

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAGEMCOM BROADBAND SAS,

Petitioner

v.

ENTROPIC COMMUNICATIONS, LLC,

Patent Owner.

IPR2026-00263

Patent No. 11,785,275

**PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE**

EXHIBIT LIST

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1048	Certified Prosecution History of U.S. Provisional App. No. 61/170,526 (“’526 provisional”)
1049	U.S. Pub. No. 2003/0056221 (“Zhang”)
1050	U.S. Patent No. 7,237,214 (“Pandey”)
1051	Excerpts of “IEEE Std 100-2000, The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition” (IEEE Press. 2000) (“IEEE Std 100”)
1052	Excerpts of Jan M Rabaey, “Digital Integrated Circuits: A Design Perspective” (Pearson, 2nd ed. 2002) (“Rabaey”)
1053	A. P. Chandrakasan, “Ultra low power digital signal processing,” Proceedings of 9th International Conference on VLSI Design, Bangalore, India, 1996, pp. 352-357 (“Chandrakasan”)
1054	S. Mirabbasi and K. Martin, “Classical and Modern Receiver Architectures,” IEEE Communications Magazine, vol. 38, no. 11, pp. 132-139, November 2000 (“Mirabbasi”)
1055	U.S. Patent No. 6,061,406 (“Carson”)
1056	Data-Over-Cable Service Interface Specifications, DOCSIS 2.0, Radio Frequency Interface Specification, CM-SP-RFIV2.0-I11-060602
1057	J. Crols and M. S. J. Steyaert, “Low-IF topologies for high-performance analog front ends of fully integrated receivers,” IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing, vol. 45, no. 3, pp. 269-282, March 1998 (“Crols”)
1058	U.S. Patents and Patent Applications Family Tree for the ’275 patent

Exhibit No.	Description
1059	Excerpts of W. Ciciora, J. Farmer, D. Large, and M. Adams, “Modern Cable Television Technology: Video, Voice, and Data Communications” (2nd ed. 2004) (“Ciciora”)
1060	Excerpts of J. Crols and M. Steyaert, “CMOS Wireless Transceiver Design” (1997)
1061	U.S. Patent No. 7,340,230 (“Khoini-Poorfard”)
1062	U.S. Pub. No. 2003/0217362 (“Summers”)
1063	U.S. Pub. No. 2006/0256799 (“Eng”)
1064	U.S. Pub. No. 2006/0083335 (“Seendripu”)
1065	Excerpts of Chris Bowick, “RF Circuit Design” (2nd ed. 2008)
1066	Excerpts of Roland Priemer, “Introductory Signal Processing” (1991)
1067	U.S. Patent No. 7,272,375 (“Tuttle”)
1068	U.S. Patent No. 7,130,576 (“Gurantz”)
1069	U.S. Patent No. 5,278,837 (“Kelley”)
1070	Jeffrey Hugh Reed, “Software Radio: A Modern Approach to Radio Engineering” (2002)
1071	U.S. Patent No. 7,213,042 (“Cannon”)
1072	Excerpts of William Buchanan, “Computer Busses” (2000) (“Buchanan”)
1073	U.S. Patent No. 7,079,528 (“Ziegler”)
1074	Excerpts of “Software Defined Radio: Enabling Technologies” (Walter H.W. Tuttlebee ed., 2003)
1075	U.S. Pub. No. 2005/0183015 (“Dunton”)
1076	Expert Declaration of Dr. Sylvia Hall-Ellis
1077	U.S. Patent No. 6,791,995 (“Azenkot”)
1078	U.S. Patent No. 6,542,203 (“Shadwell”)
1079	International Publication No. WO 2004/059933 (“Zhang ’933”)
1080	U.S. Pub. No. 2004/0250284 (“Dong”)
1081	U.S. Patent No. 3,968,444 (“Tenny”)
1082	April 1, 2025 Ex Parte Reexamination Certificate and February 10, 2025 Notice of Intent to Issue Ex Parte Reexamination Certificate; Reexamination No. 90/019,255 re US 9,210,362
1083	Complaint, <i>Entropic Communications, LLC v. Comcast Corporation, et al.</i> , 2:25-cv-07969-JWH-KES (C.D. Cal. Aug. 23, 2025)

