UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

XR COMMUNICATIONS, LLC, dba, VIVATO TECHNOLOGIES,
 	
    Plaintiff,
 	
v.
 	
AMAZON.COM, INC. et al.
 	
    Defendants.
	Civil Action No. 6:21-cv-00619-ADA
	
	JURY TRIAL DEMANDED

APPLE INC., DEFENDANT.	Civil Action No. 6:21-cv-00620-ADA **JURY TRIAL DEMANDED**
ASUSTEK COMPUTER INC. DEFENDANT.	Civil Action No. 6:21-cv-00622-ADA **JURY TRIAL DEMANDED**
GOOGLE LLC DEFENDANT.	Civil Action No. 6:21-cv-00625-ADA **JURY TRIAL DEMANDED**
SAMSUNG ELECTRONICS CO., LTD. et al. DEFENDANTS.	Civil Action No. 6:21-cv-00626-ADA **JURY TRIAL DEMANDED**
DELL TECHNOLOGIES INC. et al. DEFENDANTS.	Civil Action No. 6:21-cv-00646-ADA **JURY TRIAL DEMANDED**
HP INC., DEFENDANT.	Civil Action No. 6:21-cv-00694-ADA **JURY TRIAL DEMANDED**
MICROSOFT CORPORATION, DEFENDANT.	Civil Action No. 6:21-cv-00695-ADA **JURY TRIAL DEMANDED**

<u>DEFENDANTS' PRELIMINARY INVALIDITY CONTENTIONS</u>
<u>FOR U.S. PATENT NO. 10,715,235</u>

Pursuant to the Court's Order Governing Proceedings and the Court's Scheduling Order Defendants Amazon.com, Inc.; Amazon.com Services, Inc.; eero LLC; Apple Inc.; ASUSTeK Computer Inc.; Google LLC; Samsung Electronics America, Inc.; Samsung Electronics Co., Ltd.; Dell Inc.; Dell Technologies Inc.; HP Inc.; and Microsoft Corporation (collectively, "Defendants") respectfully submit these preliminary invalidity contentions with respect to the claims of U.S. Patent No. 10,715,235 (the "'235 Patent") identified by Plaintiff XR Communications LLC d/b/a Vivato Technologies, ("Plaintiff") in its Preliminary Infringement Contentions.

The currently Asserted Claims, as reflected in Plaintiff's Preliminary Infringement Contentions, are claims 1, 2, 4, 5, 8, 9, 11, 12, 15, and 16 of the '235 Patent (the "Asserted Claims"). As detailed further below, the '235 Patent is anticipated by, or obvious in view of, one more of the prior art references being produced at 235PRIORART_00000001 to 235PRIORART_00002069, as well as invalid under 35 U.S.C. §§ 101 and 112.

I.   PRELIMINARY STATEMENT

These invalidity contentions are based on Defendants' current knowledge, understanding, and belief of the '235 Patent and prior art, of Plaintiff's infringement theories (inasmuch as they can be inferred from its Infringement Contentions), and of the facts and other information available as of the date of these invalidity contentions. Defendants' investigation, discovery, and analysis of information related to this action is ongoing. Additional discovery, elucidation of Plaintiff's impermissibly vague infringement contentions, and/or orders of the Court may require Defendants to amend or supplement these invalidity contentions, and Defendants expressly reserve the right to do so as their respective cases proceed. These contentions represent Defendants' good-faith effort to provide a comprehensive identification of prior art relevant to these cases, but Defendants

- "transmitting to the remote station a third signal comprising content based on the set of weighting values." (claim 8)

- "The method as recited in claim 8, wherein the set of weighting values is further based on one or more of: a transmit power level, a data transmit rate, an antenna direction, quality of service data, or timing data." (claim 11)

- "the first signal transmission comprising first signal information, wherein the first signal information comprises one or more of: a transmit power level, a data transmit rate, an antenna direction, quality of service data, or timing data;" (claim 15)

- "determine a set of weighting values based on the first signal information and the second signal information, wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals;" (claim 15)

- "cause the transceiver to generate a third signal comprising content based on the set of weighting values." (claim 15)

Accordingly, the Asserted Claims are not entitled to a priority date any earlier than November 3, 2003, at the earliest.

