

FEDERAL CIRCUIT REVIEW OF *MARKMAN* ISSUES (2001)

by the Litigation Committee (2001-02) of the
Intellectual Property Law Association of Chicago (IPLAC)

edited by Edward D. Manzo
Vice Chair, 2001-02 IPLAC Litigation Committee

Revised May 2003

IPLAC CONTRIBUTORS:

Jeffrey Burgan (Leydig, Voit & Mayer, Ltd.)

Tim Delaney (Brinks, Hofer, Gilson & Lione)

Janet Garetto (Jenkins & Gilchrist)

Jeanne Gills (Foley & Lardner) with Jason Keener (University of Wisconsin Law School),

**John Klempir (George Washington University Law School), and Matthew Martin
(John Marshall Law School)**

Adam G. Kelly (Marshall, Gerstein & Borun)

Brad Lyerla and Amy Crout (Wallenstein & Wagner)

**Edward D. Manzo with Louis J. Alex, Jeana R. Lervick and Michael Zaronias (Cook, Alex,
McFarron, Manzo, Cummings & Mehler, Ltd.) and Aim Jirut (DePaul Law School)**

Sal Patel (Schiff, Hardin & Waite)

Max Shaftal (Patzik, Frank & Samotny, Ltd.)

Stan Schlitter and Sarah Haule (Jenner & Block)

Copyright 2002, 2003 Edward D. Manzo and IPLAC

Contents

Table of Cases	2
Introduction by the Editor	12
I. Published Decisions	24
A. Utility Patents	24
B. Design Patents	141
II. Non-Precedential Decisions	142
A. Utility Patents	142
B. Design Patents	186

Table of Cases

Accuscan, Inc. v. Xerox, Corp., 2001 U.S. App. LEXIS 11534, 18 Fed. Appx. 828 (Fed. Cir. May 2001), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 16640, vacated and remanded, __ U.S. ___, 122 S.Ct. 2323, 153 L.Ed.2d 152, 2002 U.S. LEXIS 4030 (2002)	142
AcroMed Corp. v. Sofamor Danek Group, Inc. et al., 253 F.3d 1371, 59 USPQ2d 1371 (Fed. Cir. July 2001), No. 00-1163, reh. den. 2001 U. S. App. Lexis 17245	24
Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc., 265 F.3d 1294, 60 USPQ2d 1161, No. 00-1417 (Fed. Cir. Sept. 2001).	26
Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc., 261 F.3d 1329; 59 USPQ2d 1801 (Fed. Cir. Aug. 2001)	28
AFG Industries, Inc. v. Cardinal IG Co., 239 F.3d 1239, 57 USPQ2d 1776 (Fed. Cir. Feb. 2001)	29
Altech Controls Corp. v. EIL Instruments, Inc., 8 Fed. Appx. 941, 2001 WL 487603, No. 00-1216 (Fed. Cir. May 2001)	143
Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 57 USPQ2d 1747 (Fed. Cir. Feb. 2001).	32
Amphenol Corp. v. Maxconn Inc.,	

2001 U.S. App. LEXIS 2189 (Fed. Cir. Feb. 2001), <i>cert. denied</i> 122 S.Ct. 42, 151 L.Ed.2d 14 (2001)	145
Applied Concepts, Inc.v. Olympia Indus., Inc., 2001 U.S. App. LEXIS 16570 (Fed. Cir. July 2001), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 19399	146
Asyst Technologies, Inc. v. Empak, Inc. et al, 268 F.3d 1364, 60 USPQ2d 1567, No. 00-1514 (Fed. Cir. Oct. 2001)	34
Avery Dennison Corp v. Flexcon Co., Inc., 15 Fed. Appx. 882, 2001 WL 811834 (Fed. Cir. July 2001)	147
Ballard Medical Products v. Allegiance Healthcare Corp., et al., 268 F.3d 1352, 60 USPQ2d 1493 (Fed. Cir. Oct. 2001)	35
Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc. et al., 262 F.3d 1258, 59 USPQ2d 1865 (Fed. Cir. August 2001)	38
Bemis Mfg. Co. v. Dornoch Medical Systems, Inc., 21 Fed. Appx. 930, 2001 WL 1381150 (Fed.Cir. Nov. 2001))	148
Bernard Dalsin Manuf. Co. v. RMR Products, Inc., 10 Fed. App. 882 (Fed. Cir. May 2001)	149
Biotec Biologische Naturverpackungen GmbH & Co. KG, v. BioCorp, Inc., 249 F.3d 1341, 58 USPQ2d 1737 (Fed. Cir. May 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 16639 (Fed. Cir. July 2001)	41
Bio-Technology General Corp. v. Bio-Technology General (Israel) Ltd., 267 F.3d 1325, 60 USPQ2d 1430 (Fed. Cir. Sept. 2001)	42
Biovail Corp. International, et al. v. Andrx Pharmaceuticals, Inc., 239 F.3d 1297, 57 USPQ2d 1813 (Fed. Cir. Feb. 2001)	42
Bose Corp. v. JBL, Inc., 274 F.3d 1354, 61 USPQ2d 1216 (Fed. Cir. Dec. 2001)	45
Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc. et al., 246 F.3d 1368, 58 USPQ2d 1508 (Fed. Cir. Apr. 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 14223 (Fed. Cir. June 2001)	46
Brown v. 3M et al., 265 F.3d 1349, 60 USPQ2d 1375 (Fed. Cir. Sept. 2001),	

cert. denied 2002 U.S. Lexis 2167	48
Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 58 USPQ2d 1801 (Fed. Cir. May 2001), reh. and reh. <i>en banc</i> denied, 2001 U.S. App. LEXIS 16604 (Fed. Cir. June 2001)	49
Circle R, Inc. v. Trail King Indus., Inc., 21 Fed. Appx. 894, 2001 U.S. App. LEXIS 22017 (Fed. Cir. Sept. 2001)	150
Civix-DDI, LLC v. Microsoft Corp., Zip2 Corp., Infoseek Corp, InfoUSA, Inc., Excite, Inc., Delorme Publishing Co., Inc., and Lycos, Inc., 18 Fed. Appx. 892, 2001 U.S. App. Lexis 19597 (Fed. Cir. Aug. 2001)	151
Collett v. Piper's Saw Shop, Inc., 2001 U.S. App. LEXIS 2046, 4 Fed. Appx. 904 (Fed. Cir. Feb. 2001)	152
Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc., 246 F.3d 1336 (Fed. Cir. March 2001)	51
Datastrip Ltd. et al. v. Symbol Techs., Inc. et al., 2001 U.S. App. LEXIS 15491, 15 Fed. Appx. 843 (Fed. Cir. July 2, 2001)	153
Day International, Inc. v. Reeves Brothers, Inc., 260 F.3d 1343, 59 USPQ2d 1790 (Fed. Cir. August 2001)	53
Dayco Products, Inc. v. Total Containment, Inc., 258 F.3d 1317, 59 USPQ2d 1489 (Fed. Cir. July 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 21101 (Fed. Cir. Aug. 2001)	53
DeMarini Sports, Inc. v. Worth, Inc., 239 F.3d 1314, 57 USPQ2d 1889 (Fed. Cir. Feb. 2001)	56
DoorKing, Inc. v. Sentex Systems, et al., 19 Fed. Appx. 872, 2001 U.S. App. Lexis 20483 (Fed. Cir. Sept. 2001)	154
Door-Master Corp v. Yorktowne, Inc., 256 F.3d 1308, 59 USPQ2d 1472 (Fed. Cir. Aug. 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 21104 (Fed. Cir. Aug. 2001)	141
Dow Chemical Co. v. Sumitomo Chemical Co., Ltd., 257 F.3d 1364, 59 U.S.Q.2d 1609 (Fed. Cir. July 2001) reh. and reh. <i>en banc</i> denied 2001 U.S. App. Lexis 21857 (Fed. Cir. Sept. 2001)	59
Durel Corporation v. Osram Sylvania, Inc.,	

256 F.3d 1298, 59 USPQ2d 1238 (Fed. Cir. June 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 21098 (Fed. Cir. Aug. 2001)	62
Ecolab, Inc. v. Envirochem, Inc. 264 F.3d 1358, 60 USPQ2d 1173 (Fed. Cir. Sept. 2001)	64
EMI Group North America, Inc. v Cypress Semiconductor Corp., 268 F. 3d 1342, 60 USPQ2d 1423 (Fed. Cir. Sept. 2001)	65
Exxon Research & Eng’g. Co. v. United States, 265 F.3d 1371, 60 USPQ2d 1272 (Fed. Cir. Sept. 2001)	65
Fin Control Systems PTY, Ltd. v. OAM, Inc., 265 F.3d 1311, 60 USPQ2d 1203 (Fed. Cir. Sept. 2001)	65
Five Star Mfg., Inc. v. Ram Lite Mfg., Inc., 4 Fed. Appx. 922, 2001 WL 120070 (Fed. Cir. Feb 2001)	186
Forest Laboratories, Inc. v. Abbott Laboratories, 239 F.3d 1305; 57 USPQ2d 1794 (Fed. Cir. Feb. 2001)	66
Gart v. Logitech, Inc., 254 F.3d 1334, 59 USPQ2d 1290 (Fed. Cir. June 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 21100 (Fed. Cir. Aug. 2001), <i>cert. denied</i> 122 S.Ct. 921 (2002)	68
Generation II Orthotics, Inc., et al. v. Medical Technology, Inc., 263 F.3d 1356, 59 USPQ2d 1919 (Fed. Cir. August 2001)	69
Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc., 262 F.3d 1333, 59 USPQ2d 1950 (Fed. Cir. Aug. 2001)	70
Globetrotter Software, Inc. v. Elan Computer Group, Inc., 236 F.3d 1363, 57 USPQ2d 1542 (Fed. Cir. Jan. 2001)	72
Hemphill v McNeil-PPC, Inc., 25 Fed. Appx. 915, 2001 U.S. App. LEXIS 27471 (Fed. Cir., Nov. 2001), rehearing denied 2001 U.S. App. LEXIS 27839, <i>cert. denied</i> 123 S.Ct. 98 (2002)	157
Herman v. William Brooks Shoe Co., 7 Fed. Appx. 941, 2001 U.S. App. LEXIS 4178 (Fed. Cir. March 2001), rehearing <i>en banc</i> denied, 2001 U.S. App. LEXIS 9394 (Fed. Cir. Apr. 2001)	158

Hilgraeve Corp. v. Symantec Corp., 265 F.3d 1336, 60 USPQ2d 1291 (Fed. Cir. Sept. 2001), rehearing and rehearing en banc denied, 2001 U.S. App. Lexis 26125, cert. denied 2002 U.S. Lexis 1420	73
In re Beigel, 7 Fed. Appx. 959 (Fed. Cir. Apr. 2001)	159
In re Cederblad et al., 4 Fed. Appx. 914 (Fed. Cir. Feb. 2001)	159
In re GenSci Orthobiologics, Inc., 10 Fed. Appx. 808 (Fed. Cir. May 2001)	160
In re Larsen, 10 Fed. Appx. 890 (Fed. Cir. May 2001)	161
In re Modine Manufacturing Co. et al., 18 Fed. App. 857 (Fed. Cir. Aug. 2001)	161
In re Roemer, 258 F.3d 1303, 59 USPQ2d 1527 (Fed. Cir. July 2001)	74
Innovad, Inc. v. Microsoft Corp., 260 F.3d 1326, 59 USPQ2d 1676 (Fed. Cir. August 2001)	75
Insituform Technologies, Inc. v. Cat Contracting, Inc., 10 Fed. Appx. 871, 2001 WL 294164 (Fed. Cir. March 2001)	162
Interactive Gift Express v. Compuserve, 256 F.3d 1323, 59 USPQ2d 1401 (Fed. Cir. July 2001)	77
Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 61 USPQ2d 1152 (Fed. Cir. Dec. 2001), reh. and reh. en banc denied 2002 U.S. App. LEXIS 7374, cert. denied. denied 2002 U.S. App. LEXIS 6051	79
Intermatic Inc. v. The Lamson & Sessions Co., 273 F.3d 1355 , 61 USPQ2d 1075 (Fed. Cir. Dec. 2001), rehearing and reh. <i>en banc</i> denied 2002 U.S. App. LEXIS 3049 (2002), vacated 154 L.Ed.2d 423, 123 S.Ct. 549, 2002 U.S. App. LEXIS 6756 (2003)	81
J&M Corp. v. Harley-Davidson, Inc., 269 F.3d 1360, 60 USPQ2d 1746 (Fed. Cir. Nov. 2001)	84

K&K Jump Start/Chargers, Inc. v. Schumacher Electric Corp., 13 Fed. Appx. 982, 2001 U. S. App. Lexis 14173 (Fed. Cir. June 2001)	163
Karsten Manuf. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 58 USPQ2d 1286 (Fed. Cir. March 2001)	86
Kimberly-Clark Corp. v. Tyco International (US), Inc., 4 Fed. Appx. 946, 2001 WL 170461 (Fed. Cir. Feb. 2001)	163
Kollmorgen Corp. v. Yaskawa Electric Corp., 2001 U.S. App. LEXIS 24496, 21 Fed. Appx. 893 (Fed. Cir. Oct. 2001)	165
Kopykake Enterprises, Inc. v. Lucks Co., 264 F.3d 1377, 60 USPQ2d 1124 (Fed. Cir. Sept. 2001)	87
Kudlacek v. DBC, Inc., 25 Fed. Appx. 837, 2001 WL 1646654 (Fed. Cir. Dec. 2001)	166
Kustom Signals, Inc. v. Applied Concepts, Inc., 264 F.3d 1326, 60 USPQ2d 1135 (Fed. Cir. Sept. 2001), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 24256, <i>cert. denied</i> 122 S.Ct. 1537 (2002)	89
KX Industries, L.P. et al. v. Water Purification Products, Inc., 18 Fed. Appx. 871, 2001 U.S. App. LEXIS 18155 (Fed. Cir. Aug. 2001)	167
Litton Systems, Inc. v. Honeywell, Inc., 238 F.3d 1376, 57 USPQ2d 1653 (Fed. Cir. Feb. 2001)	91
LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc., 275 F.3d 1347, 61 USPQ2d 1193 (Fed. Cir. Dec. 2001), reh. and reh. en banc denied 2002 U.S. App. LEXIS 4568.	91
Lockheed Martin Corp. v. Space Systems/Loral, Inc., 249 F.3d 1314 (Fed. Cir. Apr. 2001), rehearing and rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 16600, vacated and remanded, 122 S.Ct. 2349, 153 L.Ed.2d 152, 2002 U.S. LEXIS 4029 (2002)	95
Maltezos v. AT&T Corp., 6 Fed. Appx. 850 (Fed. Cir. Mar. 2001)	168
Masimo Corp. v. Mallinckrodt, Inc., 2001 U.S. App. LEXIS 18032, 18 Fed. Appx. 852 (Fed. Cir. Aug. 2001).	169

McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 60 USPQ2d 1001 (Fed. Cir. Aug. 2001), rehearing and rehearing en banc denied 2001 U.S. App. LEXIS 24254	96
Medical Device Techs, Inc. v. C.R. Bard, Inc., 2001 U.S. App. LEXIS 5295 (Fed. Cir. March 2001) (unpublished), rehearing denied, 2001 U.S. App. LEXIS 8819	170
Medtronic v. Boston Scientific Corp., 6 Fed. Appx. 890, 61 USPQ2d 1447 (Fed. Cir. Apr. 2001)	171
Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 58 USPQ2d 1607, Nos. 00-1205, 1214 (Fed. Cir. Apr. 2001)	97
Mentor H/S, Inc. et al. v. Medical Device Alliance, Inc. et al., 244 F.3d 1365, 58 USPQ2d 1321, Nos. 99-1532, 00-1165 (Fed. Cir. Apr. 2001)	99
Mollhagen v. Witte, et al., 2001 U.S. App. LEXIS 17142, 18 Fed. Appx. 846 (Fed. Cir. July 2001)	171
MSM Investments Co., LLP v. Carolwood Corp., et al., 259 F.3d 1335, 59 USPQ2d 1856 (Fed. Cir. Aug. 2001)	100
Mycogen Plant Science, Inc. v. Monsanto Co., 243 F.3d 1316, 58 USPQ2d 1030 (Fed. Cir. March 2001)	101
Mycogen Plant Science, Inc. v. Monsanto Co., 252 F.3d 1306, 58 USPQ2d 1891 (Fed. Cir. May 2001)	103
Netword, LLC v. Centraal Corp., 242 F.3d 1347, 58 USPQ2d 1076 (Fed. Cir. March 2001)	105
Newell Window Furnishings, Inc. v. Springs Window Fashion Division, Inc., 15 Fed. App. 836 (Fed. Cir. July 2001)	173
Oak Technology, Inc. v. International Trade Commission, 248 F.3d 1316, 58 USPQ2d 1748 (Fed. Cir. May 2001).	106
Optimal Recreation Solutions, LLP v. Leading Edge Technologies, Inc., 6 Fed. Appx. 873, 2001 WL 338152 (Fed. Cir. Apr. 2001)	174
Pall Corp. v. PTI Technologies, Inc., 259 F.3d 1383, 59 USPQ2d 1763 (Fed. Cir. Aug. 2001)	107

Pandrol USA, LP et al. v. Airboss Railway Prods., Inc. et al., 2001 U.S. App. LEXIS 5293, 10 Fed. Appx. 837 (Fed. Cir. March 2001)	175
Pannu v. Storz Instruments, Inc., 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. July 2001)	109
Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 57 USPQ2d 1553 (Fed. Cir. Jan. 2001)	110
Polymer Indus. Prods. Co. et al. v. Bridgestone/Firestone, Inc., 2001 U.S. App. LEXIS 3819, 10 Fed. Appx. 812 (Fed. Cir. March 2001), rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 8841 (Fed. Cir. Apr. 2001), <i>cert. denied</i> , 122 S.Ct. 344 (2001)	176
Precor Inc. v. Life Fitness, div'n. of Brunswick Corp., 13 Fed.Appx. 913, 2001 WL 727011 (Fed.Cir. June 2001), rehearing denied 2001 U.S. App. LEXIS 18769 (Fed. Cir. July 2001)	186
Purdue Pharma L.P. v. Boehringer Ingelheim GMBH, 237 F.3d 1359, 57 USPQ2d 1647 (Fed. Cir. Feb. 2001), rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 5565 (Fed. Cir. Mar. 2001)	110
Rapoport v. Dement, 254 F.3d 1053, 59 USPQ2d 1215 (Fed. Cir. June 2001)	112
Research Corp. Technologies, Inc. et al. v. Gensia Laboratories, Inc., et al., 2001 U.S. App. LEXIS 4444, 10 Fed. Appx. 856 (Fed. Cir. Mar. 2001) (not published)	177
Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 60 USPQ2d 1851 (Fed. Cir. Nov. 2001).	113
S3 Inc.(now known as SONICblue, Inc.) v. nVIDIA Corp., 259 F.3d 1364; 59 USPQ2d 1745 (Fed. Cir. Aug. 2001)	115
Sandt Technology, Ltd. v. Resco Metal and Plastics Corp., 264 F.3d 1344, 60 USPQ2d 1091 (Fed. Cir. Sept. 2001), rehearing and rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 24253	117
Schoell v. Regal Marine Industries, Inc., 247 F.3d 1202, 58 USPQ2d 1450 (Fed. Cir. Apr. 2001)	118
SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 58 USPQ2d 1059 (Fed. Cir. March 2001)	119

Semitoool v. Novellus Systems, Inc., 12 Fed. Appx 918, 2001 WL 638452 (Fed. Cir. June 2001), <i>cert. granted</i> , vacated and remanded, 122 S.Ct. 2323, 153 L.Ed.2d 152, 2002 U.S. LEXIS 4028 (2002)	178
Senior Technologies, Inc. v. R.F. Technologies, Inc., 2001 U.S. App. LEXIS 4179 (Fed. Cir. March 2001), rehearing denied 2001 U.S. App. LEXIS 7549, vacated and remanded, 122 S.Ct. 2323, 153 L.Ed.2d 151, 2002 U.S. LEXIS 4026 (2002)	180
Smith & Nephew, Inc. v. Ethicon, Inc., 276 F.3d 1304, 61 USPQ2d 1065 (Fed. Cir. Dec. 2001), rehearing and reh. en banc <i>denied</i> , 2002 U.S. App. LEXIS 7058 (Fed. Cir. Feb 2002)	122
Somfy, S.A. v. Springs Window Fashions Division, Inc., 6 Fed. Appx. 895, 2001 U.S. LEXIS 8482 (Fed. Cir. April 2001)	181
Superior Fireplace Co. v. Majestic Products Co., 270 F.3d 1358 , 60 USPQ2d 1668 (Fed. Cir. Nov. 2001), rehearing and rehearing <i>en banc</i> denied 2002 U.S. App. LEXIS 2623 (Fed. Cir. Jan 2002)	124
Tapco International Corp. v. Van Mark Products Corp., 18 Fed. Appx. 865, 2001 U.S. App. LEXIS 18330 (Fed. Cir. Aug. 2001)	182
Tegal Corp. v. Tokyo Electron Am., Inc., 257 F.3d 1331, 59 USPQ2d 1385 (Fed. Cir. July 2001), rehearing denied 2001 U.S. App. LEXIS 21126 (Fed. Cir. Sept 2001), rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 21051 (Fed. Cir. Sept 2001), subs. appeal 2002 U.S. App. LEXIS 1992 (Fed. Cir. Feb. 2002), <i>cert. denied</i> , 122 S.Ct. 1297, 2002 U.S. LEXIS 1550 (2002), <i>cert. denied</i> , 122 S.Ct. 1297, 2002 U.S. LEXIS 1551 (2002)	127
Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 58 USPQ2d 1545 (Fed. Cir. April 2001), rehearing and rehearing <i>en banc</i> denied 2001 U.S. App. LEXIS 12888 (Fed. Cir. May 2001)	129
Toro Co. v. White Consolidated Industries, Inc., 266 F.3d 1367, 60 USPQ2d 1437 (Fed. Cir. Sept. 2001), rehearing and rehearing en banc denied Nov. 1, 2001	130

Transonic Systems Inc. v. Non-Invasive Medical Technologies Corporation, 10 Fed. Appx. 928, 2001 U.S. App. LEXIS 11993 (Fed. Cir. May 2001)	184
Turbocare v. General Electric Co., 264 F.3d 1111, 60 USPQ2d 1017 (Fed. Cir. Aug. 2001)	131
Union Pacific Resources Co. v. Chesapeake Energy Corp., 236 F.3d 684, 57 USPQ2d 1293 (Fed. Cir. Jan. 2001).	132
Unique Coupons, Inc. v. Northfield Corp., 12 Fed. Appx. 928, 2001 WL 665365 (Fed. Cir. June 2001), reh. and reh. en banc denied, 2001 U. S. App. Lexis 18768 (Fed. Cir. July 2001)	188
Viskase Corp. v. Am. Nat’l Can Co., 261 F.3d 1316, 59 USPQ2d 1823 (Fed. Cir. July 2001)	133
Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc., 239 F.3d 1225, 57 USPQ2d 1679 (Fed. Cir. Feb. 2001)	134
Winbond Electronics Corp. v. International Trade Commission, 4 Fed. Appx. 832, 2001 WL 80412 (Fed. Cir. Jan. 2001)	189
Xerox Corp. v. 3Com, U.S. Robotics Corp., et al., 267 F.3d 1361, 60 USPQ2d 1526 (Fed. Cir. Oct. 2001)	137

FEDERAL CIRCUIT REVIEW (2001) OF *MARKMAN* ISSUES

by the IPLAC (2001-02) Litigation Committee¹

edited by Edward D. Manzo²

Introduction by the Editor

In 2001, the Federal Circuit reviewed or addressed claim constructions in over 120 cases.³

The patented subject matter they dealt with more often than any other was medical products or technology:

- *AcroMed* - spinal plates and bone screws
- *Advanced Cardiovascular v. Medtronic* - catheters for angioplasty
- *Advanced Cardiovascular v. Scimed* - coronary stents
- *Ballard* - tracheobronchial catheters
- *Bemis* - suction canister for use in surgery
- *Bio-Technology* - producing human growth hormone
- *Biovail* - hypertension and angina medication
- *Bristol Myers* - cancer treatments
- *Forest Laboratories* - lung surfactant compositions
- *Generation II Orthotics* – post-operative knee braces
- *Glaxo* - antibiotics
- *Hemphill* - vaginal swabs

¹ Many of the case summaries compiled here were produced by members of the IPLAC Litigation Committee 2001-02, as indicated on the cover page. The editor was the Vice Chairman of the Committee and acknowledges and thanks the members who contributed to this project and particularly those who took extra cases to be summarized.

The reader is admonished that this work is not offered as the opinion of the Association, the listed contributors, nor the editor. By request, the names of contributors are not associated with their respective individual writings.

² This project continues work done by the editor for calendar year 2000 claim construction cases of the Federal Circuit, which work was presented at a symposium on patent claim construction at DePaul Law School (Feb. 2001).

³ Surprisingly, only a few of these cases came from the Northern District of Illinois, viz., *Intermatic, Medical Device Tech., Somfy, Unique Coupons*, and *Viskase*.

- *In re GenSci Orthobiologics* - bone products
- *Medical Device Technologies* - spacer clip for biopsy needle
- *Medtronic* (2 cases) - coronary stents
- *Mentor H/S* - liposuction using ultrasonics
- *MSM Investments* - diet supplements
- *Mycogen I and II* - insect-resistant plants
- *Pannu* - intraocular lens technology
- *Purdue Pharma* - pain treatment
- *Rapoport* - sleep apnea treatment
- *Research Corp.* - cancer medication
- *Scimed v. Advanced Cardiovascular* - balloon catheters for angioplasty
- *Smith & Nephew* - anchoring suture in bone
- *Transonic* - blood flow measurement.

Opinion Writers. The decisions were penned by the judges as follows:

Archer (2): *J&M, Tapco*;

Bryson (8): *Asyst, Ballard, Exxon, In re Cederblad, Kimberly-Clark, Mycogen II, SciMed, Senior Technologies*;

Clevenger (15): *Amazon, Amphenol, Beigel, Bemis, Fin, K&K, Kudlacek, McGinley, Medical Devices, Mycogen I, Oak Technology, Pandrol, Polymer, Rapoport, Rexnord*;

Dyk (9): *Bernard Dalsin Mfg., Circle R, Dayco, DoorKing, Globetrotter, Hemphill, Hilgraeve, Kopykake, Pall*;

Gajarsa (10): *Bell, Bio-Technology, Biovail, Day, Dow Chemical, Herman, In re GenSci, In re Larsen, Lockheed, Telemac*;

Linn (15): *Advanced Cardiovascular (v. Medtronic), Budde, DeMarini, Ecolab, Gart, Generation II, Interactive, KX, Medtronic (Adv. Cardiovascular), Medtronic (Boston Scientific), Optimal, Superior, Tegal, Turbocare*;

Lourie (13): *Applied Concepts, Bristol-Myers, Durel, Forest, Intermatic, Masimo, Mentor, Mollhagen, MSM, Research Corp., Semitool, Unique, Wenger*;

Mayer (5): *Litton, Pannu, Pioneer, Purdue, Xerox*;
Michel (2): *AFG, Sandt*;
Newman (11): *Avery Dennison, Bemis, Biotec, Brown, Collett, Karsten, Kustom, Netword, S3, Smith & Nephew, Viskase*;
Plager (1): *Schoell*
Rader (10): *AcroMed, Crystal Semiconductor, Door Master, Glaxo, In re Roemer, Innovad, Kolmorgen, LNP, Toro, Union Pacific, Winbond*;
Schall (8): *Accuscan, Advanced Cardiovascular (v. Scimed), Altech, Datastrip, Insituform, Newell, Precor, Transonic*.

Per curiam opinions were written in *Civix-DDI, Five Star, In re Modine, Maltezos, and Somfy*. No opinions on claim construction were noted by Senior Judges Cowen, Friedman, Skelton nor the late Senior Judge Smith, although several of them did sit on panels hearing the cases.⁴ Nor did newly appointed Judge Prost write any claim construction opinions in 2001 nor sit on any panels that decided such cases.

Overview. The basic ground rules are well established but not always articulated the same way. For example, most of the cases report that claim construction is an issue of law that is reviewed *de novo*. However, there are occasional expressions that depart from that. This year, Judge Rader, writing in *LNP*, did not specifically articulate that the review is *de novo* but did indicate it is without deference. Nevertheless, the conclusion announced by the Court in that precedential opinion was that the district court claim construction was supported by the evidence (finding that “the record supports the district court’s interpretation.”) Perhaps the Court also arrived independently at the same claim interpretation as voiced by the district court, in which case the fact would indeed be that the record supports the district court. However, the standard on appeal for reviewing claim constructions has generally not been whether the record supports the district court’s claim interpretation.

⁴ Senior Judge Friedman sat on the panels of six cases reviewed herein. Senior Judge Plager sat on the panels of 12 cases reviewed herein. Senior Judge Skelton did not sit on the panels of any of the cases reviewed herein. Senior Judge Smith passed away on March 22, 2001 but sat on the panels of two cases reported herein.

On the substantive issues of claim interpretation, the Court is heavily influenced by the public record, paying heed to the public notice function of claims and the intrinsic evidence. The intrinsic evidence usually suffices, or is made to suffice, and reliance on extrinsic evidence (other than dictionaries) is seldom approved, save for determining how the invention was made or the context of the invention. The Court relied on claim language and its plain meaning most often, frequently emphasizing its meaning to the ordinarily skilled artisan. Nevertheless, the Court always reviewed the rest of the intrinsic evidence to determine, for example, whether the patent applicant had placed special meanings on terms or otherwise disclaimed the plain meaning with reasonable clarity and deliberateness. The Court also dealt with preamble language, claim differentiation, several Section 112-6 issues, subjective intent, other extrinsic evidence, and design patents. In one appeal, the Court remanded to the trial court for consideration of extrinsic evidence.

Some of the Federal Circuit judges outlined their own overviews on general claim construction principles in their opinions. *See*, for example, the opinions of Judge Clevenger in *Rexnord*, Judge Dyk in *Dayco*, Judge Gajarsa in *Bell Atlantic*, and Judge Linn in *Budde*, *DeMarini*, and *Tegal*.

Intrinsic Evidence. For claim construction, the Court confines itself to the intrinsic evidence only (with some exceptions), provided it is sufficient for construing the claims. At the top of the hierarchy stands the claim language itself, followed by “the rest of the intrinsic evidence.” *Advanced Cardiovascular v. Medtronic*. This comports with last year’s rubric, given in virtually each case, that one looks at *all* of the intrinsic evidence (claim language, written description, and prosecution history), *e.g.*, *Hockerson-Halberstadt*,⁵ with the claim language being most important, *e.g.*, *Interactive Gift Express*.⁶ The extreme position of the Court in one case in 2000, *i.e.*, that it would look beyond the claim language only if it were unclear, *KCJ*,⁷ was not noted again in 2001. While unambiguous claim language compelled a construction that excluded the preferred embodiment last year in *Elekta*,⁸ there was no such perverse outcome in 2001, as such denouements are strongly disfavored. *Rexnord*, *Pandrol*. In only one case did the Court find the

⁵ *Hockerson-Halberstadt v. Avia Group Int'l.*, 222 F.3d 951, 55 USPQ2d 1487 (Fed. Cir. 2000).

⁶ *Interactive Gift Express v. Compuserve*, 231 F.3d 859, 56 USPQ2d 1647 (Fed. Cir. 2000).

⁷ *KCJ v. Kinetic Concepts*, 223 F.3d 1351, 55 USPQ2d 1835 (Fed. Cir. 2000).

⁸ *Elekta Instrument v. O.U.R. Scientific International*, 214 F.3d 1302 (Fed. Cir. 2000).

intrinsic evidence insufficient and remand to the district court for consideration of extrinsic evidence. *See infra*.

Plain Meaning. In general, the Court uses the plain and ordinary meaning of claim terms. *Gart*. The Court explained the importance of fair notice to the public of what a patent claim covers. *See Bell Atlantic, Dayco, Superior Fireplace*. The patentee may have given special meaning to claim terms, either explicitly or implicitly. *Bell Atlantic*. While the ordinary meaning is the starting point for claim construction, *Bell Atlantic*, it should not be considered in a vacuum. *DeMarini*. One looks to the specification and the ordinarily skilled artisan also.

Viewpoint of the Ordinarily Skilled Artisan. The hypothetical person of ordinary skill in the art is gaining in stature. Made ubiquitous by the patent statute for Section 103 determinations, he appears also in the claim construction process. Thus, a technical term in a patent claim is to be understood as having the meaning which the person of ordinary skill in the art would give it. *Bell Atlantic, Dayco, Interactive Gift Express, Rexnord, Datastrip* (not published). Moreover, the Court conscripted him again in *Budde* to determine whether, in his viewpoint, the specification set forth adequate structure to correspond to a claimed function in a 112-6 claim). Further, he was called upon in *S3 (SONICblue, Inc.) v. nVIDIA*, on the issue of the definiteness requirement of 112-2 to ascertain whether, when the claims are read with the rest of the specification, an ordinarily skilled artisan would understand the patent scope.⁹ Indeed, the Court in one case admonished that a failure to consider such extrinsic evidence can be reversible error. *AFG Industries*.

Preambles. In the 2001 cases, preamble language was found not to limit the claims in *Advanced Cardiovascular v. Medtronic* and *Bristol-Myers*, but limiting in *Karsten*. *Cf. DeMarini*. Similarly, in

⁹ It would appear that district courts have to weigh certain evidence in the process of construing claims, if it receives extrinsic evidence on what claim language means to such hypothetical persons. Query whether summary judgment can be granted if opposing experts disagree, as one might predict, on the hypothetical ordinarily skilled person, or on what claim language means. While this might seem to raise a procedural issue – when there is a disputed fact on the meaning to this hypothetical person – the Supreme Court still seems to require the district court to decide the fact issue as part of the claim construction. *See, AFG, quoting Seymour v. Osborne*, 78 U.S. 516 (1870) (undoubted error to reject the testimony); *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390, 116 S. Ct. 1384, 1395-96 (1996) (claim construction ceded to trial court notwithstanding evidentiary underpinnings).

2000, the Court considered preamble claim language, finding no limitation on the claims in *Apple*,¹⁰ *Embrex*,¹¹ *IMS*,¹² and *Interactive, supra*, but rescuing some claims from invalidity due to preamble language in *American Imaging* (not published).¹³

Claim Differentiation – Other Claims. Litigants nearly always assert that language of one claim has to be construed a certain way in light of the language of other claims. In the early years of the Federal Circuit, claim differentiation was characterized by Chief Judge Markey as an immutable rule of patent claim construction.¹⁴ Today, however, this “immutable rule” is not always applied by the Federal Circuit, which generally notes that claim differentiation raises a presumption of differing scope but cannot change the legitimate scope of a claim. In 2001, claim differentiation received attention in several cases, including: *Applied Concepts*, *Bristol Myers*, *Globetrotter*, *Intermatic*, *Kimberly-Clark*, *Masimo*, *Medtronic*, *Mollhagen*, *Senior Technologies*, *Smith & Nephew*, *Wenger* and *Xerox*. The doctrine was occasionally applied.

Written Description. Beyond claim language and other claims, other intrinsic evidence can have profound effects on claim construction. Generally, one does not import a limitation into a claim. *Biovail*. In *Gart* and *Turbocare*, it was improper to redefine claims based on the preferred embodiments. On the other hand, the Court in several cases pronounced that the claim meaning was clear from the specification. *Intermatic*, *Hemphill* (not published), *Semitoil* (not published).

More specifically, the Court reviews the written description to determine whether special meanings have been given to terms, explicitly or implicitly, and to see whether there has been a disclaimer or other limitation that bears on the claim scope. In *Bell Atlantic* and *Intermatic*, the Court reminded that an express intent must be given in the specification if a term is to be redefined therein. In both *SciMed* and

¹⁰ *Apple Computer v. Articulate Systems*, 234 F.3d 14 (Fed. Cir. 2000).

¹¹ *Embrex v. Service Engineering*, 216 F.3d 1343 (Fed. Cir. 2000).

¹² *IMS Technology v. Haas Automation*, 206 F.3d 1422, 54 USPQ2d 1129 (Fed. Cir. 2000).

¹³ *American Imaging Services v. Intergraph Corp.*, 2000 WL 772725 (Fed. Cir. 2000).

¹⁴ *D.M.I. Inc. v. Deere & Co.*, 755 F.2d 1570, 1574 (Fed. Cir. 1985).

Kimberly-Clark, the Court found that the written descriptions of the patents-in-suit disclaimed a defendant's configuration. It thus affirmed a narrow construction of the claims and findings of non-infringement. Judge Dyk's concurring opinion in *SciMed* warned that the caselaw has not given guidance as to when to take guidance from the specification and when not to. Again in *Rexnord*, the Court noted the general rule that one looks to the specification (and drawings) to see whether there has been a disclaimer. In *Transonic* (not published), the Court also found error in failing to use equations from the specification that were absent from the patent claim.

Prosecution History. When in evidence, the prosecution history is to be reviewed and bears on the construction as disclaimers of certain interpretations may be found there. For example, in *Ballard* the Court relied on the prosecution history to support a disclaimer of certain interpretations of the patent claims at issue. *See also, SciMed v. Advanced Cardiovascular, Kimberly-Clark, KX Industries, and Rexnord*. In *Gart*, however, the Federal Circuit found that distinctions over prior art in the prosecution history (and the patent specification also) were insufficient to depart from the ordinary and accustomed meaning of terms used in a claim.

Dictionaries. The Court refers to dictionaries as a special form of extrinsic evidence. Generally, they can be used to determine the ordinary meaning of the claims. Articulations by the Court on dictionary usage have been inconsistent, however. Compare *Bell Atlantic, Interactive Gift Express* (may sometimes be considered), *Cybor*¹⁵, *Vitronics*¹⁶ (consider at any time), and *Optical Disc Corp.*¹⁷ (2000) (permitted unless contradicts patent meaning). The law continues to develop. In February 2001, the Court admonished against using ordinary dictionaries for technical or scientific terms, stated that the dictionary meaning could not be applied unless it is consistent with the usage in the patent, and indicated that a general purpose dictionary could be relied upon when the context is unclear or the term is not being used in a technical sense. *AFG Industries*. Indeed, the Court in that case approved the use of trustworthy extrinsic evidence on the common understanding of terms in a technical field. On the other hand, in the September

¹⁵ *Cybor v. FAS*, 138 F.3d 1448 (Fed. Cir. 1998) (in banc).

¹⁶ *Vitronics v. Conceptoronic*, 90 F.3d 1576 (Fed. Cir. 1996).

¹⁷ *Optical Disc Corp. v. Del Mar Avionics*, 208 F.3d 1324, 54 USPQ2d 1289 (Fed. Cir. 2000)

2001 decision in *Kustom Signals*, the Court ruled that definitions from a technical dictionary were *not* to be used to construe the disjunctive word “or” in the absence of an express intent of the inventor to use the term in its technical sense. Further discussion of dictionaries appears in:

- *Advanced Cardiovascular v. SciMed* (may resort to dictionary when intrinsic evidence insufficient),
- *Bell Atlantic* (caution against using non-scientific dictionaries),
- *Dayco* (standard dictionary definitions),
- *DeMarini* (dictionary definition not dispositive),
- *Durel* (dictionary is further support),
- *Ecolab* (dictionary evidence considered),
- *Fin Control* (cannot contradict meaning from patent documents),
- *Interactive Gift Express*,
- *Kopykake* (dictionary used),
- *Kustom Signals* (technical dictionary avoided),
- *Oak Technology* (technical dictionary used), and

in the non-published decisions in *Circle R*, *Hemphill*, *Pandrol*, and *Semitool*.

Subjective Intent. The subjective intent of the applicant or the PTO is not an appropriate topic for inquiry. *Superior Fireplace, Amazon.com*. In 2000, the Court explained that while inventor testimony is rejected as probative of the claim meaning, extrinsic evidence may properly be received to educate the court about the underlying technology, *Hockerson-Halberstadt, supra*, or to show the context or history of the invention, *American Imaging, supra* (not published), *Cortland*,¹⁸ and *Solomon*.¹⁹

Other Extrinsic Evidence. As noted *supra*, it is sometimes necessary to consider extrinsic evidence, at least on the issue of what the ordinarily skilled artisan understands. *AFG Industries* (citing Supreme Court authority). Indeed, the *AFG Industries* Court said it could be reversible error not to consider it. Yet in another case decided by the Federal Circuit just seven days later, the Court did not mention even once

¹⁸ *Cortland Line v. Orvis*, 203 F.3d 1351 (Fed. Cir. 2000).

¹⁹ *Solomon v. Kimberly Clark*, 216 F.3d 1372, 55 USPQ2d 1279 (Fed. Cir. 2000).

the role, if any, of the ordinarily skilled artisan. *DeMarini*. Cf. *Cybor*, *supra* (*in banc* decision). In one case, the Federal Circuit remanded for consideration of extrinsic evidence in *Advanced Cardiovascular v. SciMed*.

Section 112-6. The Court had several cases dealing with Section 112, para. 6 claim elements. It reaffirmed the “clear linking” requirement between corresponding structure and the claim language. *Budde*, *Medtronic*. Whether a 112-6 claim is sufficiently definite is a question of claim construction that receives plenary appellate review. *S3*. The question is to be viewed from perspective of the ordinarily skilled artisan. *Id.* The patent must set forth a showing in the specification of what is meant by the claim language, *id.* citing *In re Donaldson (in banc)*.²⁰ Further 112-6 claim construction cases in 2001 include:

- *Ballard* (statements during prosecution history deemed disclaimer),
- *Budde* (first define the function, then find the corresponding structure; clear linking requirement),
- *Generation II Orthotics* (no presumption absent “means for” in apparatus claim or “step for” in a method claim),
- *Globetrotter* (improper to adopt different function than recited in claim),
- *Lockheed Martin* (function does not include the “whereby” clause recitals),
- *McGinley* (guaranteed a range of equivalents) *Telemac* (identify function first, corresponding structure),
- *Turbocare* (presumption that 112-6 applies; “compressed spring means” not 112-6),
- *Wenger* (presumption, cannot import additional functions, claim differentiation),
- *Applied Concepts* (not published) (presumption, claim differentiation cannot override statute),
- *Medical Device Technologies* (not published) (presumption, component by component analysis improper),
- *Mollhagen* (not published) (clear linking requirement),
- *Semitool* (not published) (presumption of non-applicability), and
- *Somfy* (not published) (presumption).

²⁰ *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed.Cir.1994).

Design Patents. At first blush, one might think that there is no claim construction in a design patent where there is only one claim and its language is fairly uniform. However, design patents are also to be construed, and the Federal Circuit reviewed several design patent claim constructions in 2001. As one would expect, it construed them to avoid functional features, *Door-Master*, *Five Star* (not published), and *Precor* (not published).

Procedure and Timing. As for procedure and the timing of claim constructions, district courts typically held *Markman*²¹ hearings before trial, although hearings per se do not seem to be required. Indeed, the Federal Circuit confirmed the wide latitude given to the district court in complying with the *Markman* requirement, which “does not require a district court to follow any particular procedure in conducting claim construction. It merely holds that claim construction is the province of the court, not a jury.” *Ballard*. In one case, the district court offered a tentative claim construction, then held a *Markman* hearing and invited further briefing, and delivered its claim construction after trial but before jury deliberations. *See, Medtronic*. In several cases, claim constructions have come from special masters, *Crystal Semiconductor*, and magistrates, *Day International*, *Sandt*, *Smith & Nephew*.

Form of Claim Construction Rulings. In 2000, the Federal Circuit seemed to say that the district court could give its claim construction explicitly or implicitly. *Optical Disc Corporation v. Del Mar Avionics et al.*, 208 F.3d 1324, 1334 n. 4 (Fed. Cir. 2000) (vacate if opinion absolutely devoid of any discussion of claim construction). However, in 2001 a different panel stated that a “critical” requirement is for trial courts to set forth an *express* claim construction of the material terms in dispute, which is a “necessary foundation of meaningful appellate review.” *AFG Industries*. Hopefully, the Court will eventually set forth a clear rule of law on what it expects from the district courts on the form of their claim construction rulings.

Summary Judgments. The *Markman* requirement calling for the district court to construe the claims as a matter of law has clearly reduced the number of patent infringement cases that reach trial. In dozens

²¹ *Markman v Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995)(*in banc*), aff'd 517 U.S. 370 (1996).

of cases, the claim construction permitted a full or partial summary disposition. The following tables show the fate of these summary judgments at the Federal Circuit.^{22 23}

reversed or vacated	affirmed
SJ non-infringement <i>Asyst</i> <i>Advanced Cardio. v. SciMed</i> <i>AFG</i> <i>Bemis</i> <i>Bernard Dalsin Mfg.</i> <i>Dayco*</i> <i>DeMarini</i> <i>Dow</i> <i>Gart</i> <i>Interactive</i> <i>Medical Device Technologies</i> <i>Pall</i> <i>Pandrol*</i> <i>Rexnord</i> <i>Smith & Nephew</i> <i>Somfy</i> <i>Toro</i> <i>Wenger</i> <i>Xerox</i>	SJ non-infringement: <i>Altech</i> <i>Ballard</i> <i>Bell Atlantic</i> <i>Circle R</i> <i>Civix</i> <i>Dayco*</i> <i>Fin Control*</i> <i>Hemphill</i> <i>Hilgraeve</i> <i>Innovad</i> <i>J&M</i> <i>Karsten*</i> <i>Kustom</i> <i>KX Industries</i> <i>Lockheed Martin</i> <i>Maltezos</i> <i>Masimo</i> <i>Mollhagen</i> <i>Netword</i> <i>Pandrol*</i> <i>SciMed</i> <i>Schoell</i> <i>Semitool</i> <i>Telemac*</i> <i>Turbocare*</i>
SJ infringement <i>Ecolab</i>	SJ infringement <i>Advanced Cardio. v. Medtronic</i> <i>McGinley</i>

²² *Globetrotter* is not listed in the tables even though partial summary judgment had been granted by the district court. It does not appear that the summary judgment was reviewed by the Federal Circuit in affirming the district court's denial of the preliminary injunction.

²³ The asterisks (*) in the tables denote that the case is listed in more than one category.

reversed or vacated	affirmed
SJ invalidity <i>Bristol-Myers*</i> <i>Exxon</i> <i>Fin Control*</i> <i>Karsten*</i> <i>S3</i> <i>Sandt*</i>	SJ invalidity <i>Bristol-Myers*</i> <i>Brown</i> <i>Herman</i> <i>Karsten*</i> <i>Newell</i> <i>Pannu</i> <i>Sandt*</i> <i>Superior Fireplace</i> (as to certif. of correction) <i>Telemac*</i> <i>Turbocare*</i>
SJ not invalid <i>Durel</i>	SJ not invalid <i>Biotec</i>

Case Summaries. Summaries of the Federal Circuit decisions are presented *infra*, but with a focus on the claim construction aspects. Other aspects of the cases may be addressed, but no effort was made to present comprehensive reviews of the non-claim construction aspects of them. The precedential decisions of the Court are reviewed first, starting with cases dealing with utility patents and then following with design patents. Next, the non-precedential decisions are reviewed, in that same order.

I. Published Decisions

A. Utility Patents

AcroMed Corp. v. Sofamor Danek Group, Inc. et al., 253 F.3d 1371, 59 USPQ2d 1371 (Fed. Cir. July 2001), reh. den. 2001 U. S. App. Lexis 17245

Before: Michel, Rader, and Linn. Opinion by Rader.

Subject Matter: surgical spinal plates; bone screws

Proceedings Below: At the close of evidence, the district court (N. D. Ohio) granted JMOL that AcroMed's spinal plate ('290) patent was not invalid for improper inventorship. A jury reached a verdict of literal infringement of that patent and AcroMed's bone screw ('311) patent. The jury also decided that the '311 patent was not invalid.

Issues: whether Dr. Steffee is the sole inventor of the '290 patent and the meaning of terms in the '311 patent

Factual History: In developing improvements to spinal surgical apparatus, Dr. Steffee turned to a plate and screw arrangement. He went through various modifications, and to assist in implementing his ideas he eventually enlisted a hospital machine shop. There, machinist Frank Janson removed the heads from the regular bone screws at Steffee's direction. Steffee continued to make improvements, and he eventually asked Janson for a plate so that a specific pin nut "sinks in and stays right there." Janson "responded by putting nests in the slots." According to the Court, "The '290 patent claims the resulting combination."²⁴

Steffee founded AcroMed in 1983. In 1988, Janson joined the company, stating in his employment agreement that he had no interest in any pre-existing invention. Janson worked until 1992 and then as a consultant until 1994. In 1994, Janson was offered (and accepted) an agreement with defendant Danek to assign such patent rights as he might have to Danek for \$150,000. Janson declined to sign a declaration, power of attorney, and assignment in favor of AcroMed.

General Inventorship Principles Applied: Inventorship is a question of law reviewed without deference. Literal infringement of a means plus function claim calls for *inter alia* a showing that the accused device performs the identical function recited in the claim. That calls for a claim construction. A party claiming patent invalidity due to the omission of an inventor must produce clear and convincing evidence that the omitted person actually invented the claimed invention. Omission of one inventor from the patent application can invalidate the patent unless the omission was an error "without any deceptive intention."

²⁴'290 claim 1 recites, "**** arcuate recesses ... comprising means for blocking sliding movement ..."
'311 claim 5 calls for "**** means ... for engaging a portion of the surface defining the opening in the bone portion ... and to block effluence from the opening in the bone portion ..."

Conception is the key to determining inventorship, and each inventor must have contributed to conception. He must provide corroborating evidence of asserted contributions to the conception.

Meaning of Claim as it Relates to Inventorship: Danek asserted that Janson conceived the arcuate recesses claimed in '290 claim 1. Danek also urged that the prosecution history makes clear that the countersinking of the holes made the claimed combination patentable over the prior art, and that Steffee admitted that countersinking was Janson's work. These contentions were rejected by the Court since Steffee had instructed Janson on designing a plate according to Steffee's conception, that Janson's work of putting arcuate recesses in the slots was merely the exercise of normal skill expected of an ordinary machinist, and that the file history does *not* make the slots the reason why claim 1 is patentable. Danek had no corroborating evidence and did not present clear and convincing evidence at trial that the countersinking was an inventive contribution.

Contention re of "Engaging": The bone screw ('311) patent calls for means for ... engaging. The district court ruled that as used here, "engaging" meant "fitting together." Appellant Danek urged that this is incorrect and that this word requires a narrow construction where "the body portion of the screw forces cancellous bone tissue forward and radially outward into the thread space left behind by the screw thread or the tap." 253 F.3d at 1381. Danek's expert testified that the accused screws would not "'ram in' and 'displace material upwards and outward' as described in the '311 patent."

Dictionary Used: The Court referred to a Webster's dictionary (1988) to define "engage" as meaning "to interlock" or "mesh." This comports with the district court decision that "engage" means "to fit together."

Specification Meaning: The Court found also that the written description in the patent did not depart from nor narrow this meaning. The patent uses the word "engage" to define three interfaces, and these three uses require a broad meaning of the word "engage" in order to apply to each of these interfaces. The district court claim construction was in accordance with this broad requirement.

For Means Plus Function Claims, Must Identify Function and Must Not Import Unnecessary Structure: For §112 ¶6 claims, a court must identify the claimed function and the corresponding structure in the written description which performs that function. The court may not import structural limitations from the written description which are not needed to perform the claimed function. The function here was blocking effluence and restricting transverse movement. These are performed by the body portion 182 and the shoulder portion 184. It would be improper to limit the body portion to a certain diameter, as that would be importing specific details of the preferred embodiment that are not needed to perform the claimed function. The Court "will not limit a patent to its preferred embodiments in the face of evidence of broader coverage by the claims."

Outcome: The district court claim construction was found to be correct, and the Federal Circuit affirmed "all of the district court's judgments."

Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc., 265 F.3d 1294, 60 USPQ2d 1161, No. 00-1417 (Fed. Cir. Sept. 2001).

Before Bryson, Gajarsa, and Linn. Opinion by Linn.

Subject matter: catheters for coronary angioplasty

Proceedings Below: The district court (N.D. Cal.) granted summary judgment of infringement, no unenforceability, and no invalidity. The jury found the infringement to be wilful, and by post trial motion the district court increased damages by 30%.

Issue. In the patent, the preferred embodiment catheter had a coaxial arrangement of certain parts. The accused product did not have that coaxial arrangement but instead a side-by-side one. Medtronic raised the issue of whether the claim was properly construed to cover its side-by-side structure and asserted error in the claim construction.²⁵

Hierarchy of Intrinsic Evidence. Construction begins with the words of the claim. Next the Court considers “the rest of the intrinsic evidence, that is, the written description and the prosecution history if in evidence.”

Claim Language. From the preamble, one learns that the claim is for an "elongated balloon dilatation catheter," also referred to in the preamble as a "catheter." While the catheter can be exchanged “over a guidewire,” no restriction appears in the preamble to either the coaxial or the side-by-side design. Analyzing the body of the claim, the Court found no restriction of the guidewire lumen to being either coaxial or side-

²⁵ Claim 3 of the patent at issue provides: “3. An elongated balloon dilatation catheter for performing an angioplasty procedure within a human patient's coronary artery which has means for the rapid exchange of the catheter over a guidewire without the utilization of an exchange wire or an extension wire, comprising:

“a) an elongated catheter shaft having proximal and distal ends and being configured for percutaneous introduction into the patient's femoral artery;

“b) a distal guidewire opening in the distal end of the catheter shaft;

“c) a proximal guidewire opening in the catheter shaft spaced a short distance of at least 10 cm proximally from the distal guidewire opening and a substantial distance from the proximal end of the catheter shaft;

“d) a flexible distal shaft section configured to be advanceable within the patient's coronary arteries having a guidewire-receiving lumen extending proximally from the distal guidewire opening to the proximal guidewire opening and having an inflation lumen coextensive at least in part with the guidewire-receiving lumen,

“e) an inflatable dilatation balloon on the distal shaft section having proximal and distal ends, having an interior which is in fluid communication with the inflation lumen and being spaced closer to the distal end of the catheter shaft than the proximal guidewire opening; and

“f) a proximal shaft section much longer than the distal shaft section which is an elongated tubular member with an inner lumen extending therein in fluid communication with the inflation lumen in the distal section and which is suitable to advance the distal shaft section within a patient's coronary artery over a guidewire slidably disposed within the guidewire receiving lumen.”

by-side with the balloon.²⁶ Moreover, the Court found that the claim “makes sense with either configuration,” with its two requirements able to be met with either the coaxial or the side-by-side design.

