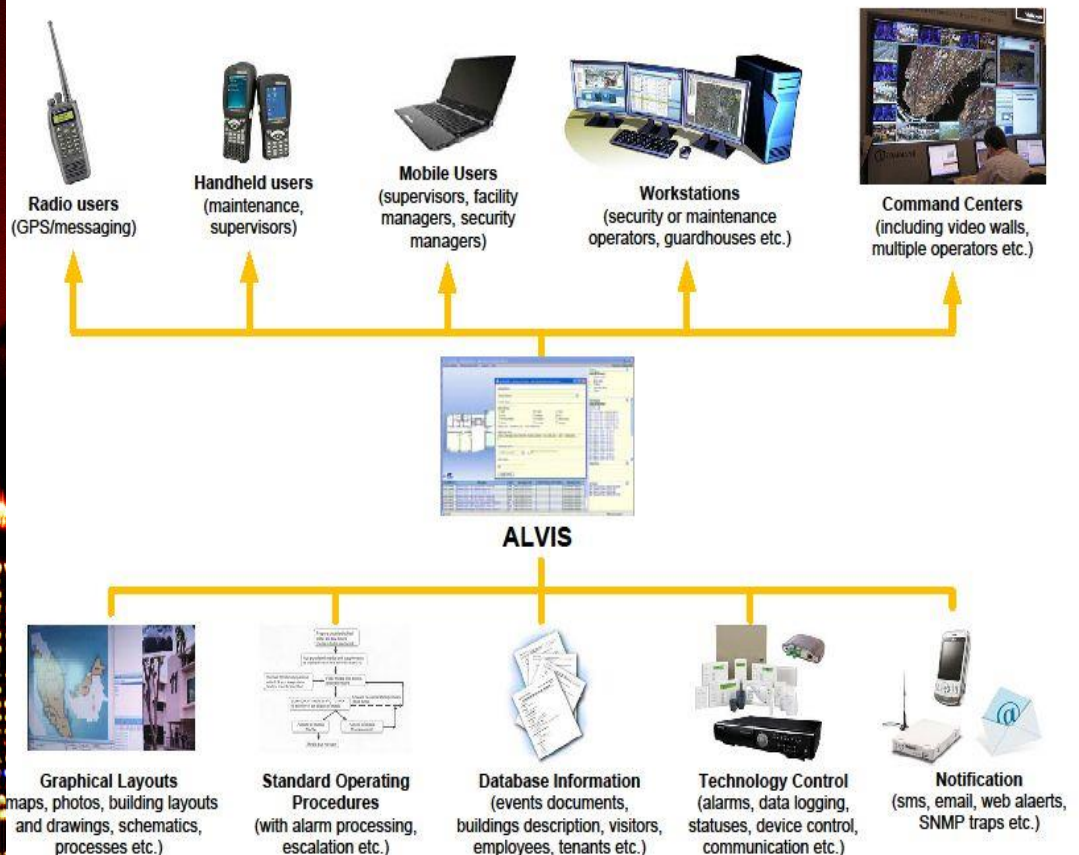# ALVIS
Alarm Visualization System

®

Graphical building integration and monitoring tool

WE ARE ON THE TOP
- features
- innovation
- support
- price

All-purpose software tool to control and monitor

► Security systems
► Fire alarm systems
► Access control systems
► Perimeters
► Video systems
► Measurement and control – heating, ventilation, elevators, lighting
► Other - processes

Radio users
(GPS/messaging)

Handheld users
(maintenance, supervisors)

Mobile Users
(supervisors, facility managers, security managers)

Workstations
(security or maintenance operators, guardhouses etc.)

Command Centers
(including video walls, multiple operators etc.)

ALVIS

Graphical Layouts
maps, photos, building layouts and drawings, schematics, processes etc.)

Standard Operating Procedures
(with alarm processing, escalation etc.)

Database Information
(events documents, buildings description, visitors, employees, tenants etc.)

Technology Control
(alarms, data logging, statuses, device control, communication etc.)

Notification
(sms, email, web alaerts, SNMP traps etc.)

(C) SPIRIT a.s.

spiril **a.s.**
INFORMAČNÉ SYSTÉMY

Features

AlViS is more than a program, it is a general-purpose tool to develop a user specific monitoring and control system. AlViS is a result of long-term development tested in hundreds of installations. It is suitable whenever a more transparent and comfortable graphical presentation of the monitored area is required.