III. THE '235 PATENT IS INVALID.

A. Identification of Prior Art

Defendants contend that the prior art references charted in Exhibits A-1 through A-42 and/or described below anticipate and/or render obvious, alone or in combination, one or more of the Asserted Claims of the '235 Patent. Furthermore, Defendants reserve the right to rely on any of the charted prior art references together with any of the below references to show the state of the art and the knowledge of one of ordinary skill in the art at the time of the alleged invention of the '235 Patent. [1]

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[1] Defendants Amazon.com, Inc., Amazon.com Services, Inc., eero LLC, Google LLC, Samsung Electronics America, Inc., and Samsung Electronics Co., Ltd. further incorporate by reference each of the prior art references identified in, and produced in connection with, their Preliminary Invalidity Contentions for U.S. Patent No. 10,594,376, served February 25, 2022. The remaining Defendants take no position as to art known to Plaintiff but not yet disclosed to the individual Defendants in discovery, but reserve the right to rely upon any invalidity contentions for the '376

Bates Number	Prior Art Reference
235PRIORART_00000001	3GPP TSG RAN WG1 R1-99c10 ("Motorola 3GPP")
235PRIORART_00000008	19990830 - 19990903 3GPP R1-07 Meeting
235PRIORART_00000012	Feedback assisted multi-antenna transmission weight adaptation for wireless communications ("Banister 2002")
235PRIORART_00000217	An Analysis of the LEGO Algorithm for Optimizing the Performance of Wireless Networks, ("Agee 2001")
235PRIORART_00000246	The LEGO Approach for Achieving Max-Min Capacity in Reciprocal Multipoint Networks ("Agee 2001")
235PRIORART_00000252	Joint Optimal Power Control and Beamforming in Wireless Networks Using Antenna Arrays ("Farrokhi 1998")
235PRIORART_00000264	Link-Optimal BLAST Processing With Multiple Access Interference ("Farrokhi 2000")
235PRIORART_00000269	Base Station Transmitter Antenna Arrays with Mobile to Base Feedback ("Gerlach 1993")
235PRIORART_00000275	Space-Time Signaling in Multi-Antenna Systems ("Heath 2001")
235PRIORART_00000410	Joint Transmitter-Receiver Optimization in Synchronous Multiuser Communications over Multipath Channels ("Jang")
235PRIORART_00000420	JP2002290317 ("Jitsukawa") (translation)
235PRIORART_00000433	JP2002290317A ("Jitsukawa") (original)
235PRIORART_00000445	KR20020034531A ("Yoo")
235PRIORART_00000461	Joint transmit and receive optimization for high data rate wireless communication using multiple antennas ("Sampath")
235PRIORART_00000466	Maximum Likelihood Multipath Channel Parameter Estimation in CDMA Systems ("Sengupta")
235PRIORART_00000472	Transmit Diversity in 3G CDMA Systems ("Derryberry")
235PRIORART_00000480	Transmit Diversity Using Filtered Feedback Weights in the FDD WCDMA System ("Hottinen 2000")

Patent that are already known to Plaintiff and any prior art disclosed therein, to the extent they apply to similar claim elements for the '235 Patent, once Plaintiff produces those documents in the course of discovery.

Bates Number	Prior Art Reference
235PRIORART_00000487	US 5,345,599 ("Paulraj 599")
235PRIORART_00000501	US 5,471,647 ("Gerlach 647")
235PRIORART_00000511	US 5,634,199 ("Gerlach 199")
235PRIORART_00000524	US 5,828,658 ("Ottersten")
235PRIORART_00000557	US 6,006,077 ("Shull")
235PRIORART_00000570	US 6,031,877 ("Saunders")
235PRIORART_00000577	US 6,067,290 ("Paulraj 290")
235PRIORART_00000629	US 6,124,824 ("Xu")
235PRIORART_00000638	US 6,141,335 ("Kuwahara")
235PRIORART_00000639	US 6,141,567 ("Youssefmir")
235PRIORART_00000662	US 6,175,550 ("van Nee")
235PRIORART_00000673	US 6,219,561 ("Raleigh 561")
235PRIORART_00000691	US 6,317,586 ("Haardt")
235PRIORART_00000705-718	*Intentionally omitted*
235PRIORART_00000719	US 6,449,490 ("Chaponniere")
235PRIORART_00000735	US 6,473,036 ("Proctor")
235PRIORART_00000751	US 6,553,012 ("Katz")
235PRIORART_00000768	US 6,650,289 ("Levy 289")
235PRIORART_00000787	US 6,657,590 ("Yoshida 590")
235PRIORART_00000801	US 6,662,024 ("Walton 024")
235PRIORART_00000828	US 6,687,492 ("Sugar")
235PRIORART_00000858	US 6,738,020 ("Lindskog")
235PRIORART_00000871	US 6,792,031 ("Sriram")
235PRIORART_00000882	US 6,816,116 ("Chen")
235PRIORART_00000895	US 6,888,809 ("Foschini")
235PRIORART_00000906	US 6,895,258 ("Scherzer 258")
235PRIORART_00000924	US 6,947,707 ("Raghothaman")
235PRIORART_00000933	US 6,970,722 ("Lewis")
235PRIORART_00000941	US 7,110,349 ("Branlund")
235PRIORART_00001052	US 7,116,723 ("Kim 723")

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