Title (en)

QPSK PHASE AMBIGUITY CORRECTOR

Title (de)

QPSK-PHASENMEHRDEUTIGKEITSKORRIGIERER

Title (fr)

CORRECTEUR D'AMBIGUITE DE PHASE PAR MODULATION PAR DEPLACEMENT DE PHASE EN QUADRATURE (QPSK)

Publication

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Application

EP 02763799 A 20020930

Priority

- US 0231044 W 20020930
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Abstract (en)

[origin: WO03028276A2] A system and method for determining and correcting the phase shift between the carrier signal in a QPSK modulated data signal (402) and the local oscillator signal (403) in a receiver (404, 420, 480) of the QPSK modulated data signal by correcting the receiver's symbol information phase reference to 0 DEG relative to the received carrier phase according to an output of a correcting means (480). Use is made of the unique seed property of pseudo random sequence generators (PRSG) (486, 502) in which inputting a "seed" of length equal to the polynomial order of the PRSG, to a first PRSG, which was taken from the output of a second identical PRSG, causes the first PRSG to output a sequence of bits which will be the same as those in the second PRSG following the seed values. By comparing the received data signals, actually the PRSG sequence output bit stream, with a sequence of bits generated by a first PRSG in the receiver, which are supposed to be identical because of the unique seed property, a determination of the phase shift ambiguity between the LO and carrier signals can be made, and subsequently corrected. The principles of the invention also work for signals that modulated using octal phase shift keying.

IPC 1-7

H04B 1/707; H04L 27/10; H04L 27/18

IPC 8 full level

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H04L 27/2332 (2013.01)

Citation (search report)

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Cited by

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