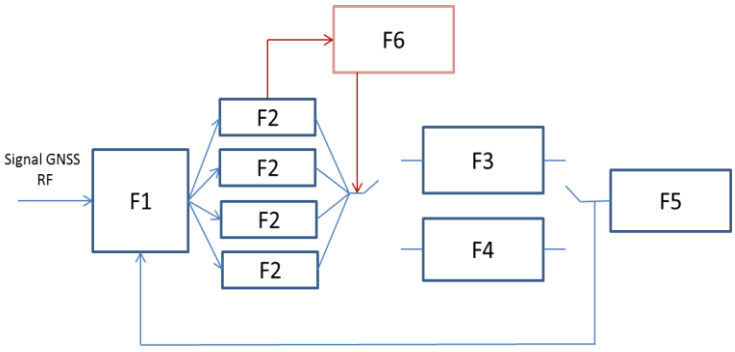
DEVICE FOR INTEGRAL TRACKING OF GNSS SIGNALS

Technological advantages

Enhanced radio-navigation

Efficient in complex environments :

- Handles multi-paths issues.
- Handles NLOS (non line of sight) issues.



Invention synthesis

The invention deals with enhancing GNSS positioning especially in complex environments characterized by multi-paths (introducing delays and errors). These paths may lead to signal losses, long initialization time and erroneous positioning.

The invention presents a system and set-up to detect multi-paths and then configure and receiver to operate in a degraded environment. The adaptative tracking mode based on the multi-path detection for each satellite allows to dynamically switch between a scalar mode and a vector mode (facilitating the tracking in the event of multi-paths or when the direct line of sight is lost).

Schematic according to this invention

F1 function : RF stage
F2 function : Tracking channels
F3 function : Signal processing in scalar mode
F4 function : Signal processing in vector mode
F6 function : Multi-path detection & switch between F3 and F4 modes

Commercial benefits

- Improvements in degraded environments
- Well suited to urban areas

Potential applications

- Radio-navigation using satellite positioning

Patented invention - under license.

For more information :

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