Medtronic sought to draw conclusions from specific adjectives in the claim, viz. the way it used the words "in" and "on." The Court found, however, that the conclusion at which Medtronic aimed was not compelled by these words.²⁷

Written Description Specifically Contemplated Side-by-Side Lumens. The Court rejected the argument which Medtronic predicated on the written description. Per the Court, not only did the written description not define any claim terms to require a coaxial limitation, but it explicitly states that "although the present invention has been described principally in conjunction with catheters having coaxial lumens, it should be appreciated that the invention is as applicable, if not more applicable, to catheters having side-by-side lumens."

Prosecution of Parent Not Applicable Where No Common Terms in Dispute. The defendant likewise found no succor in the prosecution history. Medtronic argued from the prosecution history of the '273 and '548 patents only, and not from the patent at issue. Said the Court, “The prosecution history of a related patent can be relevant if, for example, it addresses a limitation in common with the patent in suit. *** Medtronic provides no plausible reason why the prosecution histories of either the '273 or '548 patents are relevant to the construction of claim 3 of the '233 patent.”

Outcome: The Federal Circuit affirmed the claim construction by the district court and affirmed the judgment.²⁸

²⁶ The Court explained as follows: “Parts a) through c) of the claim inform us that the catheter includes an ‘elongated catheter shaft,’ also referred to as a ‘catheter shaft,’ that includes two guidewire lumen openings. Parts b) and c) state that these openings are ‘in’ the catheter shaft. Part d) informs us that the catheter includes a ‘flexible distal shaft section,’ also referred to as a ‘distal shaft section’ in parts e) and f). Part d) also reveals that the distal shaft section contains the guidewire lumen extending between the two guidewire lumen openings. From this it is clear that the distal shaft section is a part of the catheter shaft, as the names themselves suggest. Part e) further informs us that an ‘inflatable dilatation balloon’ is ‘on’ the distal shaft section.”

²⁷ “Medtronic's argument assumes that because the guidewire lumen openings are ‘in’ the catheter, the guidewire lumen must not only go through the catheter but also go through the balloon. We disagree. As part d) states, the claim only requires that the guidewire lumen go through the catheter shaft, and this is consistent with the common understanding of there being openings ‘in’ the catheter shaft as required in parts b) and c). Further, the claim's requirement that the balloon be ‘on’ the catheter shaft can be met either by the balloon being wrapped around the catheter shaft, as in a coaxial design, or simply being in contact with part of the circumference of the catheter shaft, as in a side-by-side design.”

²⁸ Medtronic also appealed the denial of leave to assert invalidity under 35 USC §112 and the denial of a motion for a new trial based on evidentiary preclusion. Following the district court’s claim construction, Medtronic had moved for leave to supplement its response and amend its answer and counterclaim. The district court observed that Medtronic’s defenses under §§102 and 103 were clear, but that Medtronic had not provided sufficient notice of a challenge under §112. The Federal Circuit noted that the litigation records showed that even though 3.5 years had passed since the suit had been filed, Medtronic had provided only bare allegations of invalidity under §112 and that plaintiff would have difficulty in providing a meaningful response. It therefore agreed with the district court.

The Federal Circuit rejected the numerous arguments regarding the need for a new trial by concluding that

Advanced Cardiovascular Systems, Inc. v. SciMed Life Systems, Inc., 261 F.3d 1329, 59 USPQ2d 1801 (Fed. Cir. Aug. 2001).

Before Michel, Archer, and Schall. Opinion by Schall.

Subject matter: flexible coronary stents

Proceedings Below. Citing the configuration of the sole embodiment in the asserted patents and statements by the applicants during prosecution, the district court (S.D. Ind.) granted summary judgment of non-infringement.

Issues. (1) Whether the district court correctly construed “connecting elements” and similar terms to require that the stent’s connecting elements be parallel to each other and to the longitudinal axis of the stent. (2) Whether the district court correctly construed the phrase “generally parallel connecting elements” to require the connecting elements to be generally parallel to the stent’s longitudinal axis.²⁹

Arguments re “Connecting elements”: ACS argued that the district court incorrectly construed “connecting elements” to require that the stent’s connecting elements be parallel to each other and to the longitudinal axis of the stent, because the phrase “generally parallel” did not appear in the specification or in the claims in question. ACS further argued that only the drawings of the asserted patents showed the connecting elements as generally parallel both to each other and to the stent’s longitudinal axis, and such a limitation, which only appears in the drawings, should not be read into the claims. SciMed responded that the only embodiments disclosed in the asserted patents depicted the connecting elements as parallel to each other and to the stent’s longitudinal axis, and that the asserted patents emphasized the longitudinal orientation of connecting elements.

Intrinsic Evidence Wrongly Construed Below. Based on the claim language, specification and prosecution history, the Federal Circuit held that the district court incorrectly construed “connecting elements” to require the stent’s connecting elements to be generally parallel both to each other and to the longitudinal axis of the stent.

Claim Language is Starting Point. None of the claims in question were limited to such connectors. In contrast, other claims specifically recited “a plurality of generally parallel connecting elements.” The

Medtronic controlled its own destiny, considering the lawsuit was filed only one month after the ‘233 patent was issued. The Court reasoned that Medtronic could have precluded the possibility of willful infringement allegations by taking appropriate steps with regard to the patent. However, Medtronic chose to continue sales of the infringing catheter for over three years after the suit was filed. Medtronic continued to assert attorney-client privilege and thus precluded any possibility of relying on an opinion of counsel.

Regarding enhanced damages, the district court’s consideration of all relevant circumstances was considered appropriate. The Federal Circuit noted that while the district court could not substitute its own factual determination for the jury’s willfulness finding, no abuse of discretion occurred.

²⁹ Claim 1 of the ‘154 patent in suit, for example, called for “cylindrical elements ... interconnected so as to be generally aligned on a common longitudinal axis; a plurality of connecting elements for interconnecting said cylindrical elements ...” Independent claim 12 specified “a plurality of generally parallel connecting elements.”

claim has no other express structural limitations, and nothing in the claim language would limit the claims to structures, etc., that are parallel to one another and to the stent longitudinal axis.

Drawings Alone Not Enough. Without a “generally parallel” limitation in the claims or in a discussion in the specification, the drawings’ depiction of the connecting elements in a parallel relationship both with each other and the stent’s longitudinal axis was not enough for the Federal Circuit to impose such a limitation. “Since nothing in the specification assigns significance to the fact that the drawings align the connecting elements parallel both to each other and to the ... longitudinal axis, we will not allow this aspect of the drawings to be imported into the claims as a limitation.”

Prosecution History Statements Were Limited To Specific Claims. The Court held that the prosecution history did not support the district court’s construction because the arguments made during prosecution to distinguish the prior art were explicitly limited to claims that recited “generally parallel connecting elements,” and were therefore not applicable to the claims in question.

Construction of “generally parallel connecting elements”: ACS argued that “generally parallel connecting elements” need only be parallel to each other, not to the stent’s longitudinal axis. ACS therefore argued that the accused device met the “generally parallel” limitation because the connecting elements, while curved, were still generally parallel to each other. SciMed responded that the district court properly construed “generally parallel connecting elements” to require the connecting elements to be parallel to each other and to the stent’s longitudinal axis and therefore, the accused device did not infringe because its connecting elements were curved.

The district court erred in construing the phrase “generally parallel connecting elements” to require the connecting elements to be parallel to the stent’s longitudinal axis. Neither the claims nor the specification supported such a construction. Furthermore, the prosecution history did not support such a construction because the inventors had not distinguished their invention from the prior art by stating that the prior art did not have connecting members that were parallel to the longitudinal axis.

Use Extrinsic Evidence When Intrinsic Evidence Insufficient: The intrinsic evidence was insufficient to enable the court to determine the frame of reference (a linear plane or cylindrical plane) in which the connecting elements should be generally parallel to each other. “When intrinsic evidence is insufficient to enable the court to determine the meaning ..., resort may be had to extrinsic evidence.” Such extrinsic evidence may be expert testimony, inventor testimony, dictionaries, and technical treatises and articles.

Outcome: The Court vacated the summary judgment of non-infringement with regard to those claims and remanded for further proceedings in which the district court was *to consider extrinsic evidence* to determine the manner in which the connecting elements should be generally parallel.

Before Michel, Lourie, and Bryson. Opinion by Michel.

Subject Matter: low-emissivity windows

Proceedings Below: The district court (E.D. Tenn.) granted Cardinal's motion for summary judgment of noninfringement.

Issues: Can a claimed window coating "composed of" five layers read on a device containing interlayers in addition to five metallic layers? This determination turns on whether the "barrier layers" in the accused product are the same as the "interlayers" disclosed in the patent.

Claim:

1. A transparent laminated product comprising a transparent substrate and a 5-layered transparent coating substrate and a 5-layered transparent coating composed of a first ZnO layer formed on the substrate, a second Ag layer formed on the first layer, a third ZnO layer formed on the second layer, a fourth Ag layer formed on the third layer and a fifth ZnO layer formed on the fourth layer, and having a visible ray transmission of at least 60%, wherein the thickness of each Ag layer is from 60 to 250 angstroms.

Open and Closed Phrases: Transitional phrases such as "composed of" can be classified as "open" or "closed." When a claim uses an open transitional phrase, such as "comprising," its scope may cover devices that employ additional, unrecited elements. When a claim uses a closed transitional phrase, such as "consisting of," any elements, steps, or ingredients not specified in the claim are excluded.

"Composed of" Like "Consisting Essentially Of": The Federal Circuit noted the paucity of precedent on the meaning of the term "composed of" outside of a 1942 decision by one of its predecessor courts, the Court of Customs and Patent Appeals (CCPA). That court had stated that the term "should be regarded as synonymous with 'consisting of'" but qualified its statement by remarking that in certain circumstances a broader meaning of "composed of" could be applied. The Federal Circuit noted that the MPEP³⁰ states that "transitional phrases such as 'composed of' ... must be interpreted in light of the specification to determine whether open or closed claim language is intended." The Federal Circuit did not accept such a broad and flexible meaning to the term as was written in the MPEP, but it agreed that the term "composed of" is not completely closed – it should be interpreted in the same manner as "consisting essentially of." Under this approach, "composed of" is open to unlisted elements that do not materially affect the basic and novel properties of the claimed invention.

Determining Whether the Interlayers Materially Affect the Invention: Evidence was presented that persons of ordinary skill in the art understand that interlayers (or "barrier layers") are routinely and often

³⁰ "MPEP" denotes the Manual of Patent Examining Procedure.

necessarily present in low-emissivity coatings. Testimony indicated that “everybody just assumes the barrier is there,” and that Cardinal personnel generally omit reference to the barrier layers when discussing the process. The Federal Circuit indicated that, based on the specification and expert testimony, the presence of the interlayers appeared to be important to the manufacturing of the claimed coatings, but were not significant in the final, claimed product. Nevertheless, “[w]hether they are, indeed, immaterial in the final product is a question of fact.”

District Court’s Construction of “Layers” and “Interlayers”: Determining whether Cardinal’s products infringed the patent required ascertaining whether these titanium deposits constitute ‘interlayers,’ as would be covered by the patent claim, or additional ‘layers,’ which would not.” The district court did not offer an appropriate definition. It used an ordinary dictionary, which the Federal Circuit cautioned against as being rarely dispositive for defining technical terms. The dictionary definition erased the distinction set forth in the written description. As defined within the written description, “interlayers” have different physical attributes than layers in that they are relatively thin and do not substantially affect the optical properties.

Make Limited Use of Dictionaries. A trial court, when construing a term of art, must define the term in a manner consistent with the scientific and technical context in which it is used in the patent. Only when the context is unclear, or it appears that the term is not being used in a technical manner, should the trial court rely upon a general purpose dictionary for construing the term.

Testimony re Meaning to Ordinarily Skilled Artisan. The dictionary definition used at trial was inconsistent with the essentially undisputed testimony during the Markman hearing as to how a person of ordinary skill in the art would interpret the terms “layer” or “interlayer.” Citing *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298 (Fed. Cir. 1999), the Federal Circuit reaffirmed that:

it is entirely appropriate, perhaps even preferable, for a court to consult trustworthy extrinsic evidence to ensure that the claim construction it is tending to from the patent file is not inconsistent with widely held understandings in the pertinent technical field.

Necessary Extrinsic Evidence. The Court commended the use of certain extrinsic evidence, noting the Supreme Court’s admonishment in *Seymour v. Osborne*, 78 U.S. 516, 546, 20 L.Ed. 33 (1870) that where the claims or specification “contain technical terms or terms of art the court may hear the testimony of scientific witnesses to aid the court in coming to a correct conclusion” and “it would undoubtedly be error in the court to reject the testimony.” Indeed, the Federal Circuit noted that reversible error may result when the district court fails to consider this:

This case presents a good example of how extrinsic evidence can and should be used to inform a court's claim construction, and how failure to take into account the testimony of persons of ordinary skill in the art may constitute reversible error.

Federal Circuit’s Construction of “Layer”: AFG asserted that a layer is “a thickness of a material uniform chemical composition.” Cardinal originally sought to define layer as “a thickness of a material of uniform chemical composition *bounded by a material of a different chemical composition,*” but the Federal Circuit declined to include this additional limitation because the specification in no way imposes this additional limitation.

The Federal Circuit deemed the proposed definitions inappropriate. Focusing on the chemical uniformity rather than the optical properties would depart from the teachings of the patent. Additionally, a definition of “layer” focusing on chemical composition would fail to distinguish between what constitutes a “layer” or an “interlayer.” Therefore, the chemical composition need only be “substantially uniform,” rather than uniform. And, because the specification distinguishes an interlayer as having “a thickness not to substantially affect the optical properties,” a “layer” should be interpreted as “a thickness of material of substantially uniform chemical composition, but excluding interlayers having a thickness not to substantially affect the optical properties of the coating.”

“Comprising” and “Top Coat”: There was a dispute as to whether the claim reads over an additional “top coat” or “overcoat” used to improve the durability of the coating. The claim recites a “transparent laminated product comprising” a substrate and a coating. The Federal Circuit concluded that a “top coat”, given the open transitional phrase of “comprising,” would fall within the disputed claim. But, because the parties did not focus on the issue at trial, the district court may on remand choose to set forth additional criteria to distinguish a “top coat” from a “layer.”

“Formed On”: “Formed on” does not mean “directly in contact with,” for the reason that the claim has been construed as to allow interlayers to reside layers. “Notably, the claim does not state that each layer is “formed directly on” the preceding layer.

Express Claim Construction Required. The Federal Circuit noted that a “critical” requirement is for trial courts to set forth an express claim construction of the material terms in dispute, which is a “necessary foundation of meaningful appellate review.” *But see, Optical Disc Corporation v. Del Mar Avionics et al.*, 208 F.3d 1324, 1334 n. 4 (Fed. Cir. 2000) (must vacate if opinion absolutely devoid of any discussion of claim construction), which implies that an implicit claim construction may suffice.

Outcome: The district court erred by adopting a claim construction that contradicted the manner in which the terms were used in the specification. The district court’s order granting summary judgment of non-infringement was vacated and remanded.

Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 57 USPQ2d 1747 (Fed. Cir. Feb. 2001).

Before Clevenger, Gajarsa, and Linn. Opinion by Clevenger.

Subject matter: “single action” ordering of items in a client/server environment (i.e. Internet)

Proceedings Below: The district court (W.D.Wa.) granted Amazon’s motion for a preliminary injunction because it had shown a likelihood of infringement by the defendant.

Issues: At issue was the “single action” claim limitation and specifically the question of whether it necessitates that an action “be performed immediately after a display of information about an item and without any intervening action, but not necessarily immediately after the first or every display.”³¹

Standard of Review: The grant or denial of a preliminary injunction is reviewed for an abuse of discretion by the district court. It is established “by showing that the court made a clear error of judgment in weighing relevant factors or exercised its discretion based upon an error of law or clearly erroneous factual findings.”

Validity and Infringement. Claims must be interpreted and given the same meaning for both validity and infringement. Not a “nose of wax..”

³¹ Some of the claims at issue provided: “1. A method of placing an order for an item comprising: under control of a client system, displaying information identifying the item; and in response to **only a single action** being performed, sending a request to order the item along with an identifier of a purchaser of the item to a server system; under control of a single-action ordering component of the server system, receiving the request; retrieving additional information previously stored for the purchaser identified by the identifier in the received request; and generating an order to purchase the requested item for the purchaser identified by the identifier in the received request using the retrieved additional information; and fulfilling the generated order to complete purchase of the item whereby the item is ordered without using a shopping cart ordering model.

“6. A client system for ordering an item comprising: an identifier that identifies a customer; a display component for displaying information identifying the item; **a single-action ordering component** that in response to performance of only a single action, sends a request to a server system to order the identified item, the request including the identifier so that the server system can locate additional information needed to complete the order and so that the server system can fulfill the generated order to complete purchase of the item; and a shopping cart ordering component that in response to performance of an add-to-shopping-cart action, sends a request to the server system to add the item to a shopping cart.

“9. A server system for generating an order comprising: a shopping cart ordering component; and a single-action ordering component including: a data storage medium storing information for a plurality of users; a receiving component for receiving requests to order an item, a request including an indication of one of the plurality of users, the request being sent in response to **only a single action** being performed; and an order placement component that retrieves from the data storage medium information for the indicated user and that uses the retrieved information to place an order for the indicated user for the item; and an order fulfillment component that completes a purchase of the item in accordance with the order placed by the single-action ordering component.”

Subjective Intent Rejected. Apparently for purposes of reading the claim on the accused product or method, Amazon had proposed a special meaning of locating the item to purchase.³² “We are not prepared to assign a meaning to a patent claim that depends on the state of mind of the accused infringer. We thus reject Amazon's special meaning for the location of an item to be purchased.”

Begin With Plain Language of the Claims: The Federal Circuit first analyzed the plain language of the claims in order to interpret the “single action” limitation. The Court found that “the context of the claim[s] makes it clear that the single action is performed after some information about the item is displayed.” For example, claim 1 recited “in response to only a single action being performed” immediately after “displaying information identifying the item.” Similarly, claim 3 recited “the single action ordering component that in response to performance of only a single action” immediately after “a display component for displaying information identifying the item.” Nevertheless, neither the plain language of these claims nor the written description required that the single action must be performed after every display or immediately after the first display. They only required that “there be some display from which single action ordering can be performed.”

Specification Consulted: The Court found that the ordinary meaning of “single action” in the various claims was “straightforward,” but the claim did “not indicate when to start counting actions.” Accordingly, the Court sought further guidance in the specification. The written description detailed several web pages, which provided information regarding an item. These pages did not require all pages to possess the “single action” capability, but rather a link to an ultimate page which provided such capability. The specification supported the construction that after information is displayed, single action ordering is available as an option.

Prosecution History Meaning Applied: The prosecution history of these claims also did not require that the single action must be performed after every display or immediately after the first display. The Court noted that, in response to an office action, the patentee stated,

... a purchaser first locates the item [1] by browsing through a catalog of items, [2] by searching for the item, [3] by selecting a link to the item, of [4] by using any other means for locating the item. Once the item is located, the purchaser need only perform a single action to generate the order.

³² Amazon added the “single action” feature to the claims by amendment. The Federal Circuit noted the following passage from the prosecution history, explaining or commenting on this feature: “Applicants' single action ordering technology facilitates electronic ordering of items by reducing the number of purchaser interactions needed to place an order and reducing the amount of sensitive information that is transmitted between a client computer and a server computer when placing an order. To order an item using single-action ordering technology, the purchaser first locates the item by browsing through a catalog of items, by searching for the item, by selecting a link to the item, or by using any other means for locating the item. Once the item is located, the purchaser need only perform a single action to generate an order for the item and to fulfill that generated order. The single action may be, for example, the selecting of a button that is displayed on the web page or the speaking of a command. Because information (e.g., billing and shipping) about the purchaser has been saved (e.g., from a previous purchase), that information can be combined with the identification of the located item to generate and fulfill an order when the single action is performed.”

The Court explained that browsing or searching for an item would cause multiple displays to arise before the “single action” is ultimately enabled.

Outcome: The Federal Circuit concluded that Amazon did show likely success at trial in its infringement case, but that defendant had also raised substantial questions as to the validity of the patent. Hence, an important prerequisite for a preliminary injunction was lacking, and the injunction was dissolved and the case remanded for further proceedings.

Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364, 60 USPQ2d 1567 (Fed. Cir. Oct. 2001).

Before Newman, Archer, Bryson. Opinion by Bryson.

Subject Matter: systems for processing semiconductor wafers

Proceedings Below: The district court (N. D. Cal.) Entered summary judgment that the accused device did not infringe any asserted claims of the patents-at-issue.

Issue: the district court’s claim construction

Means-Plus-Function Interpretation: The Court first addressed the district court’s construction of the means-plus-function claims (Claims 1 and 5) of the patents-at-issue. The court noted that construction requires identifying the function explicitly recited in the claim, and then identifying the corresponding structure in the written description that “performs the particular function set forth in the claim.” The Federal Circuit noted that the statute “does not ‘permit incorporation of structure from the written description beyond that necessary to perform the claimed function.’” The court further stated that features of the structure that do not perform the function in the claim are not limitations. The court found that the structure found in the patent’s specification corresponded to the function set forth in the claim, and therefore limits the claim.

Section 112 ¶6 Structure Must Actually Perform the Function, Not Merely Enable It. The Court noted that the corresponding structure “...must actually perform the recited function, not merely enable the pertinent structure to operate as intended...” Because the corresponding structure cited by the district court did not perform the recited function, the Court disagreed with the district court’s construction as to claim 1.

Claim 5: Addressing the plain language of the claim, the Court found that it differed significantly from the language of the limitations. Next turning to the written description, the Court held that the corresponding structure did perform the recited function. In response to this argument, the patentee claimed that the reference added an element to the claims, and therefore differed. The Court held, “[w]hile it is true that the addition of features does not avoid infringement if all of the limitations of the patent claim are found in the accused device, that principle is not dispositive here, because the question in this case is whether...the means used in the [reference system]...are equivalent to the means described in the specification...” The Federal Circuit held that, in accord with the district court’s construction, the means

were not literally identical, but that an issue of material fact as to equivalence was present, precluding summary judgment.

Outcome: The Court agreed with the district court's claim construction as to claim 5, but found error with the district court's claim construction as to claim 1. The Court reversed and remanded the case.

Ballard Medical Products v. Allegiance Healthcare Corp., et al., 268 F.3d 1352, 60 USPQ2d 1493 (Fed. Cir. Oct. 2001)

Before: Mayer, Bryson, Dyk. Opinion by Dyk.

Subject matter: ventilating and aspirating tracheobronchial catheters

Proceedings below. The district (D. Utah) ruled on summary judgment that co-defendant Sorenson Critical Care, Inc. had not infringed either literally or under the doctrine of equivalents. The Federal Circuit affirmed.

Procedural Discretion Confirmed. The Court rejected Ballard's contention that the Federal Circuit imposes particular procedures in conducting claim construction.³³

It merely holds that claim construction is the province of the court, not a jury. To perform that task, some courts have found it useful to hold hearings and issue orders comprehensively construing the claims in issue. Such a procedure is not always necessary, however. If the district court considers one issue to be dispositive, the court may cut to the heart of the matter and need not exhaustively discuss all the other issues presented by the parties. District courts have wide latitude in how they conduct the proceedings before them, and there is nothing unique about claim construction that requires the court to proceed according to any particular protocol. As long as the trial court construes the claims to the extent necessary to determine whether the accused device infringes, the court may approach the task in any way that it deems best.

Prosecution History Used for Claim Construction, Not Literal Infringement. Ballard urged that the district court used the prosecution history estoppel in the context of determining literal infringement.³⁴

³³Ballard faulted the district court for not conducting a detailed, limitation-by-limitation construction of each of the asserted claims which, according to Ballard, the Federal Circuit decision in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), aff'd, 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996), is required.

³⁴Ballard cited Federal Circuit case law that holds prosecution history estoppel to be inapplicable to literal infringement. See, e.g., *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1578 (Fed. Cir. 1995); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1571 (Fed. Cir. 1983).

Looking to substance rather than form, the Federal Circuit explained that the district court referred to prosecution history estoppel in the context of claim construction. While cases indicate that prosecution history estoppel does not apply to the determination of literal claim scope, the prosecution history may contain a disclaimer of a particular interpretation of a claim term.

In this case, the district court held that in the course of the prosecution the patentee disclaimed a particular claim interpretation. The court concluded that because of that disclaimer Ballard could not assert that interpretation as the basis for literal infringement and could not invoke the doctrine of equivalents to reach a device covered by the disclaimer. Because the substance of the district court's analysis was sound, we disregard the fact that the court used the term "prosecution history estoppel" in an unconventional manner.

112-6 Infringement Issue. The parties and both courts agreed that 112-6 applied to the claim elements in dispute. According to the Court, one issue was whether the accused product was a 112-6 equivalent ("Because there are plainly differences between the disclosed valve structure and the [accused] valve, Ballard must rely on the theory that the Sorenson valve is equivalent to the valve structure disclosed in the written description ...")

Prosecution History Can Define Scope. Both the specification and the prosecution history bear on the scope of the invention. "*** positions taken before the PTO may bar an inconsistent position on claim construction under § 112, para. 6." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998) (quoting *Alpex Computer Corp. v. Nintendo Co.*, 102 F.3d 1214, 1221 (Fed. Cir. 1996)). Several such statements occurred here, where the applicant explained the shortcomings of the relevant prior art. The caselaw has held these to be explicit disavowals. Here, the explanations concerned how the valve opened and closed, the type of seal, and a locking mechanism.

Statements Not Confined to Particular Claims. Where the applicant distinguished the invention with language as follows: the "control valve of the present invention," "the control valve structure of the above-identified application," and "the control valve disclosed in the above-identified application," then the comments speak to all of the pending claims. Also, a continuing application containing the same terms is understood to have the same disclaimers as to such terms, particularly where the applicant stated that the invention of the subsequent application "is patentable over the same [prior art] for the reasons stated in the parent case."

"In Pari Material". The Court applied a doctrine that absent a reason in the patent or prosecution history to the contrary, it would apply the same construction to the same terms, citing precedent for this doctrine. *E.g.*, *Wang Labs., Inc. v. Am. Online, Inc.*, 197 F.3d 1377, 1384 (Fed. Cir. 1999); *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999) ("When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation."); see also *Augustine Med., Inc. v. Gaymar Indus., Inc.*, 181 F.3d 1291, 1300 (Fed. Cir. 2000) ("The prosecution history of a parent application may limit the scope of a later application using the same claim term.").

Disclaimer Determined by What Competitor Would Reasonably Believe. The *in banc* decision in *Cybor* emphasized that the scope of the disclaimer must be determined by what "a competitor would reasonably believe that the applicant had surrendered." 138 F.3d at 1457-58. The applicants statements identifying his invention as a particular structure "had the effect of disclaiming pressure valves ... and dynamic seals..."

Patent Does *Not* Extend to Every Structure Performing the Function. A functional characterization that any valve structure that performs the functions is within the scope of the patent is "inconsistent with" the statute. Means plus function claim elements are limited in scope to the disclosed structure and equivalents, not "any structure" that performs the recited function.

No Infringement. The accused device includes structural features that the applicant represented were different from the invention. "Palmer gave specific, detailed reasons for distinguishing his valve from the prior art valves, and in light of those statements no reasonable jury could find that the disclosed valve is equivalent to the valve structure in the accused devices." Where there is no infringement of a §112 para. 6 claim element because "the accused device is not equivalent to the structure disclosed in the specification, the doctrine of equivalents is available only if ... the accused device "represents new technology developed after the issuance of the patent. *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1311 (Fed. Cir. 1998)."

Outcome. "Because the patentee explicitly represented during prosecution that his claims differed from structures in the prior art, we construe the disputed claims to exclude the disclaimed structures. Based on that construction, we uphold the district court's summary judgment of noninfringement".

Bell Atlantic Network Services, Inc. (“Verizon Services”) v. Covad Communications Group, Inc. et al., 262 F.3d 1258, 59 USPQ2d 1865 (Fed. Cir. August 2001)

Before Lourie, Plager, and Gajarsa. Opinion by Gajarsa.

Subject Matter: digital subscriber line (DSL) services

Proceedings Below: The district court (E.D. Va.) construed the claims based on intrinsic evidence. Plaintiff conceded that under the court’s construction, there could be no literal infringement. The district court determined that certain limitations required by the independent claims were not present in Covad’s DSL systems either literally or under the doctrine of equivalents, and granted Covad’s motion for summary judgment of non-infringement. Bell Atlantic appealed.

Issues: (1) Whether the district court correctly construed “plurality of different modes” in claim 1 and “ADSL/AVR receiver” in claim 21 to be “[A] transceiver that operates by dividing available bandwidth between two channels in at least two of the following ways, (a) where the first channel is smaller than the second (“conventional ADSL” mode); (b) where the two channels are of “roughly” equal size (“bi-directional” mode); and (c) where the first channel is larger than the second (“reversible” mode).” (2) Whether the district court correctly construed the first and second “channel” limitations in claims 1 and 21 to be “an amount of bandwidth isolated for communications that may be either unidirectional or bi-directional.” (3) Whether the district correctly construed the “selectively changing” limitation to mean “a change [in transmission rates] is chosen and occurs, although it need not occur during a communication session.”

Intrinsic Evidence is Most Significant Source. “It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history ... Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.’ *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996).”

Ordinary Meaning of Claim Language Is Starting Point. Starting with the claim language itself, the Court gives “claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art. *Hockerson-Halberstadt, Inc. v. Avia Group Int’l, Inc.*, 222 F.3d 951, 955, 55 USPQ2d 1487, 1490 (Fed. Cir. 2000).”

Use Prism of Ordinarily Skilled Artisan. “... a technical term used in a patent is interpreted as having the meaning a person of ordinary skill in the field of the invention would understand it to mean. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 2001 WL 792669, *7 (Fed. Cir. 2001).”

Treatment of Dictionaries and Treatises. “Dictionaries and technical treatises, which are extrinsic evidence, hold a ‘special place’ and may sometimes be considered along with the intrinsic evidence when determining the ordinary meaning of claim terms. *Vitronics*, 90 F.3d at 1584 n.6, 39 USPQ2D at 1577 n.6. Furthermore, we have previously cautioned against the use of non-scientific dictionaries ‘lest dictionary

definitions ... be converted into technical terms of art having legal, not linguistic significance.’ *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478, 45 USPQ2d 1429, 1433 (Fed. Cir.1998).”

Overcoming Presumption of Ordinary Meaning. To overcome the “‘heavy presumption’ in favor of the ordinary meaning of claim language as understood by one of ordinary skill in the art,” one can show:

- (1) that patentee was his own lexicographer, or
- (2) “a claim term deprives the claim of clarity such that there is ‘no means by which the scope of the claim may be ascertained from the language used.’”

For (1), one examines the intrinsic evidence “to determine whether the patentees have given the term an unconventional meaning. *Hockerson*, 222 F.3d at 955, 55 USPQ2d at 1490.” The specification may define terms expressly or by implication and usually is dispositive.

Notice Requirement for Redefinitions. If a patentee is going to redefine a term to be different from its ordinary meaning, “the intrinsic evidence must ‘clearly set forth’ or ‘clearly redefine’ a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term. *Elekta Instr. v. O.U.R. Scientific Int’l*, 214 F.3d 1302, 1307, 54 USPQ2d 1910, 1913 (Fed. Cir. 2000); *N. Telecom v. Samsung*, 215 F.3d 1281, 1287, 55 USPQ2d 1065, 1069 (Fed. Cir. 2000). We have also stated that the specification must exhibit an ‘express intent to impart a novel meaning’ to claim terms. *Schering v. Amgen*, 222 F.3d 1347, 1353, 55 USPQ2d 1650, 1654 (Fed. Cir. 2000); *Optical Disc v. Del Mar Avionics*, 208 F.3d 1324, 1334, 54 USPQ2d 1289, 1295 (Fed. Cir. 2000).”

Notice can be Implicit. An explicit redefinition of a term is not required. A written description of the preferred embodiments can provide guidance by implication.

Prosecution History. One examines the prosecution history to determine if a potential claim construction has been surrendered by amendment or argument to overcome or distinguish a reference.

When Extrinsic Evidence Proper. If intrinsic evidence makes the meaning of the claim limitation apparent, one should not turn to extrinsic evidence, except that used to ascertain the ordinary meaning of the claim limitation. “However, in the rare circumstance that the court is unable to determine the meaning of the asserted claims after assessing the intrinsic evidence, it may look to additional evidence that is extrinsic to the complete document record to help resolve any lack of clarity ... This additional extrinsic evidence includes such evidence as expert testimony, articles, and inventor testimony ... This extrinsic evidence may be used only to assist in the proper understanding of the disputed limitation; it may not be used to vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history.”

Claim Construction:

(1) “plurality of different modes” and “ADSL/AVR”: Bell Atlantic argued that based on the ordinary meaning of “mode,” the phrase “plurality of different modes” simply required “multiple operational states providing different transmission services, as distinguished by their upstream and downstream

transmission rates, whether the differences are achieved by altering bandwidth or by the other familiar methods of altering transmission rate.” Bell Atlantic contended that the universe of “modes” contemplated by the ’786 patent was not limited to the three modes (conventional, bi-directional, and reversible) discussed by the court. In particular, Bell Atlantic argued that the rate of data transfer (as opposed to bandwidth) within each of the three broad categories can be changed to create additional modes.

Term Defined by Implication. The Federal Circuit rejected Bell Atlantic’s argument, finding that the ’786 specification used the terms “mode” and “rate” to refer to two, separate and distinct concepts. Thus, different “modes” could not be created by varying the data rate within one of the three broad categories. The Court stated that it had not limited the claim terms to the disclosure or the preferred embodiment, but rather the patentees had defined the term “mode” by implication by their consistent use of such term throughout the specification. The Court also found that the prosecution history supported limiting the transceiver to three possible modes given that during prosecution, the Examiner understood “mode of transfer” as being a separate and distinct concept from “speed of transfer.” The Court likewise found that the language of the dependant claims 9-12 supported the lower court’s construction of “mode.”

Although claim 21 recited “ADSL/AVR transceiver “rather than the plurality of different modes,” the Court agreed that it must also operate by dividing the available bandwidth between the two channels in conventional, bi-directional, and reversible modes. This construction was supported by the specification and the prosecution history, as the terms “transceiver,” “ADSL/AVR,” and “ADSL/AVR transceiver” were used interchangeably throughout.

(2) “channel”: Before the Court were the issues of whether the ’786 patent required the first and second channels to support both (1) unidirectional and bi-directional communications and/or (2) an amount of bandwidth separated by frequency. Bell Atlantic disputed the district court’s construction of “channel” and argued that “channel” means a one-way path between communicating entities. Although the district court reasoned that the inventors intended “channel” to encompass both one-way and two-way segments of bandwidth, the Federal Circuit agreed with Bell Atlantic on the “one-way” aspect of the channel limitation. This construction was supported by the specification which discussed either “upstream” or “downstream” channels and thus only unidirectional communication. Despite the specification’s reference to a “two-way” or bi-directional channel, the Court found that the first and second data channel limitations in claims 1 and 21 only supported unidirectional communications.

Bell Atlantic also argued that the ordinary meaning of the term “channel” was not limited to communication paths separated by frequency. The Court disagreed, finding that “[n]owhere does the specification discuss channels created by time-division multiplexing or echo cancellation.” This construction was consistent with the manner in which the patentees used the term throughout the specification. Thus, the Court concluded that in addition to being unidirectional, the first and second channels described in claims 1 and 21 also constitute an amount of bandwidth and, as such, are channels that are separated by frequency.

(3) “**selectively changing**”: Covad challenged the district court’s construction of “selectively changing,” arguing that the limitation requires a change during a communication session.³⁵ The Court disagreed, finding that the specification contemplated the possibility of selectively changing the transmission mode or rate at times *other than* during a communication session. The Court reasoned that the specification’s varied use of the limitation demonstrates the breadth of the term rather than providing a limited definition. The Court thus concluded that the “selectively changing” and “selectively operating” limitations in claims 1 and 21 mean that a change is chosen or occurs without the alteration of the transceiver hardware, although the change need not occur during a communication session.

Infringement: Bell Atlantic argued that Covad’s SDSL systems infringed under the doctrine of equivalents. The Court disagreed, finding that Bell Atlantic’s theory of infringement would vitiate two claim limitations (the “selectively changing” and the “channel” limitations), since Covad’s SDSL linecards (1) were fixed with physical filters, and the amount of bandwidth could not be changed once the transceivers were implemented and manufactured; and (2) used “echo cancellation” techniques to allow two-way communication in a single frequency range over a single channel.

Outcome: The Court affirmed the district court’s finding of noninfringement in Covad’s favor *and assigned costs against plaintiff-appellant*.

Biotec Biologische Naturverpackungen GmbH & Co. KG, v. BioCorp, Inc., 249 F.3d 1341, 58 USPQ2d 1737 (Fed. Cir. May 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 16639 (Fed. Cir. July 2001).

Before Mayer, Newman and Schall. Opinion by Newman.

Subject matter: thermoplastically processable starch

Proceedings Below: On a summary judgment motion, the district court (C.D. Cal.) upheld the validity of the patents. The jury found BioCorp liable for infringement, but not willful infringement.

Issue: Whether “substantially water free” as recited in the limitation “mixing said admixture until it is substantially water free and until the crystalline content is less than 5%” encompasses defendant’s thermoplastically processable starch.

Testimony on Construction of “substantially water free”: The district court received testimony from the inventor and an expert witness “during trial” to explain the prosecution history and the meaning of the

³⁵ Bell Atlantic argued that the Federal Circuit lacked jurisdiction to hear Covad’s arguments because Covad did not file a cross-appeal. However, the Court noted that the general rule is that the prevailing party may present an argument that supports the judgment in its favor as long as the acceptance of that argument would not lead to a reversal or modification of the judgment rather than the affirmance. See Carnival Cruise Lines, Inc. v. U.S., 200 F.3d 1361, 1365 (Fed. Cir. 2000). Because Covad’s more favorable construction would lead to an affirmance of the district court’s ruling, no cross-appeal was required.

declarations therein. The term “substantially water free” is not given a numerical limit in the specification of the patent-in-suit. Based on the testimony and evidence, the district court ruled that stated that the term “substantially water free” meant a water content below 5%. The Federal Circuit affirmed this claim construction.

Calculation of Water Content: Defendant argued that the district court erred in its method of calculation of water content. This argument was rejected by the Court, which ruled that the issue of how to conduct the calculation was fully aired at trial and that the district court’s claim construction is in accordance with the specification and supported by the evidence.

Error in Prosecution Record: The Court upheld plaintiff’s argument that a statement in the prosecution history was an “obvious error” by its agent. The Court held that an error in the prosecution record must be viewed as are errors in documents in general; that is, would it have been apparent to the interested reader that an error was made, such that it would be unfair to enforce the error.

Expert Testimony re Measurement of Crystalline Content: The district court received expert testimony, within the hearing of the jury. The Federal Circuit found no error, citing *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993) and related cases and explained that this was relevant to the infringement issue.

Outcome: The Federal Circuit affirmed the infringement and validity judgments.

Bio-Technology General Corp. v. Bio-Technology General (Israel) Ltd., 267 F.3d 1325, 60 USPQ2d 1430 (Fed. Cir. Sept. 2001)

Before Newman, Clevenger and Gajarsa. Opinion by Gajarsa.

Subject Matter: method of producing human growth hormone via bacterial reproduction and gene expression

Proceedings Below: The district court (S.D.N.Y.) entered, and the plaintiff appealed, JMOL that claim 2 of the patent-at-issue was invalid for lack of enablement. The lower court also dismissed antitrust counts, which the defendant cross-appealed.

Issues: The Court ruled regarding enablement and claim construction, infringement and the lower court’s dismissal of the defendant’s antitrust claims.

Enablement and Prior Claim Construction: As part of its enablement analysis, the Court looked at whether the method of the patent-in-suit produces a mature cell product.³⁶ As the claim had been construed in other litigation, the Court held that the previous construction was binding.

The Court first looked at whether the defendant had proven that the patent did not enable a scientist skilled in the art to make any mature cell product. It held that the evidence in proceedings below was to be considered in the light most favorable to the jury's verdict, as the ruling on appeal was JMOL. The Court looked at the expert testimony presented by each side, and found that their statements concerning the underlying science were similar. The Court found that, because the scientific theories of both sides were similar, a reasonable jury could find that the patent was enabling.

Next the Court addressed whether the patent enabled "a substantial amount" of cell product. Further, the Court looked at whether the plaintiff was estopped from asserting that the patent enabled production of mature product due to statements made to the PTO in a divisional application. Looking at the specification of the patent, the Court held that the fact that the patent produces mature cell product does not invalidate the claims for lack of enablement. It held that the prior court's claim construction was fairly clear, and that the patent was therefore enabling.

Other Issues: The Court further decided the issues of infringement and the dismissal of antitrust issues. Regarding infringement, the Court held that ambiguities arose as to whether the defendant conceded infringement, and therefore remanded the issue to the lower court. On the dismissal of antitrust issues, the Court found that the lower court's decision was not clear error, and therefore affirmed its dismissal of the claims.

Outcome: The Court reversed the district court's finding of invalidity. It further remanded the case with respect to infringement and affirmed the lower court's dismissal of defendant's antitrust claims.

Biovail Corp. International, et al. v. Andrx, 239 F.3d 1297, 57 USPQ2d 1813 (Fed. Cir. Feb. 2001).

Before: Newman, Clevenger, and Gajarsa. Opinion by Gajarsa.

Subject Matter: hypertension and angina medication

Proceedings Below: After denying cross-motions for summary judgment, the district court (S.D.Fl.) in a bench trial found, based on its claim construction, that Andrx did not literally infringe. The district court further held that prosecution history estoppel operated as a complete bar to infringement by the doctrine of equivalents.

³⁶In particular, the defendant argued that the patent was invalid because the method of the patent produces only met-hGH (methionine-containing hGH), and the leader methionine may not be cleaved intracellularly by the *E. coli* bacterium used in recombinant techniques.

Issues: whether the “admixture” in claim 1 of the patent must be “homogeneous.”³⁷ The district court construed “admixture” of claim 1 to describe “two or more items [that] are commingled and interdispersed to obtain a homogeneous product.”

Scope of Review: A district court’s claim construction and prosecution history estoppel are legal questions reviewed *de novo*. Literal infringement is reviewed under the clearly erroneous standard, as it is a question of fact. Finally, infringement under the doctrine of equivalents is also a factual issue reviewed for clear error.

Analysis of Intrinsic Evidence: “To construe a patent claim, a court first analyzes the intrinsic evidence of record—the claims and written description of the patent itself, and, in evidence, the prosecution history.”

Patentee as Lexicographer: The Court held that “a patentee may choose to be his own lexicographer in a manner other than their ordinary meaning.” Therefore, it reviewed the specification and prosecution history to determine whether the terminology was defined inconsistent with its ordinary meaning.

General Rule re Unstated Limitations. “As a general proposition, a limitation that does not exist in a claim should not be read into that claim.” The “homogenous” feature is found in neither the claim nor the specification.

Prosecution History Meaning Applied: In continuation applications, “the prosecution history of a claim limitation in [a] first patent to issue [is] properly applied to the same limitation in the second patent to issue.” In this case, the patent-in-suit stemmed from a series of continuation applications stemming from a 1991 application. To overcome prior art in the 1991 application, the patentee added the admixture limitation. In remarks contrasting its invention through the addition of this limitation, the patentee emphasized that “it was impossible to have a sugar central core in a *homogenous* bead as in [the 1991 application]. Such a bead [with a sugar central core] is, by nature, heterogeneous.” The Federal Circuit accordingly ruled that the “admixture” limitation in the patent-in-suit also must be “homogenous.”

Prosecution History Estoppel Applied: The “admixture” limitation was added in the parent patent to distinguish prior art. Accordingly, this amendment was related to patentability. The patent-in-suit stemmed from this 1991 application. Consequently, under prosecution history estoppel, “Biovail is completely barred from claiming that any product not containing an ‘admixture’ ... infringes claim 1 of the [patent-in-suit] under the doctrine of equivalents.”

³⁷ Claim 1 provides, in pertinent part, “1. An extended-release galenical composition ... each bead containing one or more of the Diltiazem salts and an effective amount of a wetting agent in admixture with one or more Diltiazem salts to maintain the solubility of the Diltiazem in each bead, ensuring that the solubility of the Diltiazem is unaffected by the pH of the gastrointestinal tract or other adverse conditions which the composition will meet therein, ****”

Bose Corp. v. JBL, Inc., 274 F.3d 1354, 61 USPQ2d 1216 (Fed. Cir. Dec. 2001)

Before Mayer, Newman, and Bryson. Opinion by Mayer.

Subject Matter: speaker port used in loudspeakers

Proceedings Below: The District Court (D. Mass.) granted defendant JBL's motion for summary judgment of non-infringement as to literal infringement but denied it as to equivalency. Following a bench trial, the court found in favor of Bose, and JBL appealed.

Issues: The issues on appeal concerned claim amendments, the exclusion of evidence and the calculation of reasonable royalty rates by the district court.

Non-narrowing Amendments to the Claims: In its review, the Court looked at amendments made to the original claims to determine if their scope was narrowed during prosecution. In particular, the Court focused on original dependent claim 2. Claim 2 was objected to as being dependent upon a rejected base claim, and was thereafter rewritten in independent form to include all limitations of the base claim. After being rewritten, the examiner required the addition of the phrase "having a major diameter," in order to comply with §112, ¶2. The Court found that the antecedent basis rejection did not narrow the claim's scope. It quoted the MPEP stating

the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite.

Because the claim was not narrowed, the Court affirmed the district court's denial of the motion for summary judgment of non-infringement under the doctrine of equivalents.

Other Issues: Applying regional circuit law, the Court found no abuse of discretion by the trial court by refusing to permit, due to its untimeliness, the inclusion of a French patent application during trial. The Court further found that the district court did not err in its reasonable royalty calculation.

Outcome: The Federal Circuit affirmed the lower court's findings of infringement, that the amendment of a claim during prosecution did not narrow the limitation, that a French patent application was properly excluded, and that evidence supported the reasonable royalty rate determined by the district court.

Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc. et al., 246 F.3d 1368, 58 USPQ2d 1508, No. 00-1304 (Fed. Cir. Apr. 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 14223 (Fed. Cir. June 2001).

Before Lourie, Gajarsa, and Dyk. Opinion by Lourie.

Subject matter: cancer treatments

Proceedings Below: The district court (D. N.J.) entered summary judgment that various asserted claims were invalid for anticipation.

The district court: (1) determined that a preamble did not limit the claim scope but merely stated the intended use or purpose of the invention; (2) ruled that “an antineoplastically effective amount” was inseparable from specific concentrations described in the claims, and (3) found that “reducing hematologic toxicity” meant reducing toxicity relative to that normally experienced in a 24 hour treatment infusion (the standard time prior to Bristol’s development of the 3 hour infusion time).

The Invention. The inventors discovered that notwithstanding limitations on treatment due to hypersensitivity, a taxol treatment could be given effectively over a three hour period rather than the 24 hour period in the prior art.³⁸

Cumulative Preamble. Addressing the preamble of ‘803 claim 1, the Federal Circuit noted:

If the body of the claim sets out the complete invention, and the preamble is not necessary to give "life, meaning and vitality" to the claim, "then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1166 (Fed. Cir. 1999).

³⁸ Some of the claims at issue provided:

803 claim 1: “A method for reducing hematologic toxicity in a cancer patient undergoing taxol treatment comprising parenterally administering to said patient an antineoplastically effective amount of about 135-175 mg/m² taxol over a period of about three hours.”

537 claim 1: “A method for treating a patient suffering from a taxol-sensitive tumor comprising (i) premedicating said patient with a medicament that reduces or eliminates hypersensitivity reactions, and (ii) parenterally administering to said patient about 135-175 mg/m² taxol over about three hours.”

537 claim 5: “A method for treating a cancer patient to effect regression of a taxol-sensitive tumor, said method being associated with reduced hematologic toxicity, said method comprising: (i) premedicating said patient with a medicament that reduces or eliminates hypersensitivity reactions; and (ii) parenterally administering to said patient about 135-175 mg/m² taxol over about 3 hours.”

Hence, the Federal Circuit agreed with the district court and ruled that the preamble term, “reducing hematologic toxicity,” stated merely the intended use of the method and did not limit the scope of the claims. The steps of the method were performed in the same manner regardless of any reduction on the patient’s hematologic toxicity level. Also, “the language of the claim itself strongly suggests the independence of the preamble from the body of the claim. See, e.g., *In re Hirao*, 535 F.2d 67, 70, 190 USPQ 15, 16-17 (CCPA 1976) (holding that the preamble was non-limiting because it merely recited the purpose of the process, which was fully set forth in the body of the claim).” Accordingly, the Court found this expression to be non-limiting.

An “Effective Amount” Not Limiting Where Particular Doses Also Recited: The phrase “an antineoplastically effective amount” found in the ‘803 claims contemplated an intended result and duplicated express limitations appearing elsewhere in the claim; hence it was not limiting: “The express dosage amounts are material claim limitations; the statement of the intended result of administering those amounts does not change those amounts or otherwise limit the claim.” Furthermore, this phrase was amended voluntarily by the applicant after the Examiner indicated that the claims were allowable.

Claim Differentiation: a Presumption, Not a Hard and Fast Rule: The Court rejected Bristol-Myers’ claim differentiation argument, ruling that the doctrine is not a hard and fast rule. It simply creates a presumption that each patent claim has a different scope.

We decline to blindly apply the doctrine in this case to supplant other canons of claim construction that compel our conclusion that independent claims 1 and 5 have identical scope and that independent claims 2 and 8 have identical scope. We therefore affirm the district court’s interpretation of claims 5 and 8 as limited only to the actual steps of those claims, without regard to the result of performing the claimed steps.

Statement of Intended Efficacy and Reduced Toxicity Not Limiting: Bristol-Myers argued that its method was patentable as a new use of a known process. Acknowledging that new uses of old methods are patentable subject matter, the present case involved a newly discovered *result* of a known process that was inherent to the old process and, thus, not patentable.

Newly discovered results of known processes directed to the same purpose are not patentable because such results are inherent. ***

Bristol has done no more than claim a result (efficacy) of three-hour paclitaxel infusions in cancer patients. As in *May*, the purpose -- treating cancer -- is no different from the purpose disclosed by *Kris*. Although in suitable cases we will construe claims so as to preserve their validity [citation omitted], the expressions “reduced hematologic toxicity,” “antineoplastically effective amount,” and “[a] method for treating a cancer patient to effect regression of a taxol-sensitive tumor, said method being associated with reduced hematologic toxicity” do not impart patentability to Bristol’s claims because, as we hold here, they do not distinguish those

claims over the prior art. We therefore affirm the district court's conclusion that these expressions of intended efficacy and reduced toxicity are non-limiting.

Outcome: The Court affirmed the summary judgment as to the invalidity of some claims over prior art, vacated it as to other claims, and remanded.³⁹

Brown v. 3M et al., 265 F.3d 1349, 60 USPQ2d 1375 (Fed. Cir. Sept. 2001), cert. denied 2002 U.S. Lexis 2167

Before Mayer, Newman, and Clevenger. Opinion by Newman.

Subject Matter: computer programs directed to the Year 2000 (Y2K) problem

Proceedings Below: The district court (D. Ariz.) entered summary judgment of invalidity (anticipation) of the patent-at-issue.

Issue: The Federal Circuit determined whether the district court's finding of anticipation was in error. In so doing, the court looked at whether every element and limitation of the claimed invention was present in a single prior art reference, and in particular whether the lower court's construction of the terms of the patent were correct in making such a determination.

Construction of the Word "Or": The district court construed the word "or" as meaning that the apparatus was capable of converting "only to-digit, only three-digit, only four-digit, or any combination of two-, three-, and four-digit date-data." The Federal Circuit found that this construction was supported by the plain reading of the claim. The court further noted that the term is not a "technical term of art, and [does] not require elaborate interpretation," and that there was "no basis in the specification or prosecution history for reading 'or' as 'and.'"

Outcome: The Federal Circuit affirmed the lower court's interpretation of the claim, and affirmed the finding that the claim was anticipated and invalid for lack of novelty.

³⁹Validity Issues. A publication disclosed a failed experiment; however, that did not prevent it from being anticipatory. The method performed in the experiments performed all the steps of the claim at issue. Therefore, the publication could properly anticipate under §102(b). Also, the Court held that the publication was enabling based on various other references that were dated more than one year prior to the earliest filing date of the patent-in-suit. The Court stressed that the references used to establish enablement did not have to antedate the anticipating reference.

The Federal Circuit reversed summary judgment of anticipation for two of the claims of the patent-in-suit. The invalidating reference did not disclose the specific classes of premedicants in the claims. The Court noted that while the disclosure of a small genus may anticipate the species even if the species are not recited, the record failed to establish that the general class of premedicants and anticipatory reference was small enough to effectively describe the specific claim premedicants.

Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 58 USPQ2d 1801 (Fed. Cir. May 2001), reh. and reh. *en banc* denied, 2001 U.S. App. LEXIS 16604 (Fed. Cir. June 2001).

Before Bryson, Linn and Dyk. Opinion by Linn.

Subject matter: fuel injection conversion systems

Proceedings Below. Under the claim construction by the district court (N.D. Cal.), Budde's patent could not be infringed. The court also found no structure in the patent-in-suit corresponding to the claimed function (as construed by the court). The court entered final judgment in favor of Harley-Davidson.

Issue: The claim limitations at issue were called the "electronic sensing means" limitation⁴⁰ and the "status sensing means" limitation,⁴¹ both written in means plus function format. Plaintiff Budde asserted that the district court impermissibly narrowed the term "determining" in the claimed function to require electronic "sensing." Defendant argued that the function requires that the electronic sensing means analyze firing pulses and that the claims failed to disclose structure corresponding to the function of analyzing firing pulses.

