**Статья**

ServiceSoft GС has developed OHL monitoring service, which has been transferred to a new platform with the latest modern advanced technologies. The service was designed in a minimalist style with emphasis on data, and convenient perception.

The main service users are energy and electric grid companies managers and control center operators. Information is transmitted to the dispatcher workstation (AWP). Data received in time allows for a quick response to emergency situations (wirebreaks, short circuits, elevated vibration, wire-line dancing) and monitoring the condition of overhead lines.

Featuring our service enables grid management companies to use their human, material and technical resources for quick identification of the place and cause of emergencies in a more rational way, thereby significantly reducing the time to eliminate the effects caused by negative factors.

The service allows you to perform the accurate determination of damage places with time reduction of repair works’ processes, equipment downtimes and power shortages in settlements, enterprises and socially important objects.

Our Service is a live product. We do not stand still and introduce new technologies. The functionality is permanently updated and is to be implemented in the service development.

**Economic and service benefits:**

• Power line maintenances cost cut

• Losses decrease due to electricity facilities shortage

• Improving dispatcher efficiency

• Wire breaks location determination accuracy

• OHL status online monitoring

• Long-term budget planning possibility for maintenance and repair of the line/supports throughout the

overhead line.

• Key indicators and characteristics monitoring

• Event History Availability

**Service operating principle:**

The module installed at the power line requires at least 10A for stable work. After mounting the module on the wire and applying voltage to the line the module turns on automatically and starts to interrogate the sensors.

Information to the server or to the dispatcher center is transmitted via the GSM channel with a frequency from 2 minutes and more. In case of transmitting interruption the module will save the data to the flash memory and on the next connection this data will be sent with updates. Data from the modules is stored in a cloud server, where it is possible to transfer data directly to the dispatcher using the IEC protocol.

An averaging data algorithm is provided when data is displaying on graphs. It is not always necessary to see every point on the chart in data analysis, especially when we are interested in trends and changes identifying in time. In this case, the data is divided into equal time intervals and the average value is calculated for each segment.

**Посты:**

1. Alert message send

In case of emergency or pre-emergency event on the measured channels — alert message is sent by SMS, as well as to a customer Skype account.

2. Mobile version suitability

Full functionality is available in the PC version, almost full is in a mobile version of the service.

- сurrent values transmitted from the device overview

- archived data graphs

- reporting

Data is updated in real time, on the cards of the object and on the graph, the quick response is possible to change the situation. Also, for each object and its sensors, the status is calculated based on the established boundary values.

The capabilities of the mobile version are planned to update in development.

3. Reporting

Reports are available on any device (PC , iPhone, iPad, Android). Data requests can be realized for any period of time. At the current moment, the report export to Excel files is available. Also, it is possible to generate reports for several objects in the same Excel file where data for each object will be placed on a separate sheet.

For the future the reporting system will be developed and updated, e.g. select the sensors which data will be displayed in the report: current, temperature, sag angle, vibration amplitude and frequency.

The report is built by sensors data, where values from different sensors are combined by the time stamp

4. New OHL monitoring service is being developed

The service allows you accuracy determination of damage places with time reduction in repair works process, in equipment downtimes and power supply interruption in settlements, enterprises and socially important objects

5. Functionality updates development

We do not stand still and introduce new technologies. The functionality is updated and will be implemented in the service development.