

Suppression of Impulsive Noise for 4G cell phones

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Description

UVIGO telecom engineers have developed a novel methodology to suppress the impulsive noise present in Long Term Evolution (LTE) cell phone systems. These systems that utilize multiple-input multiple output (MIMO) techniques are already used in fourth generation (4G) cell phones and are expected to undergo further development in a near future. The presence of impulsive noise can be detected comparing the signals received by different antennas, the subsequent application of an enhanced algorithm leads readily to the suppression of the deleterious effect of the impulsive noise on the radio signal. To date, no other methods have been specifically developed for LTE.

Innovative aspects and advantages

In comparison with current procedures:

- Efficient detection and suppression of Impulsive Noise. The Bit Error Rate improves more than 10 times over the threshold detection and blanking method.
- It is not necessary to implement additional hardware in the handset.
- Easy algorithm, with low computational load.
- Easy to incorporate in the LTE handset firmware.

Commercial applications and potential users

- Enhanced LTE cell phone terminals.
- Manufacturers of LTE receptors.

Patent status

Spanish patent.

Type of collaboration

Industrial partners involved in manufacturing LTE receptors are sought to collaborate through a patent license agreement.

