

## ABSTRACT

APPARATUS AND METHOD FOR FRAME DETECTION AND/OR  
FREQUENCY OFFSET DETECTION IN A RECEIVED WIRELESS  
COMMUNICATIONS SIGNAL

An apparatus for detecting a frame of a received wireless communications signal comprises a phase detector configured to determine a phase difference result from first and second received symbols of the wireless communications signal. A mapper maps a property of a known data symbol stored in the apparatus to a known symbol phase result. A comparator compares the phase difference result and the known symbol phase result to provide a comparison result. A frame of the received signal is detected in dependence of the comparison result. The apparatus also determines frequency offset in the received wireless communications signal from a mean of the comparison result.

(Fig. 2)



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