Scalable architecture

AlViS simplest configuration represents client-server architecture, allowing distributed division of the monitoring and alarm system among several computers interconnected within a network (LAN, WAN, INTERNET…). The monitored panels can be connected to the same or different computers and their operation can be controlled by another computer.

AlViS itself is the **client**, ensuring the whole **visualization** part of the system. For functioning one or more **servers** are needed, which communicate with attached devices and provide the necessary data to AlViS.

The basic **AlViS** configuration could be extended to a robust central server installation including SQL server database and WEB server support. Moreover any combination of single AlViS desktop clients + desktop clients working on the central SQL database as well as WEB browser clients in one installation is possible.

Universality

By its conception and price AlViS is suitable for all types and sizes of the monitoring and control applications from the small ones, consisting of several monitoring zones only, to the large applications with hundreds of attached panels and hundred thousand of sensors.

Open system

AlViS has no limitation of sort, quantity, producer or the way of connection of the monitored devices. The number of supported systems, rather large nowadays, is still growing. Beside interfaces developed by Spirit other third party interfaces (supporting standard protocols as DDE, OPC, MODBUS, ESPA, …) may also be used.

# Simple system configuration and modification

The AlViS system modes

1. The **Development** mode is intended to design the monitoring and alarm system. This mode allows inserting object maps (drawn or scanned in different formats jpg, gif, bmp, html, wmf, emf, png, dwg …) into the system, as well as to place and configure device symbols to them. Within this mode, the built-in features allow:

- complete **customization** (internal scripting language with rich set of functions, MCI, OLE automation support.…)

- **easier work** when creating an application:

  o the possibility to **copy** control data at various levels, from defining the indicator statuses up to inserting individual maps into various applications

  o the possibility to configure a symbol according to a pre-prepared **template**

  o the possibility of **massive application changes** by means of the **template editing** and intelligent **Replace** function with regular expressions support

  o the possibility of applications development in both graphical (AlViS) and text modes (text editor, spreadsheet,..)

