

Title (en)  
CODEBOOK CONSTRUCTION

Title (de)  
CODEBUCHHERSTELLUNG

Title (fr)  
CONSTRUCTION DE LIVRES DE CODES

Publication  
**EP 2805430 A1 20141126 (EN)**

Application  
**EP 14741780 A 20140307**

Priority

- US 201361774275 P 20130307
- US 201361775058 P 20130308
- US 201361808934 P 20130405
- US 201361817150 P 20130429
- US 201361817247 P 20130429
- US 201361821989 P 20130510
- US 201414198653 A 20140306
- US 2014021535 W 20140307

Abstract (en)  
[origin: WO2014138525A1] A method implemented in a base station used in a wireless communications system is disclosed. The method comprises having 1-layer, 2-layer, 3-layer, and 4-layer codebooks for 4 transmit antenna (4TX) transmission, each codebook including a plurality of precoding matrices, precoding data with one of the plurality of precoding matrices, and transmitting, to a user equipment, the precoded data, wherein each of the 1-layer and 2-layer codebooks comprises a first codebook and a second codebook, and wherein each precoding matrix in the first codebook comprises a first index and a second index. Other apparatuses, systems, and methods also are disclosed.

IPC 8 full level  
**H04B 7/04** (2006.01); **H03D 1/04** (2006.01); **H03M 7/00** (2006.01); **H04B 7/06** (2006.01); **H04B 7/26** (2006.01); **H04L 27/00** (2006.01); **H04W 24/00** (2009.01); **H04W 88/08** (2009.01)

CPC (source: EP KR US)  
**H04B 7/0456** (2013.01 - US); **H04B 7/0469** (2013.01 - EP US); **H04B 7/0478** (2013.01 - EP KR US); **H04B 7/0486** (2013.01 - EP US); **H04B 7/0617** (2013.01 - US); **H04B 7/0626** (2013.01 - EP US); **H04B 7/0639** (2013.01 - EP); **H04B 7/0641** (2013.01 - EP US); **H04B 7/065** (2013.01 - EP US); **H04L 1/0026** (2013.01 - EP); **H04L 1/0027** (2013.01 - EP); **H04L 1/06** (2013.01 - US); **H04L 25/0391** (2013.01 - US); **H04L 27/20** (2013.01 - US)

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2014138525 A1 20140912**; EP 2805430 A1 20141126; EP 2805430 A4 20150819; ES 2587524 T3 20161025; JP 2015518324 A 20150625; JP 2016028511 A 20160225; JP 2017017758 A 20170119; JP 2018201205 A 20181220; JP 5866722 B2 20160217; JP 6036955 B2 20161130; JP 6369519 B2 20180808; KR 101516665 B1 20150504; KR 102115853 B1 20200527; KR 20140119812 A 20141010; KR 20150003410 A 20150108; KR 20160116046 A 20161006

DOCDB simple family (application)  
**US 2014021535 W 20140307**; EP 14741780 A 20140307; ES 14183773 T 20140307; JP 2015198158 A 20151006; JP 2015504778 A 20140307; JP 2016201857 A 20161013; JP 2018131287 A 20180711; KR 20147024848 A 20140307; KR 20147035037 A 20140307; KR 20167026694 A 20140307