

Receiver for receiving a combination signal taking into account inter-symbol interference and with low complexity, method for receiving a combination signal, and computer program

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Abstract

A receiver for receiving a combination signal comprising two separate signal portions whose pulses are shifted relative to each other and/or whose carrier waves have a phase difference is configured to obtain a first series of samples using a first sampling, and is further
10 configured to obtain a second series of samples using a second sampling. The first sampling is adjusted to a symbol phase of the first signal portion, and the second sampling is adjusted to a symbol phase of the second signal portion. The receiver is further configured to obtain probabilities of transmission symbols of the first signal portion and probabilities of
15 transmission symbols of the second signal portion for a plurality of sampling times based on the first series of samples and on the second series of samples. The receiver is configured to determine probabilities for transmission symbols of the first signal portion based on samples of the first sampling and estimated or calculated probabilities for transmission symbols of the second signal portion without taking into account inter-symbol interference between transmission symbols of the first signal portion in the samples of the
20 first sampling. The receiver further determines probabilities for symbols of the second signal portion in a corresponding manner. A corresponding method and computer program are also described.

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Figure 3