2. The **Monitoring** mode enables the I/O lines and displays status changes of the monitored devices. It also allows following all events on the screen, to switch between individual maps, symbols, alarms using the mouse and keyboard, or to control the connected devices by sending a command.
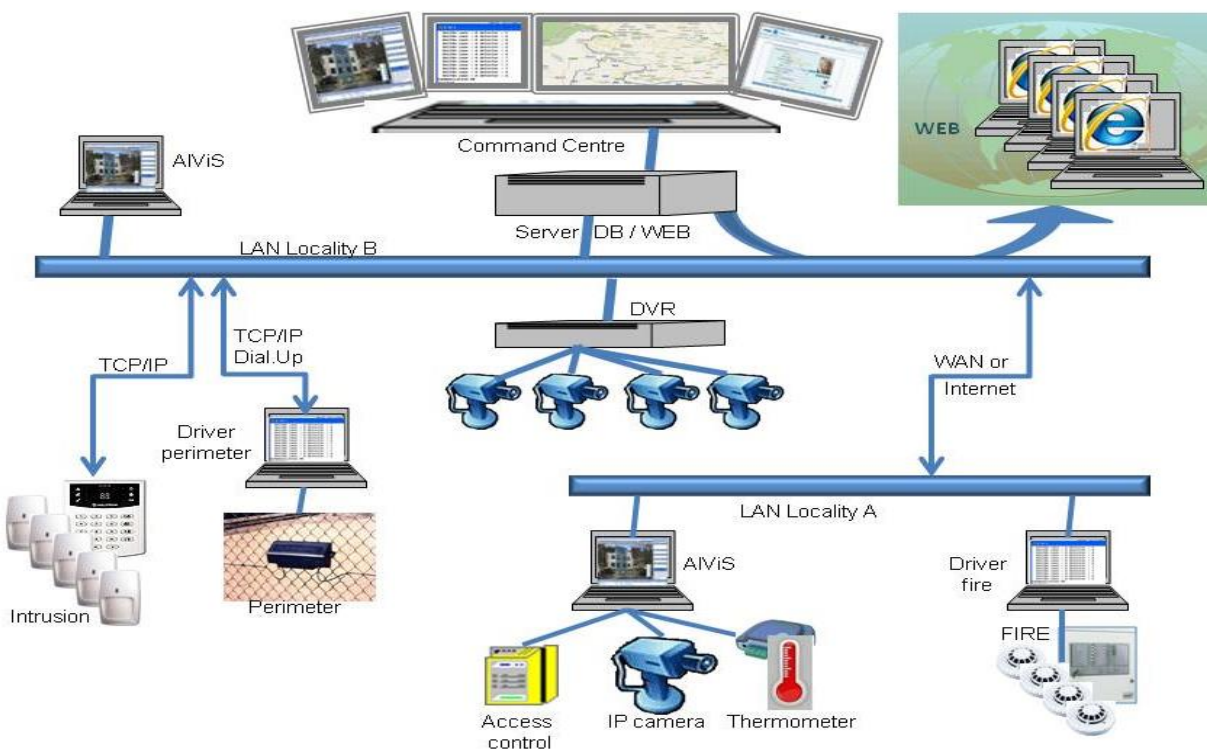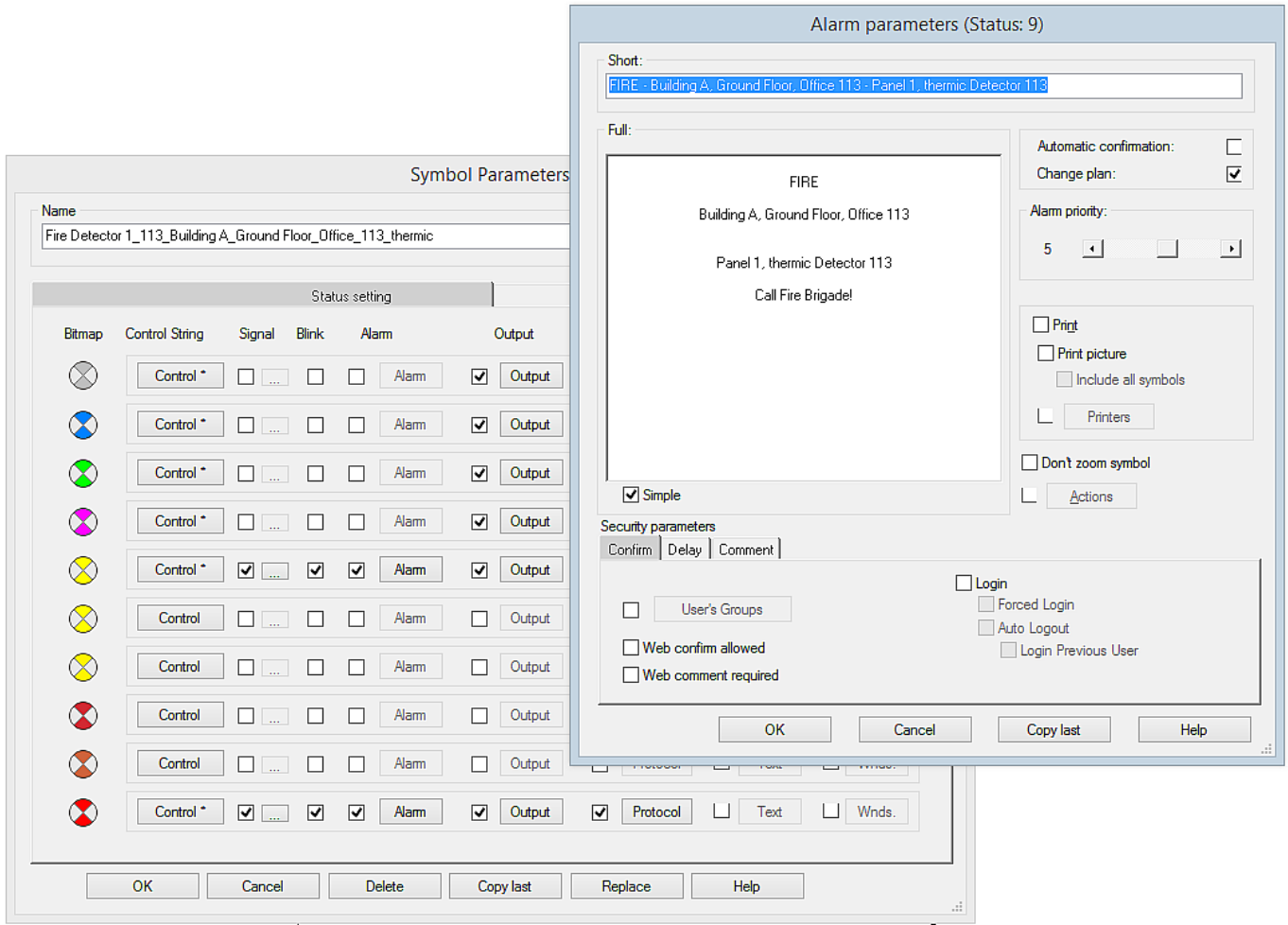
Clear graphic representation of the monitored area

