



ABSTRACT

APPARATUS AND METHOD FOR ESTIMATING TIMING CLOCK OFFSET IN **A WIRELESS COMMUNICATIONS SIGNAL**

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An apparatus for estimating a timing clock offset component of a MIMO-OFDM wireless communications signal comprises a signal-to-noise ratio generator and a timing clock offset estimator. The signal-to-noise ratio generator generates
10 two-dimensional post-linear MIMO detection signal-to-noise ratio characteristics of the MIMO-OFDM wireless communications signal. The timing clock offset estimator generates a weighting factor from the two-dimensional post-linear MIMO detection signal-to-noise ratio characteristics and applies the weighting factor to an initial timing clock offset error estimate thereby to
15 estimate the timing clock offset component.

Figure 2