

ABSTRACT**Iterative method for synthesizing digital filters for shaping a signal**

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Iterative method for synthesizing digital filters, comprising the following steps:

- The generation of a transmit filter (101) intended to be applied to a signal to be transmitted,
- The generation of a receive filter (102) intended to be applied to a received signal,

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said method being characterized in that it comprises the following iteratively executed steps:

- The convolution (107) of the transmit filter and the receive filter in order to generate a transmission filter,
- The determination (108) of a criterion that is representative of the level of intersymbol interference on said transmission filter and whether the level of intersymbol interference is higher than a given level,
- The calculation of an equalizing filter for the intersymbol interference (110),
- The replacement of the transmit filter with the convoluted transmit filter (105) having the equalizing filter or the replacement of the receive filter with the convoluted receive filter (106) having the equalizing filter.

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Fig. 1