

Title (en)
STACKED-CARRIER DISCRETE MULTIPLE TONE COMMUNICATION TECHNOLOGY

Title (de)
DISKRETE MEHRTON-KOMMUNIKATIONSTECHNOLOGIE MIT GESTAPPELTEN TRÄGERN

Title (fr)
TECHNOLOGIE DMT A EMPILEMENT DE PORTEUSES

Publication
EP 1119932 A4 20021009 (EN)

Application
EP 98940958 A 19980818

Priority
US 9817063 W 19980818

Abstract (en)
[origin: WO0011823A1] A "stacked-carrier" spread spectrum communication system (10) based on frequency domain spreading that multiplies a time-domain representation of a baseband signal by a set of superimposed, or stacked, complex sinusoid carrier waves. In a preferred embodiment (10), the spreading energizes the bins of a large fast Fourier transform (FFT). This provides a considerable savings in computational complexity for moderate output FFT sizes. Point-to-Multipoint and multipoint-to-multipoint (nodeless) network topologies are possible. A code-nulling method is included for interference cancellation and enhanced signal separation by exploiting the spectral diversity of the various sources (11). The basic system (10) may be extended to include multi-element antenna array (26/18) nulling methods also for interference cancellation and enhanced signal separation using spatial separation. Such methods permit directive and retrodirective transmission systems that adapt or can be adapted to the radio environment. Such systems are compatible with bandwidth-on-demand and higher-order modulation formats and use advanced (maximum-SINR) despreader adaptation algorithms.

IPC 1-7
H04J 9/00; **H04L 5/04**; **H04Q 7/00**; **H04B 1/06**; **H04B 7/00**; **H04B 7/216**; **H04B 7/208**; **H04L 5/02**; **H04B 1/69**; **H04J 13/02**; **H04L 27/26**

IPC 8 full level
H04B 1/69 (2006.01); **H04B 7/26** (2006.01); **H04J 1/02** (2006.01); **H04J 11/00** (2006.01); **H04J 13/00** (2011.01); **H04J 13/02** (2006.01); **H04J 15/00** (2006.01); **H04J 99/00** (2009.01); **H04L 5/02** (2006.01); **H04B 7/08** (2006.01); **H04Q 7/36** (2006.01)

CPC (source: EP KR)
H04B 1/69 (2013.01 - EP); **H04B 1/7103** (2013.01 - KR); **H04J 13/00** (2013.01 - EP); **H04J 13/10** (2013.01 - KR); **H04L 5/026** (2013.01 - EP); **H04B 7/08** (2013.01 - EP)

Citation (search report)

- [XA] WO 9835458 A1 19980813 - AT & T WIRELESS SERVICES INC [US]
- [YA] US 5467367 A 19951114 - IZUMI MICHIIRO [JP], et al
- [YA] US 5584057 A 19961210 - DENT PAUL W [SE]
- [A] WO 9736384 A1 19971002 - BOSCH GMBH ROBERT [DE], et al
- See references of WO 0011823A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0011823 A1 20000302; AU 8911798 A 20000314; BR 9816015 A 20010508; CA 2340716 A1 20000302; CN 1237746 C 20060118; CN 1310894 A 20010829; EP 1119932 A1 20010801; EP 1119932 A4 20021009; IL 141464 A0 20020310; IL 141464 A 20070515; JP 2002523969 A 20020730; KR 20010106445 A 20011129; MX PA01001753 A 20020604

DOCDB simple family (application)
US 9817063 W 19980818; AU 8911798 A 19980818; BR 9816015 A 19980818; CA 2340716 A 19980818; CN 98814242 A 19980818; EP 98940958 A 19980818; IL 14146401 A 20010215; IL 14146498 A 19980818; JP 2000566980 A 19980818; KR 20017002048 A 20010216; MX PA01001753 A 19980818