



GNSS SIGNAL RECEPTION AND TRACKING ALGORITHMS

Innovative, effective systems that quickly detect and accurately track modern radio navigation signals

Technological benefits

Fast detection

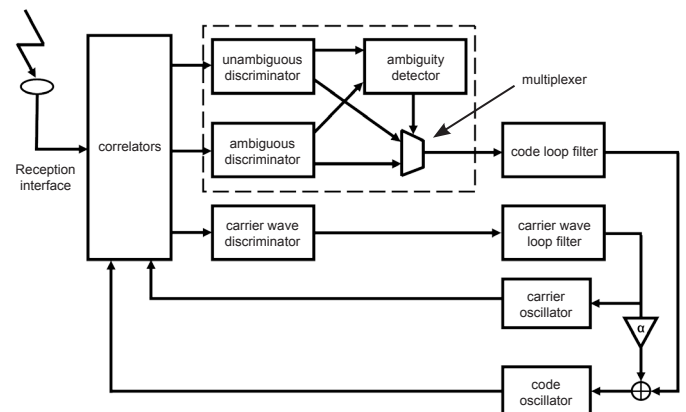
The first algorithm is suitable for all signals with long codes
The search time in a given period is divided by four, for example

Accurate tracking

The resolution of BOC ambiguities limits the loss of accuracy

Optimized material implementation

Minimal number of operations
Minimal power consumption
Compact electronics



Block diagram of a radio navigation signal receiver with BOC ambiguity resolution

Invention overview

Set of three algorithms and their electronics designed to receive radio navigation signals
Acquisition of a signal with an infinite code period by parallel operation of local replicas
Demodulation of a BOC-modulated signal by minimizing the number of channels
Ambiguity resolution using an unambiguous discriminator operating in parallel

Commercial benefits

Optimized performance

Updated GPS and Galileo signal processing

Competitive implementation

Low consumption
Compact
Low production costs

Potential applications

GNSS receivers

Ground or onboard receivers fitted to all types of vehicle

TRL : 4

Patented invention, available under license