UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS INC.,
Petitioner

v.

BELL NORTHERN RESEARCH, LLC, Patent Owner.

Case IPR2020-00319 Patent 7,039,435

PETITIONER'S REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE



EXHIBITS

Exhibit	Description
1001	U.S. Pat. No. 7,039,435 to McDowell et al. ("the '435 patent")
1002	File History of the '435 patent
1003	Declaration of Matthew C. Valenti, Ph.D.
1004	U.S. Pat. No. 6,095,820 ("Luxon")
1005	PCT Patent Publication WO 2002/05443 ("Irvin")
1006	U.S. Pat. No. 6,018,646 ("Myllymäki")
1007	U.S. Pat. No. 6,845,246 ("Steer")
1008	Joint Claim Construction Chart, Worksheet, and Hearing Statement in Bell
	Northern Research, LLC, v. Huawei Device (Dongguan) Co., Ltd., Huawei
	Device (Shenzhen) Co., Ltd., and Huawei Device USA, Inc. (Case No. 3:18-
	cv-1784) (S.D. Cal., filed 4/19/19)
1009	Defendants' Joint Opening Claim Construction Brief in Bell Northern
	Research, LLC, v. Huawei Device (Dongguan) Co., Ltd., Huawei Device
	(Shenzhen) Co., Ltd., and Huawei Device USA, Inc. (Case No. 3:18-cv-
	1784) (S.D. Cal.)
1010	Plaintiff's Opening Claim Construction Brief in Bell Northern Research,
	LLC, v. Huawei Device (Dongguan) Co., Ltd., Huawei Device (Shenzhen)
	Co., Ltd., and Huawei Device USA, Inc. (Case No. 3:18-cv-1784) (S.D.
1011	Cal.)
1011	Claim Construction Order and Order on Motions for Summary Judgment in
	Bell Northern Research, LLC, v. Huawei Device (Dongguan) Co., Ltd.,
	Huawei Device (Shenzhen) Co., Ltd., and Huawei Device USA, Inc. (Case No. 3:18-cv-1784) (S.D. Cal.)
1012	Joint Claim Construction Chart, Worksheet, and Hearing Statement in <i>Bell</i>
1012	Northern Research, LLC v. LG Electronics Inc., et al. (Case No. 3:18-CV-
	2864 (S.D. Cal.)
1013	Joint Motion for Entry of Prior Claim Construction Order in <i>Bell Northern</i>
1010	Research, LLC v. LG Electronics Inc., et al. (Case No. 3:18-CV-2864 (S.D.
	Cal.)
1014	Order Granting Joint Motion for Entry of Prior Claim Construction Order
	in Bell Northern Research, LLC v. LG Electronics Inc., et al. (Case No.
	3:18-CV-2864 (S.D. Cal.)
1015	Webster's II New College Dictionary (Houghton Mifflin Co, 1999)
1016	Webster's New World College Dictionary (Simon & Schuster, 1997)
1017	Harry Newton, Newton's Telecom Dictionary (Miller Freeman, Inc., 1999)



