

Title (en)
WIRELESS COMMUNICATIONS DEVICE INCLUDING A JOINT SPACE-TIME OPTIMUM FILTER (JSTOF) USING CHOLESKY AND EIGENVALUE DECOMPOSITIONS

Title (de)
DRAHTLOSES KOMMUNIKATIONSGERÄT MIT EINEM VERBUND-RAUM-ZEIT-OPTIMALFILTER (JSTOF) MIT CHOLESKY- UND EIGENWERTZERLEGUNGEN

Title (fr)
APPAREIL DE RADIOCOMMUNICATION A FILTRE JSTOF UTILISANT LES DECOMPOSITIONS DE CHOLESKY ET DES VALEURS PROPRES

Publication
EP 1922816 A4 20081001 (EN)

Application
EP 06790540 A 20060814

Priority
• CA 2006001322 W 20060814
• CA 2515932 A 20050815

Abstract (en)
[origin: WO2007019679A2] A wireless communications device may include a wireless transmitter and a wireless receiver. The wireless receiver may include a filter for reducing co-channel interference and may include a multi-channel, space-time filter circuit that filters n signal parts that have been split from a communications signal by jointly estimating space-time filter weights and multi-channel impulse responses (CIRs) based upon Cholesky and eigenvalue decompositions. The filter may further include a multi-channel, matched filter circuit that receives multi-channel signals from the multi-channel, space-time filter circuit and has a filter response that is provided by a channel impulse response estimation from the space-time filter circuit.

IPC 8 full level
H04B 1/10 (2006.01); **H04L 1/06** (2006.01); **H04L 25/02** (2006.01); **H04B 7/02** (2018.01)

CPC (source: EP KR)
H04B 1/10 (2013.01 - KR); **H04B 1/16** (2013.01 - KR); **H04B 7/02** (2013.01 - KR); **H04L 25/0212** (2013.01 - EP); **H04L 25/0248** (2013.01 - EP); **H04B 1/109** (2013.01 - EP)

Citation (search report)
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• [A] JAN C OLIVIER ET AL: "Joint Optimization of FIR Prefilter and Channel Estimate for Sequence Estimation", IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 50, no. 9, 1 September 2002 (2002-09-01), XP011071006, ISSN: 0090-6778
• [A] GREGORY E BOTTOMLEY ET AL: "Unification of MLSE Receivers and Extension to Time-Varying Channels", IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 46, no. 4, 1 April 1998 (1998-04-01), XP011009143, ISSN: 0090-6778
• See references of WO 2007019679A2

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Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
CA 2515932 A1 20070215; AU 2006281941 A1 20070222; BR PI0614356 A2 20110322; CN 101283516 A 20081008; CN 101283516 B 20111123; EP 1922816 A2 20080521; EP 1922816 A4 20081001; JP 2009505526 A 20090205; KR 20080036223 A 20080425; WO 2007019679 A2 20070222; WO 2007019679 A3 20071108

DOCDB simple family (application)
CA 2515932 A 20050815; AU 2006281941 A 20060814; BR PI0614356 A 20060814; CA 2006001322 W 20060814; CN 200680037752 A 20060814; EP 06790540 A 20060814; JP 2008526337 A 20060814; KR 20087006317 A 20080314