The monitored area is represented by maps. Any map contains symbols representing the monitored devices. The system allows to define almost any number of maps, e.g. building floors, parking lots etc. Each map is a bitmap file created by a drawing utility, or by a scanner. At least one map must be created for each application.

Monitored devices

All monitored devices (cameras, intrusion detectors, fire detectors, emergency buttons etc.) are represented by *symbols* placed on the maps. Symbols can change their status (differentiated by symbol colour and/or shape) depending upon real measured signal values from the corresponding devices.
The following attributes can be defined for each status of a symbol:

✔ **symbol behavior** - acoustic signal or blinking

✔ **alarm** - defining the following parameters:

- *alarm priority*
- *access right* of the user who can confirm the alarm
- *automatic switching* to the map where alarm occurred
- *automatic* alarm *confirming*
- *alarm messages* - short message displayed in the alarm survey window and 2 kinds of long messages with instructions for the operator
- *automatic printing* of the map and alarm detail information

✔ **outputs** - command strings sent to a required device, either automatically or manually (by clicking on the device symbol). This feature allows to control other devices in the system using a device signal (e.g. to activate a camera after a movement detector status changed)

✔ **protocol** - defining the message to be recorded into the protocol, including date and time, with the possibility of on-line printer output.

Graphical localization of the place from which the alarm comes

When a monitored device status changes, and an *alarm* occurs, AlViS can *automatically display* the map with the symbol of the device. The *symbol color and/or shape will change* according to the status indicated, the symbol can also *blink and play an alarm sound*.

In the *alarm survey window* an *alarm description message will appear* and on the screen the *window with detailed alarm description and instructions* for the operator, will show up. *Protocol message* with date and time will be recorded into the event protocol.

Priority real-time processing of events

The alarm states are evaluated according to their *priority and the time* of occurrence. AlViS evaluates the highest priority alarm in real time. In cases when several alarms with the same priority occur, they are evaluated according to the time of their occurrence. After *confirmation* of the alarm by the operator the alarm with the next highest priority is displayed etc. All current alarms are also displayed in the *alarm survey window* (according to their priority and the time of occurrence).

Events protocol

All events occurring within the AlViS monitoring and alarm system are *recorded* in the events protocol. The events protocol is a file being continuously saved on hard disk and on printer. Description of all events is recorded - event message, type, message keywords, date and time of the message, date and time of the event, current AlViS and external users. The protocol messages can be viewed, filtered, exported and printed from the protocol survey windows. Backup protocol can be saved automatically as well.

Security system

In AlViS, all significant actions can be protected by a system of users, *passwords and access rights*. This way the system is protected against unauthorized manipulation. In AlViS development mode, a *list of groups and users* with passwords and access rights can be created. When in the monitoring mode, only the operations where the current user has the access right can be performed. For a group of users the visibility of individual plans, symbols and event logging can be defined – i.e. for the unauthorized user a part of the plans and features could be invisible.

The encrypted communication between AlViS modules as well as encrypted plans and configuration files are features that enhance system security against unauthorized access.

Visual arrangement of relevant information on the screen

All information important for the operator is displayed on the screen. Separate *information windows* show all *current alarms and errors*. When an alarm or error becomes invalid, the relevant message disappears from the window. Alarms and errors are listed according to priority and time of their occurrence. Special information windows show alphabetical *list of maps and symbols*. When a status change or an alarm occurs, the system allows displaying a *window with instructions for the operator*. *Events protocol* is also displayed in separate windows.

The number and type of information windows can be defined in the development mode. It can also be defined whether the operator is allowed to change windows size and their location on the screen.