Scope of Review: Determining the issue of infringement requires a two-step analytical approach. First, the claims must be construed to determine their scope. Second, a determination must be made as to whether the properly construed claims read on the accused device. In this case, Budde conceded the second part of the infringement analysis, leaving only the district court's claim construction in issue. Claim construction is a matter of law that is reviewed *de novo*.

Sequence of Construing §112 ¶6 Claim Elements: (1) The court must first define the particular function claimed, then (2) the court must identify "the corresponding structure, material, or acts described in the specification." Only after this identification can the scope of coverage of the limitation be measured. 35 U.S.C. § 112, para. 6; *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1428, 44 USPQ2d 1103, 1110 (Fed.Cir.1997); *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed.Cir.1994) ("if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by the language" (emphasis added)).

Measure Disclosure From Vantage Point of Skilled Artisan: "Whether or not the specification adequately sets forth structure corresponding to the claimed function necessitates consideration of that disclosure from the viewpoint of one skilled in the art [citations omitted]. [F]ailure to disclose adequate structure corresponding to the recited function in accordance with 35 U.S.C. §112, ¶1, results in the claim being of indefinite scope, and thus invalid, under 35 U.S.C. §112, ¶2."

⁴⁰Claim 1 recites, "an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto***"

⁴¹Claim 1 further recites, " a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom***"

Presumption of Validity Applies: If a patent lacks a disclosure of structure in its specification that performs the claimed function from a §112 ¶6 limitation, then the claim is invalid for indefiniteness. Due to the statutory presumption of validity, overcoming the presumption requires that any facts supporting a holding of invalidity to be proven by clear and convincing evidence. “Thus, a challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function.”

Linking Requirement for §112 ¶6: “As a quid pro quo for the convenience of employing §112, paragraph 6, Budde has a duty to clearly link or associate structure to the claimed function.”

Must Read Specification as a Whole, Use “Viewing Glass” of Skilled Artisan: The district court gave a narrow construction of the function, relying for example on statements from the objects of the invention.⁴² “The district court found that these statements require the electronic sensing means to pick-up or sense high voltage pulses fed to the spark plugs from the ignition coil, rather than sensing camshaft position.” This narrowed view of the claim function was error. This varied from the actual claim language requirement that “merely recites the functions of ‘determining when’ pulses are delivered to fire the spark plugs and ‘producing an electronic signal in response thereto,’ not the function of sensing the high voltage pulses sent from the ignition coil to the spark plugs. Contrary to the view of the district court, ‘determining’ when pulses are delivered to fire the spark plugs does not require direct detection of those pulses.” The district court’s focus on narrow statements in isolation:

... cannot be squared with the specific passage that describes in detail the electronic sensing means...

The specification must be read as a whole to determine the structure capable of performing the claimed function. *** In construing terms used in patent claims, it is necessary to consider the specification as a whole, and to read all portions of the written description, if possible, in a manner that renders the patent internally consistent. In addition, it is important to construe claim language through the “viewing glass” of a person skilled in the art. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 231 F.3d 859, 866, 56 USPQ2d 1647, 1653 (Fed.Cir.2000).

The patent specification recited four alternative sensors and disclosed how signals from those sensors are analyzed to determine electronically when each cylinder needs a fuel charge. Each of these sensors is structure corresponding to the claimed function of the electronic sensing means.

“Clear and Convincing” Evidentiary Standard: The district court should have applied the “clear and convincing” evidentiary standard in assessing Harley-Davidson’s assertion that the specification fails to disclose the structure corresponding to the “electronic sensing means.”

⁴² For example, one of these provided, “It is another object of the invention to provide a fuel injection conversion system for Harley-Davidson motorcycle engines which is able to time the fuel injection sequence *from analysis of the spark pulses*” (emphasis by the Court).

Reference to “Commercially Available” Units Is Sufficient: One issue was whether the patent sufficiently disclosed structure capable of performing one of several functions recited in a §112, ¶6 claim element. The district court ruled that the corresponding structure was identified in the written description of the patent-in-suit as a “commercially available” vacuum sensor. Defendant urged that the generic reference in the specification fails adequately to disclose structure for performing the specific function. Since these items were well known in the art, the challenged phrase “commercially available units” sufficiently apprised those skilled in the art the sensors that were claimed.

“Commercially Available” Units Not Overbroad: Defendant asserted that using the phrase “commercially available units” unfairly allows the patentee to incorporate by reference every commercially available vacuum sensor, contrary to *Amtel Corporation v. Information Storage Devices, Inc.*, 198 F.3d 1374, 53 USPQ2d 1225 (Fed. Cir. 1999). Rejecting Harley-Davidson’s argument, the Court distinguished *Amtel*, where the issue was whether a reference in a patent specification to a published article to disclose part of the circuitry shown as a black box in the patent drawings would satisfy the requirements of §112, ¶6 that corresponding structure be adequately described in the specification. “In other words, the content of the article could not be used to discern sufficient structure in the specification that corresponded to the claimed function.” 250 F.3d at 1382.

In the present case, however, the issue is not whether subject matter absent from the specification could be incorporated to satisfy the statute. Instead, it is whether characterizing the vacuum sensor in the patent specification as a “commercially available unit” would be understood by one skilled in the art as structure capable of performing the function recited in the claim limitation. The Federal Circuit found no clear and convincing evidence that the disclosure was insufficient.

Outcome: The Federal Circuit vacated and remanded the district court’s judgment of non-infringement, due to an erroneous claim construction.

Crystal Semiconductor Corp. v. Tritech Microelectronics Int’l, Inc., 246 F.3d 1336 (Fed. Cir. March 2001)

Before Mayer, Clevenger and Rader. Opinion by Rader.

Subject matter: analog to digital converter technology

Proceedings below: The district court entered a partial summary judgment of literal infringement. At the close of the evidence but before submitting the case to the jury, the court entered a JMOL of no invalidity due to the on-sale bar. The jury returned a damages award which the court remitted, granting a JMOL that Crystal was not entitled to lost profits or price erosion damages.

Claim Construction by District Court. A special master construed the claims of the three patents at issue, and the district court (W.D. Tex.) adopted the special master’s claim interpretation.

First Patent

“A Portion”. The district court construed “disposed over a portion” in several of the claim limitations to require an “area of coincidence between the two layers greater than zero.” The Court noted that when the indefinite articles “a” or “an” are used in a patent claim, the articles mean “one or more” in claims containing open-ended transitional phrases such as “comprising.”

“Having”. As the claim at issue used the term “having” rather than the term “comprising,” the Court looked to determine whether “having” is an open-ended transitional phrase. The Court noted that the term “having” can make a claim open but does not create a presumption that the body of the claim is open. The Court examined the claim in its full context to determine whether claim 1 is limited to its recited elements by the use of “having.” The Court concluded that the use of “having” does not limit claim 1 to a closed meaning.

Conclusion on “A Portion”. The Court concluded that the written description shows the intent to make claim 1 at least partially open to permit the limitation “disposed over a portion” to mean “disposed over at least one portion.” The Court concluded that any assertion that “disposed over a portion” means “disposed over only one portion” would contradict the clear purpose of the invention as described in the written description, depicted in one of the figures, and recited in the claim. Also, the Court determined that such an assertion would improperly read the preferred embodiment out of claim 1.

“Disposed A Predetermined Distance”. The district court construed the term “predetermined distance” in claim 1 to mean “[a] distance that is determined before the fourth conductive layer is disposed on the substrate and that is sufficiently close to the second shielded conductive layer to provide acceptable shielding.” The Court found no error in the district court’s interpretation.

Second Patent

“A First Clock Signal” Not Limited to One Clock Only. The Court concluded that the term “a first clock signal” in “a first clock signal to said analog circuitry for controlling the sampling of an analog input voltage” encompasses more than one clock. The Court noted that because the claim uses “comprising” in its transitional phrase, it encompasses more than one clock unless the written description or the prosecution history clearly limits the claim to its recited elements. The Court also noted that the article “a” in “a first clock signal” generally suggests one or more clocks. The Court noted that the written description and the figures disclose two analog clocks. As neither the written description nor the prosecution history precludes more than one clock or clock signal, the Court concluded that the patent does not limit “a first clock signal” to only one clock.

Outcome. The Federal Circuit affirmed the district court’s claim interpretation and judgments holding the patents willfully infringed. Several other rulings were vacated, and the case was remanded to the district court.

Day International, Inc. v. Reeves Brothers, Inc., 260 F.3d 1343, 59 USPQ2d 1790 (Fed. Cir. August 2001)

Before Clevenger, Schall, and Gajarsa. Opinion by Gajarsa.

Subject Matter: manufacturing compressible printing blankets used for offset lithography

Proceedings Below: The district court (D. S.C.) found the patent not infringed because it was limited to processes which involve an initial curing step at “low temperatures,” namely at 110-170 degrees F. Reeves’ process never operated at a temperature below 270 degrees F.

Issues: construction of the phrase “melting point of said microcapsules” in the “maintaining step” of claims 1 and 21.

Claim Construction of “melting point of said microcapsules”: Day argued that “melting point of said microcapsules” had a plain and clear meaning to one of ordinary skill in the art rendering any reference to the written description unnecessary. However, the magistrate⁴³ found that arguments made by Day during prosecution — particularly when Day distinguished the prior art references — limited the scope of the invention to processes which involve an initial curing at “low temperatures [namely at 110-170 degrees F],” rather than at conventional curing temperatures, *e.g.*, 284 degrees F. Day also argued that such prior art procedures caused the microcapsules to melt. The Federal Circuit agreed with the magistrate, finding that the magistrate did not err in light of the prosecution history when he construed the “maintaining” step to require microcapsules that melted at conventional curing temperatures and when he concluded that the claims required an initial curing step that took place at temperatures below conventional curing temperatures.

Infringement: Because it was undisputed that Reeves used microcapsules that melted at approximately 330 degrees F (which was well above the 270-280 degrees F vulcanization temperatures used to cure the compressible layer) and that Reeves never used the compressible layer in its printing blankets at a temperature below 270 degrees F, then Reeves’ processes did not practice the “maintaining” step of the ’928 patent. Thus, the Federal Circuit agreed that no literal infringement could exist. Likewise, the Federal Circuit deemed Day’s disavowal of the prior art temperatures during prosecution of the ’928 patent as prosecution history estoppel. Because Day could not recapture subject matter that it had surrendered during prosecution, the Federal Circuit upheld the Magistrate’s finding of non-infringement under the doctrine of equivalents.

Outcome: The Court affirmed the district court’s findings of noninfringement either literally or under the doctrine of equivalents.

⁴³ The parties had consented to trial before the Magistrate.

Dayco Products, Inc. v. Total Containment, Inc., 258 F.3d 1317, 59 USPQ2d 1489 (Fed. Cir. July 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 21101 (Fed. Cir. Aug. 2001).

Before Mayer, Linn and Dyk. Opinion by Dyk.

Subject matter. Flexible hoses and coupling assemblies that can be sealingly connected to each other for utilization in underground gas containment systems

Proceedings Below. The district court (W.D. Mo.) construed the claims of five patents-in-suit and then granted summary judgment of non-infringement, from which Dayco appealed.

Issue. Did the district court judge properly grant summary judgment based on the claim construction, specifically the meaning of the terms “respectively received in,” “different than,” “outwardly convex projections,” “outwardly directed projections,” and “plurality”?⁴⁴

Background. The district court decided, without much indication of reasoning, the meaning of the claims. Summarizing, the Federal Circuit stated that the judge –

construed the disputed claim language, including the phrase ‘said projections of said insert means being respectively received in said recesses of said inner hose,’ which it determined to mean ‘three or more projections that extend outward from the peripheral surface of the insert means with two or more recesses located between the projections resulting in an alignment of the projections with the recesses where the projections are completely received within the recesses of the inner hose.’ With respect to the '050 and '023 patents, the district court construed the limitation that the length of the insert means projections be ‘different from’ the length of each of the inner hose recesses to simply mean that the length of the insert means projections must be ‘different from’ the length of the inner hose recesses. With respect to the '752 and '822 patents, the district court construed the limitation that the length of the insert projections be ‘different than’ the length insert means recesses to mean

⁴⁴Independent claim 1 of the '050 patent is representative of the claims in suit. The relevant terms have been italicized: “1. In a hose construction comprising a tubular hose having an inner peripheral surface means and an outer peripheral surface means, and a coupling secured to one end of said tubular hose, the improvement wherein said inner peripheral surface means of said tubular hose comprises an inner corrugated hose made of polymeric material and having inwardly directed projections with recesses there between and extending from said one end of said tubular hose to the other end thereof and wherein said coupling has an insert means disposed in said one end of said tubular hose and being radially outwardly expanded into sealing relation with said inner corrugated hose, said insert means having an outer peripheral surface means defined by *a plurality of outwardly directed projections* with recesses there between, said projections of said insert means being *respectively received in* said recesses of said inner hose and said projections of said inner hose being respectively received in said recesses of said insert means whereby the interior of said tubular hose is substantially sealed to the interior of said coupling, said projections of said insert means each having a transverse cross-sectional configuration of a certain length that *is different from* the transverse cross-sectional length of each of said recesses of said inner hose.”

that the length of the insert means recesses must be ‘greater than’ the length of the inner hose projections.

[internal citations omitted].

General Rules of Claim Construction

On appeal, the Federal Circuit found that the judge misconstrued the claims in four respects: “completely received”, “greater than”, the orientation of the projections, and “plurality”. The Federal Circuit enumerated several general principles of claim construction:

Perspective of Ordinarily Skilled Artisan. “We must always be conscious that our objective is to interpret the claims from the perspective of one of ordinary skill in the art, not from the viewpoint of counsel or expert witnesses retained to offer creative arguments in infringement litigation.”

Notice to Public. “One important consideration in claim construction is whether the patent has given adequate notice to the public of the proposed claim construction.”

No Importing Into Claims. “Although we construe claims in light of the teaching of the specification, we do not treat characteristics of a preferred embodiment as claim limitations.” “Adding limitations to claims not required by the claim terms themselves, or unambiguously required by the specification or prosecution history, is impermissible.”

Dictionary. “In accordance with standard dictionary definitions, we have held that ‘plurality,’ when used in a claim, refers to two or more items, absent some indication to the contrary.”

Ambiguous Specification Teaching Not to be Imported into Claim. As to the district court’s determination that “respectively received in” meant completely received, the Federal Circuit found that the teaching of the specification was ambiguous and thus such a limitation should not be read into the claims. Additionally, the Court found that it was improper to construe the claims to require alignment of the projections where such a limitation is not required by the claim language nor specification.

Inconsistent Interpretations Were Erroneous. As to the “greater than” interpretation the judge gave to the claim language of “different from”, the Federal Circuit initially rejected that construction as it was inconsistent with the judge’s construction of the same language in a sister patent. The `050 and `023 patents were determined to require only a length “different from,” while the identical term with a similar specification in the `752 and the `822 patents were determined to require a length “greater than.” The Federal Circuit found this different interpretation of the same term in very similar patents to be incorrect. Furthermore, the Court stated that the correct interpretation was the broader one afforded the `050 and `023 patents because the judge improperly read a limitation into the claims of the `752 and `822 patents from the preferred embodiment.

Improper Construction of “Outwardly Directed Projections”. Federal Circuit also found the judge’s interpretation of the claims to include a limitation based on the orientation of the projections to be incorrect as to all the patents except the `686 patent which included the language “outwardly convex projections” rather than as the other patents claimed, “outwardly directed projections”. The Federal Circuit ignored the

parties' arguments which focused on measurement techniques and instead focused on the claim language and specification. The Federal Circuit stated that the judge improperly read a limitation into the claims by narrowly defining what structures constitute "outwardly directed projections". The claim term does not provide a limitation on the shape of the projections, rather only serves to differentiate between those that are inwardly directed.

Meaning of "Plurality". The Federal Circuit also found error in the judge's interpretation of the term "plurality". The judge construed plurality to mean three or more, which the Court found directly in conflict with both the plain meaning and prior caselaw. The judge had based his claim interpretation on the preferred embodiment, which the Court held was improper. Thus, the Court stated that the term "plurality" should be interpreted as more than one.

Outcome. The Court affirmed the summary judgment of non-infringement as to the '686 patent due to the claim limitation of "outwardly convex projections". However, the Court found the remainder of the claim construction was incorrect as a matter of law and thus reversed summary judgment as to non-infringement of the '050, '023, '752, and '022 patents and remanded for trial on the new claim construction.

DeMarini Sports, Inc. v. Worth, Inc., 239 F.3d 1314, 57 USPQ2d 1889 (Fed. Cir. Feb. 2001)

Before: Schall, Bryson, and Linn. Opinion by Linn.

Subject matter: softball bats

Proceedings below: The district court (D. Ore.) entered a summary judgment of non-infringement.

Issue: Whether there is infringement by the accused bat, which uses a "diving board effect" for bending. The bat described in the patent uses the "trampoline effect." The main claim construction issue concerned the relationship of a "frame" and an "insert."⁴⁵

⁴⁵The claims at issue provided: "1. A bat, comprising: a hollow tubular bat frame having a circular cross-section; and an insert positioned within the frame, the insert having a circular cross-section, the insert having first and second ends adjoining the tubular frame, the insert being separated from the tubular frame by a gap forming at least part of an annular shape along a central portion between said first and second ends, the frame elastically deflectable across the gap to operably engage the insert along a portion of the insert between the insert first and second ends.

"2. A bat according to claim 1 in which the insert is suspended within the frame and is secured thereto at said first and second ends.

"15. In a hollow bat having a small-diameter handle portion and a large-diameter impact portion, an improvement comprising an internal structural insert defining an annular gap with an inside wall of the impact portion of the bat and the impact portion elastically deflectable to close a portion of the annular gap and operably engage the insert.

General Principles of Claim Construction:

1. “The construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.”
2. “Interpreting the asserted claims begins with a review of the intrinsic evidence, which consists of the claim language, the written description, and the prosecution history.”
3. “If the intrinsic evidence resolves any ambiguity in a disputed claim, extrinsic evidence cannot be used to contradict the established meaning of the claim language.”
4. “Extrinsic evidence may, however, be accepted by the court to enhance its understanding of the technology.”
5. “As to the review of the intrinsic evidence, the specification is reviewed to determine whether the patentee used terms in a manner inconsistent with their ordinary meaning.”
6. “The prosecution history is considered to determine whether or not there were any express representations made in obtaining the patent regarding the scope and meaning of the claims.”
7. “The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.”

Ordinary Meaning Not Taken in Vacuum: The district court ruled that “the bat frame is the single piece with the large portion for hitting the ball at one end, tapering to the handle with a knob at the other end.” DeMarini asserted, *inter alia*, that “‘bat frame’ is a hollow tube of the sort that covers the hitting end of a bat (*i.e.*, an external shell that is large enough to hold an insert), and that an ‘insert’ is a structure that incorporates both the handle and the portion of the hitting end of the bat that goes inside the external shell.” The dictionary definition of “frame” as “an open structure or rim for encasing, holding or bordering” was not found to be dispositive:

We cannot look at the ordinary meaning of the term "frame" in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history of the '398 patent to determine the proper construction of that term as modified by the claim term "bat" and as used in the claims of the '398 patent.

“18. A bat, comprising: a hollow tubular bat frame having a small-diameter handle portion and a large-diameter impact portion having a circular cross-section with an inner and outer diameter; at least one insert having a substantially circular cross-section with an outer diameter less than the inner diameter of the frame impact portion, the insert being held within the impact portion; and the impact portion being inwardly elastically deflectable such to establish a tight interference fit between the insert and the impact portion.”

Thus, the detailed description of the invention discusses at great length a variety of ways of placing an insert within a bat frame to achieve greater slugging capacity through the leaf-spring effect.

Contrary to DeMarini's argument, the patent does not suggest a bat frame consisting of less than a handle, a tapered portion, and an impact portion.

Court Declines to Base Construction on What Was *Not* Said: DeMarini urged that discourse with the examiner reveals that the examiner understood that the “frame” did *not* require an integral handle. However:

In his rejection, the examiner did not make reference to any particular feature of the [reference patent] bat that he considered to be the "bat frame" or the "insert" in his rejection. It was only DeMarini, and not the examiner, who characterized the main body 30 as a "frame" and the tapering tubular stem 20 as an "insert." The examiner made no comment on DeMarini's naming of the parts of the [reference patent] bat. DeMarini would have us infer a meaning for the term "frame" drawn from the examiner's silence, rather than from its response to the examiner's rejection. Drawing inferences of the meaning of claim terms from an examiner's silence is not a proper basis on which to construe a patent claim, and we reject DeMarini's arguments predicated on such inferences.

DeMarini also contends that because it never argued that the [reference] insert distinguished the [reference] patent from the claimed invention by extending outside the axial limits of the "main body 30," DeMarini never considered the claim term "frame" to include an impact portion and a handle. However, just as we can draw no inference from what the examiner did not say, we can draw no inference from what DeMarini did not argue. It could just as easily be presumed from DeMarini's silence that DeMarini recognized that when the "main body 30" was connected to the handle, the "insert" of the [reference] bat did not extend beyond the "bat frame" of the [reference] bat, just as the claimed "insert" does not extend beyond the "bat frame."

Implicit Claim Limitation Recognized: In construing a “large-diameter impact portion,” the Federal Circuit approved the district court’s conclusion that a bat frame was an implicit limitation of this phrase for two reasons – the file history and preamble language. The Court thus concluded,

Thus, DeMarini considered the handle portion and the impact portion to be part of a bat frame that surrounded the internal structural insert even though the specific term "frame" was not used in claim 15.

Outcome: The district court claim constructions were not found incorrect, and the summary judgment of non-infringement was affirmed.

Dow Chemical Co. v. Sumitomo Chemical Co., Ltd., 257 F.3d 1364, 59 U.S.Q.2d 1609 (Fed. Cir. July 2001), reh. and reh. en banc denied 2001 U.S. App. Lexis 21857 (Fed. Cir. Sept. 2001).

Before Clevenger, Rader, and Gajarsa. Opinion by Gajarsa.

Subject Matter: process for making high-purity epoxy resins

Proceedings below: Dow sued Sumitomo for the alleged infringement of U.S. Patent No. 4,499,255 which had been assigned to Dow. On summary judgment, the district court (E.D. Mich.) held that Sumitomo's processes did not infringe the patent-in-suit, either literally or under the doctrine of equivalents. Dow appealed that judgment.

Claim Construction

Construction of the "Boiling Point" Limitation: Clause 1 of independent claim 1 requires that the reaction be conducted "in the presence of an organic solvent which codistills with water and said epihalohydrin at a boiling point below the boiling point of the lowest boiling compound among the components in the reaction mixture." (emphasis added).⁴⁶ Thus, clause 1 requires, *inter alia*, "a numerical comparison between the boiling point of the codistillate and the lowest boiling compound in the reaction mixture." The district court erroneously interpreted "the boiling point of the codistillate" to be measured in the liquid phases rather than the vapor phase. Reversing the lower court on this matter of claim construction, the Federal Circuit concluded that the codistillate boiling point referred to in claim 1 meant the temperature of the codistillate in the vapor phase.

Extrinsic Evidence Consulted (Treatises) - "The boiling point of a codistillate" must be given its ordinary meaning as understood by one of ordinary skill in the art. The majority of treatises cited by the parties and addressed by the Federal Circuit recommended that the codistillate boiling point be measured in the vapor phase rather than the liquid phase. As implicitly and explicitly acknowledged by some of these

⁴⁶ Claim 1. In a method for preparing glycidyl derivatives of compounds having at least one aromatic hydroxyl group or aromatic amine group per molecule by reacting at least one compound having at least one aromatic hydroxyl group or aromatic amine group per molecule with an excess of at least one epihalohydrin in the presence of an alkali metal hydroxide and subsequently recovering the glycidyl derivative product; the improvement which comprises

(1) conducting the reaction in the presence of an organic solvent which codistills with water and said epihalohydrin at a boiling point below the boiling point of the lowest boiling compound among the components in the reaction mixture;

(2) conducting the reaction under a reduced pressure sufficient to provide a distillate with a boiling point of from about 45.degree. C. to about 80.degree. C.;

(3) employing said alkali metal hydroxide as an aqueous solution and adding said aqueous alkali metal hydroxide in a continuous or intermittent manner over a period of from about 0.5 to about 10 hours;

(4) continuously removing water by means of codistillation at a rate such that the water content in the reaction mixture is less than about 6 percent by weight;

(5) separating the water from the codistillate and returning the solvent and epihalohydrin to the reaction mixture.

authorities, the addition of nonvolatile compounds to a mixture of otherwise volatile compounds decreases the total vapor pressure of the solution, thereby increasing the temperature at which boiling commences.

Further corroboration for this claim construction was supported by a technical dictionary's distinction between "distillate" (*i.e.* the vapor above a boiling liquid mixture which is then condensed to a liquid) and "distilland" (*i.e.* the liquid mixture to be distilled).

Intrinsic Evidence

Specification and claims examined to determine if the patentee defined or used the term in an unconventional manner: The Federal Circuit commented on the district court's misunderstanding that "the intrinsic evidence does not distinguish between a distillate boiling point and the reaction mixture temperature, and does not teach that any temperature should be measure in the vapor phase," in the following manner:

The question before us is *not* whether the [patent] teaches that the boiling point should be measure in the vapor phase . . . [i]nstead, the question is whether the [patent] sufficiently redefines the meaning of "boiling point" such that one of ordinary skill in the art would believe that it is measured in the reaction mixture."

Claim construction that excludes a preferred embodiment is rarely, if ever, correct: The Federal Circuit noted with "great significance" that the district court's claim construction would have excluded many (*i.e.*, *six*) of the preferred embodiments from the scope of the claims.

Construction of the "Continuous/Continuously" Limitation: The district court's claim construction improperly imported a limitation not supported by the claim language or the specification by requiring "distillation [clause 4] to take place throughout the duration of the addition of caustic [clause 3]." Arguably, one consequence of this interpretation, which was accepted by the Federal Circuit, was that distillation would therefore have to begin *simultaneously* with the addition of caustic. The patentee argued that this interpretation would exclude all of the preferred embodiments of the invention because of the short delay which follows the addition of caustic before the water content increases to require distillation. The Federal Circuit concluded, based on intrinsic evidence alone, that distillation did not have to commence simultaneously with the addition of caustic, but rather that once distillation begins that it continue "without cessation."

Infringement Analysis

1. District Court determined that the accused processes did not literally infringe based on a flawed claim construction: The district court erroneously insisted that both stages of the accused processes were important in its non-infringement determination, the result of which was to conclude that because a limitation was not satisfied during one stage (in this case the first stage of a two stage process), then the patent could not be infringed. The following two reasons cited by the district court were in error. First, distillation did not occur during the *first* stage of one of the accused process when caustic was being added.

Second, the temperature of the reaction mixture during the *first* stage of the accused processes was maintained at 39° Celsius, which is below the 45° to 80° degree range required by clause 2 of the claim.

2. The Mere Addition of Elements Cannot Negate Infringement The preamble of claim 1 used the phrase “which comprises” which indicates that the named elements are essential but other elements may be added without falling outside the literal scope of the claim. The Jepson format of the claim is further support that infringement is not avoided merely by adding steps which might be “extraneous” or “colorable variations” if the express limitations of the claim appear in the accused process.

3. Statements made by an examiner will not necessarily limit a claim: Where a patentee disputes an examiner’s statement on the record, and makes no amendment based on the examiner’s statement, such a statement will usually not be construed as basis for prosecution history estoppel.

During a reexamination of the patent-in-suit, the examiner made the following statement when it allowed the patent to issue in light of a British prior art patent which covered a two stage process:

It appears that all of the cited art discloses many of the features of the [patent-in-suit], but always lack[s] at least one of the claimed limitations, whether it be temperature, the solvent, *one step process*, the water content, . . .

Another statement of the examiner follows:

[based on the British patent] one would not be motivated to use such a single stage process.

The patentee argued that the claimed invention was distinguishable over the British prior art not on the basis of it being a one-step process but for other reasons. The patentee’s response to the examiner was as follows:

This statement demonstrates why one skilled in the art would not be motivated to substitute aqueous NaOH for the solid NaOH of the [British patent] since the [British patent] process is such a fundamentally different process. Thus, as the [e]xaminer agreed, the claimed invention is not limited to a one stage or single step process.

The Federal Circuit accepted the patentee’s argument and construed the claims of the invention to not be limited to a single stage process.

Outcome: The district court’s grant of summary judgment for noninfringement of the patent, either literally or by equivalents, was vacated and remanded for a determination on whether the second stage of the accused processes literally infringed the claims of the patent, consistent with the Federal Circuit’s claim construction. Towards this end, the District Court was directed to conduct further fact-finding to determine (1) the boiling point of the pure codistillate used in the second stage of the accused processes, as measured in the vapor phase, and (2) whether dioxane used in the accused processes is an “organic solvent” as called for by claim 1 and defined by the specification.

Durel Corporation v. Osram Sylvania, Inc., 256 F.3d 1298, 59 USPQ2d 1238 (Fed. Cir. June 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 21098 (Fed. Cir. Aug. 2001)

Before Lourie, Plager and Gajarsa. Opinion by Lourie.

Subject matter: encapsulated electroluminescent phosphor particles

Proceedings Below: The district court (D. Ariz.) held that Sylvania infringed three patents relating to encapsulated electroluminescent phosphor particles used in applications such as illuminating watch faces and instrument panels in motor vehicles. The district court also granted partial summary judgment dismissing Sylvania's counterclaim for declaratory judgment of invalidity for failure to meet the enablement requirement and denied Sylvania's motion for a new trial on damages.

Claim Construction Below: The district court construed "oxide coating" as being primarily composed of metal cations and oxygen but also possibly containing other elements of compounds found in the original precursor ingredients or phosphor particles. According to the district court, a synthetic chemist would interpret the patents by using atomic mass to determine whether a coating is primarily metal cations and oxygen atoms with minor amounts of other atoms from the precursors. According to the district court, the accused coatings fell squarely within the claim construction of "oxide coating."

Issue: The claim limitation at issue is the term "oxide coating," which is not written in means-plus-function format. All of the independent claims of the patents-in-suit recite that the phosphor is encapsulated by an "oxide coating."⁴⁷ The specification of each patent defines oxide coating as follows:

As used herein, "oxide coating" means a material made up primarily of metal cations and oxygen, but which may contain minor amounts of other elements and compounds originating in the precursor materials or phosphor particles..."

Accused Product: The accused product uses phosphor coatings which are a mixture of aluminum oxide hydroxide $AlO(OH)$ and aluminum trihydroxide $Al(OH)_3$.

Construction of "Oxide Coating": Sylvania argued that the district court erred in its construction of the term, urging that the definition in the specification requires that the coating be primarily composed of metal oxides which are binary compounds and that the "other elements and compounds" it may contain are only impurities of the coating. Thus, the primary metal oxide molecule of the coating may not itself contain other elements such as hydrogen that would make the molecule something that is not classified as a metal oxide. Durel responded that the term "oxide coating" includes metal cations, oxygen and minor

⁴⁷Claim 1 recites, "Encapsulated electroluminescent phosphor particles, each comprising a particle of zinc sulfide-based electroluminescent phosphor which is essentially completely encapsulated within a substantially transparent, continuous *metal oxide coating*..."

amounts of another element such as hydrogen. Durel urged that a definition that excludes the presence of hydrogen would exclude a preferred embodiment in the specification. The Court agreed with Sylvania that the district court erred in its construction of the term “oxide coating.”

Specification Meaning Applied: In coming to its decision, the Court relied primarily on the definition in the specification. The Court concluded that the language in the specification required that the “oxide” coating must primarily comprise metal oxide compounds, *viz.*, binary compounds containing only metal cations and oxygen, which was supported by the examples in the specification. Thus, the compound may not be composed of compounds that are not binary metal oxides such as hydrogen.

Dictionary Meaning Applied: The Court found further support for its construction by dictionary definitions of “metal oxide” which stated that compounds containing additional elements other than metal and oxygen are not generally classified as metal “oxides.” The Court stated, “... we are free to consult [dictionary definitions] to interpret claim terms, ‘so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.’” (citing *Vitronics*).

Calculations Disregarded the Meaning of Words The principal error of the district court was in calculating atomic mass percentages to interpret the claim language “primarily.” That approach failed to “give meaning” to the phrase “metal oxide” and the consistent use of that term in the specification.

Patentee’s Argument Rejected. Durel urged that the definition excludes a preferred embodiment where metal *hydroxides* are *inherently* present in the disclosed metal oxides. No disclosure of metal hydroxides is found in the specification. A reference cited by Durel that aluminum trihydrate may be used interchangeably with aluminum trihydroxide is not relevant here, as the patent teaches that the oxide hydration should be minimized and that *anhydrous* films are not intended to include hydrates and hydroxides.

No Equivalency. Given the concession that the coatings on the accused products are mixtures of the hydrate and trihydroxide, these cannot be primarily a metal oxide. Sylvania’s accused hydroxide coatings do not meet the definition of the disputed claim term. The Court declined to remand because no reasonable fact finder could find infringement under the doctrine of equivalents, since such a theory of equivalence would vitiate a claim limitation.

Enablement: The Court also reviewed an enablement analysis and found, *inter alia*, that the analysis used the wrong claim interpretation. The district court erred in dismissing Sylvania’s declaratory judgment of invalidity for lack of enablement since the district court focused on the accused device. The dispositive question of enablement does not turn on whether the accused product is enabled. Rather, to be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. Thus, the Court vacated the district court’s grant of partial summary judgment that the patents are not invalid.

Outcome: The claim construction by the district court was erroneous, and its judgment was reversed because as a matter of law Sylvania does not infringe. There was no remand because the claims are not infringed and a remand to consider the validity of non-infringed claims would be a poor use of

judicial resources. The district court's partial summary judgment that the patents are not invalid was vacated.

Ecolab, Inc. v. Envirochem, Inc. 264 F.3d 1358, 60 USPQ2d 1173 (Fed. Cir. Sept. 2001).

Before Newman, Friedman, and Linn. Opinion by Linn.

Subject matter: solid detergent "cast" contained within a disposable container for use in commercial dishwashing machines

Proceedings Below. The district court (D. N.J.) entered summary judgment of infringement.

Claim Construction by District Court. The invention at issue was a solid detergent "cast." (It replaces added detergent in a washer – water sprayed on the cast releases detergent.) The cast is contained within a disposable container that surrounds the cast on all but one surface for use in commercial dishwashing machines. The district court initially construed the phrase "substantially uniform" in the limitation "a three-dimensional, solid, cast, hydrated, substantially uniform alkaline detergent for ware and hard surface washing" as describing "a cast in which the concentration of alkalinity and phosphates may vary from between 0.0% and 6.6%" based upon data presented to the Patent and Trademark Office in an affidavit comparing the claimed "substantially uniform" product and prior art solid cast compositions. Following a motion for summary judgment, the case was reassigned to a different judge who reconstrued the phrase "substantially uniform" to mean "a level of continuity of the elements from top-to-bottom throughout the cast such that a homogenous cleaning solution is formed over the life of the cast."

Construction of "Substantially Uniform": The Federal Circuit agreed with the district court's conclusion that no basis exists for inferring a numerical limitation as to what is a "substantially uniform" cast. However, the district court erred in (1) defining nonnumerically limited claim terms according to the invention's purpose; (2) not giving the phrase "substantially uniform" its accustomed and ordinary meaning; and (3) not recognizing the relevance and effect of the affidavit on the scope of the claims. The Court looked to the claim language, the written description, the prosecution history including an affidavit which was submitted to overcome a 35 U.S.C. § 103 rejection, and dictionary evidence to reach its conclusion that there was no basis in the intrinsic record on which (i) to infer adding a numerical limitation to the phrase "substantially uniform" or (ii) to functionally limit the phrase "substantially uniform." The Court concluded that the phrase "substantially uniform" as related to the "alkaline detergent cast" means "largely, but not wholly the same in form" or, in the words of the district court, "very near consistency of elements from top-to-bottom throughout the cast."

Outcome: The Court remanded the case to the district court to determine infringement in light of the claim construction.

EMI Group North America, Inc. v Cypress Semiconductor Corp., 268 F.3d 1342, 60 USPQ2d 1423 (Fed. Cir. Sept. 2001).

Though this case did have a claim construction in the trial court (D. Del.), no claim construction issues were decided by the Federal Circuit. The Court affirmed that two patents were invalid due to impossibility, affirmed the denial of a motion for new trial, and reversed a jury verdict that claims were anticipated and obvious.

Exxon Research & Eng'g. Co. v. United States, 265 F.3d 1371, 60 USPQ2d 1272, No. 00-5077 (Fed. Cir. Sept. 2001)

Before Mayer, Lourie, and Bryson. Opinion by Bryson.

Subject matter: converting natural gas to liquid hydrocarbon products

Proceedings Below: The Court of Federal Claims entered a summary judgment holding two patents invalid for indefiniteness.

Intrinsic Evidence Supplied Definiteness. Regarding the '705 patent, two claim elements were found indefinite by the claims court because there were two possible ways to calculate one element, and the other element was found to lack any upper or lower boundaries. Relying on the intrinsic evidence, the Federal Circuit concluded that the specification was reasonably clear in disclosing both the method of the calculation and that the preferred embodiment disclosed a boundary that was reasonably precise in light of the subject matter. Relying on the statutory presumption of validity, the Federal Circuit found that the claims are not indefinite.

Saved By the Presumption? Regarding the '982 patent, the trial court found four elements of claim 1 indefinite for: (1) lacking an empirical standard in determining a process; (2) having inconsistent requirements regarding the extent of a process; (3) a lack of an upper limit; and (4) ambiguity regarding the term "liquid velocity." The Federal Circuit again ruled that none of the four elements introduce sufficient uncertainty to compel invalidation. The Court did agree that the claims are flawed, and could have justifiably been rejected by the Examiner during prosecution. However, since the Federal Circuit was reviewing an issued patent that enjoys a presumption of validity, none of the noted flaws were fatal to the patent.

Outcome: The Federal Circuit reversed and remanded.

Fin Control Systems PTY, Ltd. v. OAM, Inc., 265 F.3d 1311, 60 USPQ2d 1203 (Fed. Cir. Sept. 2001)

Before Newman, Clevenger, and Dyk. Opinion by Clevenger.

Subject Matter: removable surfboard fins

Proceedings Below: The district court (C.D. Cal.) granted summary judgment of non-infringement after interpreting the claim terms "releasable means laterally engaging said formation," "applying lateral force," and "to a side wall of said cavity." The district court justified its interpretation by consulting a non-technical dictionary to construe "lateral." The district court also *sua sponte* entered summary judgment sustaining the defenses of invalidity and unenforceability.

Claim Terms Appearing In Different Portions of The Claims Are Presumed to Have The Same Meaning, Unless the Intrinsic Record Defines Otherwise: "[w]e begin with the presumption that the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims." *See Phonometrics, Inc. v. N. Telecom, Inc.*, 133 F.3d 1459, 1465, 45 USPQ2d 1421, 1426 (Fed. Cir. 1998). "In this case, the use of the term 'lateral' in the claims when referring to the surfboard fins is entirely consistent with the district court's interpretation of 'lateral' in the context of the fixing formations." The Federal Circuit further affirmed the district court's interpretation based on the prosecution history and a cited prior art reference.

Outcome. The Court affirmed the summary judgment of noninfringement, vacated the summary judgment of invalidity and unenforceability, and remanded.

Forest Laboratories, Inc. v. Abbott Laboratories, 239 F.3d 1305; 57 USPQ2d 1794 (Fed. Cir. Feb. 2001).

Before Lourie, Linn and Dyk. Opinion by Lourie.

Subject Matter: lung surfactant composition for treating respiratory distress syndrome

Proceedings Below. The district court (W.D. N.Y.) construed the claims and granted JMOL of non-infringement following a jury verdict of infringement.

The Issue. Whether the jury's verdict of infringement was supported by substantial evidence where the patent claims excluded all surface active material not containing the claimed percentage of water and Abbott failed to prove that the accused composition contained such claimed percentage.

Claim Construction.

(1) "Surface active material": Abbott argued that the term "surface active material" should not be limited to cover a pre-suspension powder, because the claims were not limited to either solid or liquid form and because the claims to a "pharmaceutical composition" depend from independent claims to a "surface active material" and therefore both "surface active material" and "pharmaceutical composition" are necessarily within the scope of the independent claim. Forest argued that the independent claims to a "surface active material" were limited to the dry state of the material before it is combined with saline to form a pharmaceutical composition with changed properties.

The Federal Circuit concluded that “surface active material” refers to the lung surfactant extract material in dry form, before it is suspended in physiological saline to form a “pharmaceutical composition.” It covers all material containing the prescribed materials in the prescribed percentages, when measured in the dry state. However, the Court concluded that the independent claims to a “surface active material” cover all surface active material that meets the claim limitations, regardless of its form as pre- or post-suspension material. Dependent claims to a “pharmaceutical composition” cover such material when combined with a pharmaceutically acceptable carrier.

(2) “Based on dry weight”: Abbott argued that, according to one skilled in the art, the phrase “based on dry weight” means that a liquid suspension or solution can be tested on a “dry weight” basis by first drying the material and then assaying the solid components of that dried material by percentage. Forest argued that water is a component of surface active material to be measured like any other, and “based on dry weight” means the surface active material should be measured in the dry state before it is combined with a pharmaceutical carrier.

The Court construed the term “based on dry weight” to mean based on the dry weight of the surface active material before it is combined with a pharmaceutical carrier.

Infringement. Abbott argued that a specific percentage of water did not need to be present and that the jury was entitled to find literal infringement on the basis of the “dried down” accused product because the patents only require the use of the dry weight method of measurement with proper calibration to the percentage of water. Alternatively, Abbott argued that an international application filed by Forest showed that the accused product contained the claimed percentage of water. Finally, Abbott argued that the district court erred in not finding infringement under the doctrine of equivalents because it improperly focused on the percentage of water instead of the difference in the time of testing. Forest responded that the court properly found no literal infringement because Abbott failed to offer any proof of the percentage of water in the accused product and the international application was not directed toward the accused product. Forest further argued that the court correctly refused to find infringement under the doctrine of equivalents because Abbott’s testimony that the water percentage was irrelevant was conclusory and contradicted Forest’s expert, and prosecution history estoppel barred application of the doctrine of equivalents.

The Court concluded that the jury’s verdict of infringement was not supported by substantial evidence and therefore the district court did not err in granting judgment as a matter of law of non-infringement. The patent claims were drafted to exclude all surface active material not containing the claimed percentages of water. Abbott failed to prove that Forest’s surface active material contained the claimed percentage of water or an equivalent. The international application may or may not have described the accused product, so it did not constitute substantial evidence of the water content of the accused product. Furthermore, the international application described material with a water content that was less than the lowest percentage within the claims at issue. Finally, arguments made during prosecution in support of patentability led the court to conclude that the claims must be limited to their literal scope.

Outcome: The Court affirmed the JMOL of non-infringement.

Gart v. Logitech, Inc., 254 F.3d 1334, 59 USPQ2d 1290 (Fed. Cir. June 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 21100 (Fed. Cir. Aug. 2001), *cert. denied* 122 S.Ct. 921 (2002).

Before Lourie, Rader, and Linn. Opinion by Linn.

Subject Matter: ergonomic structures for a trackball

Proceedings Below: The district court (C.D. Cal.) construed the claims and granted summary judgment of non-infringement and that damages were limited pursuant to 35 USC §287.

Issue: Whether “an angular medial surface” in claim 7 should be construed to require an angular ledge, as found by the district court.⁴⁸ Defendant-appellee Logitech argued that: (1) all of the drawings show a ledge; (2) the written description describes the invention as having a “medial ledge undercut” and that this is not confined to a preferred embodiment, (3) the written description distinguishes prior art as lacking an “undercut area for the middle, ring, and small fingers,” and (4) the distinction over prior art was important to the PTO decision on patentability.

General Rule Stated – Claims Given Ordinary and Accustomed Meaning: The Federal Circuit stated that the specification and prosecution history should be consulted in claim construction but only “to determine if the patentee has chosen to be his or her own lexicographer.” If the terms are not redefined, “we follow the general rule that terms in the claim are to be given their ordinary and accustomed meaning.”

Preferred Embodiments Do Not Redefine Claims: The Court found that “an angular ledge” was part of a preferred ergonomic design but not the invention as claimed. Even though all of the drawings show ledges, they are also just examples of embodiments. Thus:

*** we conclude that the entirety of the specification describes several embodiments of an ergonomic hand controller, including a controller with an angular medial ledge, a controller with an angular medial ledge having an undercut area, and a controller with an angular medial surface. The written description does not explicitly limit the subject matter of the patent to the ledge configuration set forth in the drawings.

⁴⁸ “Claim 7. A computer input accessory apparatus of the type upon which a hand rests for selectively activating sensors generating signals for affecting operation of the computer to which the apparatus is electrically connected, the apparatus being ergonomically shaped to minimize hand fatigue; the apparatus comprising:
a housing configured to receive the anterior surface of the hand and means for supporting said housing on an underlying surface;
said housing having an arched metacarpal-phalangeal support surface, a concave thenar pad support surface, a distal phalange support surface for the forefinger, a distal phalange support surface for the thumb and *an angular medial surface* for supporting the three remaining ulnar fingers in a wrapped configuration with flexion of the distal, middle and proximal phalanges of said ulnar fingers.”

Superfluous Distinctions Between the Prior Art Do Not Redefine Claims: The Court also rejected Logitech's argument that the specification limited the claims by distinguishing the invention over prior art. The Court found that this contention was not supported by the facts and concluded, "In other words, Gart did not in any way limit all of his claims to a controller with an angular medial ledge by the remarks distinguishing the prior art." Further, as to the prosecution history, the Court did not agree that the examiner allowed the claims because of "an undercut area." While the examiner referred to "the details on the shape and surfaces ... taught by the claims" as absent from the prior art, at no time did the PTO point to "the concave undercut area" as the patentable feature. The Court declined to draw an inference on the meaning of claim terms from an examiner's silence, citing an earlier decision from 2001, *DeMarini Sports, Inc., v. Worth, Inc.*, 239 F.3d 1314, 1326 (Fed. Cir. 2001).

Unambiguous Language of Claim Followed. Applying established principles of claim construction, the Court decided that (1) the patent gave no special meaning to the claim term "angular medial surface," (2) no express representations were made in the file history regarding the scope and meaning of this phrase, and (3) "the scope of claim 7 may be ascertained from the plain language of that claim." Hence the Court rejected the district court claim construction which added "a limitation appearing in the specification and the drawings, but not appearing in the unambiguous language of the claim."

Outcome: The district court's claim construction was found to be incorrect, and the summary judgment of non-infringement was vacated and remanded. The summary judgment of no notice of infringement was also reversed, as an adequately specific notice of infringement was found by the Court.

Generation II Orthotics, Inc., et al. v. Medical Technology, Inc., 263 F.3d 1356, 59 USPQ2d 1919 (Fed. Cir. August 2001)

Before Newman, Linn, and Dyk. Opinion by Linn.

Subject Matter: Post-operative knee brace

Proceedings Below: The district court (W.D. Wash.) construed the phrase "joint means in the brace to allow controlled medial and lateral inclination of each rigid arm relative to the pivotal joint" and found that the claims required "control of the angle of the arms throughout the range of motion of the pivotable joint." Generation II Orthotics ("Gen II") appealed the district court's claim construction and resulting judgment of noninfringement of the patents-in-suit.⁴⁹

Issues: (1) Whether the district court erred in its construction of "controlled" in a functional statement in a means-plus function clause and erred in its application of 35 U.S.C. § 112, ¶ 6 to certain method claims. (2) Whether the district court erred in its determination that 35 U.S.C. § 112, ¶ 6 does not apply to claim 21 of the '169 patent.

⁴⁹ Gen II had stipulated to non-infringement since the lower court's construction precluded a finding of infringement, and thereafter appealed to the Federal Circuit.

Improper to Redefine Function. The district court construed the recited function of “controlled medial and lateral inclination of each arm” to mean controlled inclination “throughout the range of motion of the brace,” or dynamic control. The Federal Circuit held that the lower court erred in so restricting the function of the “joint means” of claim 1 of the ’169 patent, which literally recites “allowing controlled medial and lateral inclination of each rigid arm relative to the pivotable joint.” Relying on *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999), the Court declined to restrict the claimed function of “controlled” to either static or dynamic control since to do so would “impermissibly limit the claim by adopting a function different from that explicitly recited in the claim, and such an error in identification of the function could improperly alter the identification of the structure corresponding to that function.” The Court also rejected Med-Tech’s contention that the prior art required a different construction since neither of the cited references required the Court to interpret Gen II’s device as having control throughout the range of motion of the brace arms. The Court thus concluded that the district court should have construed the claim limitation “controlled” according to its ordinary and accustomed meaning, *e.g.*, “as simply restrained in some manner and is not limited to require control over a particular range of motion.”

Other Means-Plus-Function Issues: (1) Corresponding Structure of the “Joint Means” Limitation: The Court looked at the Figures in the ’169 patent and determined that the corresponding structures were the adjustable joints, hinges, combination hinge/screws, and equivalent structures. (2) The parties also disputed whether 35 U.S.C. §112, ¶6 applied to claims 16 and 21 of the ’169 patent and claim 1 of the ’806 patent. The Federal Circuit held that the district court erred in its holding that §112, ¶6 applied to claims 16 of the ’169 patent and claim 1 of the ’806 patent. The Court stated that the mere fact that a method claim is drafted with language parallel to an apparatus claim with means-plus-function language does not mean that the method claim should be subject to an analysis under §112, ¶6 since each invention must be reviewed independently. Because claim 16 of the ’169 patent and claim 1 of the ’806 patent do not use the words “means for” with regard to the structural “joint” limitation, and do not use the words “step for” with respect to the “locating” and “adjusting” steps, there is no presumption that these limitations are subject to §112, ¶6. The Court agreed with the district court’s finding that claim 21 of the ’169 patent did not invoke §112, ¶6.

Outcome: The Court affirmed in part and vacated in part the district court’s holdings. The case was remanded for further proceedings consistent with the Court’s claim construction.

Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc., 262 F.3d 1333, 59 USPQ2d 1950 (Fed. Cir. Aug. 2001)

Before Mayer, Newman and Rader. Opinion by Rader.

Subject Matter: cephalosporin antibiotics, including cefuroxime

Proceedings Below: The district court (D. N.J.) Entered a preliminary injunction, finding that the plaintiff was likely to succeed on its infringement claims. In so doing, it interpreted the limitation “essentially

free from crystalline material.”⁵⁰ The lower court held that the plaintiff’s damages would amount to more than the alleged infringer’s total net worth. Defendant appealed the grant of preliminary injunction.

Issues: In determining whether the issuance of a preliminary injunction was proper, the Court looked at the issues of claim construction, literal infringement and the doctrine of equivalents.

Preliminary Injunction: The court held that a preliminary injunction is proper where a party proves four factors: (1) its reasonable likelihood of success on the merits; (2) irreparable harm to its interests; (3) the balance of hardships tipping in its favor; and (4) public interest in favor of the injunction. To determine the propriety of the injunction against Ranbaxy, the Court first examined the claim construction of the patent.

Claim Construction: The Court noted that a patent’s specification and file history may be considered in determining construction of a claim.⁵¹ Using a dictionary definition, the Court determined that “essentially” means “fundamentally,” and “free from” means “without.” It therefore held that “essentially free from crystalline material” means “fundamentally without crystalline material.” It further noted that the specification was of little help in further defining the term. However, the Court found that the prosecution history was more helpful in defining the term. During prosecution of the patent the patentee enumerated the percentage of crystalline material in the product. In addition, during trial the plaintiff submitted reports and declarations indicating that the product contained a crystalline content over 10%.

Literal Infringement: Following its claim construction, the Court compared the defendant’s proposed product to the defined claims of the patent. It held that the defendant’s product must contain all of the limitations of the asserted claims, and as Ranbaxy’s product contained a higher content of crystalline cefuroxime axetil than the patent allowed, no literal infringement claim was likely to succeed.

Doctrine of Equivalents: In addition, the defendant claimed that the plaintiff was not entitled to make doctrine of equivalents claims, as prosecution history estoppel applied. Finding that the lower court merely discussed the issue in footnotes⁵², the Court conducted its own determination of estoppel. Finding that the original patent claims were all rejected as being indefinite, the Court determined that the plaintiff narrowed the scope of the issued claims. As such, Festo provided that the plaintiff could not assert any scope of equivalents to the limitation “essentially free from crystalline material.”

Other Issues: In dicta the Court addressed the lower court’s determination that the defendant would not be able to compensate the plaintiff in the event of a finding of infringement. It disagreed with this ruling,

⁵⁰The court construed the limitation as “excluding from the claimed invention any item having sufficient crystalline cefuroxime axetil that materially affects the basic characteristics of the invention.”

⁵¹The Court stated “to determine the meaning of disputed claim terms, however, a construing court may consider the patent specification and the administrative record leading to patent issuance.”

⁵²The lower court stated, “the court also does not have to consider whether Ranbaxy’s likely product infringes the ‘181 patent under the doctrine of equivalents. If it needed to do so, it most likely would have concluded that it would infringe the ‘181 patent under this doctrine as well.” It also stated “the court also notes that it does not appear that Glaxo’s amendment satisfies the requirements for a ‘narrowing amendment,’ which the Festo Corp. court held precludes the application of the doctrine of equivalents.”

stating that patent damages are awarded to make the patent holder “whole,” and are not paid for a total amount of lost sales.

Outcome: The Court found that the lower court made an error of law in its claim construction. It therefore held the preliminary injunction improper and vacated and remanded the district court’s ruling.

Globetrotter Software, Inc. v. Elan Computer Group, Inc., 236 F.3d 1363, 57 USPQ2d 1542 (Fed. Cir. Jan. 2001).

Before: Bryson, Plager, Dyk. Opinion by Dyk.

Subject Matter: License management system for controlling the number of concurrent copies of a program in use on a computer network

Proceedings Below: The district court (N.D.Cal.) issued an order construing the terms of the ‘297 patent claims, denied the plaintiff’s motions for a preliminary injunction and partial summary judgment of infringement of claim 55, and granted defendant’s motion for partial summary judgment of non-infringement of claim 55.

