

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC.
NOKIA OF AMERICA CORPORATION
Petitioners,

v.

XR COMMUNICATIONS LLC
Patent Owner.

U.S. PATENT NO. 10,715,235
Title: DIRECTED WIRELESS COMMUNICATION

Inter Partes Review No.: IPR2024-00613

PETITION FOR *INTER PARTES* REVIEW OF U.S. PAT. NO. 10,715,235

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	[1.0] A receiver for use in a wireless communications system, the receiver comprising: an antenna, wherein the antenna comprises a first antenna element and a second antenna element;.....	35
	[1.1] a transceiver operatively coupled to the antenna and configured to transmit and receive electromagnetic signals using the antenna;	37
	[1.2] a processor operatively coupled to the transceiver, the processor configured to:	39
	[1.3] receive a first signal transmission from a remote station via the first antenna element and a second signal transmission from the remote station via the second antenna element simultaneously;.....	43

(a)	Agee’s Butler Matrix Teaches Simultaneously Receiving Signal Transmissions In The Same Way As PO Argued That The ‘235 Patent And Priority Document Teach It.	44
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[1.4]	determine first signal information for the first signal transmission;	61
[1.5]	determine second signal information for the second signal transmission, wherein the second signal information is different than the first signal information;	61
[1.6]	determine a set of weighting values based on the first signal information and the second signal information;	64
[1.7]	wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals;	69
[1.8]	cause the transceiver to transmit a third signal to the remote station via the antenna, the third signal comprising content based on the set of weighting values.	71
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[2]	The receiver as recited in claim 1, wherein the first signal transmission and the second signal transmission comprise electromagnetic signals comprising one or more transmission peaks and one or more	

	transmission nulls.	72
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	[4] The receiver as recited in claim 1, wherein the content comprises data configured to be used by the remote station to modify the placement of one or more transmission peaks and one or more transmission nulls in a subsequent signal transmission.	74
e.	Claim 5.....	75
	[5] The receiver as recited in claim 4, 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.	75
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	[8] 8. A method in a wireless communications system, the method comprising.	76
	[8.1] receiving a first signal transmission from a remote station via a first antenna element of an antenna and a second signal transmission from the remote station via a second antenna element of the antenna simultaneously, wherein the first signal transmission and the second signal transmission comprise electromagnetic signals comprising one or more transmission peaks and one or more transmission nulls;	76

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