AlViS Multiplan

Represents the option to define and place any number of plans on the screen including their symbols. Such way the overview plan as well as object detail view could be arranged and distributed on some multi-monitor installation or video wall installation.

ZOOM Plan

Zoom mode enables to change the size of the plan by turning the mouse wheel. This functionality is possible to disable in the **alvis.ini** file. Zoom mode enables to enlarge a plan detail, outlined by the rectangle. The Preview Window shows the position of the area zoomed.
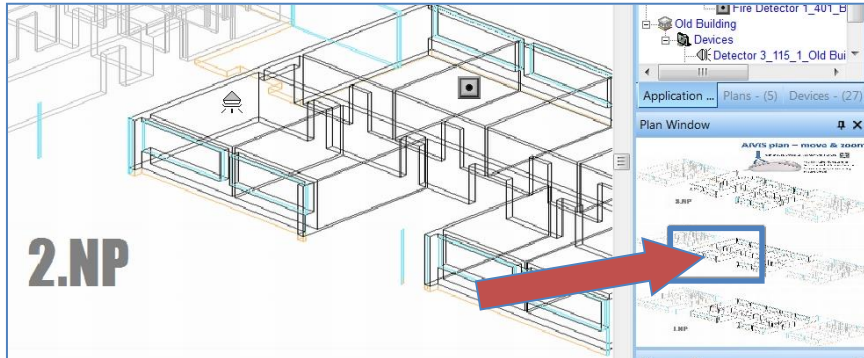

Scheduler

Scheduler is an instrument to schedule actions primary defined in the symbol output dialog. Actions could be launched regularly or even irregularly, at a certain time and interval. First, it is necessary to define and mark such events. To do this serves checkbox "Schedulable" in the dialog box to define an output of any symbol status.

Polygon, Polyline, Ellipse symbols

Polygon, Polyline, Ellipse graphics for AlViS behaves as a general symbols or templates. These graphics enables to set color and line thickness to indicate the status of an area.
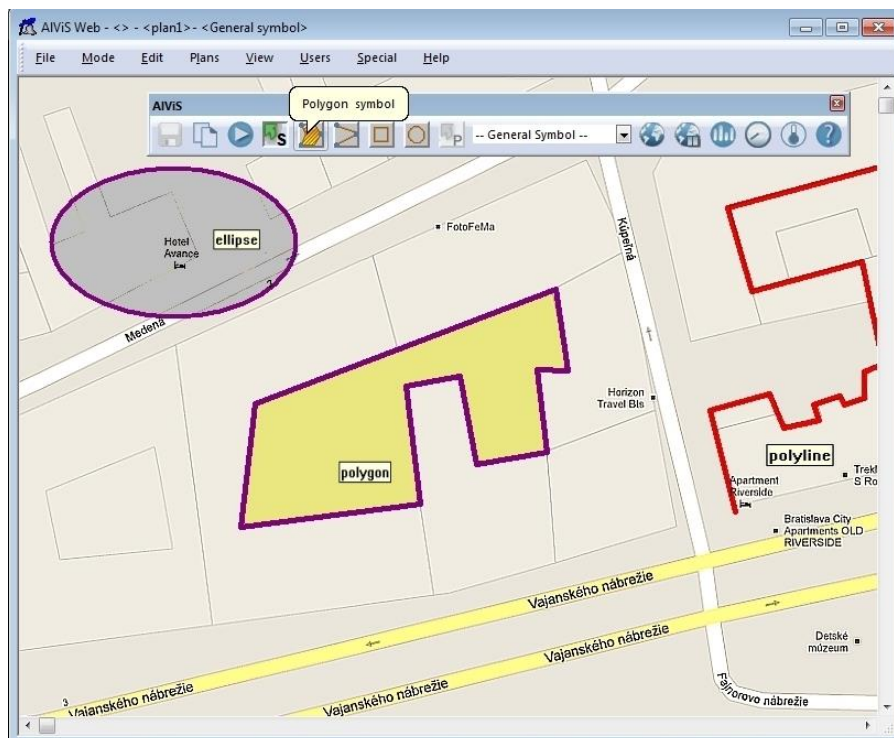

Symbol Layers

Any number of layers can be defined and each symbol in the application may be included into one layer. Layers are global for the entire application and can be switched on \ off in „Symbol Layers Window" or by AlViS scripting language commands. Turn off layer means that all symbols belonging to it as well as events (alarms, log messages ...) of these symbols are invisible. Each layer can be assigned to user groups who have a right to see the corresponding layer and turn it on \ off. Right-click in the **Symbol Layers** window in development mode will open the **Edit Layers** menu with the dialog box titled **Layers**. Standard way there is possible to add, remove and edit existing layers. It is also possible to tie showing layers according to user groups.