Issues: In its Markman order, the district court ruled that “license file means for storing” contains at least a “UID.” Globetrotter asserted that the court erred in its means-plus-function claim construction, as a “UID” was not necessary to perform the function of storing a license. Moreover, it argued this claim construction “essentially eviscerates the doctrine of claim differentiation.”

Scope of Review: A district court’s claim construction and prosecution history estoppel are legal questions reviewed *de novo*. Denial of a preliminary injunction is reviewed for an abuse of discretion.

Means-plus-function Requirements: Under *Micro Chemical, Inc. v. Great Plains Chemical*, 194 F.3d 1250 (Fed. Cir. 1999), Globetrotter correctly argued that §112, para. 6 does “not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim.” Instead, it requires “identification of the structure in the written description necessary to perform that function.” Therefore, the Federal Circuit determined whether the patent required a “UID” to perform the function of storing a license.

Meanings from Specification and Drawings Applied: In interpreting the specification, the Court explained, “When a license is loaded (i.e. stored) onto a node, it is assigned a UID. It is necessary that the license file at a node be assigned a UID so that the UID can be compared with the UID written into a directory at a remote node to determine whether the particular license is in use.” Therefore, a UID is required in storing in that this limitation prevents the licensee from utilizing licenses stored in a pool that does not have the required “UID.” The Court further found that none of the drawings illustrated an alternate method of storing a license with a license file means without requiring a UID. Accordingly, the Federal

Circuit ruled that “the specification and drawings show that a UID is [a] ‘necessary structure’ in order to perform the function of storing licenses by the license file means.”

Prosecution History Meanings Applied: The Court acknowledged that prosecution history is relevant in the means-plus-function claim construction. However, it did not apply in this case because Elan relied on portions of the prosecution history irrelevant to the claim limitations at issue.

Claim Differentiation: Globetrotter asserted that dependent claim 58 expressly recites a “means for assigning a UID”; therefore, the scope of the claim should have been differentiated from the scope of independent claim 55. Nevertheless, the Court noted that a “means for assigning” is distinct from a “means for storing.” Accordingly, reciting an additional “means for assigning a UID” is consistent with the aforementioned interpretation of the limitation of independent claim 55; whereupon it “recognizes that a UID is necessary to perform the *storing* function.” As such, dependent claim 58 merely added the additional limitation of requiring a “means for assigning a UID.”

Outcome. The Court affirmed the denial of plaintiff’s motion for a preliminary injunction. (While the Court noted that summary judgment had been entered, no review of it is stated explicitly.)

Hilgraeve Corp. v. Symantec Corp., 265 F.3d 1336, 60 USPQ2d 1291 (Fed. Cir. Sept. 2001), rehearing and rehearing en banc denied, 2001 U.S. App. Lexis 26125, cert. denied 2002 U.S. Lexis 1420

Before Rader, Plager, and Dyk. Opinion by Dyk.

Subject Matter: computer virus detection software and storage

Proceedings Below: The district court (E.D. Mi.) entered granted summary judgment of non-infringement based on its claim construction of the accused patent, and after finding that there was no dispute about how the accused products operate.

Issue: The court addressed whether the district court correctly granted summary judgment and whether the limitations of the patent-at-issue’s claims were found in methods performed by the accused products.

Earlier Construction: The Federal Circuit first looked at whether its previous construction of terms was binding in the present case. The court found that they need not determine whether its earlier construction was binding because it earlier merely adopted the district court’s construction. It found further interpretation was necessary.

Construction of “Storage”:The Court agreed with the earlier construction of “storage.” It held that “storage” of a computer virus “is identified with the virus’s ability to spread and infect the computer system.” As such, the Court agreed with the earlier finding that storage “occurs ‘when the incoming digital data [are]

sufficiently present on the destination storage medium and accessible by the operating system or other programs so that any viruses contained in the data can spread and infect the computer system.”⁵³

Outcome: Although the Court upheld the district court’s claim construction, it vacated the grant of summary judgment of non-infringement and remanded.

In re Roemer, 258 F.3d 1303, 59 USPQ2d 1527 (Fed. Cir. July 2001).

Before Michel, Lourie, and Rader. Opinion by Rader.

Subject Matter: coils for nuclear magnetic resonance imaging

Proceedings Below: The Board of Patent Appeals and Interferences held in an interference proceeding that the claims of a reissue patent application were unpatentable over prior art.

Issue: Although the patentee did not dispute the Board’s claim construction, he instead argued that the Board erred in concluding that claims of the reissue patent corresponded to the count⁵⁴ of the interference. The Federal Circuit addressed the Board’s construction of the claims, then compared them to the count.

Claim Construction of Application: Noting that the Board found Claim 1 of the application “does not require a linear gradient,” the court agreed that the plain language of the claim supported this construction. However, the court further found that the written description of the application suggested that the resulting gradient does not need to be substantially linear, and in fact “explains that linearity can be partly sacrificed in order to achieve other desirable characteristics....”

Claim Construction of Prior Art Patent: Contrary to the Board’s findings, the court determined that the prior art patent “does not disclose any of the complex mathematics required for positioning the shielding coils about the gradient producing coils to suppress the external field while still obtaining a substantially linear internal gradient field.”

Outcome: Because the patent was particularly general as to the form of the invention, the court found that the Board erred in its conclusion that the reissue application corresponded to the count.⁵⁵

⁵³The court further addressed whether Symantec was licensed to practice the patent, holding that it was not entitled to use of the patent-at-issue, under license.

⁵⁴The court noted that “a count defines the interfering subject matter between two or more applications or between one or more applications and one or more patents.”

⁵⁵The court further remanded the case to the Board to construe claims that had not been addressed in the prior proceedings.

Innovad, Inc. v. Microsoft Corp., 260 F.3d 1326, 59 USPQ2d 1676 (Fed. Cir. August 2001)

Before Mayer, Friedman, and Rader. Opinion by Rader.

Subject matter: programmable telephone dialing system

Proceedings Below: The district court (N.D. Tex.) granted summary judgment for non infringement of plaintiff's patent, either literally or under the doctrine of equivalents.

Issue: Did the district court err in construing the following terms of single, relevant claim 22:⁵⁶ (1) "telephone dialer system" did not include a keypad; (2) "small volume" meant a device smaller than the prior art portable telephone dialers; (3) "single, bi-state switch" is the only operable item on the exterior of the dialing unit; (4) "means for releasably electrically coupling said reprogrammable memory means and said programming means only during said programming mode" to require only temporary coupling between the programming means and the dialer unit.

Standard of review: Claim construction, as a matter of law, is reviewed without deference.

⁵⁶ A **telephone dialer system**, comprising:

[a] a case having at least one surface for substantially enclosing a **small volume**;

[b] reprogrammable memory means disposed within said case for storing a selected sequence of digits during a programming mode, said digits constituting at least one telephone number;

[c] signal means disposed within said case electrically coupled to said reprogrammable memory means for producing a sequence of dual tone modulated frequency signals corresponding to said at least one telephone number stored in said reprogrammable memory means during a dialing mode;

[d] an audiofrequency output means electrically coupled to said signal means for producing a sequence of audiofrequency signals corresponding to said sequence of dual tone modulated frequency signals produced by said signal means during said dialing mode;

[e] at least one battery disposed within said case, electrically coupled and providing power to said reprogrammable memory means, said signal means, and said audiofrequency output means;

[f] **a single, bi-state switch** operable from the exterior of said case for activating said signal means to produce said sequence of dual tone modulated frequency signals during said dialing mode corresponding to said digits in said reprogrammable memory means;

[g] programming means for programming said reprogrammable memory means with said at least one telephone number during said programming mode; and

[h] **means for releasably electrically coupling said reprogrammable memory means and said programming means only during said programming mode.**

The Federal Circuit addressed all four issues on the basis of intrinsic evidence without reference to any extrinsic evidence.

1. The Federal Circuit surmised that the district court may have confused the terms “telephone dialer system” and “dialer unit.” One section of the district court’s written opinion erroneously stated that a “keypad” could not fall within the scope of either term.⁵⁷ The Federal Circuit clarified that the “telephone dialer system” was a term that related to the invention as a whole; the “dialer unit,” on the other hand, identified one component of the invention.⁵⁸

Indeed, the “dialer unit” excluded a keypad. As noted in the specification, the absence of the keypad from the dialer unit in the claimed invention was a basis for distinguishing it over the less portable, bulkier prior art. However, the “telephone dialer system” could be construed to include a keypad. The intrinsic evidence (claim language and specification) provided ample support for the latter conclusion. The phrase “programming means” (a portion of the “telephone dialer system” outside the scope of the “dialer unit”) appeared in several claims and allowed for the use of keypad. Figures 1 and 2 also clearly illustrated a detachable keyboard.

2. The district court erroneously construed the term “small volume” to mean a device smaller than the prior art portable telephone dialers which had a volume of 4.4. cubic inches. The specification did not expressly define “small volume,” but merely referred it in a general sense. The Federal Circuit then observed that the dialer’s size affected its function based on the following statement in the specification: “[T]he dialer unit has no keypad, it is much smaller than existing repertory dialers and thus more portable and suitable for specialty advertising purposes.” Thus, the Court concluded that “small volume means that the dialer should be comfortably portable. Neither the words of the claim nor the context . . . limit the claimed dialer within the system to a particular volume.”

3. The district court erroneously determined that the dialer unit had *only* a “single, bi-state switch” operable from the exterior of the dialer for activating the signal to further bolster its claim construction excluding a keypad, which has many switches, from the dialer unit. The single, bi-state switch merely activated the tone to dial a telephone number. Nothing in the language of the claim or specification precluded that dialer unit from having other switches as long as a single, bi-state switch activated the signal means to produce dial tones. Moreover, use of the term “comprising” at the outset of the claim signaled that an infringing device could have additional elements beyond those cited, yet still fall within the literal scope of the claim.

4. The district court was correct when it concluded that element [h] of claim 22 (see footnote), “means for releasably electrically coupling said reprogrammable memory means and said programming

⁵⁷ The district court stated: “[T]he *telephone dialer system* does not include a keypad as did existing repertory dialers. moreover, the *dialer unit* itself had no mechanism through which the end user could reprogram the telephone number.”

⁵⁸ Single, relevant claim 22 described a “telephone dialer system.” Elements [a] through [f] of claim 22 equated to the “dialer unit” portion of the invention.

means only during said programming mode” meant that the programming means and the dialer unit were coupled only temporarily and during the programming mode.

Outcome: Although the district court erred in construing the claim terms “telephone dialer system,” “small volume,” and “single, bi-state” switch, it correctly construed other aspects of the claim language that were dispositive of the question of infringement. Namely, the district court correctly noted that the claimed invention’s “dialer unit” could not include a keypad and that the “dialer unit” could only be programmed during the temporary coupling of the programming means to the dialer unit. The dialer unit of the accused device contained a keypad which also allowed it to be programmed even when the programming means was not releasably coupled to the dialer unit. Therefore, the claims of the patent could not be infringed, either literally or under the doctrine of equivalents.

Interactive Gift Express v. Compuserve, 256 F.3d 1323, 59 USPQ2d 1401 (Fed. Cir. July 2001)

Before Plager, Schall, and Linn. Opinion by Linn. Opinion substituted on partial grant of rehearing for withdrawn opinion of November 3, 2000.

Subject matter: Information distribution (invention allows a customer to obtain information such as music or text on a medium at the point of sale).

Proceedings Below. Following claim construction on (1) the meaning of "point of sale location"; (2) the meaning of "material object"; (3) the meaning of "information manufacturing machine" ("IMM"); (4) the meaning of "authorization code"; and (5) whether the information must be provided to and stored at the IMM before the consumer requests it, the district court (S.D.N.Y) entered summary judgment of non-infringement pursuant to a stipulated order.

Focus on Claim Language. The Federal Circuit relies strongly on the claim language: "In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves..."

Hierarchy of Intrinsic Evidence. The court looks first to the claim language, then the specification and prosecution history, if in evidence.

If the claim language is clear on its face, then our consideration of the rest of the intrinsic evidence is restricted to determining if a deviation from the clear language of the claims is specified. A deviation may be necessary if "a patentee [has chosen] to be his own lexicographer and uses terms in a manner other than their ordinary meaning." *** A deviation may also be necessary if a patentee has "relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference." *** If however the claim language is not clear on its face, then our consideration of the rest of the intrinsic evidence is directed to resolving, if possible, the lack of clarity.

Where Claim Terms Are Defined In Specification, Care Is Required. Here, the specification was particularly important because IGE conceded that the claim limitations in dispute include technical terms that are defined in the specification. Care must be taken to avoid reading limitations from the specification into the claims. A useful guide is to look "to the specification to ascertain the meaning of the claim term as it is used by the inventor in the context of the entirety of his invention," and not merely to limit a claim term. *Comark Communications v. Harris*, 156 F.3d 1182, 1187, 48 USPQ2d 1001 at 1005 (Fed. Cir 1998).

Extrinsic Evidence: "If the meaning of the claim limitations is apparent from the totality of the intrinsic evidence, then the claim has been construed. If, however, a claim limitation is still not clear, we may look to extrinsic evidence to help resolve the lack of clarity. Relying on extrinsic evidence to construe a claim is 'proper only when the claim language remains genuinely ambiguous after consideration of the intrinsic evidence.' [citations omitted]"

Dictionaries. Citing *Cybor v. FAS Techs.*, 138 F.3d 1448 (Fed. Cir 1998) (*in banc*), the Federal Circuit noted that dictionaries are a special form of extrinsic evidence and may *sometimes* be considered with the intrinsic evidence. [emphasis added] And according to *Vitronics*, the court is free to consult dictionaries *at any time* to help determine the meaning of claim terms, so long as the definition from the dictionary does not contradict the meaning from the patent documents. [emphasis added]

Perspective of Skilled Artisan. Claims are to be construed using "the viewing glass" of a person skilled in the art.

Claim Construction Subject to Waiver or Judicial Estoppel: The Federal Circuit explained:

[t]he doctrine of waiver is limited in its application. As it relates to claim construction, the doctrine has been applied to preclude a party from adopting a new claim construction position on appeal ... (*see e.g. Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 715 (Fed. Cir. 1998); *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1426 (Fed. Cir. 1997)). . . [i]n the above cited cases, the claim construction proffered on appeal was considered to be 'new' because it changed the scope of the claim construction ... [w]e hold that arguments that are based on a specification in evidence and that are in support of an existing claim construction are not barred by the doctrine of waiver for the sole reason that they were not first presented to the trial court.

Therefore, so long as a party does not change the scope of his claim construction, he may argue on appeal using different supporting evidence from the specification.

The Federal Circuit then found errors in the district court claim construction, including impermissibly reading limitations from the specification into each of the five disputed claim limitations.⁵⁹

⁵⁹The "Point of Sale Location" Includes A Home. Per the district court's request for binding definitions of the disputed terms, IGE had identified a passage of the specification as defining a point of sale location. That passage states that a point of sale location is "a location where a consumer goes to purchase material objects embodying predetermined or preselected information." The district court held that a home is not a point of sale

Outcome. The summary judgment of the district court was vacated and remanded.

Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 61 USPQ2d 1152 (Fed. Cir. Dec. 2001), reh. and reh. en banc denied 2002 U.S. App. LEXIS 7374, cert. denied. denied 2002 U.S. App. LEXIS 6051

location. The Federal Circuit disagreed. First, the claim language itself does not preclude a home from being a point of sale location, even though it led to a "great likelihood that a point of sale location will not be a home," especially since IGE's asserted definition requires a consumer to go to a point of sale location "to purchase material objects." The specification also requires the IMM to be located at the point of sale location. "However, IGE's asserted definition, premised on the specification *** does not preclude a home from serving as a point of sale location, and the specification further describes a vending machine embodiment that could be utilized in a home. *** This intrinsic evidence unambiguously allows a home to serve as a point of sale location. Therefore, it is unnecessary to address IGE's arguments alleging that the prosecution history additionally supports our conclusion. Given the lack of ambiguity in the intrinsic evidence, it would be improper to address any of the parties' arguments relating to extrinsic evidence, such as other examples of point of sale locations and standard references. ***"

The Point of Sale Location Need Not Have Two (or more) Blank Material Objects. Overruling the district court, the Federal Circuit agreed with IGE that a point of sale location need not have two blank material objects.

C The claim language specifically recites "reproducing in a material object." One claim (37) initially mentions material objects in the plural, but is later modified by a singular reference and does not require more than one material object. The preambles of the independent claims similarly recite plural "material objects," but in the context of multiple IMMs and/or multiple point of sale locations. The preambles do not require multiple material objects at each point of sale location, and given the preambles' generality, the Federal Circuit found no need to "consider whether they are more than statements of intended use."

C In the specification, while one passage in the specification stated that "[e]ach point of sale location has ... a plurality of blank material objects," the Federal Circuit found that passage unclear on whether it was a general statement or limited to a particular embodiment. The Federal Circuit found nothing else in the specification supporting the position that a point of sale location has at least two blank material objects. Instead, it thought that the IMM as described in the specification requires no more than one single material object to process fully a consumer's request. The court noted the opening sentence of the background section of the patent, "[t]he present invention relates generally to a system for reproducing information in a material object." The Federal Circuit held that the entirety of the specification dictates that the reference to a plurality be understood "to refer to a *supply' of blank material objects, and that the supply can consist of one material object. See *Digital Biometrics v. Identix, Inc.*, 149 F.3d 1335, 1345, 47 USPQ2d 1418, 1425 (Fed. Cir. 1998) (basing the claim construction on the entire written description, despite an isolated passage in apparent conflict)."

The Point of Sale Location Need Not Have Blank Material Objects Available for Sale to Consumers. The Federal Circuit agreed with IGE that a point of sale location need not have any blank material objects separately for sale. The claims require only that information be reproduced in a material object. A cited definition in the patent refers exclusively to the purchase of non-blank material objects, that is, to "material objects embodying ... information." A passage cited against IDS does not state that the blanks are sold to the customers as blanks, but only that the retailer is reimbursed for the cost of blanks on which information is reproduced.

Among further claim constructions, the Federal Circuit ruled that a "material object" cannot be information itself. Citing the Supreme Court admonition that it is unjust to the public to construe a claim in a manner different from the plain import of its terms, *White v. Dunbar*, 119 US 47 (1886), in the very next paragraph the Federal Circuit turned to the specification "despite the plain language of the claims" (that the information must be reproduced in a material object) to see whether the inventor used terms inconsistent with their ordinary meaning. 231 F.3d at 869-70.

Before Lourie, Archer and Gajarsa. Opinion by Lourie.

Subject Matter: image viewing system.

Proceedings Below: In this infringement suit, the district court (E.D. Tenn.) denied a series of motions brought by the defendant following a jury trial. At trial, the defendant was found guilty of infringing claims of the patent under the doctrine of equivalents. The defendant moved for judgment based on prosecution history estoppel, for JMOL, and to set aside the damages award in favor of a new trial on damages.

Issues: The Court addressed prosecution history estoppel, the doctrine of equivalents, literal equivalents and damages.

No Prosecution History Estoppel: The defendant claimed that estoppel prevented application of the doctrine of equivalents because the plaintiff narrowed the claims during prosecution⁶⁰ by changing the nature of the device, and that arguments made during prosecution estop the plaintiff from asserting infringement by equivalents. In response, the plaintiff argued that prosecution arguments did not narrow the claims, but instead merely clarified them. The Court agreed with the plaintiff, noting that the amendment “did nothing more than make express what had been implicit in the claim as originally worded,” as evidenced by the claim language in light of the specification.

The defendant further argued that the plaintiff narrowed the claims in order to avoid the prior art.⁶¹ The Court found that the prosecution history did contain phrases describing aspects of the invention not found in the prior art, but that the remarks did not limit the claims.

Prior Art Limitations on the Doctrine of Equivalents: The defendant further argued that the scope of equivalents asserted by the plaintiff (through a hypothetical claim submitted to the jury) would not have been patentable over the prior art. The Court disagreed, concluding that the articles cited by the defendant did not collectively disclose or suggest the hypothetical version of the claim. The Court noted that although its decision was reached independently of the jury’s verdict, the same conclusion was reached.

Means Plus Function Limitation: The defendant also argued that the plaintiff could not assert infringement by equivalents of a means-plus-function limitation⁶², because the limitation was not literally present in the product of the patent, and that the equivalent was present in a prior art product. The Court

⁶⁰ Infinite asserted that the plaintiff narrowed the phrase “image transform processor means” by replacing the words “output signals” with the words “output transform calculation signals.”

⁶¹ Specifically, the defendant argued that Interactive narrowed the phrase “output signals” in order to avoid the art, based on the following remark made during prosecution:

The [digitized fisheye image] information in this input memory is processed with a transform processor to produce output signals corresponding to the perspective corrected views according to selected viewing angles and magnification, with these output signals being produced according to a combination of the digitized signals, the selected viewing angles and the selected magnification

⁶²The limitation was an “image transform processor means.”

found that “the absence of literal infringement is due to a lack of identical function of the claimed means, not a lack of equivalent structure.” Noting that the jury in the case found the difference between functions was insubstantial, the Court nevertheless affirmed the denial of JMOL.

Factual Finding of Equivalents: Despite the defendant’s argument that there were substantial differences, the Court found that the evidence supported the finding of literal equivalence. Citing the expert witness of the plaintiff as a major factor, the Court held that the devices were substantially the same under both the known interchangeability test and the function-way-result test. The Court further upheld the district court’s denial of the defendant’s motion for JMOL.

Damages: The defendant finally objected to the plaintiff’s theory of damages based on a reasonable royalty. Finding that it was acceptable to award damages premised on a lump sum royalty payment based on an infringer’s expected sales, the Court concluded that the jury’s award was reasonable.

Outcome: The Court affirmed the lower court, holding that amendment of claims during prosecution did not give rise to estoppel, there was evidentiary support for infringement by equivalents, and that a jury’s damage award was proper.

Intermatic Inc. v. The Lamson & Sessions Co., 273 F.3d 1355 , 61 USPQ2d 1075 (Fed. Cir. Dec. 2001), rehearing and reh. en banc denied 2002 U.S. App. LEXIS 3049 (2002), vacated 154 L.Ed.2d 423, 123 S.Ct. 549, 2002 U.S. App. LEXIS 6756 (2003).

Before Newman, Lourie, and Rader. Opinion by Lourie; dissent-in-part by Newman.

Subject matter: weatherproof electrical fixtures

Proceedings Below. In a first suit (*Intermatic I*), the district court (N.D. Ill.) found defendant’s “ribbed products” could not literally infringe Intermatic’s patent in suit and granted partial summary judgment. At trial, a jury found infringement under the doctrine of equivalents. The district court denied defendant’s motion for JMOL as to non-infringement, and defendant appeals. The jury found certain claims invalid, and the district court granted Intermatic’s motion for JMOL of no invalidity. Defendant appeals the denial of its various motions, and Intermatic cross appeals the grant of partial summary judgment of non-infringement. In a second suit (*Intermatic II*) directed to defendant’s ribless products, the district court granted summary judgment of no literal infringement and that prosecution history estoppel barred infringements by equivalents. Plaintiff appeals the summary judgments in the second suit.

Issue: The claim limitations at issue were called the “multiple orientation” limitation⁶³ and the “insert within the aperture” limitation,⁶⁴ neither of them being written in means plus function format. Defendant argued, *inter alia*, that the claims ought to be construed like the preferred embodiment, and that a file history estoppel (during reexamination) precluded application of the doctrine of equivalents.

Scope of Review: Grant of denial of JMOL is reviewed *de novo* using the same standard as applies in the district court. Claim construction is an issue of law which also is reviewed *de novo*, as is the applicability of prosecution history estoppel.

Plain Meaning Applied: An embodiment of the patent showed electrical outlets in a configuration where one was oriented 90 degrees from a second one in the same housing. Defendant Lamson urged that the district court had erred in not restricting the “multiple orientation” feature to that orientation, but allowed it to cover orientations that were 180 degrees different.

The Federal Circuit ruled that “absent an express intent to impart a novel meaning, ‘terms in a patent claim are to be given their ordinary and accustomed meaning.’” Thus, the recitation of first and second orientations did not require the specific first and second orientations in a preferred embodiment. Said the Court,

The relevant claims at issue require that the aperture be large enough to enable the insert to fit within the aperture "in a first orientation and a second orientation." ... The ordinary meanings of the terms "first" and "second" do not require that the orientations be separated by any specific degree of rotation, such as the ninety degree difference argued by Lamson. Rather, such language broadly claims an outlet cover with an aperture large enough to accommodate an insert placed in any two orientations, whether those orientations be separated by one hundred eighty degrees, ninety degrees, or any other degree of rotation.

Claim Differentiation “Clearly Applicable”: In reaching its discussion, the Federal Circuit noted that dependent claim 3 recited the specific orientation which Lamson had urged for claim 1. While each claim in a patent is presumed to be different in scope from others, the Court said this presumption “can be strengthened under certain circumstances.” Citing a decision earlier in the year, the Court said that

“claim differentiation ... is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims.” *Wenger Mfg. v.*

⁶³ Claim 1 recited, “a base plate adapted to be attached in weatherproof connection with the electrical outlet, the base plate having an aperture of sufficient size to accommodate the electrical outlet positioned in a first orientation and a second orientation wherein only one electrical outlet orientation can be accommodated at a given time...”

⁶⁴ Claim 1 further recited, “an insert sized an [sic] adapted to fit within the aperture of the base plate in a first orientation, the insert being of sufficient size to accommodate one electrical outlet orientation;”

Coating Machinery Systems, Inc., 239 F.3d 1225, 1233, 57 USPQ2d 1679, 1685 (Fed. Cir. 2001). Because the only meaningful difference between claim 1 and claim 3 involves the potential orientations of the insert, the doctrine of claim differentiation provides additional support for not limiting the “multiple orientation” limitation to the construction proposed by Lamson.”

Hence, the Court found no error in the claim construction by the district court for the “multiple orientation” limitation.

Specification Meaning Applied: The Court ruled next that the “insert within the aperture” limitation also was properly construed by the district court. Patentee Intermatic asserted that the district court had erred by excluding related parts of the “insert plate” and that the limitation in dispute should include a flange and raised ledge connected to it. The Federal Circuit rejected this contention because, “When the meaning of a term used in a claim is sufficiently clear from its definition in the patent specification, that meaning shall apply. [citations omitted]” Examining the specification, the Court found that the claimed “insert” is “something separate from, but connected to, the flange and the raised ledge.” Hence, the claim element does not include the flange and raised ledge.⁶⁵

Equivalency Limited By Reexamination Amendment: The patentee argued that substantial evidence supported the jury finding of equivalence and that any estoppel is limited to claim 14. During reexamination, independent claim 14 was rejected. The patentee amended the claim and argued that the claim as amended was patentable over the art. “When an amendment narrows the scope of a claim for a reason relating to patentability, no range of equivalents is available for that amended claim limitation.⁶⁶ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 569, 576, 56 USPQ2d 1865, 1872, 1878 (Fed.Cir.2000) (en banc), *cert. granted*, --- U.S. ---, 121 S.Ct. 2519, 150 L.Ed.2d 692 (2001).”

Estoppel Applies Against Unamended Claims With Same Feature. The Court next considered whether the restriction against equivalency for claim 14 applies to other claims. The Court found precedent for this situation and held that “any estoppel generated by such an amendment applies to all other claims in the patent containing that limitation.” The Court felt that any other ruling would “exalt form over substance.” Further, the Court did not want to have some claims having “multiple ranges of equivalence” depending on whether that claim limitation had been amended in that particular claim. 273 F.3d at 1367.

Commenting on the dissent-in-part, the majority opinion characterized the dissent as agreeing that under precedent, the estoppel applies to all unamended claims. Further, it read the dissent as urging that in any claim where the limitation is amended, there is an absolute bar against equivalents (due to *Festo*),

⁶⁵ Based on this construction, the summary judgment of no literal infringement of the “ribbed products” was affirmed. The issue of equivalency, however, still required discussion.

⁶⁶ During reexamination, claim 14 was amended, in pertinent part, as follows: “an insert adapted to be [mounted] *accommodated with [sic] the aperture* in the base and further in which the insert includes at least an aperture therein conforming in size and shape to the electrical service device.”

but in other claims where that limitation was unamended, then the limitation is analyzed under the flexible bar rule.

Because ribbed products do not meet the “insert within the aperture” feature literally, and there can be no equivalence, then there can be no infringement. Accordingly, the district court erred in denying the motion for JMOL of noninfringement.

Dissent-in-part

Judge Newman dissented in part, while concurring in the result. Conceding that long standing law on estoppel affects the scope of equivalents of an unamended claim when a broader claim is amended for reasons of patentability, she would not extend the *Festo* absolute bar against an unamended claim. According to the dissent, “*Festo* does not prevent an unamended claim from serving as a source of equivalency, subject to estoppel against recovering by equivalency the subject matter that was relinquished in order to achieve patentability of a different claim.”

J&M Corp. v. Harley-Davidson, Inc., 269 F.3d 1360, 60 USPQ2d 1746 (Fed. Cir. Nov. 2001)

Before Gajarsa, Archer, and Linn. Opinion by Archer.

Subject Matter: motorcycle helmet accessories used to mount a microphone and electrical plug on helmet

Proceedings below: J&M moved for a preliminary injunction to stop Harley-Davidson from selling a motorcycle helmet microphone arrangement which allegedly infringed J&M’s patent. The district court (D. Ariz.) determined J&M failed to establish a substantial likelihood of success on the merits based on a claim construction that found no infringement, either literally or under the doctrine of equivalents. J&M appealed the district court’s decision and the Federal Circuit affirmed with no written opinion. J&M then moved for partial summary judgment on Harley Davidson’s affirmative defenses. Harley-Davidson moved for summary judgment for non-infringement which the district court granted. J&M appealed, arguing that the district court abused its discretion by excluding J&M’s expert reports and erred in its finding of no infringement by equivalents.

Issues: (1) Did the district court err in holding the accused, integrated (*i.e.* single clamp) microphone design did not infringe the patentee’s double mount (*i.e.* double clamp: one for the microphone, one for the electrical boom) design, either literally or under the doctrine of equivalents? (2) Did the district court abuse its discretion by excluding expert reports?

Scope of review: A district court’s grant of summary judgment is reviewed *de novo*.

Response to Issue 1: The range of equivalents were limited as a matter of law because the patentee (1) narrowed claims during prosecution to overcome prior art and (2) made statements in the specification that disclaimed accused subject matter:

The literal scope of a properly construed, means-plus-function limitation does not extend to all means for performing a certain function, but may be sharply limited to the structure disclosed in the specification and its equivalents based on the prosecution history.

The patent-in-suit was a continuation of a reissue application filed after a previous application had failed to claim the full subject matter to which the patentee believed it was entitled. In the reissue declaration, the patentee stated that the invention “properly includes within its scope an embodiment wherein the microphone boom and the electrical plug are both attached to a *single element* . . .” (emphasis added). The patentee, therefore, asserted new claims 15-20 to encompass the single element construction. The examiner rejected these new claims under 35 U.S.C. §112 ¶¶1,2, and 251 and explained that the specification “failed[ed] to support the subject matter of claims 15 through 20 directed to a microphone boom and an electrical plug mounted on the *same jaw pair*.” (emphasis added). The examiner also noted that these claims introduced new matter into the application.

The Applicant proposed new claims in a means-plus function format (*i.e.* “gripping means” for attaching the microphone mount and electrical plug mount to the motorcycle helmet) to cover the single mount construction. After further amendment, the claims in this format were allowed. The Federal Circuit concluded that, based on the prosecution history and the specification, the patentee was statutorily entitled only to claims that “encompass embodiments of the ‘gripping means’ disclosed in the specification and their equivalents.”

Specification described single clamp construction as a problem of the prior art and a basis on which to distinguish the claimed invention: With respect to the single clamp structure of the prior art, the specification stated:

This is especially a problem when the electrical wires, [which run from the motorcycle frame to the microphone mount,] attach by means of a plug mounted to the microphone mount such as to enlarge the portion of the mount residing below the helmet lip and present a still larger object for striking the helmet wearer’s shoulder when his head turns.⁶⁷

Thus, the Federal Circuit concluded that the patentee was distinguishing his construction over the bulk associated with the single mount design.

Response to Issue 2: In light of affirming the district court’s ruling that the patentee was barred, as a matter of law, from interpreting his claims to cover a single mount design, the Federal Circuit declined to consider whether the district court abused its discretion by excluding all three expert reports of the patentee which argued for infringement by equivalents.

Outcome: affirmed.

⁶⁷Language in brackets appears in specification but was omitted in quotation which appears in written opinion

Karsten Manuf. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 58 USPQ2d 1286 (Fed. Cir. March 2001).

Before: Newman, Michel, and Plager. Opinion by Newman.

Subject Matter: golf clubs

Proceedings Below: The district court (D. Ariz.) granted summary judgment of non-infringement and held claims 1-6 invalid based on anticipation and claims 7-8 invalid based on obviousness. Karsten appealed.

Issues: (1) Whether the district court properly construed the terms “correlated set,” “back surface,” and “sloping upwardly and inwardly” in the ‘813 and ‘805 patents.⁶⁸ (2) Whether the district court properly construed claim 9 of the ‘805 patent to require protuberances which “bulge beyond the surrounding or adjacent surfaces.”⁶⁹ (3) Based on the claim construction, was the district court’s grant of summary judgment of non-infringement proper. (4) Whether claims 1-6 of the ‘803 patent were invalid as anticipated. (5) Whether claims 7-8 of the ‘803 patent were invalid as obvious.

Preamble Term Held Limiting. Giving plenary review, the Court reviewed claim 1 of the ‘813 patent regarding the terms “correlated set” in the preamble of claim 1 (“An improved correlated set of iron-type golf clubs, ...”) The district court’s interpretation of “correlated set” as meaning that all clubs in the set must have all of the claim limitations for there to be infringement was correct.

Further constructions. “back surface,” and “sloping upwardly and inwardly.” The district court also correctly “construed the ‘back surface adjacent said indented trailing edge’ as excluding the surfaces

⁶⁸ Claim 1 reads: “1. An improved correlated set of iron-type golf-clubs, each club having a head which includes a face for impacting a golf ball, a back surface, a heel portion, a toe portion and a sole, said sole having a trailing edge extending between said heel and toe portions, the improvement comprising at least a central portion of said trailing edge being indented toward said face at least 1/16 of an inch and having at least the lower portion of said back surface adjacent said indented trailing edge configured to conform to said indented trailing edge by sloping upwardly and inwardly from said indented trailing edge toward said face.”

⁶⁹ Claim 9 provides: “9. A cavity-back iron-type golf club comprising:

“a) a head having a cavity formed in the back thereof, a front face for impacting a golf ball, a back surface in rearwardly spaced relationship with the face and disposed to circumscribe the opening of the cavity, a heel portion, a toe portion and a sole, said heel having an elongated upper end extending between the heel and toe portions, the sole of said head having a trailing edge that extends between the heel and toe portions of said head, the trailing edge being indented centrally thereof toward the front face to said head and having the lower part of the back surface adjacent the indented trailing edge configured to conform to the indented trailing edge by sloping upwardly and inwardly therefrom toward the front face of said head;

“b) a top ridge formed on said head and extending longitudinally along the upper end between the heel and toe portions thereof and having a longitudinal center intermediate the heel and toe portions of the head;

“c) an upper heel protuberance located at a corner junction formed at the intersection of the heel end of said top ridge and the heel portion of said head, said upper heel protuberance being in the form of an enlarged mass concentration which protrudes rearwardly from the back surface of said head; and

“d) an upper toe protuberance located at a corner junction formed at the intersection of the toe end of said top ridge and the toe portion of said head, said upper toe protuberance being in the form of an enlarged mass concentration which protrudes rearwardly from the back surface of said head.”

of the cavity,” and went on to properly require “that ‘the surface adjacent said indented trailing edge [must] slope upward and inward’ relative to the trailing edge and the face of the club.”

Regarding the ‘805 patent, the court reviewed claim 9, interpreting it in line with the interpretation of claim 1 above. Additionally, the court found that the protuberances “bulge beyond the surrounding or adjacent surfaces” as set out clearly in the prosecution history.

Infringement: Applying the construed claims to the accused Cleveland clubs, the court affirmed the judgment that neither patent was infringed. There was no literal infringement because the Cleveland clubs do not meet every claim limitation as properly construed. Nor was there equivalence, since the prosecution history estopped Karsten from asserting this, whether analyzed under *Festo* or not.

Invalidity: As to the anticipation of claims 1-6 of the ‘803 patent, the Court found that although the specific embodiments shown in the drawings of the ‘803 patent are not identical to that pictured in the prior art, “claims 1-6 do not reflect such differences.” The Court may not rewrite the claims for the patentee to “avoid the impact of newly discovered prior art.” Therefore, the Court affirmed the judgment of invalidity of claims 1-6 based on anticipation.

The court reversed the trial court’s finding that claims 7-8 were invalid as obvious. The two references that produced the obvious combination contained “conflicting teachings [which] can not reasonably be viewed as suggesting their combination into a head having the limitations set forth in claims 7 and 8.” Nor was there any suggestion to combine the references other than hindsight knowledge of the club disclosed in the ‘803 patent.

Outcome: The court affirmed the judgment of non-infringement and the judgment of invalidity of claims 1-6, but reversed the judgment of invalidity of claims 7-8 and remanded for a determination of whether claims 7-8 are infringed.

Kopykake Enterprises, Inc. v. Lucks Co., 264 F.3d 1377, 60 USPQ2d 1124 (Fed. Cir. Sept. 2001).

Before Rader, Schall, and Dyk. Opinion by Dyk.

Subject matter: method for producing pictorial images upon foodstuffs

Proceedings Below. In a declaratory judgment case, the district court (C.D. Cal.) entered judgment of non-infringement in favor of Kopykake after construing the “screen printing” step of Lucks’ patent at issue as encompassing “conventional processes by which pictorial images are applied to the base shapes.”

The Issue. Whether “screen printing” as recited in “screen printing said at least one edible pictorial image onto said edible base shape” encompasses Kopykake’s ink jet printing methods.⁷⁰

⁷⁰Claim 1 reads as follows: “1. A method of manufacturing at least one edible base shape having at least one edible pictorial image thereon; wherein said base shape is dimensioned and adapted to be placed on and adhere

Construction of “Conventional”. The Court concluded that “screen printing” includes, according to the words of the specification, “any other conventional printing process and any other conventional means and methods” for applying pictorial images to foodstuffs. To construe the ordinary and customary meaning of “conventional,” the Court looked to dictionary definitions of the word. The Court used *Webster’s Third New International Dictionary* (1968) to obtain the ordinary and customary meaning of the term “conventional” as “according with, sanctioned by, conforming to, or based on convention, custom, or traditional usages or attitudes; established and sanctioned by general agreement and usage; lacking spontaneity, originality or individuality.”

Determination of Conventional Processes. The Court determined which processes were conventional at the time of the invention by considering the meaning of the claim as of the date the invention was constructively reduced to practice, *i.e.*, the date the patent application was filed in 1986. The Court rejected the patent owner’s argument that screen printing itself was not a conventional process for printing on foodstuffs as of the filing date of the patent application, as the patent specification states that “screen printing as used herein encompasses . . . conventional screen printing.” The Court also rejected Lucks’ argument that the “screen printing” limitation encompassed Kopykake’s ink jet printing methods, as Lucks presented no evidence, from the point of view of one of ordinary skill in the art, that ink jet printing was a conventional method of printing images on foodstuffs at the time the patent application was filed in 1986. Accordingly, the Court held that the “screen printing” limitation may not be construed to cover ink jet printing.

Outcome. The Federal Circuit affirmed the judgment of non-infringement.

to a foodstuff to decorate said foodstuff; wherein said base shape has a predetermined, two dimensional configuration and has thickness; wherein said edible base shape is manufactured from at least one edible, fluid material; and wherein said method comprises the steps of:

“(a) selecting said edible, fluid material to have a composition such that when said edible, fluid material is dried said edible base shape formed therefrom has the properties when at room temperature of being both flexible and free standing[;]

“(b) shaping said edible, fluid material into said predetermined, two dimensional configuration by filling at least one printing opening in a printing screen in a screen printing means with said edible, fluid material, wherein said at least one printing opening has said predetermined, two dimensional configuration, and by screen casting said edible, fluid material through said at least one printing opening while simultaneously depositing said edible, fluid material in said predetermined, two dimensional configuration onto a releasable carrier medium by using said screen printing means to form said base shape; wherein said base shape has a thickness in the range of from about two one-thousandths of an inch to about fifty one-thousandths of an inch; wherein said edible fluid material is selected to have a composition such that it is able to flow relatively easily through said at least one printing opening, and yet be tacky enough to adhere to said releasable carrier medium, but not be so tacky that said edible fluid material adheres unduly to said printing screen after said edible base shape has been formed, to enable said printing screen to be easily removed from said edible base shape without ruining the formed base shape;

“(c) drying said edible, fluid material in said predetermined, two dimensional configuration until it is firm enough when it is at room temperature to be removed intact from said releasable carrier medium as said edible base shape; and

“(d) *screen printing said at least one edible pictorial image onto said edible base shape.*” [emphasis added]

Kustom Signals, Inc. v. Applied Concepts, Inc., 264 F.3d 1326, 60 USPQ2d 1135 (Fed. Cir. Sept. 2001), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 24256, *cert. denied* 122 S.Ct. 1537 (2002).

Before: Mayer, Newman, and Lourie. Opinion by Newman; dissent by Mayer.

Subject Matter: traffic radar equipment

Proceedings Below: The district court (D.Kan.) granted summary judgment of non-infringement. Kustom appealed.

Issues: (1) Whether the district court properly construed the terms “or” and “either” as used in the patent claims to mean “a choice between either one of two alternatives, but not both.”⁷¹ (2) Based on the claim construction, whether the district court’s grant of summary judgment of non-infringement was proper.

Background: Kustom’s patent incorporates digital signal processing with user-selectable modes of operation designed to “identify and display the speed of either the strongest target or the fastest target

⁷¹ With emphasis added to the words “or” and “either,” on which the claim construction issue turns, independent claims 1, 16, and 20 recite:

“1. A method of processing Doppler return information in a traffic radar comprising the steps of: [a] receiving Doppler return information containing at least one return signal derived from a target vehicle, [b] presenting said Doppler return information as digital data, [c] transforming said data into the frequency domain to provide a spectrum that includes frequency components corresponding to Doppler return signals contained in said information, [d] storing said components in a memory, [e] searching said components in memory for the component that meets preselected magnitude or frequency criteria, and [f] indicating the speed of the target vehicle corresponding to the component that meets said criteria.”

“16. In a traffic radar, apparatus for processing Doppler return information comprising: [a] means for receiving Doppler return information containing at least one return signal derived from a target vehicle, and for presenting said information as digital data, [b] means for transforming said data into the frequency domain to provide a spectrum that includes frequency components corresponding to Doppler return signals contained in said information, [c] memory means for storing said components, [d] means for searching the components stored in said memory means to identify the component that meets preselected magnitude or frequency criteria, and [e] means responsive to the identified component for indicating the speed of the target vehicle corresponding thereto.”

“20. In a traffic radar, apparatus for processing Doppler return information comprising: [a] means for receiving Doppler return information containing at least one return signal derived from a target vehicle, and for presenting said information as digital data, [b] means for transforming said data into the frequency domain to provide a spectrum that includes frequency components corresponding to Doppler return signals contained in said information, [c] means for determining the magnitude and frequency of each of said components, [d] memory means for storing said components, [e] search means for providing a plurality of modes of operation, including a mode in which a target vehicle component of greatest magnitude in said memory means is identified and a mode in which a target vehicle component of highest frequency in said memory means is identified, and [f] means under operator control for selecting either a greatest magnitude or highest frequency search, whereby either strongest signal or fastest signal target identification is provided.” [Emphasis added; clause letters added.]

vehicle." Applied Concepts makes a radar device which is similar to the one claimed in the patent except that "both a strongest and a fastest analysis" are performed, and it is not subject to operator selection.

Non-Exclusive or Exclusive Or? The district court had construed the claim terms "or" and "either" to as the non-exclusive or, calling for a choice of one or the other of two alternatives, *but not both*. Kustom argued on appeal that this was a restrictive meaning, citing the *Microsoft Press Computer Dictionary*, which distinguishes among "or," (true when one or both values are true), "and" (true if and only if both values are true), and "exclusive or" (true when *only one* value is true). Kustom cited precedent which cautions against construing technical terms of the art at issue in accordance with non-technical dictionary definitions, instead of the technical usage of the field of the invention.

Technical Meaning Presumed. The Federal Circuit noted caselaw which presumes "that technical words in patent documents are used, and intended to be understood, as they would be used and understood by persons experienced in the field of the invention."

Non-Technical Meaning Adopted. Despite the presumption, the Federal Circuit concluded that the patent documents made clear that the term "or" was *not* being used as a technical programming operator, but in its ordinary meaning as stating alternatives. The Court said that in this case, if the inventor intended "a divergent specialized usage," then "the context was such that it was required to be clearly explained in the patent documents," citing *Vitronics v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.").

The district court construed "or" and "either" in their common usage as designating alternatives. We agree with this construction, for there is no indication that Kustom used these words with a different meaning. Particularly, there is no basis whatsoever for believing that Kustom intended its usage of "or" somehow to embrace "and." The district court analyzed the detailed flowcharts in the '246 specification, which showed that only one search of memory is done for any one data set for either magnitude or frequency criteria. The '246 patent does not describe any embodiment that searches for and displays both modes.

Infringement: As for the issue of literal infringement, it was undisputed that the accused Applied Concepts traffic radar performs both the "fastest" and "strongest" search. Kustom argued this was literal infringement since the accused infringing device comprised the elements and limitations of the device. However, the Court noted that the limiting term "or" required the "exclusion of devices whose memory search includes magnitude and frequency." Therefore, the accused device has a different element, and the judgment of no literal infringement was proper.

No Equivalency. The trial court did err in its determination that there was no infringement under the doctrine of equivalents since the term "or" was not an element, and each element of the claims was found in the accused product or method. However, the Federal Circuit agreed with the district court's finding that "the accused device's methodology of automatically searching both magnitude and frequency data was a

substantially different way of operation, compared with the [patent] device’s operator-initiated search of either magnitude or frequency data.” In addition, the Federal Circuit affirmed the district court’s conclusion that the prosecution history estopped Kustom “from relying on the position that a device which searches for both fastest and strongest targets performs substantially the same function as a device which searches for either the fastest or the strongest target.”

Outcome: The court agreed with the lower court’s claim construction and affirmed the grant of summary judgment of non-infringement.

Dissent by Mayer: The plain meaning of the term “or” is either or both, and the prosecution history does not create an estoppel against this.

Litton Systems, Inc. v. Honeywell, Inc., 238 F.3d 1376, 57 USPQ2d 1653 (Fed. Cir. Feb. 2001).

Before Mayer, Rader, and Bryson. Opinion by Mayer.

Subject matter: fabricating optical films

Proceedings below: The district court (C.D.Cal.) granted summary judgment and JMOL of non-infringement by Honeywell. *See also*, Litton Sys., Inc. v. Honeywell, Inc., 87 F.3d 1559, 39 USPQ2d 1321 (Fed. Cir. 1996) (“Litton I”); Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 46 USPQ2d 1321 (Fed. Cir. 1998) (“Litton II”) (affirming that Honeywell’s processes do not literally infringe and remanding for consideration of the doctrine of equivalents).

Complete bar applied despite law of the case: Litton had argued a certain claim construction in the PTO, and then actually narrowed its claim by amendment. The issue was whether Litton was barred by prosecution history estoppel. The decision in Litton II applied a flexible bar approach. The Federal Circuit opted *not* to apply the law of the case doctrine in view of the intervening change in the law – namely, that Court’s complete bar in Festo.

Judge Bryson filed a dissent as to the state law claims in the case.

Outcome: The JMOL was affirmed but the case remanded for further proceedings on state law claims.

LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc., 275 F.3d 1347, 61 USPQ2d 1193 (Fed. Cir. Dec. 2001), reh. and reh. en banc denied 2002 U.S. App. LEXIS 4568

Before: Newman, Rader, and Bryson. Opinion by Rader.

Subject matter: plastics reinforced by long-fiber thermoplastics

Proceedings Below: The district court construed the claim terms disputed by the parties, and the case proceeded to trial. A jury returned verdicts that: (1) RTP's accused products do not infringe any of the asserted claims; (2) claim 1 of the 889 patent is invalid for obviousness; (3) all of the asserted claims are invalid for indefiniteness; and (4) claim 1 of the 889 patent is not invalid for failure to provide an adequate written description. Thereafter, plaintiffs and defendant both moved for JMOL. Granting several such motions, the district court (D. Del.) determined that: “(1) RTP's accused products infringe the 450 and 889 patents (and that, in the alternative, LNP is entitled to a new trial on infringement); (2) claim 1 of the 889 patent is not invalid for obviousness (and that, in the alternative, LNP is entitled to a new trial on obviousness); (3) the three asserted claims are not invalid for indefiniteness; and (4) claim 1 of the 889 patent is invalid for failure to meet the written description requirement.”

In subsequent trials, the jury found that infringement of the first patent was not wilful, and the district court found no inequitable conduct in the prosecution of the patents-in-suit.

Technical background: Plastics have been reinforced since the 1950s with short or long fibers. Two factors which determine the stiffness of reinforced plastics, the length of the fiber filaments and the degree of wetting of the filaments by the thermoplastic, limit one another – short fibers are easier to wet but produce lower strength plastics. The three tests recognized in the industry to assess the degree of wetting are (1) visual inspection, (2) flexural modulus testing, and (3) dispersal and length testing.

Inventors at Imperial Chemical Industries (ICI) discovered ways to overcome these problems. ICI's patents were licensed and then assigned to Kawasaki which licensed plaintiff LNP. The PTO confirmed the patents in reexamination.

Claim construction issues: The claim construction issues before the Federal Circuit concerned the meaning of claim language calling for substantially complete wetting in the 889 patent⁷² and a similar phrase in the 450 patent,⁷³ and whether the claims had to be construed to call for measurement by a specific one of the three accepted tests for assessing the degree of wetting.

The district court construed the phrase “substantially completely wetted” as follows:

⁷² Claim 1 of the 889 patent, as reexamined, recites: “1. A molded article formed from a fibre reinforced thermoplastic composition in a process which includes the step of melting and homogenizing a composition containing at least 30% by weight of fiber reinforced pellets between 2 mm and 100 mm long which pellets have filaments extending the length of the pellet, characterized in that the molded article contains reinforcing filaments in the form of individual filaments and at least 50% by weight of the filaments in the pellets being present in the molded article at a length of greater than 2 mm, the pellets having been cut from a structure of continuous, parallel, aligned, reinforcing filaments which have been *substantially completely wetted* by a molten thermoplastic polymer in a melt pultrusion process.”

⁷³ Claim 1 of the 450 patent, as reexamined, recites, “1. Pellets of reinforced thermoplastic material containing at least 30% by volume of parallel, aligned reinforcing filaments between 2 and 100 mm in length, the filaments extending through the length of the pellets, the pellets having been cut from a continuous reinforced product prepared by melt pultrusion in which the filaments have been *substantially completely wetted by a molten thermoplastic material*, and which pellets can be injection molded into an article in which the filaments are present in the form of randomly dispersed individual filaments at least 50% by weight of the filaments of the pellets retaining a length of greater than 2 mm in the molded article.”

Largely, but not necessarily wholly, surrounded by resin. In the context of LFRT pellets, it is surrounding the individual filaments by resin to the extent that in articles injection molded from such pellets, the individual filaments are randomly dispersed and at least 50% by weight of the filaments retain a length of 2 millimeters or greater.

Dictionary Consulted: The word “substantially” is defined by Webster's Ninth New Collegiate Dictionary (9th ed. 1983) to mean “largely but not wholly that which is specified.” Both parties indicate that in this technology, “completely wetted” means “wholly surrounded by resin.” Therefore, the claim language supports the correctness of the district court's interpretation of “substantially completely wetted” as “largely, but not necessarily wholly, surrounded by resin.”

Claim language silent on test: The Court noted that neither claim 1 mentions the flexural modulus test nor refers to it as any kind of limitation.

Claim differentiation consulted: The Court noted that a dependent claim in the ‘450 patent does concern one of the three tests.⁷⁴ According to the Court,

Thus, dependent claim 6, presumptively narrower than claim 1, adds a specific flexural modulus limitation of at least 70%. This narrower claim at least opens the possibility that the broader “substantially completely wetted” language of claim 1 of the 450 patent embraces more than a flexural modulus of at least 70%.

Parent patent consulted: Both patents in suit derive from a ‘262 patent, which the Court also reviewed. That 262 patent indicated that the phrase at issue, “substantially completely wetted” is defined in terms of length and dispersal – without any requirement of flexural modulus. Per the Court, this evidence “suggests that [the term] is not limited to a specific flexural modulus result.”

No limitation on claim 1 from the written description in the patents: The Court noted again that the term “substantially completely wetted” is neither recited nor specifically defined anywhere in the written description of the patents. Further, the written description explains the flexural modulus test and recites it as a measure of strength. This and the trial record show that “flexural modulus is a typical way to measure LFRT strength and, therefore, degree of wettedness. The written description also explains good wetting results in terms of fiber length and fiber dispersal.” However, the Court ruled that the written description does not limit claim 1 by any flexural modulus test result.

Prosecution history not limiting: The Court’s review of the file history showed no indication of limiting the claims by flexural modulus testing.

⁷⁴ 450-Claim 6 depends from claim 1 and recites: “6. Pellets according to claim 1 which have been cut from a continuous reinforced product in which the individual filaments of the product have been wetted to the extent that the longitudinal flexural modulus of the product *as determined by ASTM D790-80 is at least 70% of the theoretically attainable flexural modulus.*”

Conclusion re claim construction: The language chosen by the majority spoke in terms of the record supporting the district court interpretation:

In sum, this court has reviewed the claim language, specification language, and prosecution history, and finds that the record supports the district court's interpretation. The district court thus correctly concluded that "substantially completely wetted" means "largely, but not necessarily wholly, surrounded by resin." Moreover the district court correctly determined that a flexural modulus test result does not limit claim 1 of both patents.⁷⁵

Infringement: LNP had introduced test results and testimony presenting "ample and substantial evidence" of infringement of 450-claim 1. RTP asserted that claim 1 of the 450 patent could not be infringed absent a flexural modulus of at least 90%. The Court rejected RTP's argument and found that the record before the jury had no evidence to rebut the substantial evidence of infringement, wherefore the district court correctly granted JMOL of infringement of 450-claim 1.

