Monitoring of cattle and horses in Russia

Challenge

The Neomatica company is engaged in hardware production for GLONASS/GPS monitoring systems. A client contacted them with a proposal to create a project for monitoring cattle and horses of individuals.

Animal owners wanted to solve the following problems:

- **Search over a large area.** Free-grazing animals can go very far. Finding a horse or herd takes several days. Searching in mountain areas is particularly difficult.
- **Fines.** Free grazing of cattle and horses is prohibited in settlements and on agricultural lands. However, animals come to restricted areas and eat crops. In this case, the owners are charged with fines.
- **Safety.** Animals come to railway lines and roads where they die being hit by a car or a train.
- **Horse stealing.** A stolen horse or cow seriously affects the owner's budget.

Solution

The Neomatica specialists suggested using GPS beacons on collars for cattle and horses.

- A beacon is embedded into an anti-shock body on a collar. Depending on the mode, the device works without recharging from 10 days (when tracking online) to 1 year (when sending data once a day).
- Data on the animal's location is sent to the Live GPS Tracking monitoring system and displayed on a map in the mobile application. Owners use this data to quickly find their animals or prove that they didn’t damage crops.
- The owner sets up geofences in the personal account. If animals enter the geofence, the owner receives a notification in the mobile app and can quickly go to the site and chase them away from danger zones.

Hardware

ADM50 trackers, ASC-01 terminals, ARNAVI BEACONS, M2M Express SIM cards, IP65 Z128JH-TM-ABS bodies, and reinforced collars of own production were used for the project.

Plans

Neomatica is developing a new version of the ADM50 tracker taking into account the requests of the company, who provides the solution to individuals. They plan to add an IP65 body to reduce costs of its separate purchasing, simplify the device configuration interface, add contactless configuration, and create a full-fledged remote troubleshooting service. Additionally, they will develop a bot to answer simple questions without the partner’s participation.

Results

The solution implementation allowed the owners to continuously track the location of animals and instantly respond if they get into a potentially dangerous situation.

Find animals quickly

Previously, it took 2-3 days to find animals; now, the average search takes an hour.

60% fewer fines

The number of fines for individuals using the solution was reduced by more than a half.

Mortality -50%

The solution helped reduce the mortality of free-grazing animals by half.

12% fewer lost animals

Due to the solution, the average animal loss rate has decreased.

Company profile

IoT project of the year nomination: Agriculture

Industry: Animal tracking

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