METHODS AND SYSTEMS FOR SOURCE TRACKING

BACKGROUND

Tracking moving signal sources has long been a challenge, especially when the source moves slower than the signals it emits. Traditional tracking methods often struggle with accuracy when analyzing complex movement patterns. There is a need for a more precise system that can reconstruct a source's path based on the sequence and timing of its emitted signals.

DESCRIPTION

The innovators provide a method for accurately tracking a moving signal source by analyzing the timing and order of emitted sub-signals. The system reconstructs the source's path by detecting these signals and determining their sequence, allowing for precise trajectory and velocity estimation. Unlike conventional tracking methods, it does not require continuous signal reception or line-of-sight visibility. By using advanced algorithms to analyze signal propagation, the system improves tracking accuracy while minimizing data processing needs. Its adaptable design makes it suitable for various environments.

ADVANTAGES

- High Accuracy
- No Line-of-Sight Needed
- Efficient Data Processing
- Versatile Application

APPLICATIONS

- Navigation – assisting in guiding vehicles or vessels.
- Environmental monitoring – tracking wildlife, seismic activity, or other natural events.

INTELLECTUAL PROPERTY

- Patent #8548177

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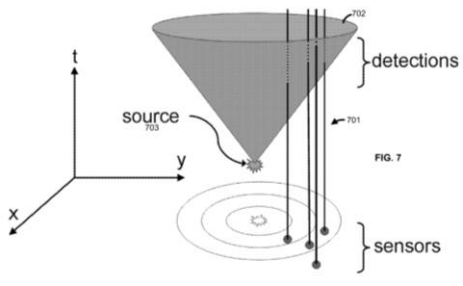

A space-time diagram depicting the detection of a signal by a planar array of four sensors.

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