Title (en)

IMPROVEMENTS IN A SPREAD-SPECTRUM MULTIPLEXED TRANSMISSION SYSTEM

Publication

EP 0489794 A4 19930609 (EN)

Application

EP 90912920 A 19900831

Priority

- AU PJ608289 A 19890901
- US 26585887 A 19870127

Abstract (en)

[origin: WO9103892A1] A spread-spectrum transmission system wherein one or more spread-spectrum signals occupy the same frequency band as a group of substantially equally spaced conventional communications channels, the spectral line spacing of the spread-spectrum signals being selected to correspond to the inter-channel spacing of the group of communications channels such that the spectral components of the spread-spectrum signals fall within the inter-channel guard bands of the communications channels. If more than one spread-spectrum channel is used, they are frequency division multiplexed by offsetting the centre or carrier frequencies of the spread-spectrum signals by a fraction of the spectral-line spacing of the signals. The signals are generated by modulating a carrier with a pseudo-noise (PN) code signal. Demultiplexing is achieved by generating the same PN code in a code generator (47) and mixing the PN code with the received signal in a mixer (45). The epoch of the code generated by the generator (47) is then advanced or retarded in response to an epoch control signal (48) generated by a controller (46). The mixed signal is passed through a narrowband filter (49) to select the baseband signal which is then fed to the controller (46) to enable the generation of the epoch control signal (48). When applied to a vehicle tracking system, the relationship between the epoch of the noise code and the reference signal (50) is used to indicate the relative propagation delay, when correlation with the received signal is achieved. The delay information, when combined with information from receivers at other locations, can be used to calculate transmitter position.

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H04J 13/00; G01S 5/06

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CPC (source: EP)

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Citation (search report)

- [Y] EP 0250105 A1 19871223 - SIGNAL PROCESSORS LTD [GB]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 4, no. 71 (E-12)(553) 24 May 1980 & JP-A-55 38 777 (NIPPON DENSHIN DENWA KOSHA)
- See references of WO 9103892A1

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