



SODIS Building M 3.0

> Real-time software for automatic monitoring systems of buildings and structures

> Mission

SODIS Building M is aimed at completing the following tasks:

- managing the automatic monitoring system of buildings and structures
- collecting and storing of data received from sensors and equipment that measure control parameters
- processing and analyzing of data to determine the technical status of a building
- customizing the special processor of the monitoring system and setting up rules for the system operation which determine the technical status of a building or structure in a real time mode

The operation of SODIS Building M is based on decision-making algorithms for the technical status of structural elements and soil interaction movements, and forecasting algorithms for the stress-strain state of construction elements.

The **decision-making algorithm** for the stress-strain state of structural elements is based on the comparison of separate control parameters that are calculated on the basis of data received from the measurement sensors. The calculated control parameters and ranges of acceptable variation are determined as a result of mathematical modeling of the operating building or structure.

The **forecasting algorithm** for the stress-strain state of structural elements is based on the determination of negative trends for changing control parameters and their approach to the acceptable variation limits.

SODIS Building M has a client-server structure and consists of a front-end (dispatcher workstation) and back-end.

SODIS Building M Server makes the data exchange and provides collecting, storage processing and analysis of data from the sensors installed on a building.

The **dispatcher workstation of SODIS Building M** provides display of the monitoring results, including those in 3D, and notifications about structural emergencies.

> Compatibility with other systems

SODIS Building M has a driver infrastructure, which allows the development of additional drivers to receive data from different measurement systems. Currently the integration with many popular measurement systems is realized (Leica, Geosystems, SisGeo, Horizont, GeoSIG, CTA-SM, SITIS and many others).

The transfer of emergency messages to SMIS is realized with a special XML messages exchange via TCP.