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1084	Joint Claim Construction and Pre-Hearing Statement, <i>Entropic Communications, LLC v. Cox Communications, Inc., et al.</i> , 2:23-cv-01049-JWH-KES (C.D. Cal. Apr. 19, 2024)
1085	Reply Declaration of David B. Lett
1086	United States Frequency Allocations, The Radio Spectrum, U.S. Department of Commerce, National Telecommunications and Information Administration, October 2003
1087	Excerpts from <i>Entropic Communications, LLC v. Comcast Corp. et al.</i> , No. 2:23-cv-01050 (C.D. Cal.), Document 128-20 (Exhibit 20 of Entropic’s Second Amended Complaint – Entropic’s infringement chart for the ’275 patent)
1088	The American Heritage College Dictionary, fourth edition, 2002, excerpt including definition of “select”
1089	Transcript of Deposition of Dr. Russ
1090	Final Written Decision
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1092	Final Written Decision
1093	Transcript of Oral Hearing held on July 18, 2025 for IPR2024-00432, IPR2024-00435, and IPR2024-00438
1094	U.S. Patent No. 11,399,206 (“the ’206 patent”)
1095	Petitioner's Demonstrative Exhibit
1096	Table Of Parallel Petitions Filed By All Petitioners (July 16, 2019-January 31, 2025) [All-Parallel-Petitions]
1097	Table of All Petitions Filed By Comcast (As Petitioner or RPI) (2016-2025) [All-Comcast-Petitions]
1098	PTAB Multiple Petitions Study [Multiple-Petitions-Study]
1099	PTAB Multiple Petitions Study Executive Summary [Executive-Summary]
1100	FreeWheel About Webpage (www.freewheel.com/about)
1101	Declaration of Kenneth K. Wang [Wang-Decl.]
1102	Director Vidal’s June 21, 2022, Memorandum Regarding Discretionary Denial With Co-Pending District Court Litigation [Interim-Denial-Memo]
1103	Email Request For Director Review [PainTEQ-Email-Request]
1104	Formal Request For Director Review [PainTEQ-Rehearing-Request]
1105	Declaration of Nathan Lowenstein In Support Of <i>Pro Hac Vice</i> Admission