Obviousness: The jury had found 889-claim 1 obvious over various patents and other prior art. These references failed to disclose specifically the length or dispersal characteristics of LFRTs. Due to this shortcoming, the district court had granted JMOL that 889-claim 1 had not been proven obvious. The Federal Circuit reviewed the scope and content of the prior art, identified the differences, and noted that one prior art patent specifically instructs the skilled artisan to adjust pultrusion as disclosed in the 889 patent to achieve the characteristics of claim 1. Also, one witness testified that the process disclosed in the prior art allowed the production of products with the characteristics claimed in the 889 patent. The Federal Circuit ultimately ruled that the record supplies substantial evidence for a reasonable jury to find that 889-claim 1 would have been obvious.⁷⁶ The Court thus found that the claim was invalid for obviousness.

Claim Definiteness: One of the inventors testified that he did not know what the phrase "substantially completely wetted" meant. The Court ruled, however, that this inability:

... does not automatically mean that claim 1 is indefinite. Although the term "substantially completely wetted" is not defined in the text of the written description of the 450 patent, the district court determined that the claims sufficiently delineate the meaning of that term.

⁷⁵ Comment: De Novo or Supported? The quoted language hardly seems like the result of a *de novo* review, and instead appears to be a ruling that the lower court decision is supported by the evidence. Indeed, this Court did not indicate explicitly that the review would be *de novo*, but simply that the claim construction would be reviewed "without deference," citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc).

⁷⁶ The standard of review indicated by the Court for reviewing jury findings of obviousness was as follows: "This court reviews a jury's conclusions on obviousness, a question of law, without deference, and the underlying findings of fact, whether explicit or implicit within the verdict, for substantial evidence. *Upjohn Co. v. MOVA Pharm. Corp.*, 225 F.3d 1306, 1310, 56 USPQ2d (BNA) 1286, 1289 (Fed. Cir. 2000)."

Inequitable Conduct: The Court indicated that a “very deferential standard of review” applies to issues of intent. On appeal, the Court could not find clear error that there was no intent to deceive the PTO.

Outcome: The Court affirmed the grant of JMOL that RTP infringes claim 1 of the ‘450 patent, affirmed that such patent is not invalid for indefiniteness, affirmed the denial of LNP’s request for a new willfulness trial, and affirmed the ruling that LNP did not commit inequitable conduct during the reexaminations of the 450 and 889 patents.

The Court reversed the grant of LNP’s request for a new trial on obviousness and the grant of JMOL that claim 1 of the 889 patent was non-obvious over prior art (which the jury had found to be obvious).

Lockheed Martin Corp. v. Space Systems/Loral, Inc., 249 F.3d 1314 (Fed. Cir. Apr. 2001), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 16600, vacated and remanded, ___ U.S. ___, 122 S.Ct. 2349, 153 L.Ed.2d 152, 2002 U.S. LEXIS 4029 (2002).

Before Schall, Friedman, and Gajarsa. Opinion by Gajarsa.

Subject matter: apparatus and method for steering a satellite

Proceedings Below. Upon holding a *Markman* hearing, the district court (N.D. Cal.) determined that certain limitations required by claim 1 were not present in defendant-appellee’s satellites either literally or under the doctrine of equivalents and granted defendant-appellee’s motion for summary judgment.

§112-6 Construction. The Court construed the “means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite whereby . . .” limitation in claim 1 as a “means-plus-function” limitation. The Court concluded that the district court improperly broadened the scope of the claimed function by determining that the “means for rotating” limitation recites a means having the function of “rotating said wheel” and reading out the remaining claim limitations. The Court concluded that the function of the “means for rotating” limitation includes the language after the “means for” clause and before the “whereby” clause because a whereby clause that merely states the result of claim limitations adds nothing to the substance of the claim. The Court then construed the meaning of the words used to describe the claimed function using ordinary principles of claim construction. The Court upheld the district court’s construction of the phrase “varies sinusoidally” to mean “a variation in a sine-shaped curve that passes through zero” and determined that the meaning of the remaining language in the “means for rotating” limitation is clear from the plain language of the claims and is consistent with the intrinsic evidence.

Literal Infringement and Doctrine of Equivalents Analysis. As plaintiff-appellant conceded that there was no literal infringement of the §112-6 limitation, the Court turned to whether there was infringement under the doctrine of equivalents. The Court looked to whether the scope of the doctrine of equivalents as applied to the “means for rotating” limitation was narrowed by prosecution history estoppel. As the “means for rotating” limitation was amended two times to specify more narrowly the period of the sinusoidal

variation, the Court afforded no range of equivalents to the entire “means for rotating” limitation to show infringement by defendant-appellee of this limitation.

Outcome. The Federal Circuit affirmed the district court’s grant of summary judgment of non-infringement in favor of defendant-appellee.

McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 60 USPQ2d 1001 (Fed. Cir. Aug. 2001), rehearing and rehearing en banc denied 2001 U.S. App. LEXIS 24254.

Before Mayer, Michel and Clevenger. Opinion by Clevenger. Dissent by Michel.

Subject Matter: a baseball with finger and palm print markings used to teach different kinds of pitches, sold as the “Roger Clemson Instructional Baseball”

Proceedings Below: The district court (D. Kan.) entered summary judgment of infringement. At trial, the jury found that the claims were not invalid and were willfully infringed. The district court then set aside the jury verdict and entered JMOL of invalidity based on obviousness. Both sides appeal.

The Claim: The phrase at issue was, "means for indicating the orientation of the baseball relative to the palm of the hand."⁷⁷ This was construed as a means plus function limitation under 112-6.

Issue: whether the court correctly ruled equivalents to the corresponding structure.

Scope of Review: review of claim construction issues is without deference to the district court.

Means-Plus-Function Claims Are Statutorily Guaranteed A Range Of Equivalents: Defendant argued that the claim construction by the district court was erroneous because after it specified the corresponding structure, it added “and any equivalents of such structure.” Defendant argued that there ought be no equivalents because none were mentioned specifically in the specification. The Federal Circuit confirmed that 35 U.S.C. §112, ¶6 guarantees “a range of equivalents extending beyond that which is explicitly disclosed in the patent document itself.”

⁷⁷ “1. A baseball pitching training device for duplicating finger placement on a baseball by a student comprising: a baseball cover; a plurality of sets of finger placement indicia on said cover, said sets of indicia comprising:

“a first set of indicia demarcating the placement of finger [sic] for throwing a first pitch;

“a second set of indicia demarcating the placement of fingers for throwing, [sic] a second pitch;

“a third set of indicia demarcating the placement of fingers for throwing a third pitch;

“means for indicating the orientation of the baseball relative to the palm of the hand; and

“means for coding said finger placement indicia sets for identification of each of said indicia associated with any one of said sets.”

Outcome: The court affirmed the district court's claim construction. It affirmed the summary judgment of infringement but reversed the JMOL that the claims were obvious.

Dissenting Opinion by Judge Michel: Judge Michel opined that trial courts and future panels will hereafter consider general verdicts on obviousness immune from meaningful review and that serious legal errors by juries will go uncorrected. Judge Michel voiced no concerns with the district court's claim construction.

Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 58 USPQ2d 1607, Nos. 00-1205, 1214 (Fed. Cir. Apr. 2001).

Before: Michel, Linn, and Dyk. Opinion by Linn.

Subject matter: coronary stents

Proceedings Below: The district court (D. Minn.) produced a final claim construction after trial.⁷⁸ The court then granted defendants' motion for JMOL that the patent-in-suit was not infringed, without the jury returning any verdict. Central to the JMOL ruling was the district court's determination of what structure corresponded to the means-plus-function limitation, "means for connecting adjacent elements together." "The district court rejected Medtronic's argument that the straight wire and hooks of Figures 7 and 8, respectively, also correspond to the claimed function. *** [T]he district court determined that there was no clear link or association, as required by our case law, between the claimed function and the straight wire and hooks. *B. Braun Med., Inc. v. Abbott Labs.*, [124 F.3d 1419, 43 USPQ2d 1896 (Fed. Cir. 1997).]"

Issue: Whether certain structure meets the requirement of being "clearly linked." "The district court properly determined the function to be 'connecting adjacent elements together.' ... The district court also properly looked to the specification for corresponding structure. The parties do not dispute, and we agree, that the helical windings are corresponding structure. The dispute centers on whether the straight wire and hooks of Figures 7 and 8, and the sutures, are corresponding structure. We agree with Medtronic that each of these structures is capable of performing the recited function. ... However, that is not the focus of the

^{78.}The district court: (1) offered the parties its proposed claim construction; (2) then held a Markman hearing during which it invited further briefing on the means-plus-function limitations in question; (3) thereafter, the district court issued an order refining its claim construction; and (4) in response to yet further briefing by the parties, later informed the parties that a final claim construction on the means-plus-function limitations would be provided prior to the jury's deliberations. This all occurred before trial.

"After trial, the district court construed the means-plus-function limitations in question to cover only the disclosed helical windings, and their equivalents. Notably, the district court did not construe the straight wires, hooks, and sutures as being corresponding structure. Medtronic conceded that there could be no infringement under this construction and it did not oppose Defendants' Rule 50(a) motion for judgment as a matter of law ("JMOL"). The district court granted the motion in a detailed opinion explaining its claim construction.

"Medtronic appeals, and Defendants cross appeal, the district court's judgment, challenging the claim construction."

inquiry. We must determine whether the straight wire, hooks, or sutures is clearly linked or associated with the function of connecting adjacent elements together.”

Clear Linking of Corresponding Structure Required in Means Claims. The Federal Circuit reviewed the clear linking requirements of *Braun*:

Our inquiry is controlled by this court's decision in *Braun*. In *Braun*, the question was what structure corresponded to the function of "holding said disc firmly against said first means in such a manner that said disc is restrained from sideways movement." ... The specification, according to *Braun*, was very clear in linking a cross bar with this function ... The patentee in *Braun* argued that another structure, a valve seat, also performed the function of restraining sideways movement. The court stated that neither the specification nor the prosecution history contained any indication that the valve seat held the disc against the triangular structure (the first means) so as to restrain sideways movement. ... Although it is not clear to us that the valve seat could never perform the recited function of restraining sideways movement, *the specification apparently made no connection between the valve seat and this function.* [emphasis added].

No Clear Link Found. The Federal Circuit agreed with the district court that as in *Braun*, here too there was no clear link or association that the structures urged by Medtronic as corresponding structure actually perform that function recited in the claim.

The present case diverges from the facts of *Braun* only in that the alleged corresponding structure, that is, the straight wire, hooks, and sutures, are definitely capable of performing the function recited in the means-plus-function limitation, that is, connecting adjacent elements together. We find, however, that this is insufficient under the *Braun* test because, as explained below, there is no clear link or association between the disclosed structures and the function recited in the means-plus-function claim limitation.

Hence, on the issue of whether the straight wire, hooks, or sutures are clearly linked with the function of connecting adjacent elements, the district court correctly concluded they are not. The Court found that although the wire, hooks, and sutures are capable of performing the claim function, this was insufficient to establish a clear link. A review of the specification and prosecution history revealed that one of ordinary skill-in-the-art would be left with the impression that only a helically wound continuous wire was disclosed, even if each turn of the wire could be considered a separate element.

Claim Differentiation Rejected. Medtronic urged that claim differentiation required the independent claims to have scopes broader than certain dependent claims. The Federal Circuit explained why the doctrine did not compel the result needed by Medtronic. After first explaining that the broad claims are

entitled to both corresponding structures and equivalents thereof, and hence were broader than claims reciting the structure alone (and thus not literally covering equivalents), the Court also explained:

The lack of a clear link or association between the structures for limiting longitudinal overstretch and the function of connecting adjacent elements together also nullifies the significance of Medtronic's arguments that a structure may perform two functions and that a function may be performed by two structures. These truisms are irrelevant in the context of a §112, paragraph 6 analysis without a clear link or association between the function or functions recited in the means-plus-function limitation and the structure or structures disclosed in the specification for carrying out those functions.

Other Arguments Rejected. Medtronic argued that since the Examiner entered a double-patenting rejection based on a continuation-in-part application that claimed the straight wire and hooks, these devices must be covered by the '727 patent. The Court disagreed. It held that the Examiner referred to the claiming of common subject matter, in general, without specific reference to subject matter that would indicate the rejection was based on a straight wire or hooks serving to connect adjacent elements together. Medtronic's arguments regarding impermissible "exact-word" matching by the district court was destined for the same fate. The Court also rejected the notion that the Examiner's selection of a figure showing the straight wire established that the straight wire is structure corresponding to the function at issue, because the figure also depicted the helical coil.

Outcome: Since Medtronic had conceded that under the district court's claim construction there could be no infringement, the judgment of non-infringement was affirmed.

Mentor H/S, Inc. et al. v. Medical Device Alliance, Inc. et al., 244 F.3d 1365, 58 USPQ2d 1321, Nos. 99-1532, 00-1165 (Fed. Cir. Apr. 2001)

Before Mayer, Lourie, and Schall. Opinion by Lourie

Subject matter: liposuction using ultrasonics

Proceedings Below: The jury returned a verdict in plaintiff's favor against a manufacturer (Misonix) and resellers (MDA and its subsidiary Lysonix) for direct, contributory, and inducing infringement. The district court (C.D. Cal.) granted judgments as a matter of law ("JMOL") that the inventors violated the best mode requirement and that there was no infringement by defendant Misonix. The district court also granted defendant's motion for a new trial on the issues of obviousness, anticipation, inequitable conduct, and contributory infringement.

Standard of Review: The Federal Circuit reviews JMOL *de novo*, applying the same standard which applies in the district court. On appeal, the evidence of record is viewed in the light most favorable to the non-movant; all inferences are drawn in the non-movant's favor without disturbing a jury's credibility decision, and without substituting the court's resolutions of conflicting evidence for those of the jury. JMOL

is affirmed when substantial evidence does not support the jury's fact findings or if the fact findings do not support the jury's legal conclusions.

Plain Meaning Applied; No New Trial for Claim Construction: Defendants urged reversible error in the district court's refusal to construe two claim terms, "irrigating" and "frictional heat." Plaintiff Mentor argued that the plain meaning was properly applied by the district court. The Federal Circuit agreed that there was no error in relying on the ordinary meanings of these terms. There was no abuse of discretion in denying a new trial to defendants on claim construction issues.

Outcome: The Federal Circuit also disposed of numerous non-claim construction issues raised by the plaintiffs, including the JMOL on issues of best mode and non-infringement, the new trial issues regarding validity, and the denial of increased attorney fees.⁷⁹ All invalidity and non-infringement judgments were reversed, but the Court affirmed the denial of increased damages.

⁷⁹ No Best Mode Violation. The Federal Circuit held that the district court had erred in granting the JMOL. The court noted that the invention concerned a *method of using* ultrasonic vibration to create heat and melt fat. The inventor at trial testified that he did not disclose all the details of the prototypes used when he made the invention, including a particular circuit he preferred *in the structure*. The Federal Circuit held that the circuit that he did not disclose was not a necessary component of the method invention. In addition, the evidence at trial did not support a finding that one of skill in the relevant art could not have readily selected the circuit to stabilize the frequency. The Court found substantial evidence to support the jury's verdict of no best mode violation, and thus JMOL was improperly granted, particularly in a situation where defendant has a "clear and convincing" burden.

No New Trial. The Federal Circuit reversed the district court's ruling for a new trial because the verdict was not against the great weight of the evidence. Regarding the grant of a new trial for contributory infringement, the Court found that there was substantial evidence that the accused product was not a staple item under 35 U.S.C. § 271(c).

Enhanced Damages: The Federal Circuit agreed with the district court's determination that enhanced damages and attorneys' fees were not warranted, despite the finding of willful infringement. The Court found that the issue of willfulness was close, and the evidence supporting that finding was not of the weight that would typically support enhancement.

MSM Investments Co., LLP v. Carolwood Corp., et al., 259 F.3d 1335, 59 USPQ2d 1856 (Fed. Cir. Aug. 2001)

Before Michel, Lourie, and Linn. Opinion by Lourie.

Subject Matter: a method of using methylsulfonylmethane (“MSM(R)”) to enhance the diet of an animal

Proceedings Below: The district court (N.D. Cal.) held the patent invalid under 35 U.S.C. §102(b) because of a prior public use, more than a year before the effective filing date, by Dr. Stanley Jacobs, who had publicly administered MSM(R) via oral ingestion to human patients at the Oregon Health Sciences University (“OHSU”).⁸⁰

Issues: (1) Whether the district court properly construed the term “feeding” in claims 1 and 5 by not limiting them to nutritional uses of MSM(R). (2) Whether the district court properly construed the phrase “beneficial amount of methylsulfonylmethane” to mean “any nonzero amount of methylsulfonylmethane that does not occur naturally in food eaten by an animal.”

Claim Construction:

(1) “feeding”: MSM argued that the district court should have given the term “feeding” in claims 1 and 5 its ordinary meaning, *i.e.*, “to give food to; to supply with nourishment.” The Federal Circuit rejected this argument, finding that while the specification did not specifically define “feeding,” it did disclose that MSM(R) may be used as a food and as a normalizer of biological function. “Food” was defined in the specification as a “nutritive material taken into an organism for growth, work, protection, repair, restoration and maintenance of vital processes.” Thus, the Court reasoned that the expanded definition of the word food coupled with the disclosed use of MSM(R) as a normalizer of biological function suggested that the claimed method of feeding could encompass both nutritional and pharmacological uses. The specification’s recitation of the pharmacological benefits of adding MSM(R) to the daily diet also supported the Court’s construction. Because the specification “commingle[d] pharmaceutical uses with nutritional uses and does not describe nutritional benefits as mutually exclusive,” the term “feeding” covered both.

(2) “beneficial amount”: MSM argued that the phrase “a beneficial amount of methylsulfonylmethane” in claims 1 and 5 should be construed as meaning “the amount of MSM(R) that produces a nutritional benefit.” The Federal Circuit disagreed. Although the Court found that the district court’s construction missed the implication of the word “beneficial” (*i.e.*, that the amount must “promote a favorable result” in the animal), the Court found that the claim language plainly encompassed

⁸⁰ In earlier related litigation brought by the sole inventor, Herschler (before assigning his rights to MSM) accused Foodscience of infringing a related patent, U.S. Patent No. 4,616,039 (the “’039 patent”). In Foodscience I, the district court held that the asserted claims were valid and infringed. With respect to validity, the court concluded that Foodscience had failed to prove that the ’039 claims were invalid based on prior public use at OHSU. However, in Foodscience II, the Federal Circuit upheld the district court’s finding of infringement but concluded that the ’039 claims that were limited to non-human use (*i.e.*, use by a herbivore) were not invalid, although those ’039 claims that included human use were invalid based on prior public use at OHSU. The ’878 claims at issue in this suit resembled the claims for human use that were invalidated in Foodscience II.

pharmacological and nutritional benefits. Thus, while the district court's construction of this phrase was incomplete, the Court viewed such as harmless error.

Invalidity (35 U.S.C. § 102(b)): Because the parties did not dispute that Dr. Jacob's prior public use more than a year before the effective filing date, and based on the finding that the term "feeding" in claims 1 and 5 were not limited to nutritional uses, the Federal Circuit upheld the district court's finding of invalidity under § 102(b).

Outcome: The Court affirmed the district court's finding of invalidity under § 102(b), which was supported by the construction of the claims.

Mycogen Plant Science, Inc. v. Monsanto Co., 243 F.3d 1316, 58 USPQ2d 1030 (Fed. Cir. March 2001)

Before Clevenger, Bryson and Linn. Opinion by Clevenger.

Subject Matter: process for genetically engineering insect-resistant plants

Proceedings Below: The district court (D. Del.) held a claim construction hearing prior to a jury trial in which all claims of the two patents-at-issue were of relevance. The jury found that the defendants' products did not literally infringe the patent claims and further found that the claims were anticipated because the defendant invented the subject matter before the priority date of the patents. Following multiple post-trial motions, the court granted JMOL for the plaintiff that the defendant infringed and induced infringement of its patents, but denied plaintiff's request for a new trial based on inconsistent judgments.⁸¹ The court also granted JMOL for the defendant holding that the claims of the patents-at-issue were invalid for lack of enablement, but denied the defendant's motion for attorneys' fees based on alleged inequitable conduct.

Claim Construction: The plaintiff contested a portion of the district court's claim construction, specifically that the court's definition of the limitation "greater number of codons preferred" was erroneous.⁸² The district court held a "preferred codon" to be any codon that brings the modified gene's

⁸¹The plaintiff's reasoning behind its claim of inconsistent judgments was based on the jury's finding of infringement and invalidity because the products that formed the basis of the anticipatory prior art were also the foundation for the infringing products.

⁸²Claim 1 states as follows: "1. A method of designing a synthetic *Bacillus thuringiensis* gene to be more highly expressed in plants, comprising the steps of:

"(a) analyzing the coding sequence of a gene derived from a *Bacillus thuringiensis* which encodes a pesticidal protein toxin;

"(b) modifying a portion of said coding sequence to yield a modified sequence which contains a greater number of codons preferred by the intended plant host than did said coding sequence prior to modification, said modification comprising reducing the number codons having CG in codon positions II and III in a region between plant polyadenylation signals in said coding sequence;

"(c) inserting said modified sequence into the genome of a plant cell; and

"(d) maintaining said plant cell under conditions suitable to allow replication of said plant cell to produce

codon frequency closer to that of the intended plant host. The Court first looked to the claim language to determine the plain meaning of the phrase, noting that a patentee is free to be his own lexicographer, so long as the special definition of the term is made explicit in the specification or the file history. Therefore, the Court examined those additional sources of extrinsic evidence. While the term at issue was never explicitly defined, the written description used the term multiple times.⁸³ The written description supported the district court's claim construction.

The Court next looked at the prosecution history. Because the prosecution history supported alternate definitions of the term, the Court found it unhelpful in its analysis. Relying on the plain meaning of the term, the Court noted that the plaintiff chose to use the term "codons preferred" in the claims, instead of "most preferred codon." The Court reasoned that, had Mycogen meant the claims to refer to the "most preferred codon," it could have, and should have, included the limitation.

Mycogen further argued that the district court's definition of the term "greater number of codons preferred" was incorrect because it rendered the phrase synonymous with "frequency of codon usage" in other independent claims. Using the doctrine of claim differentiation, Mycogen argued that there is a presumption of difference in the meaning and scope of claims. The Court held that the doctrine could not be used to overcome the plain language of the claims, and noted, "it is not unusual that separate claims may define the invention using different terminology, especially where (as here) independent claims are involved." The Court also found that the prosecution history further supported the proposition that the limitations of the patent were not necessarily identical. Therefore the district court's claim construction was affirmed.

Inconsistent Verdicts: Following a detailed description of the science behind the patents-at-issue, the Court looked at the lower court's denial of a new trial based on "inconsistent jury verdicts." The Court held that the district court applied the correct legal standard for determining whether JMOL is appropriate because JMOL was not granted solely to resolve the inconsistent verdicts, but to correct an irrational portion of the jury's verdict. It further held that, even if verdicts are potentially inconsistent, the law does not state that the verdict must be thrown out immediately, or a new trial ordered.

Reduction to Practice and Conception: In addition, the Court determined whether there was a legally sufficient evidentiary basis for a jury finding that the patents were invalid due to prior invention. The Court determined whether the patentee was the first to conceive of the invention and whether it exercised reasonable diligence in reducing the invention to practice. The Court ultimately found that the defendant was the first to conceive of the patented subject matter, and diligently reduced its conception to practice.

additional plant cells having said modified sequence in the genome of said additional plant cells, wherein said synthetic *Bacillus thuringiensis* gene is expressed to produce a pesticidal protein toxin."

⁸³For example, the specification states as follows: "In designing a synthetic gene encoding the Btt crystal protein, individual amino acid codons found in the original Btt gene are altered to reflect the codons preferred by dicot genes for a particular amino acid. . . For example, in the case of alanine, it can be seen from Table 1 that the codon GCA is used in Bt proteins with a frequency of 50%, whereas the codon GCT is the preferred codon in dicot proteins."

Outcome: The Court affirmed district court's denial of plaintiff's motion for JMOL overturning the jury's verdict of noninfringement due to patent invalidity and its denial of plaintiff's motion for new trial based on inconsistent jury verdicts. The Court further affirmed the lower court's claim construction, and its jury instructions regarding the doctrine of simultaneous conception and reduction.

Mycogen Plant Science, Inc. v. Monsanto Co., 252 F.3d 1306, 58 USPQ2d 1891 (Fed. Cir. May 2001)

Before Clevenger, Bryson and Linn. Opinion by Bryson.

Subject Matter: genetically engineering plant genes to protect plants from insects

Proceedings Below: The district court (S. D. Cal.) found a parent patent invalid on summary judgment. Two child patents had previously been involved in cases in the District of Delaware. All three patents had very similar specifications and contained related claims. The Federal Circuit's holding on appeal from one of the Delaware cases affected the district court's claim construction in the lower proceedings of Mycogen. In its invalidity finding, the district court found obviousness in light of prior work done by the defendant company.

Issues: The Court addressed collateral estoppel, enablement and doctrine of equivalents issues.

Collateral Estoppel: The Court looked at the district court's conclusion that collateral estoppel required it to adopt the Delaware court's claim construction and its decision regarding the defendant's reduction to practice. Noting that collateral estoppel applies to common issues in actions involving related patents, the Court looked at whether the actions in the Delaware case were the same as those of the California case. It found that the claims⁸⁴ of the related patents should be construed consistently and that the reduction to practice should be addressed the same. However, the Court found that multiple juries could interpret the evidence in different ways, and therefore collateral estoppel did not apply.

First to Invent: As part of its analysis, the Court determined whether the defendant should be considered the first inventor by discussing (1) when Mycogen conceived the invention; (2) when the Monsanto conceived the invention; and (3) whether Mycogen was diligent during the critical period. The Court found that the district court properly assumed that Mycogen was the first to conceive the invention. It next found that the evidence and expert testimony established that the date of conception of the invention was not as early as the district court had found. Finally, the Court found that the district court's conclusion that Mycogen did not diligently reduce its invention to practice during the critical period was incorrect because the record raised a genuine issue of material fact as to whether or not diligence took place.

Enablement: The Court first found that an enablement argument was not estopped by the prior, Delaware decision because the Federal Circuit did not reach enablement in the Delaware case, and the

⁸⁴The claims of the patent in the Delaware case involved two steps to produce a synthetic *Bacillus thuringiensis* gene. The California patent involved the same two steps, plus two additional steps.

claims were sufficiently different to preclude an estoppel argument.⁸⁵ The Court next held that it would not require the district court to enter summary judgment on enablement when it did not reach enablement in its earlier decision.

Doctrine of Equivalents: Finally, the Court addressed the district court's judgment that prosecution history estopped Mycogen from relying on the doctrine of equivalents to show infringement. It noted that, during prosecution of the patent, the plaintiff cancelled several of its original claims on the grounds of obviousness and lack of enablement. Citing Festo, the Court held that any amendment that narrows the scope of a claim for any reason related to patentability will give rise to estoppel. Because the claims of the patent were narrowed by cancellation of a claim with a broad limitation in favor of one with a narrower limitation, the Court affirmed the district court's ruling that Mycogen was estopped from asserting the doctrine of equivalents.

Outcome: The Court affirmed the lower court's finding of estoppel, in light of Festo, and that an enablement determination was not estopped by prior Delaware decisions.

Netword, LLC v. Centraal Corp., 242 F.3d 1347, 58 USPQ2d 1076 (Fed. Cir. March 2001).

Before: Newman, Archer, and Clevenger. Opinion by Newman; dissent by Clevenger.

Subject Matter: system for locating and retrieving information on a computer network

Proceedings Below: The district court (E.D. Va.) granted summary judgment of non-infringement. Netword appealed.

Issues: (1) Whether the district court correctly construed claim 1 to require the local server computer to maintain a "cache," or limited database of aliases, and to "pull" information as needed from the central registry.⁸⁶ (2) Based on the claim construction, whether the district court's grant of summary judgment of non-infringement was proper.

⁸⁵The Court stated, "because the '600 patent recites a four-step claim and the '831 patent recites a two-step claim, a finding that the four-step claim was not enabled does not necessarily mean that the two-step claim was not enabled."

⁸⁶Claim 1 provides: "1. An electronic resource denotation, request and delivery system within a network which shares information resources among its user community, comprising: a central registry computer whose action is directed by software components; one or more local server computers whose actions are directed by software components and linked to the central registry computer; one or more client computers whose actions are directed by software components, and linked to a local server computer; wherein the software components in these computers operate in concert as a distributed entity to allow client computers to denote resources with aliases that are unique across said server computers and said client computers, and further allow client computers to retrieve information corresponding to said aliases; and wherein said aliases are maintained in at least said central registry computer and one or more of said local server computers."

Scope of Review: The district court's claim construction and grant of summary judgment receives plenary review on appeal. For Network to prevail on appeal, the evidence must be such that the nonmoving party could not prevail on any reasonable version of the facts.

Claims Are Construed in Light of the Specification: The '906 patent is directed to a computer network, the language of which describes a central registry computer and local server computer which maintain aliases and associated information such as URLs, descriptions of designated resources, and update information. Network argued that the "caching" and "pulling" language in claim 1 did not refer to passage through the local server. The district court interpreted this language using the specification and prosecution history which stressed the local server as an intermediary.

Network argued that although the claims are always construed in light of the specification, the real role of the specification is to present a description of the technological subject matter of the invention whereas the claims (which in this case were broader) are what clearly define and claim the matter patented. The Court noted that although a specification need not point out every embodiment, "the claims will not enlarge what is patented beyond what the inventor has described."

The Court agreed with the district court's claim interpretation, which required a local server computer to cache records, transmit cached records to the client computer, and request updates from the central registry. The Court also said that the specification was properly used to define the plaintiff's invention.

Infringement: The Court agreed with the district court that Centraal's system did not literally infringe since it did not use local server computers, but rather offered direct communication between the client computers and all of Centraal's data entries. Furthermore, Centraal's system did not satisfy the all-elements rule under the doctrine of equivalents since it contained no element which was the same or equivalent to plaintiff's local server.

Outcome: The Court affirmed the district court's claim construction and the judgment of non-infringement.

Dissent by Clevenger: The two limitations listed by the Court, namely the necessity of a local server and the maintenance of aliases by the local server, are indeed present in the specification and file history, but should be treated as explanations of the dependent claims "to which they clearly relate."

Oak Technology, Inc. v. International Trade Commission, 248 F.3d 1316, 58 USPQ2d 1748 (Fed. Cir. May 2001).

Before Newman, Clevenger and Bryson. Opinion by Clevenger.

Subject matter: CD-ROM drive controller

Proceedings Below: The ALJ determined (1) that imported devices did not infringe the claims of plaintiff's patent related to an improved compact disk, read-only memory (CD-ROM) drive controller providing faster and simplified data communication, so that their importation did not violate the Tariff Act, and (2) that the asserted claims were invalid and unenforceable. The International Trade Commission (ITC) reversed the invalidity and unenforceability determinations, but affirmed the finding of no infringement.

Issue: Whether the accused devices meet the "said assembled data," "after," and "cyclic redundancy checker" limitations of claim 1 that requires "performing error correction on *said assembled data* and ...detecting errors in said assembled data *after* correction of said data by said correction circuitry..." and "a *cyclic redundancy checker* for detecting errors in said assembled data."

Scope of Review: Factual findings by the ITC are reviewed under the substantial evidence standard. The Court will not disturb ITC factual findings which are supported by such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. Claim construction, however, is a question of law, which is reviewed *de novo*.

Plain Meaning Applied: The Court found that the plain language of the claim specified that the cyclic redundancy checker operates on the output of the "error correction circuitry."

Specification Meaning Applied: The Court held that the ITC was correct in ruling that "said assembled data" refers to an entire sector of CD-ROM data as it is stored in random access memory and rejected Oak Technology's argument that it is an unspecified number of eight-bit bytes of information. The Court found that there was overwhelming intrinsic evidence in the specification to support this construction.

Construction of "After": The construction of the word "after" in the phrase "a cyclic redundancy checker for detecting errors in said assembled data *after* correction of said data by said correction circuitry" was found to mean that the device first performs error correction on an entire Sector of data, and then performs error detection with a cyclic redundancy checker on the entire corrected Sector of data. The Court relied on the fact that the only embodiment described in the patent-in-suit always performs error correction before performing error detection. There is no mention in the patent-in-suit where the sequence of operations is reversed.

Dictionary Definition Applied: The Court relied on an *Encyclopedia of Computer Science* to construe the term "cyclic redundancy checker" to mean those which operate on an entire Sector of data after the sector of data has already been processed by error correction circuitry and rejected Oak Technology's assertion that it described any circuitry that performs a cyclic redundancy check.

Outcome: The Federal Circuit affirmed the ITC's ruling of non-infringement literally or under the doctrine of equivalents.

Pall Corp. v. PTI Technologies, Inc., 259 F.3d 1383, 59 USPQ2d 1763 (Fed. Cir. Aug. 2001)

Before Schall, Friedman, and Dyk. Opinion by Dyk.

Subject matter: filter technology for high temperature corrosive chemicals used in the etching process of semiconductor chips

Proceedings Below: Two patentees sued each other alleging infringement of the respective filter technology patent each held. The district court (E.D.N.Y.) granted each party's summary judgment motion for non-infringement. Both parties appealed.

Issues: (1) Whether the claim language "filter membrane made of . . . PTFE and *net supporters* made of . . . PFA, . . . FEP . . . or . . . EPE superimposed on the both surfaces thereof" of U.S. Patent No. 4,663,041 (the "'041 patent") could encompass the accused devices' support and drainage layers, which corresponded to "net supporters," and contained at least 60% PTFE under the doctrine of equivalents. (2) Whether the District Court erred when it construed the claim element "impervious fluoropolymeric end caps" in claims 1 and 9 of U.S. Patent No. 4,609,465 (the "'465 patent") to encompass only one-piece end caps rather than end caps formed by welding two components together.

Examination of Issue 1:

Prosecution file history barred application of the doctrine of equivalents:

The accused device of Pall utilized support and drainage layers on each side of a filter membrane. These "support and drainage layers" contained at least 60% PTFE and corresponded to the "net supporters" of the '041 patent. However, the language of claim 1 defined "net supporters" to be made of "PFA [tetrafluoroethylene/perfluoroalkyl vinyl ether copolymer resin], FEP [tetrafluoroethylene/hexafluoropropylene copolymer resin], or EPE [tetrafluoroethylene/hexafluoropropylene/perfluoroalkyl vinyl ether terpolymer resin]." The District Court interpreted this claim language to mean that the "net supporters must be made wholly of PFA, FEP or EPE, and cannot include any other fluorocarbon resin (e.g., PTFE) therein" and "cannot (1) be a mixture of two or more of the three materials specified [PFA, FEP, or EPE] or (2) contain a material other than PFA, FEP or EPE."

As filed, claim 1 stated "net supporters made of thermoplastic fluorocarbon resin." However, the language of claim 1 was later amended in light of a prior art rejection to state, "net supporters made of . . . [PFA, FEP, or EPE]." In remarks which accompanied this change, the patentee stated, "[a]ll of the constituents of the filter element now claimed are not the same. The membrane material is PTFE but the net [supporters], seal, etc. are not. . ." Based on the prosecution file history, the Federal Circuit determined that patentee's narrowing amendment which was clearly made for reasons related to patentability precluded the patentee from making a doctrine of equivalents argument with respect to the "net supporters" limitation of claim 1.

Examination of Issue 2:

Ordinary meaning of disputed claim language examined first: As noted by the Federal Circuit, claim 1 recited "first and second impervious fluoropolymeric end caps." Said first end cap being further described in claim 1 as "including a cylindrical protrusion projecting away from the filter arrangement and containing means defining a central aperture communicating with the center of the filter arrangement."

In contrast to the district court, the Federal Circuit concluded that the ordinary meaning of the claim language did not mandate that the first end cap be of a unitary structure.

Specification examined next: The Federal Circuit concluded that the specification did not define any of the disputed claim language in a manner inconsistent with its ordinary meaning.

Prosecution file history

During the course of prosecution, the patentee submitted an Information Disclosure Statement (“IDS”) that listed a number of attached references, including a one-page brochure which was co-authored by the accused infringer. The brochure described a filter cartridge under the same trademark (“Fluoroflow™”) as the accused device. The IDS and accompanying references were filed simultaneously with an amendment after final rejection. With respect to these submissions, the patentee stated to the PTO, “[n]one of these materials [including the brochure] disclose a filter cartridge or assembly as claimed in independent claims 1,9 or 13 of the referenced application.” The central question identified by the Federal Circuit was, “what did the brochure disclose?” The brochure did not contain any drawings or photographs of the Fluoroflow™ filter cartridge.

The Federal Circuit the concluded that “[b]ased upon the face of the brochure, it is unclear . . . whether the filter cartridge disclosed in the brochure is the same or substantially identical to the accused device. More importantly, it is unclear whether one of ordinary skill in the art would believe the filter cartridge in the brochure includes all of the recited claim limitations. . . .” Because the district did not address the issue of what the skilled artisan would believe to have been excluded from the scope of the patentee’s claims in light of the prosecution history as a whole, including the one-page brochure and the statements of the applicant, the Federal Circuit declined to affirm or reverse the district’s grant of summary judgment of the ‘465 patent for non-infringement.

Outcome: Remanded to give both parties further opportunity to submit evidence “directed to the extent of the disclosure of the brochure to one of ordinary skill in the art.” “[T]he scope of the exclusion of subject matter during prosecution for purposes of claim construction is a matter of law to be made after examination of the appropriate evidence.”

Pannu v. Storz Instruments, Inc., 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. July 2001).

Before: Mayer, Friedman, and Rader. Opinion by Mayer.

Subject Matter: intraocular lens technology

Proceedings Below: The district court (S. D. Fla.) granted defendant summary judgment, finding that the patent was invalid under the rule of recapture.

Issue: Pannu filed suit, alleging that the defendant infringed a reissue patent. The defendant counterclaimed that the reissue was broader than the original patent, triggering the recapture rule.

Summary Judgment: The court first determined that claim construction, as was necessary to determine the scope of a reissue patent, is a purely legal question, “appropriate for summary judgment.”

Reissued Claims: In its analysis, the court determined whether the recapture rule applied. The court noted that, “[r]eissued claims that are broader than the original patent’s claims in a manner directly pertinent to the subject matter surrendered during prosecution are impermissible.⁸⁷” The court found that the reissued claims were broadened and that the claims involved the same subject matter that was surrendered during prosecution.⁸⁸

Outcome: The Federal Circuit held that Pannu limited the claims on reissue, and was therefore estopped from attempting to recapture the narrowed subject matter. Thus the Court affirmed the judgment.

Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 57 USPQ2d 1553 (Fed. Cir. Jan. 2001)

Before Mayer, Newman and Lourie. Opinion by Mayer.

Subject Matter: circuitry designed to provide a steady electrical current source to another circuit

Proceedings Below: Noting that the examiner of the patent-at-issue had rejected original claims as anticipated and indefinite, the lower court (C.D. Cal.) held that the plaintiff was estopped from asserting any equivalents to its claims.⁸⁹ In response, the parties stipulated that summary judgment of non-infringement be granted.

Issues: Estoppel under the Festo decision was the focus of the Court.

Prosecution History Estoppel: The Court first looked at prosecution history estoppel, holding that a court must first determine what claim limitations are alleged to be met by equivalents, as well as whether any amendments made narrowed the scope of the claim. It further noted that if an amendment is made for a reason unrelated to patentability, then a court must consider why it was made to decide whether estoppel is precluded. Alternately, if an amendment is made for patentability reasons, “no equivalency is available as to the subject matter of the amendment,” and if no reason is given, a presumption should be made that the amendment was made for reasons related to patentability. Looking at the plaintiff’s amendments, the

⁸⁷The court noted that, as originally filed, “none of the claims in the [original] application limited the shape of the [lenses].” Upon rejection, however, Pannu added claims that defined the shape of the lenses. This shape was broadened during reissue.

⁸⁸Pannu argued that, because the claims were also narrowed in other ways on reissue, the recapture rule did not apply. The court rejected this argument, stating that the narrowing of the claims was not related to the subject matter, and recapture still applied.

⁸⁹“The court concluded that a non-switching multiplier” is outside the permissible range of equivalents of this limitation because Pioneer narrowed claim 1 by adding limitations, including the “switching” limitation, to meet the objections of the Patent and Trademark Office as to the patentability of the claim in light of prior art.”

Court found that estoppel arose. The Court refused to consider the plaintiff's expert declaration, stating that only public prosecution records may be considered. Further, the Court held that the patent's history indicated that the amendments made were not inadvertent. Even if they had been inadvertent, the amendments were related to the patentability of the invention.

Outcome: The Court affirmed the judgement of the district court, finding that estoppel arose out of claim amendments made during prosecution.

Purdue Pharma L.P. v. Boehringer Ingelheim GMBH, 237 F.3d 1359, 57 USPQ2d 1647 (Fed. Cir. Feb. 2001), rehearing *en banc* denied 2001 U.S. App. LEXIS 5565 (Fed. Cir. Mar. 2001).

Before Mayer, Michel, and Schall. Opinion by Mayer.

Subject Matter: pain treatment

Proceedings Below: The district court (S.D.N.Y.) granted Purdue Pharma's, et. al., (collectively referred to as Purdue) motion to preliminarily enjoin Boehringer, et. al. (collectively referred to as Roxane), from infringing, actively inducing infringement, or contributing to the infringement of its patents.

Issue: Whether the district court properly construed the term "administration" in finding that it encompasses both single and multiple dose administrations.⁹⁰

Facts/History: Purdue and Roxane are pharmaceutical companies that each developed controlled release oxycodone medications for the treatment of moderate to severe pain. Purdue owns several patents at issue, consisting of two continuation-in-part patents as well as a divisional application patent. Purdue sought a preliminary injunction to enjoin Roxane from infringing, actively inducing infringement, or contributing to the infringement of its patents.

Roxane contended the claim language, particularly the term "administration," is limited to single dose studies, while Purdue argued the language encompasses both single dose and multiple dose, steady-state studies.⁹¹

⁹⁰The claim language at issue concerns the type of administration used to determine the mean time "after administration" (Tmax) at which the maximum mean plasma level of oxycodone in human patients is reached.

⁹¹One representative claim provides as follows: "A controlled release oxycodone formulation for oral administration to human patients, comprising from about 10 to about 40 mg oxycodone or a salt thereof, said formulation providing a mean maximum plasma concentration of oxycodone from about 6 to about 60 ng/ml from a mean of about 2 to about 4.5 hours after administration, and a mean minimum plasma concentration from about 3 to about 120 ng/ml from a mean of about 10 to about 14 hours after repeated administration every 12 hours through steady-state conditions."

Claim Construction: Roxane argued that the plain language of the claim indicates a single dose. It contended that in those instances where multiple dose administrations were desired, it was so specified. Additionally, the specification examples as well as the parent patent referred to single dose administration.

Ambiguous Claim Term. The district court found the phrase “after administration” to be ambiguous in regard to the type of administration. In relying upon the specification and the “‘fundamental purpose and significance’ of the invention,” the district court held that “administration” included multiple doses. The Federal Circuit found no error in the district court’s initial findings. The bare language is indeed unclear and the district court’s refusal to read in a single dose limitation from the specification, given the presence of both single and multiple dose studies in the specification, was not improper. Such a construction is “‘consistent with and furthers the purpose of the invention,’ which the court determined to be to administer steady-state dosages to a patient.””

Roxane contended that a parenthetical reference in the specification to a single dose study defines “administration” within the context of the invention.⁹² The district court determined this reference was merely an explanation of prior art. The Federal Circuit found that although there was testimony that supports the court’s interpretation, its interpretation is a reasonable one independent of that testimony. It could not be said, therefore, that the court impermissibly relied on extrinsic evidence when construing the claims.

The district court’s rejection of Roxane’s argument that the parent’s patent prosecution history limits the claim to single dose studies was proper. The parent patent uses the bare term “administration,” but it also discloses values obtained in multiple dose, steady-state studies.

Outcome: The district court’s claim construction was not in error and the court did not abuse its discretion in granting the preliminary injunction. The judgment of the district court was affirmed and the case remanded for further proceedings.

Rapoport v. Dement, et al, 254 F.3d 1053, 59 USPQ2d 1215 (Fed. Cir. June 2001)

Before Clevenger, Rader and Gajarsa. Opinion by Clevenger.

Subject Matter. drug to treat sleep apnea

⁹² The paragraph read as follows: “In order to obtain a controlled release drug dosage form having at least a 12 hour therapeutic effect, it is usual in the pharmaceutical art to produce a formulation that gives a peak plasma level of the drug between about 4-8 hours after administration (in a single dose study). The present inventors have surprisingly found that, in the case of oxycodone, a peak plasma level at between 2-4.5 hours after administration gives at least 12 hours pain relief and, most surprisingly, that the pain relief obtained with such a formulation is greater than that achieved with formulations giving peak plasma levels (of oxycodone) in the normal period of up to 2 hours after administration.”

Proceedings Below. In an interference, the PTO Board awarded priority to the senior party (Dement, et al.). Junior party (Rapoport) contended that the count read on prior art.

Claim Construction: Even in interferences, the Court begins by interpreting any disputed terms in the interference count. The interference count relates to the treatment of sleep apnea by administering a therapeutically effective amount of a certain compound “to a patient in need of such treatment.” Rapoport asserted that the count should be construed “broadly” so that it includes treating both (1) the anxiety secondary to sleep apnea, and (2) the underlying sleep disorder itself.

Unambiguous Language of the Count. The Federal Circuit reviewed the Board’s claim interpretation without deference and found that the evidence uniformly pointed to treating only the underlying sleep disorder itself. The claim language (language of the interference count), was unambiguous in referring to “treatment of sleep apneas,” and did not by its plain terms address treatment of any associated symptoms.

Specification: Resort to the specification to interpret an interference count is necessary only when there is ambiguity inherent in the claim language or obvious from counsel arguments. Here, the specification confirms the Board’s interpretation that the phrase, “treatment of sleep apneas,” refers to the respiratory disorder itself.

Outcome. The Court affirmed the Board’s interpretation of the count and affirmed its decision in all respects.

Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 60 USPQ2d 1851 (Fed. Cir. Nov. 2001).

Before Newman, Clevenger and Dyk. Opinion by Clevenger.

Subject Matter. conveyor transfer devices

Proceedings Below. Both parties moved for summary judgment on the issue of infringement. Laitram also moved for summary judgment on the issues of patent invalidity and trade secret misappropriation. The district court (W.D. Wisc.) entered summary judgment of non-infringement. Rexnord appealed.

Issue. Whether the district court properly granted summary judgment on the issue of infringement. The dispositive question is whether the word, “portion” includes the parts of an object that are separate or integral, or rather that it is limited to only those parts that are separate.

Background. The district court held a *Markman* hearing to determine the scope of claims. The district court determined from the claims, specification and file history that the meaning of the term at issue, “portion”, was limited to separate parts of an object, not integral parts. As Laitram’s device did not use separate parts, this claim interpretation was the basis of the summary judgment of non-infringement.

Claim Construction. Construing the term “portion”,⁹³ the judge correctly looked first to the claims, then the specification, and finally the file history. The Federal Circuit concluded that although the judge correctly looked to the specification and file history, his construction of the meaning of the term was incorrect.

Rules. The Federal Circuit recapitulated some of the rules of claim construction:

Start with Claim Language. “We begin our claim construction analysis as it always should: with the language of the claims.”

Full Range, Ordinary Skill. “[A] court will give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill.”

Consistency of Interpretation Within Claims. “Furthermore, a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.”

Own Lexicographer. “[P]atent law permits the patentee to choose to be his or her own lexicographer by clearly setting forth an explicit definition for a claim term that could differ in scope from that which would be afforded by its ordinary meaning.”

Rarely Exclude Preferred Embodiment. “[B]ecause a claim construction that would exclude the preferred embodiment ‘is rarely, if ever, correct and would require highly persuasive evidentiary support, a court mindful of this canon of construction would need to examine the written description and the drawings to determine whether the preferred embodiment falls within the scope of a construed claim.’ [internal citation omitted].

Check for Disclaimers in Specification, Drawings. “[A]n examination of the written description and drawings is necessary to determine whether the patentee has disclaimed subject matter or has otherwise limited the scope of the claims.”

⁹³ The asserted claims in the '550 patent are claims 5 and 12-19. Claims 5, 12 and 16 are independent claims representative of the claims at issue and provide in relevant part:

“5. A conveyor apparatus comprising ... a first conveyor ... including ... a transition section ... and a second conveyor ... including a plurality of elongated chain pins, and a plurality of chain links ... including a link module *portion* ...and a cantilevered *portion* extending laterally from said link module *portion* and away from from [sic] said chain pins and into overhanging relation to said transition section of the first conveyor to provide an extension of said second conveyor article supporting surface, and including a lower edge *portion* contoured to follow the arcuate path of said transition section.”

“12. A conveyor chain comprising a plurality of chain links each including a link module *portion* ... and a second *portion* extending ... in cantilevered relation from only one of said sides of said link module *portion*....”

“16. A conveyor chain adapted for use with a transversely oriented conveyor ... comprising a plurality of chain link modules extending transversely with respect to the direction of movement of the conveyor chain and each ... having ... a second side edge ... arranged to extend in cantilevered relation over a *portion* of the transversely oriented conveyor to facilitate direct transfer of articles therebetween ...”

Use Specification, File History Whenever Claim Too Vague. “[I]f ‘the term or terms chosen by the patentee so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained’ by one of ordinary skill in the art from the language used, a court must look to the specification and file history to define the ambiguous term in the first instance.”

Check for Disclaimers in Prosecution History. “After examining the written description and the drawings, the same confirmatory measure must be taken with the prosecution history, since statements made during the prosecution of a patent may affect the scope of the invention.”

Error Not to Use Ordinary Meaning for “Portion”. The Federal Circuit found that although the judge properly identified that the term “portion” can have two readings as used, the judge improperly limited the scope of the claim by not using the ordinary meaning, by relying on the preferred embodiment and by incorrectly assessing the prosecution history. The term “portion” can mean both parts that were separable from the whole and parts that were not separated from the whole or only parts that were separable. The Federal Circuit found that the ordinary meaning of portion is “a part of any whole, either separated from or integrated with it.” This meaning encompasses both the quality of being separate and together; thus the claim should have been given the broadest meaning.

The judge also erred in relying on the fact that the disclosed embodiments were two-piece embodiments. The Federal Circuit found that the specification does not contain any additional limitations on the term “portion” and that the patentee need not describe each and “every conceivable and possible future embodiment of his invention.” In fact, the patent contains other uses of the term “portion” in contexts where it clearly means both separate and integral. Furthermore, the Federal Circuit stated that two of the three embodiments are written without reference to words that might indicate a separate attachment. In addition to this, the Federal Circuit observed that the careful drafting of the written description does not limit the invention to the embodiments described and shows that the patent gave notice of the broader meaning of the claims regardless of the preferred embodiment.

File History Was Misinterpreted. Lastly, the Federal Circuit found that the judge erred in limiting the claim based on comments in the file history from the examiner’s rejection of the claim at issue. The Federal Circuit stated that the examiner rejected the claim as originally written from a logical standpoint as it was impossible to claim what was claimed given the structure described. The Federal Circuit presumed that the examiner gave the terms the broadest meaning possible as they are required to do and thus would encompass both integral and separate units.

Outcome. The Court reversed the summary judgment decision due and remanded to the trial court for proceedings based on the new claim construction.

S3 Inc. (now known as SONICblue, Inc.) v. nVIDIA Corp., 259 F.3d 1364; 59 USPQ2d 1745 (Fed. Cir. Aug. 2001).

Before Newman, Michel, Gajarsa. Opinion by Newman. Dissent by Gajarsa.

Subject Matter: integrated circuit for use in computer video color display

Proceedings Below. The district court (N.D. Cal.) granted summary judgment that the patent in suit was invalid on the ground of claim indefiniteness under 35 U.S.C. § 112. S3 appealed.

The Issue. Whether the claims met the requirements of §112 when they (1) were “difficult to understand” without the benefit of the specification and (2) contained a functional limitation in “means for” language, and the supporting structure was not disclosed in the specification, but rather was alleged to be well known in the field of the invention.⁹⁴

Definiteness of 112-6 Claims: Whether 112-6 claims meet the requirement of 112-2 is a claim construction matter which receives plenary appellate review. Claims pass muster under the definiteness requirement when a person of ordinary skill in the art “would understand the scope of the subject matter that is patented when the claim is read in conjunction with the rest of the specification.” If the claims read in light of the specification reasonably apprise such a person of the scope of the patent, they are sufficient. The *in banc* requirement of *In re Donaldson* applies:

As was explained in *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (en banc), “if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.”

Claim Construction.

(1) “Video information stream”: S3 argued that the data stream from the video controller can either be sent directly to the digital-to-analog converter (DAC) through a selector in the direct-color mode or processed by the random access memory (RAM) in the indexed mode, and that this distinction was represented in the claims and would be so understood in light of the rest of the specification. nVIDIA argued that the claims were ambiguous because two different outputs of the video controller were required, and that was inconsistent with the description in the specification.

The Federal Circuit held that it was not inconsistent for a claim to use the term “video information stream” to describe both the information that the DAC received directly from the video controller and the

⁹⁴ Claim 1 provides: “1. A monolithic integrated circuit comprising:
“programmable clock circuit means for producing a video memory clock signal and a video dot clock signal;
“a video controller coupled to said programmable clock circuit means for receiving the video memory clock signal and the video dot clock signal and for producing a video information data stream;
“random-access memory means, coupled to said video controller, for receiving the video information data stream and producing a video display information data stream; and
“digital-to-analog converter means, coupled to both said random-access memory and to said video controller, for selectively receiving either the video information data stream or the video display information data stream as received data and for converting the received data to analog video signals.”

information that the RAM received from the video controller. The Court stated that the specification explained that the video information stream emitted by the controller either (i) was processed in the RAM to produce a video display information stream, or (ii) already consisted of video display information, bypassed the RAM, and proceeded directly to the DAC. Thus the Federal Circuit concluded that a person experienced in the field of the invention would understand the scope of the claims when read in conjunction with the specification.

