

**METHOD AND APPARATUS FOR COHERENT
COMMUNICATION IN A SPREAD-SPECTRUM
COMMUNICATION SYSTEM**

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Abstract of the Disclosure

10 A method and apparatus is provided for encoding and decoding
to facilitate coherent communication. In encoding, reference symbols
are inserted into a stream of input data symbols (110) to form a
reference coded stream of input data symbols (114). Subsequently, the
reference coded stream of input data symbols are prepared for
15 transmission over a communication channel by spreading the reference
coded stream of input data symbols with a spreading code prior to
transmission over the communication channel. In decoding, a received
communication signal (120) is despread with a spreading code to derive
a stream of reference samples (132) and a stream of data samples
20 (138). The channel response is estimated by utilizing the stream of
reference samples (132). Finally, an estimated data symbol is detected
from the stream of data samples (138) by utilizing the estimated channel
response.

FIG. 1 accompanies this abstract.