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1106	Exhibit 2012 To Deposition Of David Lett Dated July 23, 2025: Errata For Depositions Dated December 10-11 2024
1107	Declaration of Samuel H. Russ, Ph.D. [Russ-Decl.]
1108	Curriculum Vitae of Samuel H. Russ, Ph.D. [Russ-CV]
1109	European Patent Application No. 02759732.7.2415 Communication From Examining Division [EPO-Communication-Annex]
1110	European Patent Application No. 02759732.7.2415 Reply To Communication From Examining Division [Zhang-EPO-Reply]
1111	European Patent Application No. 02759732.7.2415 Intent To Grant European Patent [EPO-Grant-Intent]
1112	U.S. Patent 11,381,866 ['866-Patent]
1113	Deposition Of David Lett Dated December 10, 2024 [Lett-Depo.]
1114	Deposition Of David Lett Dated December 11, 2024 [Lett-Depo.]
1115	Deposition Of David Lett Dated May 20, 2025 [Lett-Depo.]
1116	Deposition Of David Lett Dated July 23, 2025 [Lett-Depo.]
1117	U.S. Pat. No. 6,704,372 [Zhang-Patent]
1118	Information Disclosure Statement submitted during the prosecution of the '275 patent [IDS]
1119	Notice Of Allowance for the '275 patent [NOA]
1120	<i>Comcast Cable Communications LLC v. Entropic Communications LLC</i> , IPR2024-00432, Paper 28 [Comcast-Reply]
1121	<i>Comcast Cable Communications LLC v. Entropic Communications LLC</i> , IPR2024-00438, Exhibit 1078 [Lett-Decl.]
1122	Information Disclosure Statement filed June 18, 2024 in Reexamination No. 90/019,255
1123	Applicant's Arguments filed June 18, 2024 in Reexamination No. 90/019,255
1124	Information Disclosure Statement filed August 7, 2024 in Reexamination No. 90/019,255
1125	Deposition Of David Lett Dated December 16, 2025 [Lett-Depo.]
1126	Patent Owner's Oral Argument Demonstrative Exhibits
1127	EX3001
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1131	Supplemental Declaration of David Lett
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1133	Comparison of IPR2025-00180 Paper 2 – Petition for Inter Partes Review and Instant Petition IPR2026-00263
1134	Joint Motion to Continue Stay Pending Inter Partes Review, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Feb. 13, 2026), ECF No. 39
1135	Entropic Communications, LLC's Complaint for Patent Infringement, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Apr. 10, 2025), ECF No. 1
1136	Executed Summons, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. June 26, 2025), ECF No. 15
1137	Order, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Oct. 9, 2025), ECF No. 29
1138	Order, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Feb. 18, 2026), ECF No. 40
1139	U.S. Publication No. 2025/0175663
1140	Exhibit 20, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Dec. 8, 2023), ECF No. 128-20
1141	D&B Report: Sagemcom USA LLC
1142	Sagemcom Head Office and Subsidiaries
1143	Sagemcom 2022 CSR Report
1144	Sagemcom BEAD Product BABA Compliance
1145	Build America, Buy America (BABA) Waivers
1146	Comcast SNE Energy Information
1147	Declaration of Thibault Decoudun (Sagemcom), <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Aug. 12, 2025), ECF No. 19-35
1148	Appellant's Unopposed Motion for Extension of Time to File Opening Brief, <i>Entropic Commc 'ns, LLC v. Squires</i> , No. 26-1432 (Fed. Cir. May 19, 2026), ECF No. 13
1149	Order, <i>Comcast Cable Commc 'ns, LLC v. Entropic Commc 'ns, LLC</i> , IPR2024-00432, -435, -438, Paper 49 (Jan. 26, 2026)
1150	Joint Status Report, <i>Entropic Commc 'ns, LLC v. Sagemcom Broadband SAS</i> , No. 2:25-cv-00379 (E.D. Tex. Aug. 17, 2026), ECF No. 46

Patent Owner (“Entropic”) has nothing new to say. Entropic’s Patent Owner Preliminary Response (“POPR”) serves only to reinforce that: this IPR should be instituted; the record from IPR2025-00180 (“the Comcast IPR”) adopted; and the proceeding expedited to pick up where the Comcast IPR left off. Although Entropic surely prefers to avoid any final written decision from the Board on the ’275 patent entirely, Entropic’s rehashed POPR arguments do nothing more than reinforce the efficiency and appropriateness of institution here.

Entropic’s POPR here repeats and paraphrases the *exact same arguments* made in its Patent Owner Response (“POR”) in the Comcast IPR. Many sections between the two documents are verbatim identical or nearly so. *Compare* Exh. 1019 (Comcast POR) at, *e.g.*, 1-3, 5-7, 10-13, 42-47 *with* Paper 14 (POPR) at 1-3, 4-6, 9-12, 24-29.¹ Entropic simply shortened its earlier POR to meet the word limits here, omitting some sections along the way. There is no reason the parties and Board should spend another year re-creating the Comcast record when Entropic has no new arguments to present. Just as the Board previously instituted the exact same petition as now submitted here, it should do so again. *See* Ex. 1008 (Institution Grant).

¹ The Board’s order permitting this Reply did not allow submission of evidence, but Petitioner has prepared a version of Entropic’s current POPR highlighting the crossover from Entropic’s earlier POR and, if permitted, will submit it as an exhibit.

Dated: October 6, 2026

Respectfully submitted,

/ Daniel T. Keese /

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of Petitioner's Preliminary
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