AlViS CD – Central Database Installation

Enables to configure the system with the central SQL Database server which includes the AlViS application (i.e. a set of graphical plans, symbols, there functions and configuration parameters). Moreover Database includes the common events protocol log tables. This installation provides that all AlViS workstations contain one common and consistent application and one events log. One ALVIS Workstation could be detached to be development console to operate all the application changes, test them and save into the central database where all the other workstations are invited to import and upgrade the new applications
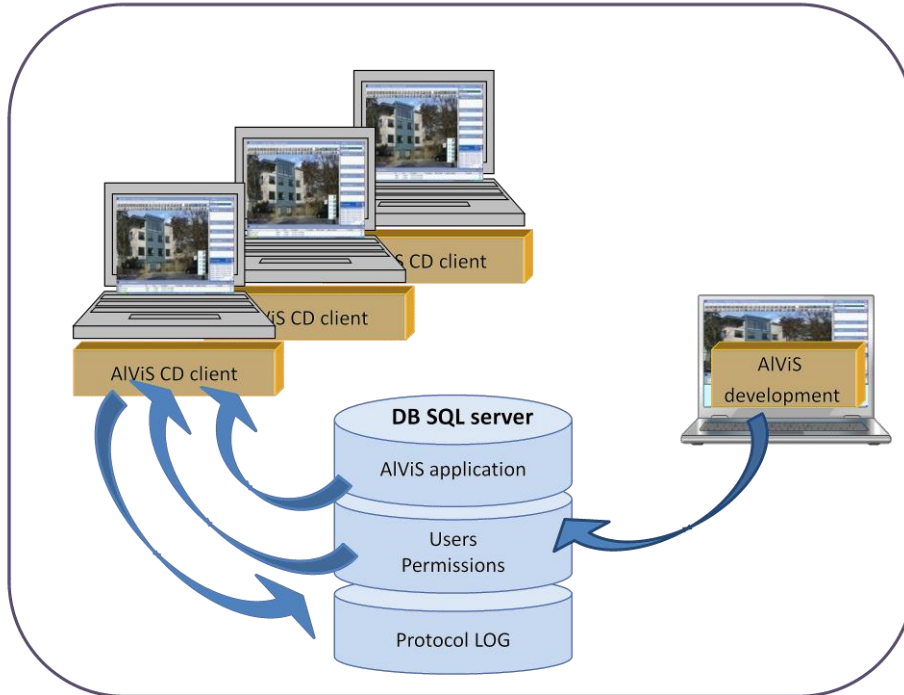
AlViS WEB

AlViS/WEB is the extension of one (or more) AlViS desktops running an application. This AlViS desktop could be running in hidden mode on a computer server having a role to communicate with device drivers and fill all appropriate information about events and actions into SQL database. The user interface is provided by dynamic WEB pages running on web server reachable from any internet browser on any authorized computer in the LAN. The web pages are based on data saved into SQL database and they are displaying the graphical monitoring of plans, symbols, events, temporary windows and protocol log the same way as the AlViS desktop client is displaying. The main advantage of this installation is that no local installation is needed on the target workstation but only appropriate configuration of standard browser is required. AlViS. Moreover web server supports "smart" pages of the AlViS application suitable for small Smartphone display and Smartphone browser to enable mobile monitoring of a building.

AlViS Smart for Android

AlViSmart is an Android application – non-graphical monitoring client which uses the notification system of Android to notify the user of events occurring in the monitored object(s). It can also be used to browse the structure of the monitored object(s). It communicates with AlViS web service to request, obtain and display data. The main features are – notification of any events, viewing plans and devices with symbol images representing the current state of the devices, performing actions on devices, viewing alarms and errors with possibility to confirm alarms and opening of AlViS Web graphical smart version in the browser.

Available drivers – the actual list is published at http://www.alvis.sk/en/technologies.php

CONTACTS

spirit@spirit.sk,   www.spirit.sk,   www.alvis.sk