



REDUCTION OF THE ACQUISITION AND TRACKING THRESHOLDS FOR SPREADING CODES

Procedure for the reduction of acquisition and tracking thresholds for the spreading codes of an orbiting spectrum

Technological advantages

Improved acquisition of spreading codes

Reduction of the spreading code acquisition and tracking threshold by a minimum factor of 100

Reduced acquisition time

Improved robustness of geostationary satellites and satellites in survival mode

Compatible with all types of satellite

Proven technology on more than one hundred orbiting satellites

Compatible with LEO, MEO, GEO or HEO orbiting satellites.



The system can be applied to Galileo satellite receivers, for example.

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Summary of the invention

Reduction of the spectrum spreading code acquisition and tracking thresholds received in orbit by a satellite receiver accessing an orbital navigator, such as a Kalman filter which can be installed directly inside the receiver or ECU of the carrier satellite

The receiver is installed with a code loop, responsible for the acquisition or tracking of pseudo-random codes. The orbital navigator is the source of the precise accuracy of the satellite receiver speed and enables the acquisition and tracking threshold to be reduced significantly.

Commercial benefits

Instant installation and benefits

Compatible with existing and future receivers: GPS, GLONASS, Globalstar, Galileo, COMPASS, Egnos, GNSS and IRNSS

Compatible with spread spectrum remote control receivers used in ground stations or relay satellites

No modification to equipment is required.

TRL: 9

Patented invention, available under licence

Potential applications

Space industry