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

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Application
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Priority
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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.

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