

Title (en)
OTFS METHODS OF DATA CHANNEL CHARACTERIZATION AND USES THEREOF

Title (de)
OTFS-VERFAHREN ZUR DATENKANALCHARAKTERISIERUNG UND VERWENDUNGEN DAVON

Title (fr)
PROCÉDÉS OTFS DE CARACTÉRISATION DE CANAL DE DONNÉES ET LEURS UTILISATIONS

Publication
EP 3172838 A1 20170531 (EN)

Application
EP 15824664 A 20150721

Priority
• US 201462027231 P 20140721
• US 201414583911 A 20141229
• US 2015041420 W 20150721

Abstract (en)
[origin: WO2016014596A1] Computerized wireless transmitter/receiver system that automatically uses combinations of various methods, including transmitting data symbols by weighing or modulating a family of time shifted and frequency shifted waveforms bursts, pilot symbol methods, error detection methods, MIMO methods, and other methods, to automatically determine the structure of a data channel, and automatically compensate for signal distortions caused by various structural aspects of the data channel, as well as changes in channel structure. Often the data channel is a two or three dimensional space in which various wireless transmitters, receivers and signal reflectors are moving. The invention's modulation methods detect locations and speeds of various reflectors and other channel impairments. Error detection schemes, variation of modulation methods, and MIMO techniques further detect and compensate for impairments. The invention can automatically optimize its operational parameters, and produce a deterministic non-fading signal in environments where other methods would likely degrade.

IPC 8 full level
H03H 7/30 (2006.01)

CPC (source: EP KR US)
H04B 7/0413 (2013.01 - EP KR); **H04B 7/10** (2013.01 - EP KR); **H04L 5/0048** (2013.01 - EP KR US); **H04L 25/0202** (2013.01 - EP); **H04L 25/0204** (2013.01 - EP); **H04L 25/0222** (2013.01 - EP); **H04L 25/03159** (2013.01 - EP); **H04L 27/2613** (2013.01 - EP KR US); **H04L 27/2634** (2013.01 - EP US); **H04L 27/2639** (2013.01 - EP KR); **H04L 27/2646** (2013.01 - EP); **H04L 27/26524** (2021.01 - EP US); **H04L 27/26532** (2021.01 - EP US); **H04L 5/0044** (2013.01 - EP 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 2016014596 A1 20160128; AU 2015292775 A1 20170216; AU 2015292775 B2 20180913; AU 2015292777 A1 20170223; AU 2015292777 B2 20191121; CA 2955800 A1 20160128; CA 2955800 C 20220816; CA 2955827 A1 20160128; CA 2955827 C 20190226; CN 106716824 A 20170524; CN 106716824 B 20200303; CN 106716825 A 20170524; CN 106716825 B 20190816; EP 3172838 A1 20170531; EP 3172838 A4 20180418; EP 3178164 A1 20170614; EP 3178164 A4 20171220; EP 4203310 A1 20230628; JP 2017528040 A 20170921; JP 2017528041 A 20170921; JP 2020025361 A 20200213; JP 2020205641 A 20201224; JP 2021002846 A 20210107; JP 6803828 B2 20201223; JP 7075093 B2 20220525; JP 7240677 B2 20230316; KR 102377015 B1 20220318; KR 102421667 B1 20220714; KR 102596363 B1 20231030; KR 20170033402 A 20170324; KR 20170034411 A 20170328; KR 20220038536 A 20220328; WO 2016014598 A1 20160128

DOCDB simple family (application)
US 2015041417 W 20150721; AU 2015292775 A 20150721; AU 2015292777 A 20150721; CA 2955800 A 20150721; CA 2955827 A 20150721; CN 201580049201 A 20150721; CN 201580049414 A 20150721; EP 15824664 A 20150721; EP 15825399 A 20150721; EP 22212797 A 20150721; JP 2017503560 A 20150721; JP 2017503561 A 20150721; JP 2019210452 A 20191121; JP 2020153659 A 20200914; JP 2020162994 A 20200929; KR 20177004709 A 20150721; KR 20177004740 A 20150721; KR 20227008651 A 20150721; US 2015041420 W 20150721