(2) “Means ... for selectively receiving”: The parties agreed that the “means ... for selectively receiving” limitation corresponded to a “selector” referred to in the specification and shown in the drawings. However, the electronic structure and operation of the selector were not described in the specification. In the district court, S3 presented evidence that the selector was a standard electronic component whose structure is well known in the art. However, the district court held that such evidence did not compensate for the failure of the patent to disclose expressly the structure of such a device.

The Federal Circuit noted that the law is clear that patent documents need not include subject matter that is known in the field of the invention and is in the prior art.

Outcome. The Court thus found that the claims were *not* invalid for indefiniteness under §112 and reversed the district court’s ruling.

Dissent. The dissent by J. Gajarsa asserted that the term “video information data stream” rendered the claims ambiguous in scope and meaning and that the specification did not correct the ambiguity. The dissent further asserted that the specification inadequately described the structure and operation of the selector, and thus failed to fulfill the requirements of §112.

Sandt Technology, Ltd. v. Resco Metal and Plastics Corp., 264 F.3d 1344, 60 USPQ2d 1091 (Fed. Cir. Sept. 2001), rehearing and rehearing en banc denied 2001 U.S. App. LEXIS 24253.

Before: Michel, Schall, and Dyk. Opinion by Michel; concurring opinion by Dyk.

Subject Matter: security device for pay telephones

Proceedings Below: The district court (S.D.N.Y.) entered a summary judgment of invalidity of Sandt’s patent. Sandt appealed that judgment and the denial of its motion for summary judgment that Resco infringed.

Issues: Two limitations of claim 1 raised claim construction issues: “a first plate secured across the housing flat front face” and “a portion [of the second plate] extending directly behind said opening to protect additionally said instrumentalities by preventing drilling of a small hole through the information pad.”

Ultimate issues were: (1) whether claim 1 was anticipated under 102(g); (2) whether claims 3 and 19 were obvious; (3) whether the district court properly invalidated the entire patent where the parties

presented evidence and argument regarding the validity of claims 1, 3, and 19 only; and (4) whether the invalidity ruling mooted an infringement analysis.

Invalidity: Sandt moved for summary judgment claiming invalidity of claims 1, 3, 19, and the entire patent. A magistrate judge recommended holding claims 1, 3, and 19 invalid and that the invalidity mooted the issue of infringement. The district court subsequently held claims 1, 3, and 19 invalid but also invalidated the rest of the patent since the remaining claims 2, 4-18, and 20-21 were dependent on the invalidated claims.

Claim 1 Anticipated: Reviewing the summary judgment *de novo*, the Court agreed with the district court that Resco's alleged prior invention was sufficiently corroborated, not abandoned, and anticipated claim 1 of the patent.⁹⁵

Specification Does Not Require Special Meanings. Sandt argued that the term "secured across" refers to the placement or positioning of the plate, rather than the fasteners used in securing. Sandt also argued that the term "directly behind" does not require the second plate to actually touch the first. Looking to the district court's findings as to claim 1, "there is nothing in the specification which indicates that the term 'secured across' requires a specific securing structure between the first and the second plate." Because the "specification states only that the second plate is mounted between the outer plate ... and the upper housing," and the Resco plate has a second plate mounted behind the first, Resco's plate did contain the limitation of claim 1.

Claims 3 and 19 Are Obvious: As to the obviousness of claims 3 and 19, the Court found "that the only relevant difference between claim 3 and the Resco cover was the method of attachment: welds versus studs." This was considered to be only a slight variation which had no effect on the novelty of the concept. For claim 19, requiring a "structure for mounting the second plate on the first plate," the district court found that the limitation was obvious because the "difference concerned a method of attachment or affixation that produced a slight convenience without any change in the respective limitations of the claims."

Presumption of Validity: The Court noted that the presumption of validity is with the patent holder, and those challenging this presumption must provide clear and convincing evidence to the contrary. On appeal, the Federal Circuit found the district court in error regarding its judgment of invalidity of the entire patent. Only claims 1, 3, and 19 could be held invalid and the remaining 18 claims were not invalid as obvious because Sandt presented no evidence to support this contention.

Infringement: Sandt asserted that Resco infringed only claims 1, 3, and 19. The Court affirmed the judgment of invalidity with regard to these three claims. Therefore, the Court agreed with the district court that the invalidity ruling mooted an infringement analysis as to the three asserted claims.

Outcome: The Court affirmed the summary judgment of invalidity of claims 1, 3, and 19, but reversed as to claims 2, 4-18, and 20-21 and remanded for a determination of obviousness as to these

⁹⁵ This case discussed the corroboration requirement for an accused infringer asserting invalidity on the basis of his own prior invention.

claims. The Court affirmed the district court's determination that the invalidity ruling mooted an infringement analysis as to the three asserted claims.

Concurring Opinion by Dyk: Even where the other side produces no evidence, it may still be appropriate to deny summary judgment where the prior inventor's testimony raises credibility issues requiring a trial.

Schoell v. Regal Marine Industries, Inc., 247 F.3d 1202, 58 USPQ2d 1450 (Fed. Cir. Apr. 2001).

Before Newman, Plager and Schall. Opinion by Plager.

Subject Matter: boat hulls

Proceedings Below: The district court (M. D. Fla.) granted summary judgment of non-infringement both literally and under the doctrine of equivalents, adopting the report and recommendation thereon of a magistrate judge.

Issue: As noted by the Federal Circuit, "[t]he principal question in this case is whether the term 'generally flat aft keel,' properly construed, encompasses a twelve degree V-shaped aft keel such as the one found in Regal's FasTrac hull design."

Interpretation of "Generally Flat": The Court first addressed the district court's construction of the term "generally flat." The Court noted that the term "generally" modifies "flat" and therefore means "mostly," as supported by the written description. The court further noted that the district court held "flat" to mean "horizontal," holding that it is "generally understood" that the two terms are synonymous.⁹⁶ The Court further found that the claims, description and prosecution history distinguish between "flat" and "generally flat."

Outcome: Because the patentee distinguished between "flat" and "generally flat" shapes, the claim was limited and the Federal Circuit affirmed the lower court finding of non-infringement.

⁹⁶As a note, the court found that the district court's "...reference to other reported decisions construing the term "flat" in other contexts is at most harmless error since the court relied on the ordinary meaning and not on any special meaning given to the term in the patents at issue in those cases."

SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 58 USPQ2d 1059 (Fed. Cir. March 2001).

Before: Bryson, Plager, and Dyk. Opinion by Bryson; concurring opinion by Dyk.

Subject Matter: balloon “dilatation” catheters

Proceedings Below: The district court (N.D. Cal.) granted summary judgment of non-infringement. SciMed appealed.

Issues: (1) Whether the common specification of the three patents limits the scope of the asserted claims to catheters with coaxial lumens. (2) Based on the claim construction, whether the district court’s grant of summary judgment of non-infringement was proper.

Background: Balloon dilatation catheters are used to remove restrictions in coronary arteries during coronary angioplasty procedures. The three sections to a catheter are: (1) a first shaft section which is “long, stiff, and tubular,” (2) a second shaft section which is flexible and contains a balloon to be inflated and relieve the arterial block, and (3) a transition section between the first and second sections.

SciMed’s patents claim catheters with two lumens (passageways), one of which is used to guide the wire to be inserted into the blockage. All agree that there are only two arrangements of the lumens used in the art: (1) side-by-side positioning, and (2) coaxial positioning.

Advanced Cardiovascular Systems (“ACS”) produced catheters with dual lumens and argued in the district court that SciMed’s coverage should be limited to catheters with coaxial lumens based upon the common specification of the three patents. The district court agreed and noted that the abstract, written description, invention summary, and specification language of each patent clearly defined the plaintiff’s invention as being limited to the coaxial lumen structure and excluded ACS’s dual lumen catheter design.

In View of the Specification, Claims Given Narrow Meaning: SciMed charged that a limitation from the written description had been read into the claims. The Federal Circuit, however, found that the district court properly followed the rule that “claims must be read in view of the specification, of which they are a part.” *Markman v. Westview Instruments*, 52 F.3d 967, 979-980 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996):

As this court has recently explained, “one purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 ... (Fed. Cir. 2000). Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.

The Court had narrowly construed claims in light of the specification in *Wang Labs, Inc. v. America Online, Inc.*, 197 F.3d 1377 (Fed. Cir. 1999), citing *Modine Manufacturing Co. v. United States International Trade Commission*, 75 F.3d 1545, 1551 (Fed. Cir. 1996), explaining that "when the 'preferred embodiment' is described as the invention itself, the claims are not entitled to a broader scope than that embodiment." 197 F.3d at 1383. The Court then cited further relevant caselaw: *Cultor Corp. v. A.E. Staley Manufacturing Co.*, 224 F.3d 1328 (Fed. Cir. 2000); *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576 (Fed. Cir. 1997); and *Toro Co. v. White Consolidated Industries, Inc.*, 199 F.3d 1295 (Fed. Cir. 1999). The Court then explained how the intrinsic evidence supports the narrow claim construction.

Abstracts. First, the three patents indicate that the claimed invention uses coaxial, rather than side-by-side lumens. The abstracts refer to "an inner core tube which defines a guide wire lumen" The abstract adds that the inflation lumen is "continued as an annular inflation lumen" through the sleeve section of the catheter. This is calling for a coaxial structure.

Description of Disadvantages of Prior Art Implicate Coaxial Structure. The patents note "several disadvantages" of prior art structures, lamenting "dual lumen configurations adjacent their distal regions." The patents thus distinguish prior art on the basis of the use of dual lumens and point out the advantages of the coaxial lumens.

"Strong Evidence When Present Invention" Described as Having Annular Section. The "Summary of the Invention" descriptions refer to "the present invention" having a sleeve section with an inner core tube having a guide wire lumen extending through it and an outer sleeve defining "a longitudinally extending annular inflation lumen." The characterization of the "present invention" includes several more references to the "annular inflation lumen" as well, and the "Conclusion" section of the written description again refers to the "guide wire lumen and annular inflation lumen" in the distal portions of the catheter. As in the *Wang Labs* and *Modine* cases, the characterization of the coaxial configuration as part of the "present invention" is strong evidence that the claims should not be read to encompass the opposite structure.

Further Specification Evidence Excludes Dual Lumens. The Court found "most compelling" a portion of the specification entitled "Catheter Intermediate Sleeve Section" describing the annular structure. The patents then recite:

The intermediate sleeve structure defined above is the basic sleeve structure for all embodiments of the present invention contemplated and disclosed herein--namely, an inner core tube bonded to a distal portion of the main catheter shaft, with an outer sleeve forming an annular continuation of the inflation lumen through the main shaft between the core tube and outer sleeve. As discussed below and illustrated herein, various configurations of the connections and components relative to the formation of the distal guide wire lumen, including the coupling of the main shaft to the intermediate sleeve section, are contemplated.

This language defines the invention as excluding side-by-side lumens.

Description Not Confined to Preferred Embodiment. SciMed urged that the description was confined to the preferred embodiment, not the claims. The Court noted that such argument contradicted “the many statements in the written description that define ‘the invention’ as employing a coaxial lumen structure and distinguish the prior art ...” The Court noted especially language in the patent that the annular (coaxial) arrangement provided “the basic sleeve structure for all embodiments of the present invention contemplated and disclosed herein.” That could not be reconciled with the argument now offered that the statements are for the preferred embodiment only.

Clear Language Worked a Disclaimer. The patents describe “all embodiments of the present invention” having the coaxial lumen configuration as a necessary element of every variant of the claimed invention. Also, the patentee clearly knew about dual lumen configurations. The Court viewed this as “a clear case of disclaimer of subject matter that, absent the disclaimer, could have been considered to fall within the scope of the claim language.”

Infringement: The specification of each patent clearly disclaimed the dual lumen catheter design. Therefore, there was no literal infringement.

No Equivalents. After finding no literal infringement, the Court also ruled out infringement under the doctrine of equivalents. SciMed distinguished its patents from the prior art by pointing out that the use of dual lumens is inferior to the use of coaxial lumens for the SciMed design. The Court stated that “[i]t is difficult to imagine how the patents could have been clearer in making the point that the coaxial lumen configuration was a necessary element of every variant of the claimed invention . . . [and] there is no suggestion that the patentee made that statement unaware of the alternative dual lumen configuration.”

Outcome: The Court affirmed the trial court’s claim construction and judgment of non-infringement.

Concurring Opinion by J. Dyk: While a written description can “provide guidance as to the meaning of the claims” an unsolved problem is that the “decisions provide inadequate guidance as to when it is appropriate to look to the specification to narrow the claim by interpretation and when it is not appropriate to do so. Until we provide better guidance, I fear that the lower courts and litigants will remain confused.”

Smith & Nephew, Inc. v. Ethicon, Inc., 276 F.3d 1304, 61 USPQ2d 1065 (Fed. Cir. Dec. 2001), rehearing and reh. en banc *denied*, 2002 U.S. App. LEXIS 7058 (Fed. Cir. Feb 2002).

Before Newman, Michel, Gajarsa. Opinion by Newman. Dissent by Michel.

Subject matter: method for anchoring a member and attached suture in bone

Proceedings Below: The district court (D.Ore) adopted much of a magistrate’s claim construction report with some exception, conducted a summary judgment hearing, and entered summary judgment of non-infringement.

Facts: Per the majority decision, “surgeons are instructed to tug on the suture after the anchor is pressed into the bone, to assure that it is securely seated.” 276 F.3d at 1306.⁹⁷ Ethicon’s anchor needed pulling on the suture to cause the anchor to work.

Issue: The magistrate reported that the claim⁹⁸ does not preclude movement or manipulation after “lodging.” Plaintiff urged that added steps used with defendant’s device do not remove it from the scope of the claims. Defendant urged that it avoided the claim because its product was not “lodged” simply by pressing; a tug was required. The district court ruled on summary judgment that if pulling to set the anchor is required (as opposed to permitted), there is no infringement since using the Ethicon device requires the added step of pulling, which is not claimed.

Need Highly Persuasive Evidence To Preclude Extra (Unclaimed) Steps Taught By Patent: “... the ... claims, correctly construed, neither exclude nor require a surgeon’s tug to assure that the anchor is set within the cancellous bone, and do not preclude a small movement as a result of that tug. A claim interpretation that would exclude the reasonable practice of the method taught in the patent ‘is rarely the correct interpretation; such an interpretation requires highly persuasive evidentiary support.’ [citation omitted]” *Id.* at 1309-10.

Is The Invention The Elimination of Steps? “... claims are infringed when all of the steps thereof are performed, unless the invention itself is the elimination of additional steps. The ... patent, its specification, prosecution history, and testimony in the summary judgment proceeding, make clear that the instruction to surgeons to tug on the anchor before using it is a matter of prudent surgical practice, not a limitation of claim 1.”

Claim Differentiation Applied: Independent method claim 6 requires that the member “lodges within the hole in the absence of any manipulation of the member other than inserting the member into the hole.” This provides no basis to limit claim 1 to precluding movement or manipulation after lodging.

Claims Estopped From Covering Device Which Requires More Steps: The majority focused on whether more steps were necessary (outside claim scope) or merely advisable (within claim scope). “However, we also confirm the claim construction that the ... claims do not cover a device whereby the suture must necessarily be manipulated and moved through the bone in order to open the anchor and spread the legs, for S & N is estopped by the prosecution history from covering a device that must be manipulated and opened in order to fix it in the bone. However, a device that resiles after insertion into the bone may be manipulated provided that ‘manipulation beyond pressing [is not] necessary in order to secure the member in the hole.’”

⁹⁷ Presumably, this instruction is contained in the patent specification. The Court gives no citation to the specification for this. The dissenting opinion by J. Michel notes this omission. 276 F.3d at 1314.

⁹⁸ Claim 1 recites: “1. A method of anchoring in bone a member and attached suture, comprising the steps of: forming a hole in the bone; attaching a suture to a member; lodging the member within the hole by pressing the member with attached suture into the hole; and attaching tissue to the suture so that the tissue is secured against the bone.” [emphasis added]

“Comprising” Permits Additional Steps: Ample precedent holds that the transitional word “comprising” does not exclude the presence in the accused apparatus or method of factors beyond those explicitly recited.⁹⁹

Not All Steps Must Be Recited: “A claim is not defective when it states fewer than all of the steps that may be performed in practice of an invention.” *Id.* at 1311.

Some Evidence Suggested Extra Step Not Required: The majority found some evidence in the record that the Ethicon device required no further action of the surgeon. This disputed evidence precluded summary judgment.

Outcome. The summary judgment of non-infringement was vacated and the case remanded for further proceedings in accordance with the modified claim construction given by the Court.

Dissent

Judge Michel’s dissent noted the following points:

1. Old precedent says that “comprising” as a transition word does not include disclosed but unclaimed subject matter.
2. The inventor agreed that the invention was for making the anchor member ready simply by pushing it into hole.
3. There is a long-standing rule that disclosed but unclaimed subject matter is dedicated to the public.
4. Courts should (merely) give effect to words of claim, not re-write them
5. The written description says that the “tug” on the suture is for causing or helping to cause the anchor to lodge itself within the bone. This is more than merely assuring that the anchor is lodged within the bone.
6. The process described in the patent requires a tug to assure the anchor is set in the bone.
7. The claims say nothing of this tug but instead leave it to the resiliency of the legs alone to complete the necessary “lodging” step.
8. A patentee cannot use the open-ended term to recapture what it has already dedicated to the public by disclosing without claiming.

⁹⁹ The Court here referred to inventor testimony “that any prudent surgeon would test the anchor to assure that it is lodged beneath the cortical layer was not included in any claim.” According to the Court, it was not required to be claimed.

9. Claims 1-3 state that one must lodge the anchor member in the hole by pressing the member with attached suture into the hole. Read in context, this means that the resilient material of the anchor member *automatically* kicks out the legs or “resiles” the legs to dig into the bone.

10. Even extrinsic evidence, i.e., the inventor’s own testimony, confirms the reading of the patent. [Query why he testified at the *Markman* hearing, as the Court indicates.]

11. The patent in suit avoids the need for the extra tug on the suture or anchor member to have the legs “resile.”

12. No genuine evidence shows that the accused products work that way. The accused method does require the added step.

13. Using all elements of the claim does not establish infringement here because the invention is the elimination of the extra step. When the added step is required to be practiced, infringement is avoided.

14. Because the specification does disclose the need to have tension applied to the suture to make the claimed anchor member ready for attachment of tissue to bone, but the claims nowhere recite this step, the patentee has dedicated the process to the public. Defendant could reasonably conclude it was free to practice that dedicated process.

Superior Fireplace Co. v. Majestic Products Co., 270F.3d 1358, 60 USPQ2d 1668 (Fed. Cir. Nov. 2001), rehearing and rehearing *en banc* denied 2002 U.S. App. LEXIS 2623 (Fed. Cir. Jan 2002).

Before Mayer, Linn, Dyk. Opinion by Linn; dissent by Dyk.

Subject matter: flueless gas log fireplace

Proceedings Below: The district court (C.D. Cal.) entered a summary judgment that a certificate of correction was invalid and that the uncorrected patent is not infringed.

Issue. The infringement issue turned on whether the claim could properly be corrected by a certificate of correction. Both the district court and Federal Circuit found the certificate improper and the uncorrected patent claim not infringed.

Facts/History. Figure 2 of the patent shows a firebox in a gas log fireplace. The fireplace housing has a rear wall. The firebox within the housing also has a rear wall 15 and a reflective rear wall 11. The claim called for a firebox with a rear wall. During prosecution, the examiner changed it to “rear walls” in an examiner’s amendment. The accused product has only a single rear wall in the firebox and could not infringe if the claim requires plural rear walls there.¹⁰⁰

¹⁰⁰ Claim 1 provides, in pertinent part:

“1. A gas log fireplace comprising in combination:

Most of the discussion by the Federal Circuit concerns the (im)propriety of making a substantive change to a claim, which changes its scope, via a 35 USC §255 certificate of correction (certificate when “mistake of a clerical or typographical nature, or of a minor character, which was not the fault of the [PTO].” The Court found this to be a case of first impression on the issue of whether such a certificate could broaden a claim. 270 F.3d at 1369.

Notice to Public is Vital Function. “Sections 251 and 252 evince the clear intent of Congress to protect the public against the unanticipated broadening of a claim after the grant of the patent by the PTO. It would be inconsistent with that objective to interpret § 255 to allow a patentee to broaden a claim due to the correction of a clerical or typographical mistake that the public could not discern from the public file and for which the public therefore had no effective notice. Such a broadening correction would leave the public without effective notice, without the constraint of a two-year time bar, and without the hope of intervening rights. *** Both the Supreme Court and this court have highlighted the importance of the notice function of patent claims.” *Id.* at 1371.

Error Neither Clerical Nor Typographic Based on Intrinsic Record. “Applying the clear and convincing evidence standard to this validity challenge, we must affirm the district court’s holding if we find the absence of a genuine issue that the appropriate correction of the alleged “rear walls” mistake was not clearly evident from the intrinsic record. The intrinsic record, that is, the public record, consists of the original and corrected claims, the written description and drawings, and the prosecution history.”

Claim Clearly Contains An Error. The claim is internally inconsistent because it refers to a firebox with rear walls (no obvious error there), but then also refers to “the rear wall of the firebox” (which is singular rather than plural). One must be a mistake.

Written Description and Drawings Consistent With Either Meaning. “The former interpretation, that there are two rear walls, is suggested most strongly by the commonality between sheet 11 and rear wall 15, which commonality suggests that sheet 11 should be considered to be a second rear wall. Sheet 11 and rear wall 15 are common in terms of size, placement, and function.” The Court then considered the size, placement, and function of these members 11 and 15. *Id.* at 1373-74.

Lack of Other Recital in Claim. The Court noted also that no limitation of the claims clearly corresponded to sheet 11. Accordingly, “a reader of the patent might well conclude ... that sheet 11 and rear wall 15 together correspond to the ‘rear walls’ limitation.” *Id.* at 1374.

Prosecution History. The file history supports the view that the change from “wall” to “walls” in the first place was intentional. “First, the examiner changed ‘rear wall’ to ‘rear walls’ in an examiner’s

“a housing having a top wall, bottom wall, side walls and a rear wall;

“a firebox within the housing comprising a top wall, rear walls and side walls, said firebox forming a primary combustion chamber;

“a room air plenum comprising a top room air plenum between the top wall of the firebox and the top wall of the housing, a rear room air plenum between the rear wall of the firebox and the rear wall of the housing in communication with the top room air plenum; ***” [*italics by the Court, underscoring added herein*].

amendment after a telephonic interview that was scheduled for the purpose of discussing prior art. The clear inference is that the examiner and the patentee agreed that such a change was necessary to overcome the prior art. That inference is buttressed by the fact that Superior did not object to the change, even though the examiner's amendment itself reminded Superior of its right to do so.” *Id.* at 1374.

Conclusion re Clerical or Typographic Mistake. Because the limitation in question is “syntactically correct and on its face raises no question of a mistake,” and for the other noted reasons, “the requested correction of the alleged mistake was not apparent from the specification, drawings, and prosecution history.” *Id.* at 1375. Hence, the alleged mistake was not a clerical or typographical mistake correctable under §255.

Mistake Not Minor in Character. The Court declined to rule that a mistake of a minor character could be one that broadens the claim.

Subjective Intent Not Given Weight. The Court rejected the argument that the version of the claim which the patentee and examiner had allegedly agreed to should be followed. “Superior asserts that the examiner and the patentee both understood that the claim only required a single rear wall, and that this intent should govern our analysis. We decline Superior's invitation and refer to our own case law. ‘No inquiry as to the subjective intent of the applicant or PTO is appropriate or even possible in the context of a patent infringement suit. The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history).’ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 985, 34 USPQ2d 1321, 1334 (Fed. Cir.1995). Thus, Superior's suggestion that we compare claim scope by considering what was ‘intended’ by the parties, rather than by construing the claims for what they actually recite, is completely without merit.”

Outcome. The Federal Circuit affirmed the summary judgment that the certificate of correction is invalid and affirmed several other rulings. It vacated the exceptional case determination and remanded.

Dissent

Judge Dyk’s dissenting opinion noted the following points:

1. He disagrees that for certificate of correction under §255, the error must be apparent from the file history; statute does not require this.

2. §254 correction calls for error “clearly disclosed by the records of the Office.” This phrase is absent from §255. We therefore should not construe §255 to require the same showing as §254. It is highly unlikely that Congress intended the file history do disclose applicant’s own mistakes before a §255 correction could be made.

3. “The presumption of validity and the clear and convincing evidence standard were crafted, in part, because we recognized that we cannot know exactly what occurred during prosecution, and we appropriately assume that the PTO has done its job properly, absent clear and convincing evidence to the contrary.”

4. There is ample evidence to support conclusion that a mistake occurred, and no clear and convincing evidence to the contrary. Patent specification refers to the “rear wall” of the firebox.

5. “The written description stated: ‘[i]n the *preferred form* of the invention, *the* firebox rear wall 15’ (emphases added). ‘534 patent, col. 4, ll. 11-12. By using the definite article, the patentee clearly indicated that the preferred embodiment of invention included a firebox having a *single* rear wall. We have held that a claim construction that does not encompass the preferred embodiment is ‘rarely, if ever, correct and would require highly persuasive evidentiary support.’ *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583, 39 USPQ2d 1573, 1578 (Fed. Cir.1996). So too a claim which is written to exclude the preferred embodiment is likely to be an error.”

6. The examiner changed "rear wall" to "rear walls" after a telephone interview to discuss prior art and infers “that the amendment was made in a deliberate attempt by the applicant to overcome prior art and was not a clerical or typographical error. But the examiner's amendment also added, at the same time, to the same claim, the claim limitation ‘a rear room air plenum between *the rear wall* of the firebox’” Thus there is evidence that the change to "rear walls" was inadvertent and was a clerical or typographical mistake.

Tegal Corp. v. Tokyo Electron Am., Inc., 257 F.3d 1331, 59 USPQ2d 1385 (Fed. Cir. July 2001), rehearing denied 2001 U.S. App. LEXIS 21126 (Fed. Cir. Sept 2001), rehearing *en banc* denied 2001 U.S. App. LEXIS 21051 (Fed. Cir. Sept 2001), subs. appeal 2002 U.S. App. LEXIS 1992 (Fed. Cir. Feb. 2002), *cert. denied*, 122 S.Ct. 1297, 2002 U.S. LEXIS 1550 (2002), *cert. denied*, 122 S.Ct. 1297, 2002 U.S. LEXIS 1551 (2002).

Before Lourie, Bryson and Linn. Opinion by Linn.

Subject Matter: plasma reactors used in the fabrication of semiconductor devices

Proceedings Below: Following claim construction on (1) "electrode" and (2) "plasma" and a bench trial, the district court (E.D. Va.) found willful infringement, granted an injunction, and awarded attorney fees.

Normal Rules of Claim Construction Apply:

[w]e construe the term "electrode" according to the normal rule of claim construction. . . First, we look to the claim language. Then we look to the rest of the intrinsic evidence, beginning with the specification and concluding with the prosecution history, if in evidence. If the claim language is clear on its face, then our consideration of the rest of the intrinsic evidence is restricted to determining if a deviation from the clear language of the claims is specified . . .

Relying on the extrinsic evidence to construe a claim is proper only when the claim language remain genuinely ambiguous after consideration of the intrinsic evidence . . .

... But extrinsic evidence may never be used for the purpose of varying or contradicting the terms in the claims. Throughout the construction process, it is important to bear in mind that the viewing glass through which the claims are construed is that of a person skilled in the art. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 231 F.3d 859, 865-66, 56 USPQ2d 1647, 1652-53 (Fed. Cir. 2000) (citations and internal quotations omitted).

Terms Of Art Require Examination Of The Specification. Here, the court determined that the "[i]t was clear that 'electrode' is a term of art susceptible to various meanings, and so we must go to the specification . . . to determine the scope of the term." The Federal Circuit noted that the term was used in a broad sense throughout the claims. After examining the specification, the Court found that "[t]he specification, therefore, broadly describes an 'electrode,' and imposes no limitations beyond its having an electric potential or source coupled to it, and the implicit requirement that it be a conductive surface so that electric fields can be established between electrodes."

Prosecution History Used To Limit Explicitly Scope Of Term: The Court limited the scope of the term in one respect based on comments made to distinguish over a prior art reference. The Court found "the term 'electrode' must be construed so as not to cover spiked electrode."

Use Of Figure From Physics Book Was Improper: "Neither the claims, the specification, nor the prosecution history even suggest that the claimed plasma is limited to the particular range of current TEA proposes, and TEA's use of extrinsic evidence to establish such a contrary proposition is improper." *Interactive Gift Express*, 231 F.3d at 866, 56 USPQ2d at 1652-53.

Outcome. "We affirm the district court's decision with respect to: (1) neither party having a right to a jury trial; (2) the finding of infringement; (3) the decision that the claims of the '223 Reexamination Certificate are enforceable; and (4) the non-obviousness decision. However, we vacate and remand: (1) the finding that Itakura did not anticipate the '223 patent; (2) the findings of pre-filing and post-filing willfulness; (3) the finding of an exceptional case; (4) the award of attorney fees; and (5) the entry of the injunction."

Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 58 USPQ2d 1545 (Fed. Cir. April 2001), rehearing and rehearing *en banc* denied 2001 U.S. App. LEXIS 12888 (Fed. Cir. May 2001).

Before Newman, Lourie and Gajarsa. Opinion by Gajarsa.

Subject matter: debit phone system

Proceedings Below. The district court (N.D. Cal.) entered a summary judgment of invalidity and non-infringement. The district court construed claim 1, basing its construction on the claim language that the host processor initiates communications with the mobile phone.¹⁰¹ The district court rejected a claim differentiation argument predicated on claim 3.

Issues. Construction of “communication means” and “complex billing algorithm.”

Construction of “Communication Means”– Steps in Construing §112-6 Element. First, the Court found that this claim limitation was to be construed under Section 112-6. The first step in construing such a claim is to identify the function of the claim limitation. The second step is to identify structures in the specification “and equivalents thereof” that perform the claimed function.

Plain Meaning of Claim Language. The Federal Circuit concluded that the district court properly construed the limitation “communication means for selectively establishing a communication link with each mobile phone unit.” The Court looked to the plain language of the claim and concluded that the function “selectively establishing a communication link with each mobile phone unit” describes a communication established by the host processor and does not encompass communications established by a user via a mobile phone. A “construction that flies in the face of the express language of the claim is not preferred.”

Written Description. The Court next examined the written description. “Unless something in the written description suggests that the patentee intended the unambiguous language to be construed in a manner inconsistent with its ordinary meaning, we are bound by that language.” The Court found nothing in the written description which contradicted the plain language describing this function of the “communication means” limitation.

¹⁰¹ “1. A mobile phone system comprising a system provider having a host processor unit and a plurality of system users each having at least one mobile phone unit wherein:

“the host processor unit has communication means for selectively establishing a communication link with each mobile phone unit; and,

“each phone unit includes a processor, a clock chip, memory associated with the processor, program means including a complex billing algorithm and rate data for internally calculating call charges as calls are made, wherein the phone unit includes internal accounting means for generating a debit account with an account amount in the phone unit and decrementing the account amount in the debit account in real time, and wherein the system provider has payment verification means under system provider control for setting a phone use account amount and communicating the account amount to the phone unit, wherein the internal account means adds the account amount to the debit account.”

Identification of Structure for Performing the Claimed Function. The Court found numerous passages from the specification identifying structure for establishing communication with a mobile phone, each being part of the host processor. The Court concluded that only those embodiments involving communications established by the host processor meet the functional requirement of the “communication means” limitation. Thus, the Court agreed with the district court’s conclusion that the disclosed embodiments describing user-initiated communications could not provide the structure or equivalent structure for performing the claimed function under §112-6. Because the function and structure for performing user-initiated communications found in the accused device correspond to the claimed “payment verification means” and are not part of the “communication means,” the Court upheld the district court’s conclusion that no reasonable jury could have found that the accused device literally infringes. As the structure used to perform user-initiated communications in Defendant-Appellee’s system is not the same as or equivalent to the structure in the host processor corresponding to the claimed means for selectively establishing communications with a mobile phone, the Court upheld the decision below that no reasonable jury could have found that the accused device infringes under the doctrine of equivalents.

Construction of “Complex Billing Algorithm”: The Court determined that the district court properly concluded that the claimed “complex billing algorithm” requires storage of phone rates for, at a minimum, local, long distance, international, and roaming calls based upon the written description.

No Ordinary Meaning Exists. Because the term “complex billing algorithm” does not have an ordinary meaning and its meaning is not clear from a plain reading of the claim, the Court turned to the remaining intrinsic evidence, including the written description, to assist in its construction of this term. The Court concluded, upon analyzing the written description, that the district court properly followed the intrinsic evidence in construing “complex billing algorithm.” As the billing algorithm in the accused device did not include calculation of charges for international calls, the Court upheld the district court’s conclusion that no reasonable jury could have found that the accused device literally infringes. As no feature in the accused device corresponds to the international call category component of the claimed telephone system, the Court upheld the district court’s conclusion that no reasonable jury could have found that the accused device infringes under the doctrine of equivalents.

Outcome. The Federal Circuit affirmed the judgment of the district court.

Toro Co. v. White Consolidated Industries, Inc., 266 F.3d 1367, 60 USPQ2d 1437 (Fed. Cir. Sept. 2001), rehearing and rehearing en banc denied Nov. 1, 2001

Before Newman, Rader and Linn. Opinion by Rader.

Subject Matter: convertible vacuum blower

Proceedings Below: The district court (D. Minn.) granted summary judgment of non-infringement to defendant White Consolidated, under the doctrine of equivalents. The district court held that the function of the device was not equivalent to the accused device, based on the structure of the two inventions.

Issue: Because the Federal Circuit originally interpreted the claims of the patent, the issue on the second appeal was whether the district court erred in its finding of non-infringement under the doctrine of equivalents and subsequent grant of summary judgment.

Earlier Construction: In an earlier appeal, the Federal Circuit had interpreted the term-at-issue, “means for increasing the pressure,” to mean “permanently affixed to and included as part of the cover.” The court reasserted its construction, stating that the written description supported such an interpretation. However, the Court further stated that its claim construction, “...did not and could not import into the claim a function from the specification, particularly when the claim recites only purely structural limitations.” The Court held that its interpretation of the claims did not “...make the inherent function of automatic placement a key objective of [the] invention.”

Outcome: The Court found that a genuine issue of fact existed as to whether the function of the patented invention was equivalent to the function of the reference, and therefore vacated and remanded the case.

Turbocare v. General Electric Co., 264 F.3d 1111, 60 USPQ2d 1017 (Fed. Cir. Aug. 2001)

Before Bryson, Gajarsa, and Linn. Opinion by Linn.

Subject matter: a shaft seal for fluid-driven devices, *e.g.*, steam turbines

Proceedings Below: Following claim construction on the meaning of (1) "radiation positioning means," (2) "large clearance position," and (3) "small clearance position," the district court (D. Mass.) entered summary judgment of non-infringement of some claims and invalidity of claim 2.

Presumption of Section 112, ¶ 6: Because the term "radial positioning means" uses the word "means," it is presumptively subject to section 112, paragraph 6." *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427, 44 USPQ2d 1103, 1109 (Fed. Cir. 1997).

Presumption Overcome Where Claim Recites Specific Structure: “where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format.” *Sage*, 126 F.3d at 1427-28, 44 USPQ2d at 1109.

Generally Understood Term Meanings May Control Where Patent Discloses Only One Type of Device, Despite An Otherwise Functional Connotation: “Although the term 'spring' has a functional connotation, a 'compressed spring' denotes a type of device with a generally understood meaning the mechanical arts.” [citations omitted]. “There is nothing in the specification or the prosecution history suggesting that the patentee used the term 'compressed spring means' generally to refer to any structure that can perform a biasing function; on the contrary, both the specification and the prosecution history disclose only a type of device denoted as a 'spring' or a 'compressed spring.' In these circumstances, the term 'compressed spring means' is not subject to section 112, paragraph 6.”

A Patentee Who Represents To The Public That His Invention Does Not Include A Specific Feature May Not Later Claim That Feature: "Brandon thus represented to the public in clear and definite terms [via distinguishing the invention over a prior art reference during prosecution] that his invention did not require any such holes. *See Watts v. XL Sys., Inc.*, 232 F.3d 877, 883, 56 USPQ2d 1836, 1840 (Fed. Cir. 2000)

A Court Should Not Read A Limitation From the Preferred Embodiment Into The Plain Language of A Claim: "There is no basis for reading a limitation from the preferred embodiment into the language of the claim." *See Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 865, 9 USPQ2d 1289, 1299 (Fed. Cir. 1988) [citations omitted]. "That is particularly true where another claim restricts the invention in exactly the manner suggested by the district court's narrow claim construction." *See Beachcombers v. Wildewood Creative Prods., Inc.*, 31 F.3d 1154, 1162, 31 USPQ2d 1653, 1659 (Fed. Cir. 1994)

Outcome. The Court affirmed the summary judgment of invalidity of claim 2 for violation of Section 112, affirmed several of the non-infringement judgments, and remanded to consider whether certain accused products infringe under the doctrine of equivalents and whether the remaining claims are valid.

Union Pacific Resources Co. v. Chesapeake Energy Corp., 236 F.3d 684, 57 USPQ2d 1293 (Fed. Cir. Jan. 2001).

Before: Michel, Lourie, and Radar. Opinion by Rader.

Subject Matter: method of drilling for oil and natural gas.

Proceedings Below: After construing the claims, the District Court (N.D. Tex.) invalidated plaintiff's claims for nonenablement and indefiniteness.

Issues: The claim limitation at issue involved whether "comparing said . . . characterizing information" as meaning "examining data . . . from selected points along an offset vertical well, in such a manner that the proximity to, or location within, certain strata . . . may be ascertained. That manner involves four (4) coordinates for each selected point along the borehole, the fourth being that of 'true stratigraphic depth.' "

Specification and Expert Witness Meaning Applied. The Federal Circuit found that "comparing" was used in only a few sentences of the specification, but not explained. Nevertheless, the Court noted that the specification used the term "correlating," which involved both "rescaling" and "comparing." The specification pointed out that the "correlation points" referred to "selected points along the length of the borehole being drilled." "The specification also describe[d] the correlation of selected points on the horizontal borehole log to selected points on an offset log." Expert witnesses testified that "true stratigraphic depth" is determined through correlation of these logs. The Court further noted that the specification defined "true stratigraphic depth" to describe the location of a borehole relative to the target zone."

Outcome. affirmed.

Viskase Corp. v. Am. Nat'l Can Co., 261 F.3d 1316, 59 USPQ2d 1823 (Fed. Cir. July 2001)

Before Newman, Lourie, and Rader. Opinion by Newman.

Subject Matter: heat-shrinkable films used to make plastic bags for packaging food articles

Proceedings Below: The district court (N.D. Ill.) construed the claims, decided various motions for summary judgment, held a jury trial, conducted post-trial proceedings, entered judgment that the patents were valid and willfully infringed, and awarded damages. The district court construed “about 0.91 g/cm³” to mean “up to 0.914 g/cm³.”

Issue: Should “below about 0.91 g/cm³” be construed to mean “below about 0.910 g/cm³”?¹⁰²

Interpret Claims as a Person Experienced in the Field Would Understand Them: The patentee used the number 0.91 in all documents during prosecution. However, to distinguish his invention from a prior art with a density range of 0.910-0.0940, he stated:

The “A” copolymer is clearly not pertinent to the present application in that it does not have a density below about 0.910 g/cm³ as defined in all pending claims.

The district court found this inclusion of a zero in the third place was an error. Because 0.910 is known in the field as the line between “low density” and “very low density,” the Federal Circuit held that a person skilled in the art would read the prosecution history and understand the claim to only cover “very low density” copolymers. Therefore, the claim is limited to “about 0.910.”

Objection to District Court’s Claim Construction Waived If Alternate Construction Not Offered: The defendant objected to the district court’s construction of “linear” as “without significant long chain branching” as insufficiently precise. However, since the defendant on appeal did not offer a more precise definition, the objection was deemed waived.

Outcome: The district court’s claim construction was found to be incorrect, and the summary judgment of infringement was vacated and remanded.

¹⁰² Claim 33. “A heat-shrinkable, puncture resistant, biaxially stretched, thermoplastic film suitable for use in fabricating bags for packaging food articles such as frozen poultry, said film comprising a very low density polyethylene which is a linear copolymer of ethylene and higher alpha olefin containing from 3 to 8 carbon atoms, having a density below about 0.91 g/cm³, a 1% secant modulus below about 140,000 kPa, and said film being formed using a double bubble method and wherein said film heat-shrinks from about 30 percent to about 50 percent at a temperature of about 90E C. in the transverse direction.”

Before Newman, Lourie, and Gajarsa. Opinion by Lourie.

Subject Matter: apparatus for coating and drying food products

Proceedings Below: The district court (S.D. Iowa) granted defendant CMS' motion for summary judgment of non-infringement and denied Wenger's cross-motion for summary judgment of infringement.

Issues: Whether the district court properly construed "air circulating means" as requiring a structure capable of recirculating air, and "means defining a plurality of separate product coating zones" as including fully perforate reels.¹⁰³

General Claim Construction: In interpreting claims, a court "should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history," and in the absence of "an express intent to impart a novel meaning, 'terms in a claim are to be given their ordinary and accustomed meaning.'"

"Air Circulating Means" is a Means-Plus-Function Limitation Under §112, ¶6: The use of the word "means" creates a presumption that §112, ¶6 is applicable. But, if a recited function corresponding to the "means" is lacking or if a sufficiently definite structure for performing the function is recited, §112, ¶6, does not apply. The Federal Circuit accepted the district court's finding that the "air circulating means" limitation should be construed as a means-plus-function limitation under §112, ¶ 6. The "means" term was present, creating a presumption that the limitation invokes §112, ¶ 6. Additionally, the claim language recites the

¹⁰³Claims: 1. An apparatus for coating and drying a food product comprising:
a dryer housing;
an elongated reel representing a longitudinal axis and having an inlet, an outlet, and a sidewall defining an interior and presenting a plurality of perforations, said side wall being located substantially within said housing whereby said perforations are surrounded by said housing;
means for introducing the product into the interior of said reel through said inlet;
means for rotating said reel within said housing;
means for selectively inclining said reel with said inlet elevated relative to said outlet;
air circulating means associated with said dryer housing for circulating air through said reel, the air circulating means including means for drawing air from the interior of the reel into said housing in order to provide positive air flow through the apparatus; and
means defining a plurality of separate product coating zones longitudinally spaced along said reel, each of said zones including at least one spray nozzle directed toward said sidewall for pressurized spraying of a coating on the food product during passage of said food product from said inlet to said outlet.

2. An apparatus for coating and drying food product as set forth in claim 1 including structure associated with said housing defining a plenum therein for receiving said air passing through said perforations from the interior of said reel.

3. An apparatus for coating and drying a food product as set forth in claim 2 including a means for exhausting a first portion of said air received in said plenum and recirculating a second portion of said air back into the interior of said reel.

corresponding function of “circulating air through said reel,” without reciting any structure for performing that function.

No Importation of Unnecessary Functional Limitations: “In construing a means-plus-function limitation, a court must identify both the claimed function and the corresponding structure in the written description for performing that function.” “Under §112, ¶6, a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the recited function.”

The Federal Circuit rejected the district court’s interpretation that, as a means-plus-function limitation, the phrase “air circulation means” requires structure capable of recirculating air. In doing so, the district court had “improperly restricted the ‘air circulation means’ limitation to structure that was disclosed in the preferred embodiment, but was not necessary to perform the recited function of circulating air.”

Ordinary Meaning of “Circulate”: CMS’ argument that the ordinary meaning of the term “circulate” necessarily includes or implies “recirculate” was rejected. The ordinary meaning of the term “circulate” neither connotes nor requires that the ‘air circulation means’ have structure capable of ‘recirculating.’” Unlike “circulate,” “recirculating” implies a second circulation.

Meaning of “Circulate” Under the Doctrine of Claim Differentiation: Under the doctrine of claim differentiation, each claim in a patent is presumptively different in scope. However, “claim differentiation is not a ‘hard and fast rule of construction’ and cannot be relied upon to ‘broaden claims beyond their correct scope.’” Although the judicially created doctrine of claim differentiation cannot override the statutory requirements of §112, ¶6, means-plus-function limitations may be interpreted with regard to other claims. Claim differentiation is “clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims.”

CMS argued, relying upon *Laitram Corp. v. Rexnord*, 939 F.2d 1533 (Fed. Cir. 1991), that claim 1 must be interpreted, in accordance with §112, ¶6, without regard to dependent claim 3. The Federal Circuit rejected this contention, stating that “*Laitram* does not stand for the broader proposition suggested by CMS, *viz.*, that a means-plus-function limitation must be interpreted without regard to other claims.”

The Federal Circuit found that under the doctrine of claim differentiation, claim 1 and claim 3 are presumptively different in scope because claim 3 recites a separate and distinct function (i.e. “recirculating”) that is not recited in claim 1. “Accordingly, the doctrine of claim differentiation supports the conclusion that the “air circulating means” limitation in claim 1 should be limited to structure for performing the recited function of circulating air, and should not be interpreted as requiring structure capable of performing the additional function of recirculation, which is expressly recited in claim 3 and not found in claim 1.”

Conclusion is Consistent with Specification: The specification discloses “the function of ‘circulating’ in the context of drawing air through the reel in order to dry the food product, and discloses ‘recirculation’ as a separate function involving the return of a portion of the drying air back into the reel.” In the preferred

embodiment, the air may be either exhausted or returned back for recirculation. The specification thus “further supports the conclusion that the ‘air circulation means’ should not be limited to structure capable of performing the unrecited function of recirculation.”

Prosecution History Does Not Support “Recirculation” as Structural Limitation: CMS’ argued that prosecution history supports the conclusion that the “air circulating means” in claim 1 should be limited to structure capable of recirculating air.¹⁰⁴ CMS alleged that Wenger had distinguished prior art with its invention’s ability to recirculate air. The Federal Circuit rejected this contention, instead favoring Wenger’s assertion that prior art was distinguished based on its lack of a housing.¹⁰⁵

“Means defining a plurality of separate product coating zones” does not fall under §112, ¶6.: CMS argued that district court has erred in concluding that the claimed “means defining a plurality of separate product coating zones,” includes fully perforate reels. CMS argued that §112, ¶6 applies to the “product coating zones” because there is no structure recited for performing the claimed function of “defining.”

The Federal Circuit rejected this argument, upholding the district court’s determination that the “product coating zones” limitation was not subject to §112, ¶6, because there was no corresponding function to the term “means.” Additionally, even if the term “defining” were to be construed as the associated function, there was sufficient structure recited in the claim for performing the function of “defining.” The claim specifically recited structure including spray nozzles, directed toward the sidewall of the reel, which “define” the separate product coating zones.

“Product Coating Zones” includes both Perforate and Nonperforate Reel Sections: Although claims must be read in light of the specification of which they are a part, it is improper to read limitations from the written description into a claim. Although claim 1 expressly recites that the reel has “a plurality of perforations,” it does not require that the reel have imperforate sections or that “product coating zones” be limited to such sections. The district court did not err in concluding that the “product coating zones” limitation could be satisfied by fully perforate or alternating perforate and imperforate sections.

Outcome: The district court improperly construed the phrase “air circulating means” as requiring structure for recirculating air. Given the new claim construction, the district court’s grant of summary judgment of non-infringement was improper and therefore reversed. Additionally, the Federal Circuit held that summary judgment of infringement should be granted given the new claim construction. There no longer was any genuine issue of material fact. The case was remanded for further proceedings.

¹⁰⁴In support of its prosecution history argument, CMS relied heavily upon an unsigned draft amendment, which the district court properly refused to consider.

¹⁰⁵CMS argued that housing alone does not distinguish claim 1 over the prior art, and absent recirculation, claim 1 would have been obvious in view of a French patent. The Federal Circuit declined to consider the reference to the French patent because it was not in evidence before the district court.

Xerox Corp. v. 3Com, U.S. Robotics Corp., et al., 267 F.3d1361, 60 USPQ2d 1526 (Fed. Cir. Oct. 2001)

Before Mayer, Newman, and Clevenger. Opinion by Mayer; concurring opinion by Clevenger.

Subject Matter. handwriting character recognition using single stroke symbols

Procedural History. The district court (W.D.N.Y.) granted summary judgment of non-infringement by 3Com and U.S. Robotics and denied Xerox's motion for summary judgment of infringement.

Issues. (1) Whether the definition of “unistrokes” itself requires an entire alphabet. (2) Whether the term “unistroke symbols” requires sufficient graphical separation that the computer can definitively recognize a symbol immediately upon delimitation or pen lift. (3) Whether “spatial independence” requires the accused device to be capable of properly distinguishing and recognizing symbols without reference to where a previous symbol was written on the written surface. Four independent claims were involved.¹⁰⁶

¹⁰⁶ “16. A system for interpreting handwritten text comprising (i.) a user interface including a manually manipulatable pointer for writing mutually independent unistroke symbols in sequential time order and a user controlled signaling mechanism for performing a predetermined, symbol independent, delimiting operation between successive unistroke symbols in said sequential order, some of said unistroke symbols being linear and others being arcuate, each of said unistroke symbols representing a predefined textual component said delimiting operation distinguishing said unistroke symbols from each other totally independent of [*sic*, and?] without reference to their spatial relationship with respect to each other

“10. A machine implemented method for interpreting handwritten text comprising

“i. writing said text in sequential time order using an alphabet of mutually independent unistroke symbols to spell out said text at an atomic [*sic*?] level, each of said unistroke symbols conforming to a respective graphical specification that includes a stroke direction parameter, some of said unistroke symbols having graphical specifications that differ from each other essentially only on the basis of their respective stroke direction parameters, some of said unistroke symbols being linear and others being arcuate;

“ii. entering a predetermined, symbol independent delimiter between successive ones of said unistroke symbols in said time order, said delimiter distinguishing successive unistroke symbols from each other without reference to and totally independently of their spatial relationship with respect to each other

“12. A handwriting recognition process for pen computers, said process comprising the steps of

“a) correlating unistroke symbols with natural language alphanumeric symbols, each of said unistroke symbols being fully defined by a single continuous stroke that conforms geometrically and directionally to a predetermined graphical specification, some of said unistroke symbols being linear and others being arcuate;

“b) entering user written unistroke symbols into buffer memory in sequential time order, successive ones of said unistroke symbols being delimited from each other by a predetermined, symbol independent delimiting operation, said delimiting operation distinguishing successive unistroke symbols from each other without reference to and totally independently of their spatial relationship with respect to each other

“16. A machine implemented handwriting recognition process comprising the steps of

“a) correlating natural language symbols with unistroke symbols, where each of said unistroke symbols is fully defined by a single continuous stroke that conforms geometrically and directionally to a predetermined graphical specification, at least certain of said unistroke symbols being arcuate;

“b) writing user selected unistroke symbols in sequential time order while performing a predetermined, symbol independent delimiting operation for delimiting successive ones of said unistroke symbols from each other, said delimiting operation distinguishing successive unistroke symbols from each other without reference to and

Intrinsic Evidence; Claim Differentiation. One examines the plain meaning of the claims, the specification, and the prosecution history. The specification defines the term “unistroke” as “a single, unbroken stroke.” Only claims 10 and 11 require an entire alphabet. The Federal Circuit thus agreed with the district court that the definition of “unistrokes” itself does not require an entire alphabet.

Prosecution History. Among the independent claims, only claim 10 refers to graphical separation. During reexamination, Xerox had invoked “separation” in explaining a difference between “unistroke symbols” and multistroke symbols:

unistroke symbols are single stroke symbols (representing alphanumeric characters or specified functions) that are sufficiently well separated from each other graphically so that definitive recognition can occur after each such symbol is written, e.g., immediately upon pen-up, without requiring the system to wait for possible additional strokes.

Noting also that Xerox had “distinguished a reference on the basis that it was designed to accommodate multi-stroke symbols as well as single stroke symbols, and, therefore, did not implement the claimed combination of unistroke symbols and symbol independent delimiting,” the Court found that “‘unistroke symbols’ requires sufficient graphical separation for the computer to definitively recognize a symbol immediately upon delimitation or pen lift.”

Claim Differentiation Applied. Certain claims included a recital concerning “sloppiness space.” Those claims also referred to “unistroke symbols.” The Court recognized this as “clearly separate and additional to” the unistroke requirements. If the Court were to construe all of the claims as including a certain feature, that would make these claims superfluous. The Court declined to do so, in view of the presumption of a difference in meaning and scope when different words or phrases are used in separate claims. “To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant” (quoting *Tandon Corp. v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987)). Hence, the Court found that the dependent limitation for the symbols to be well separated from each other in sloppiness space is clearly separate and additional to the requirements to be considered a “unistroke symbol.” Reading the “even when perfectly formed” requirement into the graphical separation limitation for all claims would effectively render two claims superfluous, which the Federal Circuit declined to do.

The Spatial Independence Feature. Xerox argued that spatial independence is part of the delimiting operation, which requires that the operation distinguish unistroke symbols from each other “totally independent of and without reference to their spacial relationship with respect to each other.” The specification states that “unistroke symbols can be written one on top of another because they are interpreted in the order in which they are written.” During the original prosecution, Xerox distinguished over the prior art because some of the prior art symbols differ from each other only in their positioning within

totally independently of the spatial relationship of said unistroke symbols with respect to each other ...”

the character space. During reexamination, Xerox argued that a symbol can be written without reference to where a previous symbol was written. Based upon the plain language of the claims, the specification, and Xerox's arguments to distinguish over the art, the district court was found to have properly held that "spatial independence" requires the invention to be capable of properly distinguishing and recognizing symbols without reference to where the last symbol was written.

