

ABSTRACT

A METHOD OF WIDELY LINEAR TURBO-EQUALIZATION IN A MULTI- 5 USER CONTEXT AND FOR A MULTI-CHANNELMULTI-ANTENNA RECEIVER

A method of equalizing a signal received by a plurality of antenna elements,
10 said received signal being produced by the transmission of signals by a
plurality of transmitters, said method including:

- a step of converting the received signal into the frequency domain,
- a step (203_{k,m}) of subtracting from said signal an estimate of the
intersymbol interference and the interference between users so as
15 to obtain a complex corrective signal,
- a step (204_{k,m}, 201) of conjoint widely linear filtering of said
complex corrective signal and the conjugate complex corrective
signal to obtain an equalized signal,
- a step of converting the equalized corrective signal into the time
20 domain,
- a step (101) of calculating coefficients of said at least one equalizer
filter from the covariance matrix and the pseudo-covariance matrix
of the received signal.

25 **Figure 5**