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(54) **LOW COMPLEXITY CARRIER FREQUENCY
OFFSET ESTIMATION ALGORITHM USING
KNOWN SYMBOLS**

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(57) **ABSTRACT**

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A communication device, including a receiver configured to receive a signal comprising a plurality of training symbols and a data symbol; and at least one processor configured to: select, from among the plurality of training symbols, a first training symbol and a second training symbol based on a first parameter and a second parameter; obtain a first symbol difference corresponding to the first training symbol, and a second symbol difference corresponding to the second training symbol; estimate a carrier frequency offset based on the first symbol difference and the second symbol difference; obtain a compensated data symbol corresponding to the data symbol based on the estimated carrier frequency offset; and demodulate and decode the compensated data symbol to obtain decoded data.