1010	
1018	Martin H. Weik, <i>Fiber Optics Standard Dictionary</i> (Chapman & Hall, 1997)
1019	U.S. Pat. No. 6,029,074 ("Irvin '074")
1020	U.S. Provisional Patent Application No. 09/612,034 ("Irvin Provisional")
1021	Michael Barr, Programming Embedded Systems in C and C++ (O'Reilly & Associates, 1999)
1022	Rudolf F. Graf, Modern Dictionary of Electronics (Butterworth- Heinemann, 1999)
1023	U.S. Pat. No. 6,456,856 ("Werling")
1024	U.S. Pat. No. 6,498,924 ("Vogel")
1025	Defendants' Motion For Summary Judgment On Indefiniteness in <i>Bell Northern Research, LLC v. LG Electronics Inc., et al.</i> (Case No. 3:18-CV-2864 (S.D. Cal.)
1026	Claim Construction Order and Order on Motion for Summary Judgment of Indefiniteness in <i>Bell Northern Research</i> , <i>LLC</i> , v. <i>LG Electronics Inc. et al.</i> , 3:18-cv-02864 (S.D. Cal. December 20, 2018)
1027	Coolpad Tech., Inc. et al. v. Bell Northern Research, LLC, IPR2019-01319, Paper 19 (PTAB Jan. 29, 2020)
1028	Coolpad Tech., Inc. et al. v. Bell Northern Research, LLC, IPR2019-01320, Paper 18 (PTAB Jan. 29, 2020)
1029	ZTE (USA) Inc. v. Bell Northern Research, LLC, IPR2019-01365, Paper 13 (PTAB Feb. 11, 2020)
1030	Scheduling Order in <i>Bell Northern Research</i> , <i>LLC</i> , v. <i>ZTE Corp. et al.</i> (Case No. 3:18-cv-1786) (S.D. Cal.)
1031	Scheduling Order in <i>Bell Northern Research</i> , <i>LLC</i> , v. <i>Coolpad Technologies</i> , <i>Inc. et al.</i> (Case No. 3:18-cv-1783) (S.D. Cal.)
1032	Transcript of Claim Construction Hearing in <i>Bell Northern Research</i> , <i>LLC</i> , v. Coolpad Technologies, Inc. et al. (Case No. 3:18-cv-1783) (S.D. Cal.)
1033	Order Granting Renewed Motion to Stay Pending <i>Inter Partes</i> Review in <i>Bell Northern Research, LLC, v. Coolpad Technologies, Inc. et al.</i> (Case No. 3:18-cv-1783) (S.D. Cal.)
1034	Order Granting Renewed Motion to Stay Pending <i>Inter Partes</i> Review in <i>Bell Northern Research, LLC, v. ZTE Corp. et al.</i> (Case No. 3:18-cv-1786) (S.D. Cal.)
1035	Transcript of Claim Construction Hearing in <i>Bell Northern Research</i> , <i>LLC</i> , v. <i>LG Electronics Inc. et al.</i> (Case No. 3:18-cv-2864) (S.D. Cal.)
1036	Joint Notice of Proposed Scheduling Order and Notice Regarding <i>Inter Partes</i> Reviews in <i>Bell Northern Research</i> , <i>LLC</i> , v. <i>LG Electronics Inc. et al.</i> (Case No. 3:18-cv-2864) (S.D. Cal.)



1037	Joint Motion to Extend the Case Management Order in <i>Bell Northern</i>
1037	Research, LLC, v. LG Electronics Inc. et al. (Case No. 3:18-cv-2864) (S.D.
	Cal.)
1038	Order on Motion to Stay in Finjan, Inc. v. ESET, LLC et al. (Case No. 3:17-
	cv-00183) (S.D. Cal.)
1039	Order Lifting Stay in Nuvasive, Inc. v. Alphatec Holdings, Inc. (Case No.
	3:18-cv-347) (S.D. Cal.)
1040	Order Granting Motion to Stay and Setting Schedule in Warsaw
	Orthopedic, Inc. et al. v. Nuvasive, Inc. (Case No. 3:12-cv-2738) (S.D.
	Cal.)
1041	Order on Nuvasive's Motion to Stay in Warsaw Orthopedic, Inc. et al. v.
	Nuvasive, Inc. (Case No. 3:12-cv-2738) (S.D. Cal.)
1042	Order of the Chief Judge No. 18, "Suspension of Jury Trials and Other
	Proceedings During the COVID-19 Public Emergency," Mar. 17, 2020
	(S.D. Cal.)



I. The Board Should Decline BNR's NHK Arguments

BNR focuses on "efficiency" arguments because LG's Petition makes the unpatentability of the '435 patent evident. Since "the strength of the merits on the present record outweighs relatively weaker countervailing considerations of efficiency," *Illumina, Inc. v. Natera, Inc.*, IPR2019-01201, Paper 19, 8 (PTAB Dec. 18, 2019), the Board should reject BNR's *NHK*-based argument.

But even if the Board entertains BNR's appeal to efficiency, BNR's *NHK* argument omits several relevant facts in the POPR (§ VIII.A), all of which counsel against discretionary denial under § 314(a) and *NHK*.

Notably, BNR fails to mention that the Board has already denied its "advanced stage of litigation" arguments in three highly-similar IPRs that stem from other BNR-initiated litigations and that all were at *more advanced stages* than the LG litigation. (EX1027, 7-8; EX1028, 7-8; EX1029, 9-10.) In these other litigations, Coolpad and ZTE filed three IPRs (IPR2019-01319, -01320, -01365) against BNR's asserted patents. Although the district court was *less than 2 months* from holding the final pretrial conference and an eventual trial, (EX1030, 8; EX1031, 8), the Board rejected BNR's *NHK* argument and instituted these IPRs, reasoning that trial was uncertain given the judge's request to stay informed of the IPR status and her statement that, "[e]ven though we have done claim construction, I'm *rather loathe to go on parallel tracks with the Patent Office*." (EX1032,



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