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## The "BigLock" Smart Locking System

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At of 2013, the specialists of JSC IPK STRAZH (Russia) developed the BigLock smart locking system (hereinafter referred to as the System), based on the GLONASS/GPS technology.

This System consists of a central database server, mobile workplace, software, communication systems (a GSM cellular communication channel using 3 mobile operators, a satellite communication link and an electronic locking/sealing device (ELSD). The ELSD itself is made up of two components –the Sirius reusable electronic unit and a Sprut-777 standard disposable seal, combined into a single locking/sealing module during seal installation.

The mobile workplace makes it possible to simplify the process of seal installation: the user only has to read the electronic unit and seal bar codes and enter the item ID number by hand or by voice.

The system operates in real time, which enables the user to monitor the ELSD condition through the transit, and, if the seal is tampered, an alarm signal will immediately pop up in the personal cabinet, showing the location coordinates and time of the alarming event. Also, additional remote sensors (humidity, temperature gas and other transmitters) can be used to monitor the parameters of the item sealed.

Furthermore, the System may benefit to continuity of knowledge, including by following of routes and timing of item transfers.

The System has been commercially operated for more than three years; from April 2016 it is successfully used to track more than 14 000 items within domestic and international transfers.

### Which "Key Question" does your Abstract address?

NEW1.6

### Topics

NEW1

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