The Court thus affirmed the district "court's claim construction that (1) the definition of 'unistrokes' itself does not require an entire alphabet, (2) the term 'unistroke symbols' requires sufficient graphical separation that the computer can definitively recognize a symbol immediately upon delimitation or pen lift, and (3) 'spatial independence' requires the accused device to be capable of properly distinguishing and recognizing symbols without reference to where a previous symbol was written on the writing surface."

Outcome. The Court affirmed-in-part, reversed-in-part, and remanded the case for further proceedings. It reversed the summary judgment of non-infringement by the Graffiti system of 3Com. The trial court erred in: not considering direction in its determination of what constitutes graphic similarity; finding that Graffiti does not allow for definitive recognition of all symbols immediately upon pen lift; and finding no infringement because Graffiti requires the computer to consider the placement of the stroke on the writing surface when performing recognition of a symbol, instead of whether the current symbol has to be written in a particular location relative to the previous symbol in order to be recognized.

Concurring Opinion by J. Clevenger

J. Clevenger's concurring opinion dealt with infringement.

1. One infringement issue is "whether, in order to infringe, all of the accused symbols, as opposed to only some of them, must be proven to be unistroke symbols." The file history shows that every symbol made by a single stroke used by the defendants must be a "unistroke symbol," as defined by the court.

2. In the original prosecution, the applicant distinguished a reference because it was not wholly composed of "unistroke" symbols. Hence, the patent reads on only a system of symbols, all of which are unistroke.

3. A file memorandum by the PTO examiner noted that according to the applicant, although the patent does not require any particular alphabet of letter symbols, it does require that each unistroke symbol must meet all of the claim requirements. These are that each unistroke symbol in the accused symbols (i.e., all symbols except for "x" which is composed with two strokes) has (a) graphic separation, (b) definitive recognition, and (c) spatial independence. Xerox cannot prevail without showing that this is true of the accused systems.

4. This was confirmed in the reexamination proceedings where the examiner distinguished the claimed unistroke symbols over a reference because it "does not disclose an alphabet consisting entirely of unistroke symbols."

5. On remand, absent a summary judgment, "The jury will have to decide if every one of the accused symbols that is composed by a single stroke meets all of the tests of a 'unistroke symbol.' This is

so, because in order to escape the reach of potentially invalidating prior art, the patentee insisted that his invention requires that every symbol composed by a single stroke must be a complete ‘unistroke symbol.’”

B. Design Patents

Door-Master Corp v. Yorktowne, Inc., 256 F.3d 1308, 59 USPQ2d 1472 (Fed. Cir. Aug. 2001), rehearing *en banc* denied, 2001 U.S. App. LEXIS 21104 (Fed. Cir. Aug. 2001).

Before: Rader, Gajarsa, Linn. Opinion by Rader.

Subject matter: design patent for cabinet door

Proceedings below: The district court (D. N.J.), following a jury verdict of wilful infringement, denied a motion by defendants for JMOL and entered a damages award.

Issue: The claim called for “An ornamental design for an integrated door and frame as shown and described.” One main issue was whether the design patent covered the features of the back of the cabinet door which are hidden when the door is closed. Figure 2 of the patent showed the rear of the door.

Design patents subject to claim construction: The design patent test for infringement requires the court to construe the claimed design “if appropriate” and then compare the claimed design to the accused product.

General rules for construing design patents: Only non-functional aspects of an ornamental design as shown in the patent are “proper bases.” Generally concealed features are not proper bases for protection.

Features excludable:

1. Despite requirement in 37 CFR 1.152 (1993) that drawings fully show the article of manufacture, a patented design may be embodied in less than the entire article.
2. Nothing in the patent indicates that the rear features are not part of the claimed design.
3. Though 37 CFR 1.152 may have required the drawings to disclose the appearance of the entire article, it did not require the drawings to claim the whole design.
4. The patent showed a door pull in broken lines and the description excludes that door pull. Likewise, it could have shown the rear features of the door in broken lines to comply with 1.152 while excluding them from the design as claimed.
5. The rear features are not “hidden” but instead are a “matter of concern.” Nor are they nonfunctional.

Outcome: After construing the claim, the Federal Circuit reviewed the test for infringement and found sufficient evidence to support the jury verdict. The judgment was therefore affirmed.

II. Non-Precedential Decisions

A. Utility Patents

Accuscan, Inc. v. Xerox Corp., 2001 U.S. App. LEXIS 11534, 18 Fed. Appx. 828 (Fed. Cir. May 2001) (not published), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 16640, vacated and remanded, ___ U.S. ___, 122 S.Ct. 2323, 153 L.Ed.2d, 2002 U.S. LEXIS 4030 (2002)

Before Clevenger, Plager, and Schall. Opinion by Schall.

Subject Matter: circuit for performing contrast calibration for a scanned document

Proceedings Below: After a jury verdict, the district court (S.D.N.Y.) found that four of Xerox's product lines infringed and denied a motion for JMOL of noninfringement.

Issues: Xerox argued that its products do not infringe when the asserted claims are properly construed under prosecution history estoppel. Xerox argued that AccuScan limited the use of anything other than a "divide circuit" under its patent. Xerox argued that AccuScan further limited its invention by arguing that it "did not cover circuits that do not store and hold a white sample during the entire scan of the document, and do not continually combine the input signal with the black and white samples during the entire scan of the document."

Scope of Review: Denial of a motion for JMOL is reviewed by reapplying the district court's standard of review, whereupon a verdict may be overturned "only if, upon the record before the jury, reasonable jurors could not have reached that verdict." Finally, claim construction and prosecution history estoppel are legal questions reviewed *de novo*.

Prosecution History Estoppel Applied: The Federal Circuit held that "arguments and amendments made during the prosecution of the patent limit the interpretation of the claim terms so as to exclude any interpretation that was disclaimed during prosecution." More specifically, Xerox argued that AccuScan limited the use of anything other than a "divide circuit" for the function claimed in claim 1. In order to overcome a prior art reference, AccuScan "explicitly disclaimed coverage of any device performing the mathematical calculation yielding VO by something other than a divide circuit." AccuScan had previously argued that Xerox's Docutech system and 5775 copier infringed claim 1 under the doctrine of equivalents. However, the Court reasoned that these two products did not infringe as it was limited to the use of a "divide circuit." Nevertheless, Xerox's SA-4 scanner and 7117/20/21 facsimile machine still infringed under this argument as they both utilized "divide circuits."

Consequently, Xerox argued that AccuScan further limited its invention by arguing that it "did not cover circuits that do not store and hold a white sample during the entire scan of the document, and do not continually combine the input signal with the black and white samples during the entire scan of the document." More specifically, the Court found that AccuScan repeatedly emphasized the importance of storing a sample of the white signal in order to distinguish its patent over prior art references. Therefore, the claims 1 and 17 should have been construed to require continuous storing and combining of these

samples. Because Xerox's SA-4 scanner and 7117/20/21 facsimile machine did not combine or store such samples, the Court reasoned that these two products did not infringe on the AccuScan patent.

Outcome: Accordingly, the Court reversed the district court's denial of Xerox's motion for JMOL.

Altech Controls Corp. v. EIL Instruments, Inc., 8 Fed. Appx. 941, 2001 WL 487603, No. 00-1216 (Fed. Cir. May 2001)

Before Clevenger, Schall, and Bryson. Opinion by Schall.

Subject Matter: supermarket refrigeration systems; 3 patents were in suit

Proceedings Below: The district court (S. D. Tex.) held a Markman hearing to construe the claims of the '776 patent, following which it granted summary judgment of non-infringement of several claims asserted against the RC-1000 product as to which there was no presumption of laches. In another summary judgment order, it ruled that prosecution history estoppel barred application of the doctrine of equivalents to that same product. Following a jury trial, the district court entered judgment of non-infringement in favor of defendant EIL and in its favor on its affirmative defenses of equitable estoppel, laches, and invalidity.

Issues: The issues on appeal concerned equitable defenses and claim construction.

Equitable Defenses. On the '776 patent, the Court reviewed equitable estoppel principles and found the defense inapplicable here.¹⁰⁷ However, it found laches applicable to certain accused products but not others.¹⁰⁸

Claim Construction by the District Court: The district court concluded that the claims were limited to a FIFO selection.¹⁰⁹ There was little dispute that the RC-1000 avoids FIFO selection as described by the patent, and that instead it –

uses a single signal to both de-energize some compressors and at the same time energize others to obtain the desired capacity. In contrast, FIFO selection uses a decrease signal only to de-energize compressors, and it uses an increase signal only to energize compressors.

¹⁰⁷ This requires (1) a communication "in a misleading way" such that the defendant would not be sued, (2) substantial reliance on the misleading conduct by the defendant, to its detriment, and (3) material prejudice to the defendant if the suit were allowed.

¹⁰⁸ Laches calls for proof that the patentee unreasonably and inexcusably delayed in filing suit and that the delay "resulted in" material prejudice to the defendant.

¹⁰⁹ The FIFO selection technique involved turning off the compressor which had been operating the longest, and turning on the compressor which had been off the longest.

On this basis, the district court found that the RC-1000 did not infringe the '776 patent.

Claim Language and Prosecution History Limit Scope of Claims. The Federal Circuit rejected Altech's argument that while some claims of the '776 patent were directed to a FIFO invention, claim 1 and others were broad enough to read on the RC-1000 selection process. The Court's discussion was terse:

However, both the language of the claims and the prosecution history indicate that the claims are limited to a FIFO system. During prosecution of the patent Altech made express representations that the claims were limited to a FIFO system. In addition, Altech repeatedly referred to its invention as utilizing FIFO selection, without any reference to specific claims.

The Court observed that the claim which matured into patent claim 1 was originally broad enough to encompass the RC-1000 controller. After being rejected over prior art, Altech amended the claim to include the words "selectively energizing" and "respective." The Court then explained how this limited the claims and that the claims as amended rule out a construction that would read on the RC-1000.

Doctrine of Equivalents Barred for '776 Patent. The Federal Circuit agreed that Altech was barred from using the doctrine of equivalents for these claims of the '776 patent due to that Court's *en banc* decision in *Festo*, 234 F.3d 558 (Fed. Cir. 2000) (later reversed by the Supreme Court).

Other Issues. The Court then reversed the district court's grant of JMOL of invalidity due to the on-sale bar because substantial evidence supported the jury verdict (that the invention was not on-sale). Likewise, the Court reversed the JMOL of invalidity due to obviousness ('776 claim 24) because substantial evidence supported the jury verdict that claim 24 is valid.

'700 Patent. The Federal Circuit affirmed the summary judgment of non-infringement that the RC-1000 did not infringe various claims of the second patent-in-suit. It agreed that these claims too are limited to the FIFO selection by virtue of their language and prosecution history.

Prosecution History from Common Ancestor Applied. The '700 patent shares a common prosecution history with the '776 patent, and the express statements limiting the invention to the FIFO selection procedure apply to this '700 invention as well.

'326 Patent. No claim construction issues were involved here. The Court reversed the decision that laches applied and since infringement was conceded, remanded for a damages determination.

Outcome. The Court affirmed some of the rulings on laches but vacated one such ruling, affirmed the summary judgments that the RC-1000 of the '776 patent and '700 patent do not infringe, reversed the grant of JMOL as to '776 claim 24 being invalid for obviousness or the on-sale bar, and remanded the case for a damages determination on the '326 patent.

Amphenol Corp. v. Maxconn Inc., 2001 U.S. App. LEXIS 2189 (Fed. Cir. Feb. 2001)(not published), *cert. denied* 122 S.Ct. 42, 151 L.Ed.2d 14 (2001)

Before Mayer, Chief Judge Clevenger, and Rader. Opinion by Clevenger.

Subject Matter: electrical connectors, specifically an “RJ modular connector”

Proceedings Below. The district court (N.D. Cal.) held that the Amphenol’s patent was invalid as anticipated, pursuant to 35 U.S.C. §102(b), by a prior art reference that was unknown to the inventor at the time he prosecuted his patent.

The Issues. Whether the district court erred in (1) its interpretation of the limitation “housing” and “within said housing” and (2) its application of the previously construed “plurality of conductor wires.”

Claim Construction.

(1) “Housing” and “within said housing”: The claim in question required a “housing formed by front, rear, top and bottom walls . . .” and a light-emitting device (LED) secured “within said housing.” Amphenol argued that the LED in the prior art reference was not secured within said housing, but rather sat exposed on a projection above the housing. Maxconn maintained that, as defined by the claim in question, the LED on the front wall was within the housing, because the claim did not limit the invention to a box-like structure with the LED placed within the internal volume of the four specified walls.

The Federal Circuit held that the district court properly construed the “housing” limitation in the claims as not requiring that the device have side walls, be box-like in structure, or have the edges of the four walls meeting at the four corners at right angles. Rather, it appeared that the claim language was intentionally vague to capture within its claims the whole variety of RJ connector configurations known in the art. Furthermore, the specification expressly stated that the configuration of the RJ connector was not a limitation to the invention. On these grounds the Federal Circuit concluded that “housing,” as defined by the claims, encompassed a housing with a protrusion or flange, such as that found in the prior art reference.

The Federal Circuit further concluded that Amphenol waived its argument that the district court erred in its application of the previously construed “plurality of conductor wires . . .” limitation when the parties previously agreed that the prior art reference met this limitation.

Outcome: The Court affirmed the district court’s judgment of patent invalidity pursuant to 35 U.S.C. § 102(b).

Applied Concepts, Inc.v. Olympia Indus., Inc., 2001 U.S. App. LEXIS 16570 (Fed. Cir. July 2001)(not published), rehearing and reh. en banc denied 2001 U.S. App. LEXIS 19399.

Before Lourie, Schall, and Linn. Opinion by Lourie.

Subject Matter: self-adjusting utility pliers having a tooth and pawl construction

Proceedings Below: The district court (W. D. Penn.) granted a preliminary injunction for the plaintiff-licensee after determining that ACI established a likelihood of prevailing on the merits on the issues of validity and infringement.

Issue: Whether the district court properly construed the terms "handle end" and "slideable and pivotable fastening means."

Methodology: "In construing the claims, a court 'should look first to the intrinsic evidence of record, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.'" *Vitronics Corp. v. Conceptorics, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996).

Use Of The Word 'Means' Invokes Presumption As 35 U.S.C. §112, ¶6: "In determining whether a claim limitation is a means-plus-function limitation, the use of the word 'means' creates a presumption that §112, ¶6 applies . . . [h]owever, a limitation that uses the word 'means,' but does not recite a function that corresponds to the means, does not invoke §112, ¶6." "Likewise, even when a limitation does recite a function, if it also recites a sufficiently definite structure for performing that function, then §112, ¶6 does not apply." (citations and quotations omitted).

Must Identify Both Function and Corresponding Structure: "In construing the means-plus-function limitation, a court must identify both the claimed function and the corresponding structure in the written description for performing that function." Here, the district court failed to properly identify the claim functions, yet concluded that the structure in the written description corresponding to the "slideable and pivotable fastening means."

Plain Language Of The Claim And The Written Description Identify Structure: "[t]he plain language of the claim and the written description make clear that the 'fastening means' must be slideable and pivotable." Here, the court relied heavily on the specification to support its construction.

Claim Differentiation Cannot Override §112, ¶6: "Under the doctrine of claim differentiation, each claim in a patent is presumptively different in scope." *** " . . . [h]owever, claim differentiation is not a 'hard and fast rule of construction,' and cannot be relied upon to broaden claim beyond their correct scope." *** "Moreover, the judicially created doctrine of claim differentiation cannot override the statutory requirements of §112, ¶6."¹¹⁰ (Citations and quotations omitted)

¹¹⁰Here, to the extent that dependent claim 3 recited structure that corresponds to the claimed functions of the 'fastening means' limitation, the doctrine of claim differentiation does not negate the conclusions that the "slideable and pivotable fastening means" limitation in claim 1 is limited to the corresponding structure described in

Outcome: Reversed and remanded.

Avery Dennison Corp v. Flexcon Co., Inc., 15 Fed. Appx. 882, 2001 WL 811834 (Fed. Cir. July 2001)

Before Newman, Lourie, and Gajarsa. Opinion by Newman.

Subject Matter: facestock used for adhesive labels, tapes, or signs

Proceedings below: The district court granted summary judgment for non-infringement of the 3 patents in suit.

Issue: Did the district court err in concluding that defendant's facestock "formed by adhering preformed layers" was not within the scope of the patentee's claims which required the facestock to be either a "coextrudate of cojoined layers" or manufactured by "coextruding . . . to thereby form . . . a multiplayer extrudate."

Scope of review: Claim interpretation is a matter of law that is reviewed *de novo*.

District court adopted claim construction from another suit against a different defendant but which involved the same products and patents: In that litigation, the court concluded that the relevant claims of the patent in suit "should be plainly construed to cover a coextrudate which is a facestock, or plastic film, formed by *simultaneous* or *joint extrusion* of several materials through a die. The *immediate* result of this *simultaneous* extrusion, or coextrusion, is a multiplayer film wherein the layers are firmly adhered to one another in a permanently combined state, i.e., the patented coextrudate." (emphasis added). This claim construction was applicable to all three patents, the specifications of which were "substantially identical." The Federal Circuit rejected the patentee's argument that the district court erred when it required the facestock be the "sole" and "immediate" result of coextrusion.

District court's claim construction taught by specification, including drawings: The specification of all three patents were "substantially identical." As an illustration, the Federal Circuit pointed to the specification of one patent which taught that the facestock layers are "formed by simultaneous extrusion from a suitable known type of coextrusion die, and are adhered to each other in a permanently combined state to provide a *unitary* coextrudate."¹¹¹ (emphasis added). Figure 8 of same further illustrated the simultaneous joining of three individual components being "coextruded" through a die to form "a coextruded facestock with [three] joined layers."

Prosecution history narrowed scope of claims in accordance with district court's claim construction: In response to a restriction that arose during the course of prosecution, the patentee explained that the claimed coextrudate was distinguishable from a material "formed by adhering preformed layers." With

the specification and equivalents thereof, which includes a pawl that is "slideable and pivotable."

¹¹¹ U.S. Patent No. 4,713,273, col. 9, II. 23-26.

regard to the latter, the patentee stated “if the layers were preformed they would not have been coextruded and would not constitute a coextrudate as called for in independent product claims.”

These statements made to distinguish the claimed invention over the prior art, along with the fact that the accused product did not literally infringe the claims of any of the three patents, barred the patentee from using the doctrine of equivalents to argue the lamination step was merely an extra in the formation of the accused product.

Bemis Mfg. Co. v. Dornoch Medical Systems, Inc., 21 Fed. Appx. 930, 2001 WL 1381150 (Fed.Cir. Nov. 2001)(not published)

Before Mayer, Newman, Cleverger. Opinion by Cleverger. Concurring/dissenting opinion by Newman.

Subject matter: suction canisters for collecting medical waste fluids

Proceedings below: Bemis moved for summary judgment of infringement. Dornoch opposed on the basis that some parts of the claims should be construed under 112-6. Dornoch moved for partial summary judgment of invalidity based on alleged prior invention under 102(g). The district court (E.D.Wisc.) *sua sponte* granted summary judgment for the *non-movant*, *i.e.*, ruling in favor of Dornoch that there was no infringement of the four patents-in-suit.¹¹² The district court denied Dornoch's motion for summary judgment of invalidity.

Issue. Bemis urges on appeal that it was not given adequate opportunity to be heard on the ground used to support the summary judgment.

No Review of Claim Construction: The majority did not review the construction of the claims given by the district court. The majority found insufficient findings in the decision below for a meaningful appellate review.

Outcome: affirmed as to the denial of partial summary judgment re 102(g) priority of invention; affirmed as to the denial of summary judgment re inequitable conduct; vacated and remanded as to the summary judgment of non-infringement and invalidity.

¹¹² The motion for summary judgment was brought by the plaintiff-patentee, seeking an order that the claims should be given their ordinary meaning claims and that defendant infringed. Defendant Dornoch moved for summary judgment of invalidity based on a 102(g) priority issue. The district court *sua sponte* granted a summary judgment on non-infringement in favor of *defendant*, even though defendant had not moved for summary judgment. A portion of the Federal Circuit's review was directed to this procedural issue, which it treated under Seventh Circuit law. The Court noted that it had previously indicated the lack of any inherent problem in a district court granting summary judgment in favor of the *non-movant*, citing *Massey v. Del Laboratories*, 118 F.3d 1568, 1572 (Fed Cir. 1997).

Dissent by J. Newman

The dissent faulted the majority for not reviewing the claim construction, particularly where this was decided by the district court with a full opinion thereon, stating:

... when claim construction has been decided by the trial court and duly appealed, our obligation is to review the decision, and decide the claim construction, *de novo*. Our appellate treatment is particularly flawed because the district court proceeded in accordance with a incorrect view of § 112 ¶6, presenting an opinion that may defeat finality of this litigation on remand, to the disadvantage of the parties as well as the judicial process.

Bernard Dalsin Manuf. Co. v. RMR Products, Inc., 10 Fed. App. 882 (Fed. Cir. May 2001).

Before Lourie, Rader and Dyk. Opinion by Dyk.

Subject Matter: chimney damper attachable to the top of a chimney flue

Proceedings Below: The district court (D. Minn.) granted summary judgment of non-infringement, finding that although the patent and the accused device serve the same general purpose, they are not the same either literally or under the doctrine of equivalents.

Issue: construction of the limitation “mounting means for mounting the flue cover means to the chimney flue”

Means-Plus-Function Claim Construction: The parties and the Federal Circuit agreed that the disputed term “mounting means” was a means-plus-function limitation. The Court found that a means-plus-function limitation requires determination of the meaning of the means term. Such a determination, the Court found, rested on the corresponding structure, as described in the specification.

Outcome: Based on structures found in the patent’s specification, the Court found that the district court erred in its construction of “mounting means,” and ultimately reversed the court’s grant of summary judgment of non-infringement.

Circle R, Inc. v. Trail King Indus., Inc., 21 Fed. Appx. 894, 2001 U.S. App. LEXIS 22017 (Fed. Cir. Sept. 2001) (not published)

Before Newman, Bryson and Dyk. Opinion by Dyk.

Subject matter: side dump trailers

Proceedings Below: The district court (D. Nebr.) granted summary judgment of non-infringement to the defendants, finding the phrase “substantially flat” to mean “entirely flat.” The court reasoned that the accused device did not literally infringe because it did not possess an entirely flat bottom wall and similarly concluded that it did not infringe under the doctrine of equivalents.

The magistrate judge assigned to the case also excluded the testimony of Circle R’s expert witness for failure to comply with the Federal Rules of Civil Procedure.

Issue: The appellant argued that the district court’s claim construction was erroneous because “substantially flat” meant “largely, but not wholly, flat.” It further argued that the lower court’s decision to exclude expert testimony was erroneous.

Scope of Review: The Court’s review of the district court’s grant of summary judgment and its claim construction are both reviewed without deference, or *de novo*.

Ordinary and Customary Meaning Should Apply: The Federal Circuit found the district court’s claim construction to be erroneous. Although the district court properly looked to the specification in its claim construction, the claim should have first been given its ordinary and accustomed meaning. The Court looked to a dictionary and determined that the ordinary meaning of the word “substantially” was “considerable in ... extent,” contrary to the district court’s interpretation. However, the Court also found that the prosecution history indicated that “substantially flat” meant “flatter than [an ellipse found in the prior art].” Because the drawing depicting the accused device was clearly more curved than the prior art, the accused device did not infringe literally nor under the doctrine of equivalents.

Rejection of Expert Testimony: The Court held that exclusion of Circle R’s expert testimony was not reversible error. It further found that, even if it were, it was not relevant to the issues of claim construction or prosecution history estoppel and resulted in harmless error.

Outcome: Although the district court’s claim construction was erroneous, its grant of summary judgment of non-infringement was affirmed. Further, the magistrate’s decision to exclude expert testimony was not reversible error.

Civix-DDI, LLC. v. Microsoft Corp., Zip2 Corp., Infoseek Corp, InfoUSA, Inc., Excite, Inc., Delorme Publishing Co., Inc., and Lycos, Inc., 18 Fed. Appx 892, 2001 U.S. App. Lexis 19597 (Fed. Cir. Aug. 2001)

Before: Mayer, Newman, and Rader. Decision *per curiam*.

Subject matter: a system showing places of interest geographically

Proceedings below: The district court (D. Colo.) Granted summary judgment of non-infringement to numerous defendants on various claims of the patent in suit. Civix appeals. Lycos cross appeals the order denying to hold the case exceptional.

Claim Construction of “Positional Coordinates”: The Court relied on the specification, claim language, and prosecution history to find that the phrase “positional coordinates” refers to a set of coordinates, and not in general any collection of values that identify a vicinity:

The patent's specification (together with the plain language of the claims and the prosecution history) mandates the court's construction of "positional coordinates" as "a set of coordinates defining a single reference point within a corresponding geographic vicinity which operates to determine the corresponding geographic vicinity." CIVIX slip op. at 35. CIVIX argues that the term should be construed to refer to any "collection of values sufficient to identify a vicinity . . .". This argument reads out the word "coordinates" in the claim, and is contrary to the repeated language and examples in the specification and the claims stating that the positional coordinates represent a single location, within a vicinity. (See '525 patent, col. 5, II. 16,17 ("The positional coordinates locate one location within the geographic vicinity . . ."); col. 8, II. 36-38 (stating that figure 4A "illustratively shows the positional coordinates . . . for each vicinity. . ." and depicting geographic vicinities each centered around positional coordinates)). Figures 3A and 3B are limited to the user display and do not correspond to the "positional coordinates" limitation of the claims. The Semple letter in the file history, which the inventor with counsel chose to include in the '525 patent's public record, further confirms this construction.

Claim Construction of “Relative to”: The Court rejected Civix’s argument that an absolute position indication is within the claim scope, relying on claim language and prosecution history:

Similarly, the district court also properly construed the term "relative to" ("identification of a position . . . relative to the positional coordinates and other items of interest . . . ") to denote that the "information transmitted to a user of the system displays the items of interest only relative to the positional coordinates" in an internal grid system, as opposed to absolutely, such as by reference to that item of interest's

latitude and longitude. CIVIX slip op. at 40. The prosecution history, together with the claims language, require this construction. CIVIX amended independent claims 1, 17 and 26 by adding the limitation "relative to" in order to overcome an examiner's rejection for indefiniteness, which stated that "the position of an . . . item . . . can be absolute or relative. If the position is meant to be relative it is necessary to distinctly point out the relativity."

Outcome: Since Civix offered no evidence that the defendants systems include the "positional coordinates" and items defined "relative to" such coordinates, there can be no direct infringement. Since Civix offered no evidence as to equivalency, no infringement issue remained. The Court thus affirmed the district court's claim construction, ruling of non-infringement, and ruling that the case was not exceptional.

Collett v. Piper's Saw Shop, Inc., 2001 U.S. App. Lexis 2046, 4 Fed. Appx. 904 (Fed. Cir. Feb. 2001) (not published)

Before: Newman, Michel, and Rader. Opinion by Newman.

Subject matter: cutting tooth for circular saw

Proceedings Below. The district court (E.D Tex.) held that the patent-in-suit was not infringed under the doctrine of equivalents and was invalid for violation of 35 U.S.C. § 102(b), the on-sale bar.

Issues. Whether the all-elements rule applied to each individual alloy component set forth in the claim term: "wherein said cutting tip is composed of high impact resistant carbide alloy consisting essentially of a mixture of 83.5% tungsten carbide, 16% cobalt and 0.5% tantalum carbide." Collett contended that the absence of tantalum carbide from the accused product was only an insubstantial change.

All Elements Rule Applies. When "applying the all-elements rule, care must be taken to identify the 'claimed elements' correctly, lest the doctrine of equivalents be collapsed into literal infringement." Here, where the inventor included in the claim the separate components of the alloy, and relied on the presence of tantalum carbide to distinguish his invention from the tungsten carbide alloy used in the prior art, the separate components of the alloy were properly viewed as separate claimed elements, and the complete omission of any one or an equivalent thereof violates the all-elements rule. The Federal Circuit noted that inventor had relied upon the presence of tantalum carbide to distinguish his invention from the prior art.

Outcome: Since the accused saw tooth did not contain tantalum carbide or an equivalent, the Federal Circuit concluded that it did not infringe literally nor under the doctrine of equivalents, and affirmed the judgment of non-infringement.¹¹³

Datastrip Ltd. et al. v. Symbol Techs., Inc. et al., 2001 U.S. App. LEXIS 15491, 15 Fed. Appx. 843 (Fed. Cir. July 2001)(not published)

Before Michel, Schall, and Dyk. Opinion by Schall.

Subject matter: a printed data strip containing encoded information that could be decoded by an optical scanner

Proceedings Below: The district court (D. Del.) denied a JMOL to overturn a jury verdict of non-infringement.

Issue: whether the phrase “presence or absence of printing” includes “variable width encoding”

The Claim: "information ... encoded in said bit areas by the presence or absence of printing"

Methodology: "In construing the claims, a court 'should look first to the intrinsic evidence of record, the patent itself, including the claims, the specification and, if in evidence, the prosecution

¹¹³ On other issues, the Federal Circuit ruled as follows.

On-Sale Bar. The critical date for the on-sale bar was May 23, 1987. Collet argued that there was no documentary evidence or testimony to support the district court's finding that the invention was the subject of a commercial sale at least as early as April of 1987. The record contained advertisements starting in March 1988, which were offers to sell the patented cutting tooth, but which did not state the composition of the alloy. An article describing the performance of the cutting tooth was published in November of 1987. However, the composition was not disclosed. There was no written record of when the first cutting teeth containing the claimed alloy were made and tested. The first cutting tips containing the claimed alloy were shipped to the inventor from the manufacturer on March 24, 1987. The inventor's brother testified that it would have taken at least ninety days after those cutting tips were received to make and test experimental cutting teeth. However, the district court discredited the testimony of the inventor's brother as an interested party, and found that the invention was subject to a commercial sale at least as early as April of 1987.

The Federal Circuit, however, stated that there was no evidence contrary to the testimony of the inventor's brother, and in the absence of any evidence that the product had been sold or offered for sale prior to the critical date, the violation of the on-sale bar was not proved by clear and convincing evidence. Therefore, the judgment of invalidity was reversed.

Obviousness and Inequitable Conduct. Piper's charges of obviousness and inequitable conduct were based on the fact that before the critical date Collet sold a saw tip blade with the same overall shape as that shown in the patent in question, but without the specific claimed composition of the tip alloy. Piper alleged that this prior art, added to the art before the examiner and the specific alloy of the tip, required the conclusion that the overall claimed invention would have been obvious. Piper further alleged that the shape of the prior art tip had been withheld from the PTO. Collet responded that Piper's analysis required impermissible hindsight and disputed the allegation that the shape of the prior art tip had been withheld from the PTO.

The Federal Circuit upheld the district court's rulings that the patent was not invalid for obviousness or unenforceable due to inequitable conduct because reversible error had not been shown.

history." *Vitronics Corp. v. Conceptionics, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996).

Plain Language of the Claim Supports District Court's Interpretation: "The claim language requires that the information in the data strip be encoded by using the presence or absence of printing in the bit areas. *** The plain language of the claim requires the usage of presence/absence encoding."

Specification Support Claim's Plain Language: "The specification contrasts the bar code prior art with the claimed invention, indicating that the invention provides bits of information by the 'presence or absence of printing.' *** The encoding method used in the preferred embodiment, dibit encoding, is presence/absence of printing.' "

Construe Limitations Per Meaning to Persons Skilled in the Art When Patent Filed: "Based on the evidence in the record, we conclude, as a matter of claim construction, that to those skilled in the art at the time of the patent's filing, the phrase 'presence or absence of printing' did not include variable width encoding."

Outcome: The Court found that substantial evidence supported the jury's verdict of no literal infringement and no infringement by inducement, and therefore affirmed.

DoorKing, Inc. v. Sentex Systems, et al., 19 Fed. Appx. 872, 2001 U.S. App. Lexis 20483 (Fed. Cir. Sept. 2001)

Before: Mayer, Schall, and Dyk. Opinion by Dyk.; dissent-in-part by Schall.

Subject matter: audio communication systems for tenants and visitors

Proceedings below: The district court (C. D. Cal.) granted defendants motion for summary judgment of non-infringement and denied defendant's motion for attorney fees under 35 USC 285.

Claim: Claim 1 is representative and includes the following paragraph:

(e) control means responsive to said monitor means for automatically transferring transmit control to the first microphone and disabling said second microphone such that transmission cannot occur through said second microphone when audible sounds are generated at said first microphone and for enabling said second microphone to transmit only when audible sounds are not generated at said first microphone.

Issue: whether the word "disable" should be construed per a dictionary or the specification. DoorKing relied on the dictionary definition and specifically the indication that "weaken" is presented as a synonym.

Citing one dictionary meaning, DoorKing urges that "disabling" should be construed to mean "to suppress, to make incapable or ineffective," and that the term is synonymous with the word "weaken." For example, Webster's Dictionary defines disable: "to make incapable or ineffective" and lists "weaken" as a synonym for "disable." Webster's New International Dictionary 642 (3d ed. 1968). Standard dictionary definitions indicate ordinary meaning. [citation omitted]. Of course, it is appropriate to look to the dictionary to help determine the ordinary meaning of "disable."

Sentex, on the other hand, urged that the specification and prosecution history require a narrower interpretation of "disabling."

Specification statements: The specification states that: "During each monitor of the phone line, the external microphone is temporarily disabled so that any signal on the line cannot be the result of external noise or someone talking on the external microphone."

Prosecution statements: The Court noted several statements in the prosecution by DoorKing to distinguish the invention over the art. For example, as to one reference, DoorKing explained, "In accordance with the present invention, one of the microphones is literally de-activated and that is the microphone in the noisy area for purposes of monitoring the telephone line. This clearly does not exist in [the reference]."

Likewise, distinguishing over another reference, DoorKing stated, "In distinction, the system of the present invention is obviously quite different in that only one person can obtain transmit control." As to a third reference, DoorKing stated:

Of primary importance is the fact that Nishino et al. does not cut off a microphone or a speaker at any time. In other words, the microphone and the speaker are always on. . . . The references of record do not even remotely suggest the disabling of any one of the microphones to determine if audible sounds are being carried over the telephone line. In addition, Claim 1 calls for the control means which is responsive to the monitor means for disabling one of the microphones such that transmission cannot occur through that microphone.

Intrinsic evidence controls: The Court determined that indeed the prosecution history called for the narrower construction, and that "disabling" means to make incapable or ineffective, but not merely to "weaken." The Court explained:

Like the district court, we find that the prosecution history at least requires a narrower interpretation of the claim language than indicated by the dictionary definition. The proper interpretation is that "disabling" means "to make incapable or ineffective," but not "to weaken." The prosecution history is not consistent with a broad interpretation of

disabling that includes merely weakening the signal from the visitor microphone. We construe "disabling" as requiring that the visitor microphone be rendered incapable of: (a) transmitting a signal that is audible at the tenant location; and (b) preventing the tenant microphone from controlling the system. This construction is similar to but not identical to the district court's construction.

Outcome: Under this interpretation, Sentex might infringe. In the summary judgment proceeding, Sentex did not show that its product operates a certain way at its extreme adjustment range. Hence, the summary judgment of non-infringement was vacated and the case remanded for further consideration. Also, the Court ruled that DoorKing's suit was not frivolous and thus affirmed the denial of Sentex's request for attorney fees.

Dissent: Judge Schall dissented as to the infringement issue but concurred on the attorney fee issue. Points in the dissent include:

1. "... Doorking presented no evidence that suggested that the accused device was even capable of "disabling" the second microphone so that "transmission cannot occur through [the] second microphone," as recited in the claims. The accused device weakens the signal transmitting from the second microphone through the use of an attenuator, but it never makes the second microphone "incapable or ineffective" of transmitting a signal when "audible sounds are generated at [the] first microphone." Thus, the accused device cannot be found to literally infringe the '501 patent."
2. Statements made during prosecution can evince a clear and unmistakable surrender of subject matter that cannot be recaptured through the doctrine of equivalents.
3. "During prosecution of the '501 patent, the inventors, in response to a prior art rejection, described the claimed invention as 'literally de-activating' the second microphone when sound was present at the first microphone. In addition, the inventors distinguished a prior art reference, the Nashino reference, on the ground that Nashino 'does not cut off a microphone or a speaker at any time. In other words, the microphone and speaker are always on.' Such statements evince a clear surrender of devices that leave the second microphone on when the tenant is speaking, systems that do not 'literally de-activate' or 'cut off' the second microphone. As acknowledged by Doorking's expert, the accused device's second microphone is on at all times. The accused device thus falls within the scope of the surrendered subject matter. It therefore cannot infringe the '501 patent under the doctrine of equivalents."

Hemphill v. McNeil-PPC, Inc., 25 Fed. Appx. 915, 2001 U.S. App. LEXIS 27471 (Fed. Cir., Nov. 2001) (not published), rehearing denied 2001 U.S. App. LEXIS 27839, cert. denied 123 S.Ct. 98 (2002)

Before Clevenger, Gajarsa, Dyk. Opinion by Dyk.

Subject matter: vaginal swabs or refreshers

Proceedings Below: The district court (D. Md.) entered a summary judgment of non-infringement.

Intrinsic Evidence. The intrinsic evidence of record, *i.e.* the patent itself, including the claims, the specification and, if in evidence, the prosecution history, should be considered. The specification may explain the invention and define terms used in the claims. When the meaning of a term used in a claim is sufficiently clear from its definition in the specification, that meaning shall apply.

Prosecution History Statements re Other Claims Can Apply. Prosecution history is relevant for both prosecution history estoppel and for construing the meaning and scope of the claims. If the same structure is being discussed in the prosecution history, even though it relates to a different claim, it is proper for the court to use that history to construe the claim (citing *Alpex Computer v. Nintendo*, 102 F.3d 1214, 1220 (Fed. Cir. 1996)). It is proper to refer to statements made in reexam proceedings also.

Dictionaries. The district court properly referred to dictionary definitions to ascertain the plain meaning of terms such as “swab,” and referred to the specification to determine the meaning of “vaginal” and “vaginal swab.”

Reexam request. “The fact that the PTO granted Hemphill's request for reexamination in light of a patent for wrapped sanitary napkins ... and reissued her patent over [that patent] does not alter the proper construction of the term ‘vaginal swab,’ and does not persuade us to construe the term “vaginal swab” to cover wrapped sanitary napkins.”

Prosecution History As Applied. Patentee Hemphill distinguished her invention from a reference and explained that her outer housing became a handle structure, unlike the prior art. Likewise, the district court properly construed “core member” to require “a fairly rigid core member with an annular band or ring at its base that can fit into the band or ring of the outer housing,” again referring to the patentee’s statements during prosecution and the manner in which it is described in the specification.

Outcome. The Federal Circuit affirmed the claim construction in all respects and then found that summary judgment (non-infringement) was properly granted.

Herman v. William Brooks Shoe Co., 2001 U.S. App. LEXIS 4178 (Fed. Cir. March 2001) (not published), rehearing *en banc* denied, 2001 U.S. App. LEXIS 9394 (Fed. Cir. Apr. 2001).

Before Schall, Friedman and Gajarsa. Opinion by Gajarsa.

Subject matter: “insert type” footwear

Proceedings Below: The district court (S.D.N.Y.) granted summary judgment of invalidity due to anticipation.

Issue: The sole claim limitation at issue before the district court was whether a “moisture vapor permeable [material]” was disclosed in an earlier patent. The patentee-appellant argued that “moisture permeable” differed from the prior art’s “air permeable,” and that the transmission rate of materials used in the prior art differed from that of the patent in question.

Scope of Review: Claim construction is an issue of law that is reviewed *de novo*. The grant of summary judgment is also reviewed *de novo*, and anticipation is a question of fact.

Claim Construction: The Court construed the claim at issue by looking at the written description of the patent. It found that, in the written description, the insert material was described as “breathable” and as “allowing passage of water vapor therethrough.” The Court therefore determined that the intrinsic evidence demonstrated that “moisture vapor permeable” described a body through which moisture could pass.

Comparison to Prior Art: The Court noted that the prior art patent disclosed a sock that is “lightweight, flexible and preferably air permeable, i.e. [constructed of] polyethylene, polypropylene, urethane film, etc.” The Court concluded that one of ordinary skill in the art would know from the prior art that it was possible to construct the sock in the patent at issue.

No Imputation to Save Validity. In response to the patentee’s argument that the materials used in the prior art had a low transmission rate, while those described in the patent at issue had a high transmission rate, the Court held that the statement in the written description concerning transmission rate could not be imputed to the claims at a later time. The Court stated, “[t]he water vapor transmission rate is not a limitation of claim 1 of the [patent at issue].”

Outcome: The summary judgment (invalidity due to anticipation) was affirmed.

In re Beigel, 7 Fed. Appx. 959 (Fed. Cir. Apr. 2001).

Before Clevenger, Plager and Gajarsa. Opinion by Clevenger.

Subject Matter: electronic identification systems

Proceedings Below: The PTO Board of Patent Appeals sustained the Examiner's rejection of the claims as obvious over prior art references.

Issue: whether the claims were unpatentable as obvious distinctly pointed out the invention

Obviousness: In determining whether the application was obvious, the Court looked at interpretation of the claims. The Court looked first at the plain meaning of the claims and then addressed obviousness of a means-plus-function claim. The Court found that the Board incorrectly interpreted the means-plus-function claims of the application, in part because it relied upon the functional description of Figure 1 of the application as providing structural detail. It held that no such detail was found in Figure 1. Instead, the Court found, the Board should have addressed either Figure 6 or Figure 7's structure. The Court further made a similar analysis of remaining claims of the application and found likewise.

Indefiniteness: The Court also looked at the Board's finding that a claim of the application "fails to particularly point out and distinctly claim the subject matter which the applicant regards as his invention." The Court agreed with the Board, holding that the claim's plain meaning does not distinctly claim an invention.

Outcome: The Court affirmed the indefiniteness rejections and vacated the obviousness rejections.

In re Cederblad et al., 4 Fed. Appx. 914 (Fed. Cir. Feb. 2001).

Before Clevenger, Schall and Bryson. Opinion by Bryson.

Subject Matter: plastic netting having unidirectional elasticity

Proceedings Below: The PTO Board of Patent Appeals sustained the anticipation rejection.

Issue: whether the claims, as properly construed, were anticipated by prior art

Inherent Advantages of Patentee's Process: The Court rejected arguments that the process is inherently novel, based on the fact that all of the claims in the application were product claims, not process or product-by-process claims. The Court further stated that, even if the claims were construed as process claims, the process would still be anticipated.

Claim Limitations: The court found no limitations in the application that narrowed the scope of the claims such that they overcome anticipation. The Court found that the term “may,” found in the specification, “does not exclude other types of processes.” The Court further found that the remainder of the written description was broad, and did not contain limitations.¹¹⁴

Outcome: The Court found that the evidence supported the Board’s finding of anticipation.

In re GenSci Orthobiologics, Inc., 10 Fed. Appx. 808 (Fed. Cir. May 2001).

Before Mayer, Schall and Gajarsa. Opinion by Gajarsa.

Subject Matter: demineralized bone products

Proceedings Below: In a proceeding for patent infringement, defendant responded to the patentee’s first set of requests for admission. Two studies were thereafter published that indicated the responses were incorrect. The defendant requested and was denied permission to withdraw the admissions. In response, the defendant petitioned the Federal Circuit for a writ of mandamus to direct the district court (C. D. Cal.) to vacate its order. In the meantime, the district court granted patentee summary judgment that the patent was infringed.

Issue: In its infringement decision, the district court stated that it did not rely upon the defendant’s admissions, pursuant to its claim construction, making them moot. The patentee further claimed that the defendant was “improperly seeking review of the district court’s claim construction by way of its mandamus petition.”

Appropriateness of Reviewing Claim Construction through the Writ: Upon appeal, the Federal Circuit found that the defendant was attempting to seek review of the district court’s claim construction through its writ. The court declined to review the claim construction and summary judgment findings of the district court, finding that the defendant may only appropriately raise the issues on appeal after final judgment.

Outcome: The Federal Circuit refused to review the district court’s claim construction and summary judgment rulings on their merits.

¹¹⁴When comparing the applicant’s claims to the prior art reference, the court notes that, “even though [the prior art invention is] encompassed by a secondary material...[it] still anticipates [applicant’s] claims.” The court found that applicant’s use of the term “consisting essentially of” provided enough room to include the material of the prior art reference.

In re Larsen, 10 Fed. Appx. 890 (Fed. Cir. May 2001).

Before Lourie, Gajarsa and Plager. Opinion by Gajarsa.

Subject Matter: elastic loop used to fasten the hook of a garment hanger to a clothesline

Proceedings Below: The PTO Board of Patent Appeals and Interferences upheld a final rejection of claims of a patent application as indefinite, stating that the preamble failed to recite elements in the body of the claims.

Issue: whether the Board erred when it found that the lack of information in the application preamble indicated that it was unclear what was being claimed

Preamble Limitations: The Federal Circuit found that all elements of the invention were found in the body of the application's claims. However, the court noted that it must "consider the totality of all the limitations of the claim and their interaction with each other to ascertain the inventor's contribution to the art." The Court went on to find that the omission of material from a claim preamble does not render the claim indefinite.

Outcome: Because the claim at issue included all elements, and despite lack of limitation in the preamble, the Court reversed the Board's finding that the claim was indefinite.

In re Modine Manufacturing Co. et al., 18 Fed. App. 857 (Fed. Cir. Aug. 2001).

Before Mayer, Schall and Dyk. Opinion filed per curiam. Concurring-in-part and dissenting-in-part opinion filed by Schall.

Subject Matter: refrigerator condenser

Proceedings Below: The PTO Board of Patent Appeals and Interferences affirmed the final rejection of an application directed to a refrigerator condenser with a hydraulic diameter flow path, and further affirmed the final rejection of reexamination claims, which originated as a continuation-in-part.

Issue: the Board's claim construction in view of lack of descriptive support in the drawings

Ranges Based on Drawings: The Court's primary focus was on whether the patentee's application "defined an infinite number of ranges," and was therefore indefinite under the statute. The patentee claimed that the ranges were defined by the graph used in one of its drawings. However, the Court agreed with the Board, finding that the figure did not "point out and distinctly claim the invention." Although graphic limitations may be read into claims, the court noted that the patentee's graph did not have such limitations.

Outcome: The Court upheld the Board's rejection of the application for indefiniteness and failing to meet the written description requirement.

Insituform Technologies, Inc. v. Cat Contracting, Inc., 10 Fed. Appx. 871, 2001 WL 294164 (Fed. Cir. March 2001)

Before Mayer, Michel and Schall. Opinion by Schall.

Subject Matter: process for repairing damaged pipelines and passageways.

Proceedings Below: In the Southern District of Texas, the court ruled awarded damages for infringement of plaintiff's patent under the doctrine of equivalents (Insituform IV), and further joined a party to the suit as a defendant after the damages trials had concluded (Insituform III). The parties appealed, asking the Court to apply its holdings in Festo to the case.

Issues: On appeal, the Court addressed the application of Festo to existing cases.

Application of New Law: On appeal, the plaintiff argued that the holdings of Festo could not be applied to the Court's earlier decisions. The Court held that Festo was to be given retroactive effect in all open cases. Although the final judgment was binding under *res judicata*, because the final judgment was on appeal to the Court, it would be allowed to review the case in light of Festo. Because Festo "represents an intervening change in controlling authority," the Court held that it could be applied to Insituform. Further, the Court had used the flexible bar approach to prosecution history estoppel in its earlier decisions in the case, but because Festo presented a contrary rule of law, the issues should be reexamined.

Prosecution History Estoppel: The plaintiff asserted that prosecution history estoppel did not apply to the patent because no limitations not already found in the original application were added to the claims of the patent.¹¹⁵ The defendants argued that, during the prosecution of the patent, the plaintiff canceled its original independent claim and replaced it with a new claim that was narrower in scope than the original claim, in response to a §103 rejection. The Court noted that the plaintiff had previously argued before it that the issued claim was limited to the specific method described. Although the plaintiff argued that it did not limit its claims during prosecution, it did not argue that amendments were not made for a substantial reason related to patentability. The Court found that, during prosecution, the original independent claim was replaced with a new independent claim, and therefore Festo dictated that the claims must be compared. Because the claim was narrowed, the plaintiff could not assert any range of equivalents for the limitation.

Outcome: In light of the Court's Festo decision, it vacated the district court's judgment of liability and damages, as the patent was narrowed during prosecution and was not entitled to any equivalents.

¹¹⁵Specifically, the plaintiff contended that the claim limitation "the use of a single cup to create a vacuum" was present in the original patent claims.

K&K Jump Start/Chargers, Inc. v. Schumacher Electric Corp., 13 Fed. Appx. 982, 2001 U.S. App. Lexis 14173 (Fed. Cir. June 2001).

Before Clevenger, Schall, and Bryson. Opinion by Clevenger.

Subject Matter: reusable safety cap for booster cable clamps

Proceedings Below: The district court (W. D. Mo.) entered JMOL of patent invalidity, based on the filing date of an earlier filed Canadian application.

Issue: To determine the filing date of the Canadian application, the Federal Circuit had to determine whether the application “reasonably conveys to one of skill in the art that the inventor possessed the later claimed subject matter of claim 1 of [the patent at issue].”

Entitlement to Earlier Filing Date: To entitle the U.S. patent to the priority date of the Canadian application, the Court found that the specification must contain a written description of the invention and must reasonably convey to one of skill in the art that “the inventor possessed the later-claimed subject matter at the time the parent application was filed.”

Comparison of Patents: In comparing the patent at issue to the Canadian application, the Federal Circuit looked at the figures of each and found them virtually identical. The court further looked at the written descriptions of both and found them similar. In its analysis of the written descriptions, the court noted that the patent “does not cite any dictionary definitions or other evidence, either intrinsic or extrinsic” to demonstrate the meaning of terms.¹¹⁶

Outcome: The court reversed the district court’s finding of noninfringement because there was no basis for finding that the patent at issue was not entitled to the filing date of the Canadian application.

Kimberly-Clark Corp. v. Tyco International (US), Inc., 4 Fed. Appx. 946, 2001 WL 170461 (Fed. Cir. Feb. 2001) (not published)

Before Michel, Lourie, and Bryson. Opinion by Bryson.

Subject matter: diapers with elasticized side pockets

Proceedings Below: Following claim construction (W.D. Wisc.), the parties advised the court that under the court’s construction, Tyco did not infringe. Kimberly-Clark (KC) appeals.

¹¹⁶Also of interest, the court stated, “If, as the district court’s opinion suggests, the alleged disconnect between the [patent at issue] and the Canadian application stemmed from an improperly broad construction of the term “tab” in claim 1 of the [patent at issue], this problem should not be resolved through the written description requirement. Instead, the district court must insure that the claim construction for the [patent at issue] was correct.”
Citations omitted.

Narrowing during prosecution: In a first application, KC's inventor Enloe proposed adding a pair of flaps to or formed from the body liner to collect and contain fecal matter. The first specification said the flaps could be fluid pervious or impervious. Claim 1 did not specify which, but dependent claim 2 specified a fluid permeable flap. Following a rejection over prior art, Enloe abandoned the original application and filed a continuation-in-part (CIP) application.

The CIP specified that the flaps were fluid pervious, to overcome certain problems that Enloe ascribed to the prior art reference that used waterproof material for the flaps. Claim 1 specified "fluid pervious flaps." The patent issued (Enloe I).

Two subsequent KC patents – Enloe II and Enloe III – included in the written description the same language from Enloe I distinguishing over the prior art on the basis of permeability. The allowed claims do not recite the "fluid pervious" limitation. This was deleted by KC in an interference contest, where KC copied claims from a Lawson patent for interference purposes.

Issue: whether the claims of Enloe II and III are limited to fluid pervious flaps, notwithstanding the specification statements.

Disclaimer from specification applied: The Federal Circuit agreed squarely with the district court that the written specifications in Enloe clearly disclaim the fluid impervious flaps. The Court applied several principles:

1. "That language from the specifications provides strong support for the district court's conclusion that the asserted claims of Enloe II and Enloe III must be read as limited to fluid pervious flaps."

2. Statements about the preferred embodiment (that the "preferred material for the flaps ... is a liquid pervious material") do "not justify the conclusion that the asserted claims must be read to cover both fluid pervious and fluid impervious flaps."

3. It is improper to construe the same term in related patents differently.

4. "There is no suggestion in the prosecution history that the deletion of that language had the effect of recapturing fluid impervious flaps."

5. "...the doctrine of claim differentiation cannot in any event alter a definition that is otherwise clear from the claim language, the written description, and the prosecution history." "Whether or not claims differ from each other, one can not interpret a claim to be broader than what is contained in the specification and claims as filed." (Citation omitted).

Overly Broad Definition Rejected: The district court construed "fluid pervious" to mean "pervious without pressure." KC had no definition in the patent, but during prosecution had said that it meant "open to passage or entrance; permeable." Court rejected that definition because, "Such a general definition is not particularly helpful because any material, under sufficient pressure, will become pervious."

“Concocted” Measurement Test Rejected: KC admitted that one member of the diaper has to be pervious without pressure but urged that the flaps could be regarded as “pervious” if they were pervious under certain pressures (up to 6 psi):

In support of its theory, Kimberly-Clark offers a "normal use" pressure measurement test that is not disclosed in the specification or the prosecution history, is not used in the industry, and, according to the district court, was "concocted solely for purposes of this litigation."

Citing the public notice requirement, the Federal Circuit squarely rejected KC’s proposed test:

Enloe did not give notice that "fluid pervious" may mean something entirely different when used in reference to the inner flaps, and he even suggested that the inner flaps can be made from exactly the same material as the fluid pervious bodyside liner, which strongly suggests that the term "fluid pervious" was being used in the same way for both structures.

The public notice function of patents is defeated if a patentee can subsequently and substantially alter the meaning of his claims by a post-hoc, litigation-driven "definition" unsupported by the specification. *** Because the Enloe patents do not distinguish between the bodyside liner and the flaps with respect to the feature of fluid perviousness, and because the bodyside liner is considered fluid pervious if it is fluid pervious without pressure, the inner flaps must be considered fluid pervious under the same conditions.

Outcome: The district court judgment of non-infringement was affirmed.

