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(54) **PROCESSING METHOD IN A WIRELESS TELECOMMUNICATIONS RECEIVER RECEIVING A DIGITALLY MODULATED SINGLE-CARRIER SIGNAL, ASSOCIATED WIRELESS TELECOMMUNICATIONS RECEIVER AND ASSOCIATED COMPUTER PROGRAM**

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(57) **ABSTRACT**

A processing method in a wireless telecommunications receiver receiving a digitally modulated single-carrier signal includes, between a matched filter, in the time domain, operating at a frequency drx×B and a frequency equalizer, operating at the frequency B, a decimation step comprising: i/extracting, from a filtered signal frame, a first sequence of samples for aiding the decimation and having the same power; and a second sequence of payload samples intended to be equalized; ii/estimating the variance in the power of each of the drx decimation phases of the first sequence and identifying the $n^{th}$ decimation phase associated with the minimum variance; iii/decimating the second sequence by selecting the $n^{th}$ decimation phase of the second sequence and supplying the decimation phase at the input of the frequency equalizer.