

Title (en)  
FREQUENCY DOMAIN CHANNEL STATE INFORMATION COMPRESSION

Title (de)  
KOMPRIMIERUNG VON FREQUENZBEREICHSKANALZUSTANDSINFORMATIONEN

Title (fr)  
COMPRESSION D'INFORMATIONS D'ÉTAT DE CANAL DANS LE DOMAINE FRÉQUENTIEL

Publication  
**EP 3874614 A4 20220831 (EN)**

Application  
**EP 19877558 A 20191029**

Priority  
• US 201862754497 P 20181101  
• US 201962794220 P 20190118  
• US 2019058523 W 20191029

Abstract (en)  
[origin: WO2020092340A1] Methods, systems, and circuitries are described for reporting precoding matrices to a base station. In one example a user equipment device (UE includes one or more processors configured to identify a codebook that specifies codebook parameters and precoding matrices. Each column of the precoding matrices corresponds to a spatial layer and is constructed by linear combination of spatial beams with each spatial beam having coefficients defined for different sets of frequency resources. The processors are configured to process a reference signal received from a base station to determine the codebook parameters of the reference signal; calculate, based on the codebook parameters, a precoding matrix indicator (PMI), wherein the PMI identifies a selected linear combination of spatial beams defined in the precoding matrices for use in downlink transmission from the base station to the UE; and report the PMI to the base station.

IPC 8 full level  
**H04B 7/06** (2006.01); **H04B 7/0456** (2017.01); **H04L 1/00** (2006.01)

CPC (source: EP)  
**H04B 7/0456** (2013.01); **H04B 7/0639** (2013.01); **H04B 7/0663** (2013.01)

Citation (search report)  
• [XI] HUAWEI ET AL: "Discussion on CSI enhancement for MU-MIMO", vol. RAN WG1, no. Chengdu, China; 20181008 - 20181012, 29 September 2018 (2018-09-29), XP051517518, Retrieved from the Internet <URL:http://www.3gpp.org/ftp/tsg%5Fran/WG1%5FRL1/TSGR1%5F94b/Docs/R1%2D1810103%2Ezip> [retrieved on 20180929]  
• [XI] ERICSSON: "On CSI enhancements for MU-MIMO support", vol. RAN WG1, no. Chengdu, China; 20181008 - 20181012, 29 September 2018 (2018-09-29), XP051518594, Retrieved from the Internet <URL:http://www.3gpp.org/ftp/tsg%5Fran/WG1%5FRL1/TSGR1%5F94b/Docs/R1%2D1811193%2Ezip> [retrieved on 20180929]  
• See references of WO 2020092340A1

Cited by  
US11909472B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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**WO 2020092340 A1 20200507**; CN 112913155 A 20210604; EP 3874614 A1 20210908; EP 3874614 A4 20220831

DOCDB simple family (application)  
**US 2019058523 W 20191029**; CN 201980036384 A 20191029; EP 19877558 A 20191029