

Description of the offer

1. Name of the offer

Technology transfer and organization of production of Local Radio Navigation System (LRNS) for GPS/GLONASS receivers, trackers, mobile phones and other devices which are equipped with GPS/GLONASS receivers.

2. Description of the product

The product relates to the navigation of moving objects and transmittio of the information about location of various objects using satellite navigation system GPS /GLONASS.

- Local radio navigation system (LRNS) is a functional addition to GPS / GLONASS. LRNS is developed to control the location of various objects using GPS trackers or other devices which are equipped with GPS receivers in closed spaces such as supermarkets, sport facilities, warehouses, cargo terminals, closed parkings, etc.

- The main functions of LRNS are to improve accuracy and reliability of positioning of various moving objects by using GPS / GLONASS receiver. For example, it maybe useb for landing of aircrafts or helicopters, for high-precision navigation ships and transports work in mountains or careers.

3. The practical advantage for the consumer

A) Local radio navigation system (LRNS) is designed to control the location using GPS trackers or mobile phones with GPS-modules indoor.

The main applications of GPS-trackers:

- monitoring of people (control of the movements of children or old people for protection).
- monitoring of the movement of transport.
- monitoring of the movement of animals.
- monitoring of the sports events.

Indicated are as of aplication of GPS-trackers may be enhanced by addition of LRNS indoors.

B) Local radio navigation system (LRNS) is designed for the use by Airlines, marine companies and trucking companies to improve the reliability of transport control.

Main use of GPS/GLONASS receivers on any transports is to provide definite location and speed.

Application of LRNS Hardware greatly improves accuracy and reliability of standard GPS/GLONASS receivers.

4. The market study

A) There are no similar devices at the present time, which can provide precise determination of the location and monitoring other objects using GPS-trackers and mobile phones with GPS - modules. In case of partial or complete absence of GPS signal known devices do not work, which reduces their effectiveness.

Potential targets for the introduction of LRNS equipments are:

- large commercial companies, in particular supermarkets;
- different sports buildings;
- large warehouses, factory shops and other production areas;
- Indoor parking, etc.

B) Application of LRNS hardware provides increase of the accuracy and reliability of control of the transports in difficult conditions. For example, if any GPS signals do not come through; if level of radiointerference is high; if the work proceeds under difficult conditions.

Potential customers of LRNS hardware are airlines, maritime companies and trucking companies.

5. Market size and growth in the future

In our demand assessment of LRNS equipment which extends the capabilities of all models of GPS-trackers and mobile phones with GPS-modules is more than ten thousands units would be sold per year.

6. Competing products

Modern GPS-trackers and mobile phones with built-in GPS modules from different manufacturers differ in design performance, instruction set, format of messages and support functions. However, they can provide the control of location of the objects only under the open space. In fact, GPS-trackers or mobile phones can work only under the open space, for example, at streets, fields, mountains, etc.

Competitor on the market is the company «Skyhoog Wireless» United States, which provides monitoring indoors with using "Wi-Fi" transmitters and special software. However, the positioning accuracy ensured is not high and it is more than 100 meters. In addition, receiver needs a special program, so existing GPS-trackers and mobile phones with GPS modules cannot be used.

7. Competitive advantages

- Provides control of location of different objects, transports, human location or animal monitoring indoor with accuracy about 3 meters.
- Provides uninterrupted control of different object's location indoor.

- Improves safety of different observable objects because of uninterrupted control

Achievements of the high technology has been incorporated in the current system. It allows to create a modern and competitive LRNS equipment for control of location using GPS-trackers and other devices with GPS-modules in indoors or spaces with limited radio visibility of GPS satellites.

8. The following work is suggested:

Stage 1.

We will deliver LRNS equipment for testing:

- Delivery of 1 unit of LRNS for use №1 (for indoor facilities)
- Delivery of 1 unit of LRNS for use №2 (to create a local area with sizes of 10x10 km for precise navigation)

Stage 2

Conduction of cooperative trials of LRNS on the customer's side.

Stage 3.

Transfer of technology, delivery of all necessary equipment and documents for serial production of LRNS on the customer's side.

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