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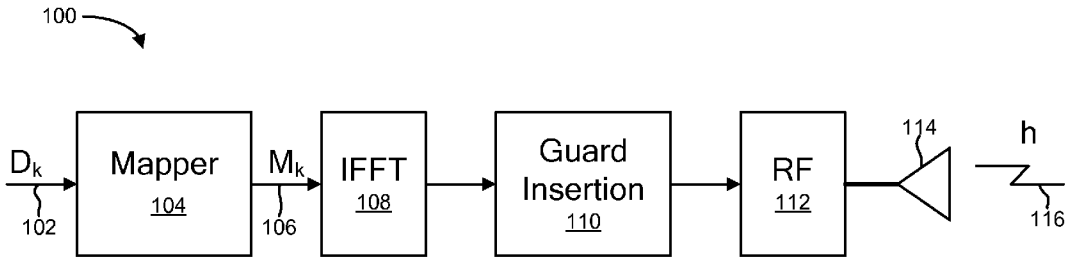
(54) **Title:** METHODS AND APPARATUS FOR SIGNAL AND TIMING DETECTION IN WIRELESS COMMUNICATION SYSTEMS



(57) **Abstract:** In accordance with a detection method in a wireless communication system, an initial hypothesis for a starting position of a desired signal within a received wireless communication signal may be determined. The desired signal may have a conjugate symmetric property. At least one correlation value may be determined based on the initial hypothesis. The at least one correlation value may indicate the extent to which at least one sample sequence selected from the received signal has the conjugate symmetric property.

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