Kollmorgen Corp. v. Yaskawa Electric Corp., 2001 U.S. App. LEXIS 24496, 21 Fed. Appx. 893 (Fed. Cir. Oct. 2001) (not published)

Before Michel, Rader & Gajarsa. Opinion by Rader.

Subject matter: not stated

Proceedings Below: The district court (W.D. Va.) certified an interlocutory order stating that collateral estoppel did not apply when a patentee who settled an earlier infringement case after a *Markman* ruling sought to relitigate claim construction issues determined in the prior case. The district court concluded that collateral estoppel did not apply because a consensual settlement agreement between parties did not constitute a “final judgment.”

Issue: Whether the defendant could appeal the district court interlocutory order stating that collateral estoppel did not apply.

Interlocutory appeal: In its certification of its order for an interlocutory appeal, the district court determined that the order involved a controlling question of law, that there was substantial ground for difference of opinion on the question, and that the immediate determination of the question by the Federal Circuit would “materially advance the ultimate termination of [the] action.” The Court agreed with these findings.

Outcome: Petitioner was granted permission to appeal the order.

Kudlacek v. DBC, Inc., 25 Fed. Appx. 837, 2001 WL 1646654 (Fed. Cir. Dec. 2001) (not published)

Before Clevenger, Gajarsa and Dyk. Opinion by Clevenger.

Subject Matter: archery bow stabilizer

Proceedings Below: The District Court (N. D. Iowa) granted summary judgment of non-infringement. The district court extensively discussed its claim construction¹¹⁷ and its denial of summary judgment of invalidity.

Issues: The Federal Circuit looked at the district court’s claim construction, as well as issues of claim differentiation and non-infringement.

Claim Construction: The plaintiff challenged the district court claim construction of only the limitation “resilient securing means.” The Court noted that the district court looked to the written description of the patent, which contained only one reference to a structure corresponding to that which was claimed. Because the specification identified a screw and a pad as components of the “resilient securing means,” and describes the specific structure that performs the claimed function as requiring the pad and screws working as a unit, “...any alternative structures using a disembodied pad that would give broader scope to the resilient securing means limitation” were not disclosed.

Claim Differentiation Not Applied: In addition, the plaintiff raised a claim differentiation argument. In its decision, the court addressed the doctrine of claim differentiation as the presumption that different claims have a different scope, and noted that claim differentiation “only guides the court’s interpretation of the claims, it does not command.” In its holding, the Court found that claim differentiation would not apply where the only structure corresponding to the means claimed in an

¹¹⁷The court construed the “resilient securing means” limitation of a claim, then identified the claimed function to be “‘resiliently engaging and securing’ the adjustment member to the stabilizer rods....” The court further identified the structure in the written description that corresponds to the “resilient securing means.” This structure corresponds to “both the set screws and resilient pads,” including the assemblies.

independent claim is disclosed in a dependent claim. Further, the Court held that the claims of the patent at issue differed in several limitations, negating the doctrine of claim differentiation.

Excessive Limitations: Kudlacek further argued that the district court erroneously imported limitations into the claims beyond those limitations necessary to construe “resilient securing means.” The Federal Circuit said that any error was harmless. The Court stated that correctly construed, the claim language¹¹⁸ imposes a similar limitation to that of the specification, rendering any error harmless.

Other Issues: The Federal Circuit further affirmed the lower court’s holding regarding infringement. In light of its construction of the claims, the Court held, no reasonable jury could find infringement.

Outcome: The Court affirmed in whole the district court’s summary judgment of non-infringement.

KX Industries, L.P. et al. v. Water Purification Products, Inc., et al., 18 Fed. Appx. 871, 2001 U.S. App. LEXIS 18155 (Fed. Cir. August 2001) (not published)

Before Rader, Gajarsa, and Linn. Opinion by Linn.

Subject Matter: preparation of composite materials used in water filtration, *e.g.*, carbon block filters

Proceedings Below: The district court (D. Del.) entered summary judgment of non-infringement of claim 94. In finding that PUR did not infringe claim 94, the district court applied the doctrine of disclaimer to determine that for a compression molding process, the heating limitation is limited to “no pressure being applied.” Similarly relying on the doctrine of disclaimer, the district court determined that the pressure applied must be greater than 400 psi. Because PUR did not perform either of these steps in its compression molding process, the district court held that its process did not literally infringe, and the disclaimers prevented a finding of infringement under the doctrine of equivalents.

Issues: In dispute were the district court’s construction of (1) the heating limitation in the claimed phrase “heating said substantially uniform mixture, in the absence of pressure or shear sufficient to convert the binder particles ...”; and (2) the amount of pressure applied in the claimed phrase “thereafter applying pressure and shear to the heated mixture to substantially immediately convert at least a portion of the binder material particles into a substantially continuous webbing structure ...”

Claim Construction: The Federal Circuit first addressed the district court’s finding that the amount of pressure was expressly limited by the inventor. In the specification, the inventor distinguished his invention from the prior art reference Degen by noting that a minimum of 400 psi is necessary to

¹¹⁸The language of in the claims contain “a structural limitation on the position and orientation of the resilient securing position and orientation of the resilient securing means, *i.e.*, the screw and the pad.” The Court used a dictionary to construe the claim language in order to compare it to the specification.

activate the binder resins, and such activation is a necessary step in obtaining the novel cwm and fpb composite materials with the claimed process. The fact that the inventor mentioned the minimum level needed for activation in the “Background” section of the specification was no less important in determining what the inventor deemed necessary to the claimed process.

The Court declined to address the district court’s construction of the heating limitation since a comparison of PUR’s process to claim 94 was dispositive on the issues of infringement.

Infringement: Because it was undisputed that PUR’s process employed pressures well below 400 psi as required by claim 94 (*i.e.*, 95-140 psi), the Court held that PUR’s process did not literally infringe claim 94. Likewise, because the ’311 patent made clear that without pressures of 400 psi or more, the binder resins are not activated and the novel structures are not obtained, the much lower pressures used by PUR cannot be insubstantially different. Thus, the Court concluded that the PUR process using such pressures could not infringe under the doctrine of equivalents.

Outcome: The Court affirmed the summary judgment of non-infringement.

Maltezos v. AT&T Corp., 6 Fed. Appx. 850 (Fed. Cir. Mar. 2001).

Per Curiam.

Subject Matter: public use telephone that provides multi-lingual instructions

Proceedings Below: The district court (S.D.N.Y.) granted summary judgment to AT&T after finding that the company did not infringe either literally nor under the doctrine of equivalents.

Issue: Whether the district court correctly construed the meaning of the term “digital voice device.”

Interpretation of a Claim: The Federal Circuit first discussed construction of the single claim of the patent at issue. The Court found that the ordinary meaning of the term “digital voice device” required that “...the device provide audible output.” The Court further stated that this finding was supported by the written description.

Outcome: The Court affirmed the judgment, upholding the district court’s construction of the claim and ultimately its finding of non-infringement under the doctrine of equivalents.

Masimo Corp. v. Mallinckrodt, Inc., et al., 2001 U.S. App. LEXIS 18032, 18 Fed. Appx. 852 (Fed. Cir. Aug. 2001) (not published)

Before: Newman, Lourie, and Gajarsa. Opinion by Lourie; dissent-in-part by Gajarsa.

Subject Matter: pulse oximeter

Proceedings Below: Based on its claim construction, the district court (C.D.Cal.) granted Mallinckrodt's motion for summary judgment of noninfringement. It further denied Masimo's motion for preliminary injunction because it failed to establish a genuine issue of material fact that defendant's infringe under the doctrine of equivalents.

Issues: The district court interpreted both "adaptive filter" of claim 16 and "adaptive noise canceler" of claim 28 to mean "only one specific type of adaptive filter, an adaptive noise canceler." Supported by texts incorporated by reference in its patent, plaintiff argued that those skilled in the art understand "adaptive filter" to mean "devices that remove noise by monitoring their own performance and, in response, self-adjust their own parameters through closed loop action to improve their performance." Masimo further argued that the prosecution history demonstrates that it had claimed a generic filter rather than a particular type of filter. Plaintiff finally argued that, even under the district court's claim construction, the defendant's products infringe the Masimo patent under the doctrine of equivalents.

Scope of Review: The district court's grant of summary judgment is reviewed *de novo*. Denial of a preliminary injunction is reviewed for an abuse of discretion by the district court.

Specification Meaning Applied: The Federal Circuit ruled that the "adaptive filter" limitation was properly construed by the District Court. It reasoned that the specification teaches the use of an adaptive noise canceler, without reference to any other filter that performs a similar function. It further noted that the adaptive noise canceler was central to the oximeter; the specification stated that "the present invention is a processor which determines a noise reference signal . . . for use in an adaptive noise canceler."

Incorporation by Reference Meaning: The Court found that the texts incorporated by reference were cited to explain "least squares" and "least squares algorithms." These references were not incorporated in order to disclose alternative types of adaptive filters.

Prosecution History Meaning Applied: The Court found that the prosecution history illustrated that Masimo had used the terms "adaptive filter," "adaptive signal processor," and "adaptive noise canceler," interchangeably. More specifically, it noted that Masimo stated that "the independent claims define that at least one output/filtered signal is provided by an adaptive signal processor or adaptive filter."

Claim Differentiation Applied: The Federal Circuit asserted that the claims of Masimo's patent treated the terms "adaptive filter," "adaptive signal processor," and "adaptive noise canceler," synonymously. More specifically, Claim 16 referred to an "adaptive filter," but not an adaptive

canceler. Claims 18, 19, and 21 depended from claim 16, but referred to “said adaptive canceler.” Therefore, “Masimo drafted the claims such that the term “adaptive filter” provided the antecedent basis for the phrase “said adaptive canceler.”

Outcome. The Court affirmed the judgment below.

Dissent: Judge Gajarsa agreed that the district court properly construed the claims, but “would remand the matter . . . for a factual determination of whether or not the defendant’s products infringe under the doctrine of equivalents.”

Medical Device Techs, Inc. v. C.R. Bard, Inc., 2001 U.S. App. Lexis 5295 (Fed. Cir. March 2001) (not published), rehearing denied, 2001 U.S. App. Lexis 8819.

Before: Clevenger, Schall and Dyk. Opinion by Clevenger.

Subject matter: spacer clip for holding biopsy needle in a fixed position

Proceedings Below: The district court (N.D. Ill.) granted summary judgment of noninfringement.

The Issue: Whether the claim terms (1) support body means, (2) handle receipt means, and (3) handle disengagement means were properly construed by the district court which construed the terms as means-plus-function limitations pursuant to 35 U.S.C. § 112, ¶ 6.

Determining Whether a Limitation Is a Means-plus-function Limitation. In determining whether a claim limitation is a means-plus-function limitation, "use of the word 'means' creates a presumption that § 112, ¶ 6 applies, quoting *Personalized media Communications, L.L.C. v. ITW*, 161 F.3d 696, 703, 48 USPQ2d 1880, 1886 (Fed. Cir. 1998). If "the limitation uses the word 'means' but does not recite a function that corresponds to the means, then §112, para. 6 is not invoked" citing, *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302, 50 USPQ2d 1429, 1434 (Fed. Cir. 1999). If "the limitation does recite a function, if sufficient structure for performing the function is also recited, then § 112, ¶6 does not apply. (citing, *Sage Prods. v. Devon Indus., Inc.* 126 F.3d 1420, 1427-28, 44 USPQ2d 1103, 1109 (Fed. Cir. 1997).

Three Limitations Properly Construed as Means-plus-function Limitations. Handle receipt means and handle disengagement means were properly interpreted as means plus function limitations. While "support body means" did not recite any associated structure, it also did not recite much functional detail. The court found that "support" did itself connote a function and that because the term uses the word "means" and also recites at least some function, it was appropriate to interpret the limitation as a means-plus-function limitation.

Component-by-component Analysis of the Means Structure under §112, ¶6 Is Improper. The district court's analysis of whether the accused device contained identical or equivalent structure to the handle disengaging means structure improperly focused upon only one portion of the handle disengaging

means structure – the resistively flexible spline. The handle disengagement means was construed to include both a spline and webs. The individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations. Rather, the claim limitation is the overall structure corresponding to the claimed function. Further deconstruction or parsing is incorrect, *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267, 51 USPQ2d 1225, 1229 (Fed. Cir. 1999). The district court improperly placed all of the focus on the spline component while a proper analysis should have compared the "spline and webs" to the accused device's "rigid members and webs" to determine if the two structures were identical or equivalent.

Question of Fact Raised by Experts. Equivalence is a question of material fact when specific, detailed evidence by dueling expert witnesses is submitted.

Outcome: Reversed and remanded.

Medtronic v. Boston Scientific Corp., 6 Fed. Appx. 890, 61 USPQ2d 1447 (Fed. Cir. Apr. 2001).

Before Michel, Linn and Dyk. Opinion by Linn.

Subject Matter: intravascular coronary stents

Proceedings Below: The district court (D. Minn.) granted judgment to Boston Scientific, finding non-infringement.

Issue: In the district court proceedings, construction of the pertinent claim limitations was determined by incorporating, at the parties' request, its claim construction from a related case, and granted non-infringement, also at the parties' request. Medtronic appealed the claim construction.

Claim Construction from Related Cases: The Federal Circuit noted that, in the appeal of the related case, it upheld the district court's claim construction. As the parties stipulated that the construction is dispositive, the court affirmed the district court's judgment.

Outcome: The court affirmed the district court's judgment of non-infringement.

Mollhagen v. Witte et al., 2001 U.S. App. LEXIS 17142, 18 Fed. Appx. 846 (Fed. Cir. July 2001) (not published)

Before Mayer, Lourie, and Rader. Opinion by Lourie.

Subject Matter: a portable squeeze chute apparatus for restraining livestock

Proceedings Below: The district court (D. Neb.) construed the claims and granted summary judgment of non-infringement.

Claim:

30. *** (c) exit gate means associated with said exit end, said exit gate means including fore-and-aft immobilizing means for selectively immobilizing fore- and -aft movement of the animal relative to the apparatus;

Specification:

The fore-and-aft immobilizing means generally include an exit gate having a neck clamp which is adapted to selectively abut opposing sides of the neck of the animal as it is positioned in the chute. . . . The neck clamp generally includes two opposing neck clamp or exit gate side portions, each of which is connected to the superstructure such that each of the exit gate side portions pivots about a respective, generally vertical axis which is spaced intermediately between the exit end and the entrance end.

Issues:

1. Is “exit gate means” a means plus function limitation?
2. Does “immobilizing means” relate solely to the neck clamp in the specification or also the pivoting structure of the neck clamp?
3. Does the doctrine of claim differentiation make the claim broader than the structure disclosed in the specification if there is a dependent claim which claims that structure?

The Plain Language Of The Claim Defines It: Patentee Mollhagen argued that the exit gate means is not a means plus function claim because it recites sufficient structure, allowing it to read on any exit gate. However, the Federal Circuit held that since the claim states “said exit gate means *including* fore-and-aft immobilizing means” (emphasis added), the exit gate means is construed to include the immobilizing means.

To Interpret According to §112, ¶6, Must Examine Specification for a Disclosure of the Structure: In construing the immobilizing means the Court found that the specification discloses a “neck clamp structure with two exit gate side portions that pivot about a vertical axis, which is spaced intermediately between the exit end and the entrance end” which corresponds to the immobilizing means. The plaintiff-patentee argued that only the neck clamp corresponds to the immobilizing means, the rest not being solely a preferred embodiment. The Federal Circuit rejected this reasoning because the specification “clearly links” the entire structure to the immobilizing means.

Claim Differentiation Does Not Override Requirements of §112, ¶6: The plaintiff’s claim 34 read the same as claim 30 except for including the structure of the immobilizing means disclosed in the specification. The plaintiff argued that under the doctrine of claim differentiation that claim 30 should be interpreted as being broader than claim 34. The Federal Circuit disagreed, noting that claim differentiation is not a hard and fast rule and cannot be used to expand claims beyond their correct

scope. Moreover, a patentee cannot overcome the requirements of §112, ¶6 simply by adding a dependent claim.

Outcome: The district court's claim construction was found to be correct, and the summary judgment of non-infringement was affirmed.

Newell Window Furnishings, Inc. v. Springs Window Fashion Division, Inc., 15 Fed. App. 836 (Fed. Cir. July 2001).

Before Michel, Schall, and Gajarsa. Opinion by Schall.¹¹⁹

Subject Matter: cellular window shades

Proceedings Below: In the Northern District of Illinois, a magistrate judge found patents infringed but unenforceable due to inequitable conduct and invalid due to anticipation and obviousness.

Issue: On appeal, Newell argued that the district court's invalidity finding was improper due to its construction of the term "cellular pleated shade member." The district court construed the phrase to mean "a sample of cellular pleated fabric that contains three or more cells, with at least one of those cells exhibiting the physical characteristics described in the claims."

Construction of the Claim: Noting that anticipation and obviousness determinations depend on claim construction, the court found that the plain language of Claim 1 of each patent supported the district court's construction.

Claim Differentiation: The Court further noted that the remaining independent claims of each patent "describe a complete shade assembly that covers a window." The Federal Circuit held that the doctrine of claim differentiation requires a presumption of "...a difference in meaning and scope when different words or phrases are used in separate claims." The court further found that Claim 1 of each patent did not require the explicit requirement of a complete shade, but that the remaining independent claims of both patents did. The court held that the doctrine of claim differentiation supported the district court's construction of the claims.

Outcome: The Federal Circuit affirmed the district court's claim construction, and therefore affirmed its finding of invalidity.¹²⁰

¹¹⁹An unrelated concurrence was filed by Judge Gajarsa.

¹²⁰The district court's finding of invalidity, however, was vacated as moot because the court reversed the district court's judgment of inequitable conduct.

Optimal Recreation Solutions, LLP v. Leading Edge Technologies, Inc., 6 Fed. Appx. 873, 2001 WL 338152 (Fed. Cir. Apr. 2001)

Before Schall, Gajarsa and Linn. Opinion by Linn. Dissent by Gajarsa.

Subject Matter: global positioning system used to compute distances on a golf course

Proceedings Below: The district court (D. Ariz.) construed the disputed claim limitations and sanctioned the plaintiff for discovery abuses by precluding the plaintiff from presenting evidence of doctrine of equivalents infringement. After the court entered judgment of no literal infringement, the parties stipulated to the entry of final judgment to position the case for review.

Issues: Claim construction and the preclusion of evidence under the doctrine of equivalents as a sanction were both addressed by the Federal Circuit.

Claim Construction: Looking at the intrinsic evidence, the Court construed the claims at issue. In particular, the Court reviewed the terms “position” and “location” and found that they were used in the claims in their ordinary sense. The Court then looked to the specification to determine any special meaning for the words, and found none.

No 112-6 Claim Element: In addition, the Federal Circuit addressed the “means” limitations of the claims. It noted that the word “means” combined with a function in the claim element raises a presumption that an element is a means-plus-function element, unless the claim itself recites sufficient structure to perform the function. The Court determined that the claim limitations were not means-plus-function limitations. As part of its analysis, the Court looked at whether the term has a meaning understood by those in the art. As such, it determined that the ordinary meaning of the terms of the patent claims, to one of ordinary skill in the art, was clear and unambiguous, and capable of literal infringement.

Doctrine of Equivalents: The Court further addressed whether the lower court’s sanction of the plaintiff by precluding evidence on the doctrine of equivalents was proper. It held that a party’s discovery violation may be sanctioned as a judge sees fit “because the district court judge is best equipped to assess the circumstances of the non-compliance.” Because the plaintiff did not update interrogatories, and failed to comply with the Federal Rules of Civil Procedure, the court’s sanction was found proper.

Dissent: In his dissent, Judge Gajarsa disagreed with the majority’s finding that the claim limitations “memory means” and “display means” were not means plus function limitations. The dissent states that there was no specific, definite structure that corresponded with the terms, but that the terms instead simply described functions. Judge Gajarsa stated that the presumption that a “means” term falls within §112, ¶6 was not overcome, and thereby dissented in part.

Outcome: The Federal Circuit affirmed the ruling precluding Optimal from presenting evidence of equivalency, but indicated that the district court’s error in claim construction required remand for determination of whether there is literal infringement.

Pandrol USA, LP et al. v. Airboss Railway Prods., Inc. et al., 2001 U.S. App. Lexis 5293, 10 Fed. Appx. 837 (Fed. Cir. March 2001)(not published).

Before: Clevenger, Smith and Dyk. Opinion by Clevenger.

Subject matter: railroad track rail fasteners

Proceedings Below: The district court (W.D. Mo.) granted summary judgment of non-infringement.

Issue: Whether the '898 patent term "complementary" requires both the locking element and the clip holder to have faces in the shape of a U with curved corners.

Use of Term in Claim Must Be Given Due Significance. Patentee asserted that "complementary" simply means a shape that accomplishes the function specified in the claim and that infringement should turn on whether the accused locking element provides a lateral force that reduces rail creep. The Court found that such a construction was too broad since any conceivable shape would suffice so long as a "wedging action" was produced. The patentee chose to use the term "complementary" in the claim and, at the very least, the term indicates that the inside face of the locking element should bear some resemblance to the outside face of the clip holder. The '898 patent specification indicates that a complementary locking element would have at least a shape that is rounded to fit the clip holder.

Issue: Whether the '046 patent claim terms "wider than said rail" applied to the entire length of the rail or only a specific portion of the rail.

Element as a Whole and Related Prosecution History Must Be Considered: Prosecution history establishes that the "wider than said rail" language was added as a part of a broader limitation requiring "being wider than said rail and extending beyond the flange of said rail" which was added to distinguish over the prior art. As a part of the argument in support of the amendment, the applicant stated that one "of the reasons for the shoulder cut out is to enable the abrasion plate to extend well beyond the edges of the rail flange." This statement applied to only the corner portions of the plate and not along the rail's entire length.

Issue: Whether the '046 patent term "adhering" was properly interpreted by the district court to mean "bonding" using a layer of adhesive, such as a glue or epoxy, which bonds the plate to the tie.

Claim Interpretation in Direct Conflict with the Plain Language of a Neighboring Claim. The district court ignored the claim 3 requirement that the adhering material "is a closed cell foam pad." A claim term "cannot be given a different meaning in the various claims of the same patent." *Georgia-Pacific Corp. v. U.S. Gypsum Co.*, 195 F.3d 1322, 1331, 52 USPQ2d 1590, 1598 (Fed. Cir. 1999).

A Claim Interpretation That Excludes a Preferred Embodiment Is Disfavored. One of the preferred embodiments called for the "adhering material" to be HDPE foam. A construction that would cause a preferred embodiment to fall outside of the scope of the patent claim is strongly disfavored. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583-84, 39 USPQ2d 1573, 1578 (Fed. Cir. 1996). An inventor would not likely define the invention in a way that excludes the preferred embodiment, or that persons of skill in this field would read the specification in such a way. *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1581, 38 USPQ2d 1126, 1130 (Fed. Cir. 1996).

Dictionary and Specification Dictate That "Adhere" Is Not Limited to Bonding. The dictionary definition of adhere indicates that bonding is not the only way to get two objects to "adhere" to one another. Magnets, solder, and Velcro strips are each used to adhere two objects together but accomplish this in altogether different ways. Further, the specification notes that both epoxy resin adhesives and an HDPE close cell foam may be used. Further, the Examiner during prosecution used the word "adhere" to include a plate fastened down by nails or spikes.

Outcome: Affirmed in part, vacated in part, and remanded.

Polymer Indus. Prods. Co. et al. v. Bridgestone/Firestone, Inc., 2001 U.S. App. Lexis 3819, 10 Fed. Appx. 812 (Fed. Cir. March 2001)(not published), rehearing *en banc* denied 2001 U.S. App. LEXIS 8841 (Fed. Cir. Apr. 2001), *cert. denied*, 122 S.Ct. 344 (2001).

Before: Clevenger, Schall and Bryson. Opinion by Clevenger.

Subject matter: a ply turn-over bladder used in the manufacture of tires

Proceedings Below: The district court (N. D. Ohio) entered judgment following a jury finding of infringement.

Issue: Whether the court erred in refusing to construe claim 1 to include an abrading limitation.

Scope of Protection Defined by Claims, Not by Embodiments in the Written Description. Claim 1 makes no mention of abrading. While abrading is a clear limitation in process claim 5, there is no textual support in product claim 1 for an abrading limitation. The accused infringer's attempt to compare its products with an intermediate embodiment is unavailing since it is the claim language which governs infringement. Where the patent specification at least alludes to a way of producing the claimed invention without abrading – albeit admittedly in a context in which elastic cords, as opposed to inelastic cords, are used, there is at least support for the general concept of nonabraded bladders. While the prosecution history includes statements by the inventor that it was necessary to take abrasive action against the surface, it was unclear whether these statements applied to product claim 1 or process claim 5.

To comply with § 112, ¶ 2, all that is necessary is that the claims reasonably apprise those skilled in the art both of the utilization and scope of the invention. If the language is as precise as the subject matter permits, that is sufficient.

Outcome: affirmed.

Research Corp. Technologies, Inc. et al. v. Gensia Laboratories, Inc., et al., 2001 U.S. App. LEXIS 4444, 10 Fed. Appx. 856 (Fed. Cir. Mar. 2001) (not published)

Before: Lourie, Radar, and Gajarsa. Opinion by Lourie.

Subject Matter: cancer medication

Proceedings Below: After construing the claims, the district court (D. N.J.) invalidated plaintiff's claims for obviousness-type double patenting.

Issues: The district court construed "protected from light" as meaning "maintained in the absence of light from preparation until use." It further interpreted "suitable for therapeutic administration by injection in solution therefor" as meaning "a tumor reducing platinum complex that is capable of being placed into solution or other nonharmful media for parenteral administration." The court finally interpreted "stabilizing effective amount of a saline or buffer solution" as meaning "that the solution contains sufficient chloride or other ions so as to effect some stabilization of the platinum complex against hydrolysis in aqueous solutions."

Plaintiff argued that the relevant field of art was "oncological pharmaceuticals," not cancer research. It further contended that, in the art, "protected from light" means that the composition must be protected from harmful light, not all light. It finally asserted that "suitable for therapeutic administration by injection in solution therefor" language requires a solution free from harmful impurities that retains its therapeutic properties even after storage.

Scope of Review: The district court's claim construction is a legal question reviewed *de novo*. Moreover, "the factual underpinnings of the district court's double patenting conclusions [are reviewed] for clear error and its ultimate legal question *de novo*."

No Expert Evidence to Decide Relevant Field of Art. Plaintiff argued that the relevant field of art was "oncological pharmaceuticals," not cancer research, and that expert testimony regarding this field should not have been excluded when determining claim construction. Nevertheless, the Federal Circuit ruled that the disputed terms should be construed *without* any reference to extrinsic evidence. It reasoned that this evidence is not necessary to assist in the interpretation of the claim language.

Specification Meaning Regarding "Protected from Light" Applied. The Federal Circuit found that the specification that the platinum complex be stored in the dark until testing. It further noted that no other reference was made to protecting it from the light. Therefore, the district court correctly construed "protected from light" as meaning "maintained in the absence of light from preparation until

use.” Nevertheless, the Court ruled that “protected from light” was not a structural or otherwise meaningful claim limitation. More specifically, this limitation merely distinguished on how the claimed composition should be treated. Accordingly, the Court construed the expression as nonlimiting.

Meaning of “Suitable for Therapeutic Administration by Injection in Solution Therefor”. The Federal Circuit did not evaluate the claim construction for “Suitable for Therapeutic Administration by Injection in Solution Therefor.” Under double patenting, “such a limitation would have been an obvious modification over the prior method claims.”

Outcome: affirmed.

Semitoool v. Novellus Systems, Inc., 12 Fed. Appx 918, 2001 WL 638452 (Fed. Cir. June 2001) (not published), *cert. granted*, vacated and remanded, 122 S.Ct. 2323, 153 L.Ed.2d 152, 2002 U.S. LEXIS 4028 (2002).

Before: Michel, Lourie, Rader. Opinion by Lourie.

Subject matter: semiconductor wafer processing equipment

Proceedings below: The district court (N.D.Cal.) granted summary judgment of non-infringement.

Issues: proper construction of phrases in claims, including whether one element falls within ambit of 35 USC 112-6.

Use intrinsic evidence first for claim construction: “In interpreting claims, a court ‘should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification, and, if in evidence, the prosecution history.’ *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 39 USPQ2d 1573, 1577 (Fed.Cir.1996). When the meaning of a term used in a claim is sufficiently clear from its definition in the patent specification, that meaning shall apply. *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed.Cir.1998); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388, 21 USPQ2d 1383, 1387 (Fed.Cir.1992). Furthermore, ‘[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.’ *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (Fed.Cir.1995) (citations omitted).”

“Substantially enclosed” limitation: Claim 1 was properly construed to require a seal created by the head and bowl sufficient to permit gas processing a wafer using the gas phase of a processing fluid.¹²¹

¹²¹ Claim 1 of the '310 patent was found to be representative and provides:
“1. A wafer processing apparatus, comprising:

a stationary frame;

at least one processing base and a *complementary processing head* mounted to the frame, the processing

Plain Language Failed: In this case, the Federal Circuit found the plain meaning not to be helpful in construing “substantially enclosed.” However, the prosecution history is helpful. Distinguishing a reference, the applicant stated, “The Aigo reference has no ability to enclose the wafer *and cannot process effectively using gases.*” [emphasis by Court]. Semitool thus “expressly disclaimed” coverage of any wafer processor which cannot effectively use the gas phase of a chemical.

The Surrender of Coverage Applies Also to CIP Patent: The second patent in suit is a CIP of the first one and it too uses the “substantially enclosed” limitation. The Federal Circuit reached the same conclusion on the same phrase, citing caselaw that, “‘When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.’ *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980, 52 USPQ2d 1109, 1114 (Fed.Cir.1999) (citing *Jonsson v. The Stanley Works*, 903 F.2d 812, 817-18, 14 USPQ2d 1863, 1863-69 (Fed.Cir.1990)). Thus, Semitool’s relinquishment of subject matter during prosecution of the ’310 patent applies with equal force to the ’708 patent.”

§112, ¶ 6 Inapplicable; No Rebuttal: It was [harmless] error to hold that the phrase, “wafer support for detachably supporting wafers thereon” in the ’708 patent was a means-plus-function limitation under 35 U.S.C. §112, ¶ 6.

“The failure to use the word ‘means’ creates a presumption that §112, ¶ 6 does not apply, which can be rebutted by both intrinsic evidence and any relevant extrinsic evidence. *Personalized Media*, 161 F.3d at 703, 48 USPQ2d at 1886 (citing *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1213, 48 USPQ2d 1010, 1016 (Fed.Cir.1998)). ‘In deciding whether [the] presumption has been rebutted, the focus remains on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of § 112, ¶ 6.’ *Id.* (citing *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427-28, 44 USPQ2d 1103, 1109 (Fed.Cir.1997)).”

Here, because the phrase at issue lacks the word, “means,” it is presumed that §112, ¶ 6 does not apply.

“Support” Is Sufficient Structure; Broadly Construed: None of the intrinsic or extrinsic evidence rebuts this presumption. Citing a dictionary definition, the Federal Circuit found that the term, “support” is a sufficient recitation of structure. That no *particular* structure is stated is not determinative of whether “structure” is supported. [citing *Greenberg v. Ethicon Endo-Surgery*, 91 F.3d 1580, 1583, 39 USPQ2d 1783, 1786 (Fed.Cir.1996) (stating that a claim term “need not call to mind a single well-defined structure” to fall within the ambit of § 112, ¶ 6, and that the relevant inquiry is whether the claim term “has a reasonably well understood meaning in the art”)].

base and complementary processing head being moveable relative to one another between a closed relative position forming a *substantially closed processing space* for containing processing fluids between the processing base and the processing head and an open relative position allowing transfer of wafers to and from the processing head;
means for moving the processing base and complementary processing head relative to one another; and
wafer transfer means on the frame for directing individual wafers between the processing head and one or more wafer carriers.” [emphasis by the Court]

The Court thus construed the "wafer support" limitation broadly "to mean any device capable of both holding or grasping a semiconductor wafer and releasing it at some later time."

No Equivalents Permitted: Due to adding the "substantially enclosed" limitation for a reason related to patentability, the file history bars Semitool from urging that the claim element applies beyond a head and bowl arrangement. In the second patent, Semitool is similarly barred from arguing that air flow cannot satisfy the limitation.

Outcome: The summary judgment of non-infringement was affirmed (on basis of the "substantially enclosed limitation.") It was not necessary to reach the "complementary processing head" and "wafer support" features in order to sustain the summary judgment of no infringement.

Senior Technologies, Inc. v. R.F. Technologies, Inc., 2001 U.S. App. LEXIS 4179 (Fed.Cir. March 2001) (not published), rehearing denied 2001 U.S. App. LEXIS 7549, vacated and remanded, 122 S.Ct. 2323, 153 L.Ed.2d 151, 2002 U.S. LEXIS 4026 (2002).

Before Clevenger, Smith & Bryson.¹²² Opinion by Bryson.

Subject matter: "wanderer" monitoring security system

Proceedings Below: The district court (D. Neb.) in a bench trial found non-infringement in favor of R.F. Technologies. The district court further found that Senior Technologies' patent claims were definite and valid.

Issue: Whether the lower court was correct in its claim construction, as well as its finding of non-infringement. The Court also looked at whether the district court committed reversible error in its treatment of remaining issues.

Scope of Review: The Court reviewed the lower court's claim construction de novo. The infringement issue was reviewed by the Court for clear error.

Claim Construction of "Receiving Circuit": Senior Technologies argued that the district court should not have excluded the microprocessor of the accused product from being compared to the "receiving circuit" of the patented product. The Court stated that this argument was not, per se, arguing claim construction, meaning that the construction of "receiving circuit" was not in dispute.

Comparison of Patent and Accused Product: The Court found that the lower court committed clear error when it failed to include the microprocessor of the accused product in its comparison to the patented product. Although the Court found that the presence of a microprocessor in the accused product was non-infringing, it held that it must determine whether the lower court's conclusion of non-infringement can be affirmed on alternative grounds, as well.

¹²² Judge Smith heard oral argument, but, due to illness, did not participate in the case's disposition.

Claim Construction of a “Single Housing Within Which Lies the Receiving Circuit”: Based on the prosecution history, the Court found that “the receiving circuit” must be located “in the sensing module.” It noted that, had claim 6 been left unamended, the claim language contained no such requirement. However, the claim was specifically amended to combine two elements into one, indicating that the claim was limited to a device in which a receiving circuit is within a sensing module, and the lower court’s construction was correct.

Comparison of Patent and Accused Product: The Court found that two of three accused products could not contain one, unitary receiving circuit in a sensing module, and therefore did not infringe literally. One of the accused products, however, could arguably meet the single housing requirement, contrary to the lower court’s assertions. It noted that none of the accused products infringed under the doctrine of equivalents, but that the one product that could meet the single housing requirement had to be further scrutinized to determine if it infringed the patent at issue.

Construction and Comparison of “Associated Sensing Means”: The Court addressed one limitation that was not clearly looked at by the district court--“associated sensing means.” By using the doctrine of claim differentiation, and by looking at the intrinsic evidence, the Court held that the remaining product did not infringe the patent at issue either literally or under the doctrine of equivalents, although the “associated sensing means” of the patent’s claim 1 had to be contained within the same housing as the receiving circuit.

The Court’s final inquiry involved whether the remaining accused product infringed the patent at issue under claim 6. The Court differentiated claim 6 from claim 1 by looking at the plain language of the claims. It noted that the specification contained some inconsistencies, but that the claims should be read as different so as to preserve the patent’s validity.

Noting that the lower court erred in its construction of claim 1, the Court concluded that it was harmless error, and affirmed the district court’s conclusion of non-infringement.

Remaining Claims: Finally, the Court found that the patent at issue was definite and valid and that there was no evidence of inequitable conduct that indicated the district court abused its discretion. The Court also found that attorneys’ fees were not justified.

Outcome: The lower court’s judgment was affirmed. R.F. Technologies’ devices did not infringe, but the patent was not invalid and inequitable conduct was not established.

Somfy, S.A. v. Springs Window Fashions Division, Inc., 6 Fed. Appx. 895, 2001 U.S. LEXIS 8482 (Fed. Cir. April 2001) (not published)

Before Mayer, Bryson, and Dyk. Opinion *per curiam*.

Subject matter: device for evenly winding the suspension cord of window blinds

Proceedings Below: The district court (N.D. Ill.) granted summary judgment of non-infringement.

Issue: Somfy's patent contained a "means-plus-function" claim that the district court found the defendants did not infringe. The district court held that the "function of [the] limitation of the invention is to move the cord by blocking ("shouldering") the cord, moving successive cord windings axially away from the shoulder and preventing it from winding beyond the auxiliary drum."

Scope of Review: The Court reviewed the district court's grant of summary judgment, as well as its claim construction, de novo. Both literal infringement of the claim, as well as infringement under the doctrine of equivalents, are questions of fact.

Construction of means-plus-function claim: If the word "means" appears with a function in a claim, it is presumed to be a means-plus-function element under §112, ¶6, but that this presumption is overcome if "the claim itself recites sufficient structure or material for performing the claimed function." Both parties conceded that the district court correctly held "shoulder means" to be a §112, ¶6 limitation in the patent at issue. Construction of a means-plus-function limitation, the Court held, includes (1) identifying the claimed function and (2) determining the corresponding structure or act in the specification.

The Court upheld the district court's determination that the "shoulder means" limitation was described as in contact with the drum, and found the extrinsic and intrinsic evidence to support this finding.

Infringement of a means-plus-function claim: In addressing literal infringement under §112, ¶6, the Court held that it must be determined whether the accused device performs an identical function to the one recited in the claim, and, if so, whether the device uses the same materials, acts or structure found in the specification or their equivalents. The Court found the devices to be structurally dissimilar but, after drawing all inferences in the movant's favor, ruled that a reasonable juror could conclude they function in the same way.

Outcome: The Federal Circuit upheld the district court's finding that the claim limitation was to be analyzed under §112, ¶6, but reversed the summary judgment and remanded.

Tapco International Corp. v. Van Mark Products Corp., 18 Fed. Appx. 865, 2001 U.S. App. LEXIS 18330 (Fed. Cir. Aug. 2001).

Before: Schall, Archer, and Bryson. Opinion by Archer.

Subject Matter: sheet metal bending brakes

Proceedings Below: Plaintiff filed suit against defendant claiming that defendant's industrial portable bending brake infringed their '053 and '055 patents. The district court accepted plaintiff's

claim construction. The court then rejected the defendant's motion for summary judgment of invalidity of the '053 patent and found that claim 61 of that patent was infringed by defendant's brake. The court entered judgment in plaintiff's favor and permanently enjoined any further infringement of plaintiff's patents. Defendant now appeals that the district court misconstrued claim 3 of the '055 patent and that under a proper construction defendant's brake does not infringe. In addition, defendant appeals that the '053 patent is invalid for obviousness in view of the cited prior art.

Technical background: Sheet metal is used in a variety of industries to make a wide assortment of products. In the manufacture of sheet metal products, such as exterior trim elements for buildings, the sheet metal must be bent into desired shapes. The patents at issue are directed to portable bending brakes, which are manually operated devices that clamp the sheet metal so that it may be bent. The '053 patent relates to such a portable bending brake that includes an attached track for guiding a roller cutter which allows long pieces of sheet metal to be easily and accurately cut. The '055 patent is directed to a portable bending brake that includes a leg stand to stabilize the brake to prevent it from tipping over when bending heavy gauge sheet metal.

Claim construction issue: The claim construction issues before the Federal Circuit concerned the meaning of claim 3 of the '055 patent.¹²³ In particular, the Court had to construe the meaning of the clauses, "said legs having portions projecting outwardly from beneath the sheet bending brake" and "legs which project outwardly from said bending brake." Defendant, appellant argued that the claim should be construed to mean that portions of the legs must extend beyond the back edge of the bending brake while plaintiff, appellee, contended that the claim language does not require such a meaning but instead only requires that the legs project toward the back. The district court accepted plaintiff's construction of the claim. The Court first looked to the intrinsic evidence—the claim language, the written description, and the prosecution history.

Dictionary Consulted: The Court first looked at the words "project," "outwardly," and "from." "Project" is defined as "causing to protrude." Webster's New Collegiate Dictionary 913 (1979). "Outwardly" is defined as either "on the outside, externally" or "toward the outside." *Id.* at 809. "From" is "used as a function word to indicate a starting point." *Id.* at 457. With these definitions, the Court found that the leg portions start beneath the brake and must protrude toward the outside of the back edge of the brake.

¹²³Claim 3 of the '055 patent reads in pertinent part: "3. A portable sheet bending brake comprising * * *
"longitudinally spaced legs extending downwardly from said sheet bending brake elevating said brake
above the floor,

"said legs having portions projecting outwardly [* * 3] from beneath the sheet bending brake toward the
side of the brake opposite to the side from which said handle member and handle means are accessible,

"said sheet bending brake being constructed and arranged such that when a workpiece of increased
thickness is clamped for bending and when a person stands on the floor facing the handle means and the handle
means is grasped and raised in a direction away from the person in order to move the handle means, forces occur
which prevent the handle means from moving sufficiently to produce a predetermined bend and the forces cause the
entire sheet bending brake to tip away from the person about the portions of the legs which project outwardly from
said bending brake and prevent the movement of the bending member relative to the first member and prevent
bending of the workpiece..."

Claim language silent on test: The Court, however, found that the claim language alone, did not assist in determining whether the legs must project beyond the edge of the brake.

Entire claim language consulted: The Court looked to the entire language and determined that the bending brake is constructed and arranged to prevent the bending brake from “tip[ping] away from the person about the portions of the legs which project outwardly from said bending brake...” and that to provide effective stabilization, the legs must extend beyond the brake. The Court noted that both the written description and prosecution history supported this construction.

Written description consulted: The written description discusses only a single embodiment. The described embodiment showed that the legs are attached to the base rail at the rear or back edge of the brake. The Court stated that it is evident that the legs extend beyond the back end of the brake since the vertical portion of the rear legs are positioned on the back edge.

Prosecution history consulted: During prosecution, plaintiff, appellant, distinguished the brake described in a prior art reference as not disclosing or suggesting “...legs that extend outwardly from beneath the sheet bending brake beyond the brake.” The Court found that since the plaintiff asserted this claim construction to obtain allowance of its claim, it could not now seek a broader claim scope, and therefore, held that claim 3 is limited to a portable bending brake where the legs extend beyond the back end of the brake.

Outcome: With this claim construction of claim 3 of the ‘055 patent, the Court found no infringement and reversed the district court. The Court also held that claim 61 of the ‘053 patent was invalid for obviousness in view of cited prior art and reversed the district court’s holding that the claim was not invalid.

Transonic Systems Inc. v. Non-Invasive Medical Technologies Corporation, 10 Fed. Appx. 928, 2001 U.S. App. LEXIS 11993 (Fed. Cir. May 2001) (not published)

Before Lourie, Schall and Linn. Opinion by Schall.

Subject matter: measuring blood flow in hemodialysis shunts

Proceedings Below: The district court (D. Utah) granted a preliminary injunction related to alleged infringement of Transonic’s patent and the alleged infringer appealed.

Issue: Whether the district court’s construction of the claim limitations, “calculating” and “determining” as meaning “to determine by mathematical calculation,” was proper.

Error Not to Include Equations from Specification: The Federal Circuit held that the district court’s construction of the terms “calculating” and “determining” as meaning “to determine by mathematical calculation” was too broad. The patent-in-suit describes the determination of shunt blood flow with reference to specific equations. Moreover, the prosecution history identified the calculation of shunt blood flow via principles taught in the application as one of the primary features of the invention.

Finally, the patentee distinguished a prior art reference by explaining that the “shunt flow, in the present invention, is calculated from a dialysis flow and a concentration curve measurement.” Thus, the Court held that the limitations, “calculating” and “determining” must be construed as requiring the use of at least one of the equations set forth in the specification.

Outcome: The Court vacated the preliminary injunction and remanded the case for further proceedings.

B. Design Patents

Five Star Mfg., Inc. v. Ram Lite Mfg., Inc., 4 Fed. Appx. 922, 2001 WL 120070 (Fed. Cir. Feb 2001) (not published)

Before: Bryson, Dyk, and Plager. Opinion *per curiam*.

Subject matter: lawnmower ramp design

Proceedings below: Following a jury trial, the district court (S.D. Kan.) held the design patent invalid due to functionality.

Issue: whether the patent has any valid scope.

Utilitarian Features Not Protected: “The design of a utilitarian article is deemed to be functional when the appearance of the claimed design is dictated by the use or purpose of the article. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123, 25 USPQ2d 1913, 1917 (Fed.Cir.1993). While the functionality of each of the various elements that comprise the patented design may be relevant, the ultimate question is whether the claimed design, viewed in its entirety, is dictated by the utilitarian purpose of the article. *Id.*; see also *Power Controls Corp. v. Hybrinetics, Inc.*, 806 F.2d 234, 239, 231 USPQ 774, 777-78 (Fed.Cir.1986) (finding that testimony from an inventor as to the functionality of each feature of a patented design is evidence of the functionality of the patented design). Here the evidence is sufficient to support the jury's finding by clear and convincing evidence that the claimed design in its entirety was dictated by a utilitarian purpose. The testimony of both inventors as to the functional aspects of their invention and the testimony of Ramp Lite's president all support the contention that the patented design is merely functional.”

(The Federal Circuit did not find any claim construction for which the design patent would be valid. However, this issue may not have been raised on appeal. The opinion is silent thereon.)

Outcome: The judgment below was affirmed. The design patent is invalid.

Precor Inc. v. Life Fitness, a division of Brunswick Corp., 13 Fed.Appx. 913, 2001 WL 727011 (Fed.Cir. June 2001) (not published), rehearing denied 2001 U.S. App. LEXIS 18769 (Fed. Cir. July 2001).

Before Clevenger, Schall, and Bryson. Opinion by Schall.

Subject matter: design and utility patents for an exercise treadmill

Proceedings below: A jury found that Life Fitness' treadmill infringed Precor's design patent and that claim 37 of a utility patent of Life Fitness was not supported by an earlier application and thus was invalid over prior art. The district court (D. Wash.) denied Life Fitness' motion for JMOL of non-infringement of the design patent, a motion for JMOL on whether claim 37 was supported by the prior

application, and motion for a new trial. The district court entered judgment of infringement in favor of Precor and awarded attorney fees to Precor.

Issue: The main issue was the scope of Precor's design patent.

Must construe design patent claim: "In determining if a design patent is infringed, a court must first construe the design patent's claim."¹²⁴

Claim, per Undisputed Construction, Not Infringed: "Precor does not dispute the district court's claim construction of the '826 design patent, which indicates that there are four claimed ornamental design elements:

- [1] a center support column with *a ribbed front surface*, which column inclines at a shallow angle towards the rear of the machine;
 - [2] an *asymmetrically* shaped center console located atop the center support column;
 - [3] hand rails which attach to the treadmill both (a) *at the front* of the center console atop the center support column; and (b) at approximately the midway point of the runaway frame;
 - [4] a *rectilinear and asymmetrical* hood over the motor.
- (emphasis added). The FlexDeck does not contain any of these claimed ornamental features."

Outcome: Affirmed-in-part, reversed-in-part, vacated, and remanded-in-part. The Federal Circuit reversed the district court's denial of the Life Fitness' motion for JMOL of noninfringement. Though functional aspects of the design were adopted, "the jury's finding of infringement is not supported by substantial evidence because the [accused Life Fitness product] does not contain any of the ornamental features claimed by [Precor's design patent-in-suit]. The Court found substantial evidence in favor of, and thus affirmed, the finding as to the effective filing date of a claim of [Life Fitness' utility patent in suit]. The Court vacated the award of attorney fees to Precor and remanded for reconsideration of that issue.

¹²⁴Next, the fact-finder must determine whether the accused design infringes the patent, first employing the ordinary observer test:

“[I]f, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two design are substantially the same, if the resemblance is such as to deceive such an observer, inducing him to purchase one supposing it to be the other, the first one patented is infringed by the other.”
“*Gorham Mfg. Co. v. White*, 81 U.S. (14 Wall.) 511, 528, 20 L.Ed. 731 (1871). The fact-finder is to determine whether “the patented design as a whole is substantially similar in appearance to the accused design.” *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405, 43 USPQ2d 1641, 1647 (Fed.Cir.1997). “In determining this overall similarity of design, the ordinary observer must be deceived by the features common to the claimed and accused designs that are ornamental, not functional.” *Unidynamics Corp. v. Automatic Prods. Int’l, Ltd.*, 157 F.3d 1311, 1323, 48 USPQ2d 1099, 1107 (Fed.Cir.1998). If the accused device is not substantially similar, the inquiry ends at the ordinary observer test, and the accused device does not infringe. If the accused design is overall visually similar to the patented design, the fact-finder then must conclude, in order to find infringement, that this similarity is based on the patented device's (1) points of novelty that distinguish it from the prior art and (2) ornamental, not functional, features. *Id.* at 1323-24. Infringement of a design patent is a question of fact. *See Shelcore, Inc. v. Durham Indus., Inc.*, 745 F.2d 621, 628-29, 223 USPQ 584, 590 (Fed.Cir.1984).”

Unique Coupons, Inc. v. Northfield Corp., 12 Fed. Appx. 928, 2001 WL 665365 (Fed. Cir. June 2001), reh. and reh. en banc denied, 2001 U. S. App. Lexis 18768

Before Newman, Lourie and Bryson. Opinion by Lourie.

Subject Matter: devices used to insert coupons into packages

Proceedings Below: Following its claim construction of the patents-at-issue, the District Court (N. D. Ill.) denied plaintiff's motion for summary judgment of infringement. Northfield also moved for summary judgment of non-infringement, which the district court (apparently) denied. Following a bench trial, the court found no literal infringement, but held that the defendant's product infringed under the doctrine of equivalents¹²⁵ and awarded damages. The defendant appealed.

Issues: While the Federal Circuit focused on claim construction and infringement, it also commented on standing.

Claim Construction: Citing the abstract, summary of the invention and detailed description of the patents, the Court interpreted the claims of the patent. In particular, the Court found that the claim limitation was reduced to a single, and not just preferred, embodiment. It noted that a limitation must not be read into a claim when interpreting claim language, but stated that it did not cross that line. Because "every statement in the written description" embodied a particular reading of the claims, the court interpreted the coupon sensing position in the claims as being "between the feed rolls and the positioning rolls."

Infringement: In light of its claim construction, the Court found that the accused device did not literally infringe the claims, and did not infringe under the doctrine of equivalents. In light of the fact that no reasonable fact-finder could find either literal or equivalent infringement, the Court found that Northfield's motion for summary judgment of non-infringement should have been granted.

Standing: The Court further addressed whether the plaintiff, as licensee, had standing to bring the action without joining the patentee. Finding no limitation of the assignment between the patentee and plaintiff, the Court held that the licensee did not need to join the patent owner and that jurisdiction existed.

Outcome: Due to the district court's error in claim interpretation, the Federal Circuit reversed the finding of infringement under the doctrine of equivalents.

¹²⁵The court held that the "sequential sensing" limitation of one claim was not present in the accused device. The court further found that the use of a sensor which senses the presence or absence of a coupon, as opposed to the presence and the absence of a coupon was an insubstantial difference. In addition, it found an activation sensor for sensing the presence of a container was equivalent to a "timing signal."

Winbond Electronics Corp. v. International Trade Commission, 4 Fed. Appx. 832, 2001 WL 80412 (Fed. Cir. Jan. 2001)

Before Clevenger, Rader, and Dyk. Opinion by Rader.

Subject Matter: semiconductor chip and method for encoding information onto the device

Proceedings Below: The International Trade Commission initiated an investigation of infringement. The administrative law judge construed the claims of the patent and found the claims invalid for indefiniteness. The judge further found that none of the respondents infringed the claims. Following Commission review of the decision, the patents were found unenforceable for failure to name an inventor. The patentee petitioned for, and was granted, a Certificate of Correction and petitioned for rehearing before the Commission. On rehearing, the administrative judge found the patent unenforceable because the Certificate of Correction named the incorrect inventors and for inequitable conduct. On review to the Commission, the patent was found enforceable and found the claims infringed.

Issues: The Court interpreted the disputed claims of the patent.

Claim Construction: In reviewing the Commission's claim construction, the Court looked first to the intrinsic evidence, including the specification of the patent. The Court further acknowledged that a claim receives its ordinary meaning unless the specification or prosecution history provide a special meaning.

Primary Circuit: Regarding the term "primary circuit," the Court first acknowledged that the term had no special meaning to those of skill in the art. The written description defined the term, and never limited it. The Court further noted that the doctrine of claim differentiation supported the ordinary meaning of the term. However, the Court held, the Commission interpreted the term in a manner other than that provided by the specification. It noted that a single structural element may perform two functions and may also support two different claim terms when reasonable in light of the term language. The Court construed "primary circuit" as not including structures such as the "output buffer."

Adjacent: When construing the term "adjacent," the Court conducted a similar analysis to that made for "primary circuit." Noting that "adjacent" is not a term of art, it held that it should be given its ordinary and accustomed meaning. The Court therefore used a dictionary to determine the scope of the limitation. It further stated that the prosecution history did not contradict the ordinary meaning. "Adjacent" was defined as meaning "close to, next to, or adjoining."

Access Means: "Access means," was also defined by the Court. It held that use of the word "means" in combination with a function raises the presumption that the element is a means-plus-function claim. This presumption may be overcome by proving that the claim itself recites sufficient structure or material for performing the claimed function. Because "access" did not provide structure to "means," "access means" was construed as a means-plus-function element. The Court found corresponding structures for the "access means" because they perform all of the recited functions of the "access means."

Output Means: As a means-plus-function limitation, “output means” was interpreted by the court by looking to the written description to determine its corresponding structure. The Court found that the description clearly indicated that the output buffer and pins correspond to the “output means.”

Infringement: Finally, the Court held that its claim meaning of the elements in dispute justified vacating the Commission’s judgment of non-infringement.

Outcome: The Federal Circuit reversed the Commission’s non-infringement finding and held that, on remand, the Commission must determine whether the accused devices have equivalent or the same structures as the limitations “access means” and “output means” as defined by the Court.