

**ABSTRACT****APPARATUS AND METHOD FOR ESTIMATION OF COMMON PHASE**

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ERROR IN A MIMO-OFDM SYSTEM

An apparatus for estimating a common phase error component of a MIMO-OFDM wireless communications signal comprises a signal-to-noise ratio generator and a common phase error estimator. The signal-to-noise ratio generator generates a plurality of two-dimensional post-linear MIMO detection signal-to-noise ratio characteristics of the MIMO-OFDM wireless communications signal. The common phase error estimator generates a weighting factor from the plurality of two-dimensional post-linear MIMO detection signal-to-noise ratio characteristics to apply the weighting factor to an initial common phase error estimate thereby to estimate the common phase error component.

Figure 2.