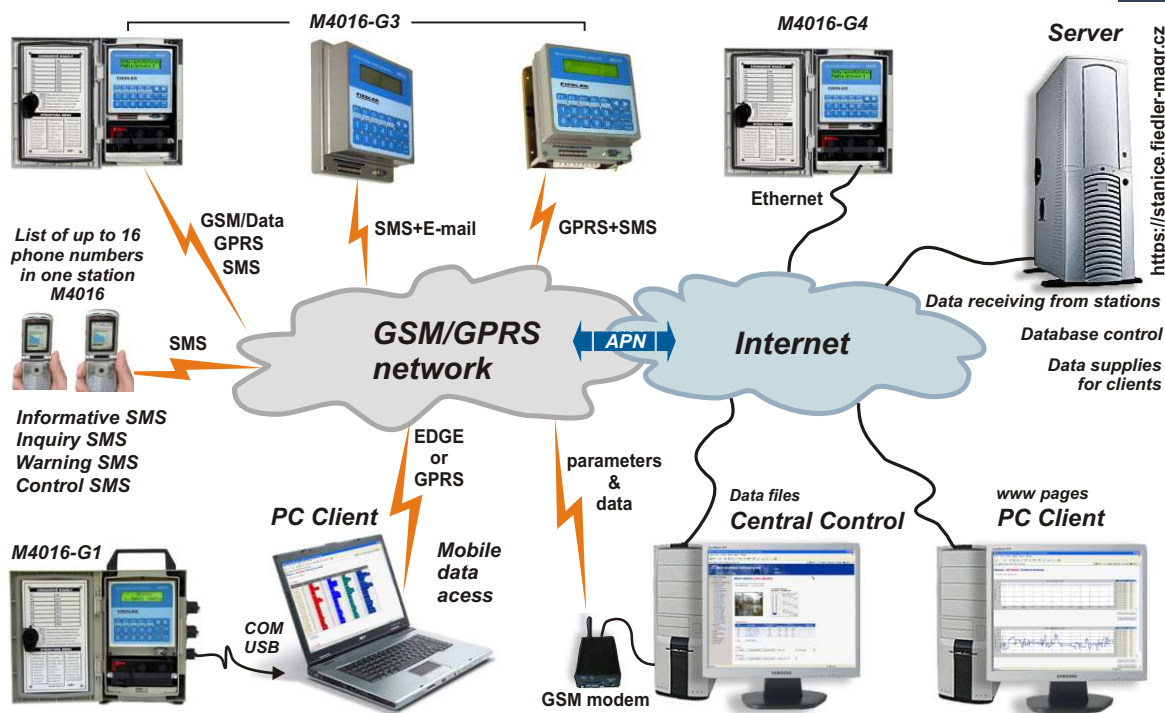


Telemetry

Data Transfer and Processing from M4016 stations

2



Data Transfer system

Telemetric stations M4016 or STELA series with its own built-in GSM modem use secured TCP/IP protocol in GPRS network for measured data transfer. In terms of users comfort and operational costs, this way of data acquisition is much advantageous than usual dial-up connecting from one controlling station.

Stations are programmed in a way to act as independent clients who transfer data regularly in a set time interval on a determined data server in the Internet (intranet). Access to saved data is than whenever and wherever possible through standard web browser. This solution has several essential advantages:

- ☐ Stations might be operated for the time of several years only from **its own batteries**, because GSM-GPRS modem is possible to turn off between transfers.
- ☐ Its possible to use cheap prepaid SIM cards without fixed IP addresses, which assigning is usually charged.
- ☐ In a case of an unusual event occurrence data will get on server immediately, because station doesn't have to wait for **reading cycle of server**.

Telemetric stations are predetermined to be used in many applications, thanks to its low purchase price and operating costs, easy installation, built-in warning SMS messages system, compact mechanical design and ability not only to monitor but also to operate this technology.

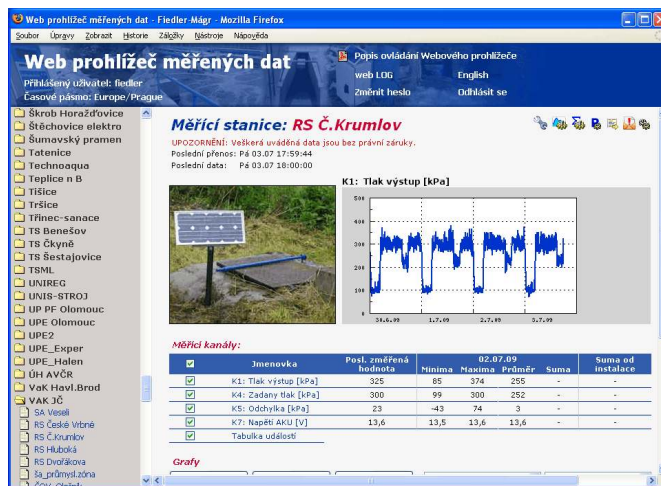
Typical example is monitoring and operating of ČOV, ČS, ÚV and VDJ or building of **water level stations**, level controlling in holes etc. No limitation for number of stations in the system.

Purchase price and operational costs

M4016-G3 telemetric station costs 30.400 CZK and STELA sets are sold from under 20.000 CZK.

Registered users don't have to purchase server and its software, because station lease of place on its own fast server and all services related (data hosting) is provided by producer for 100 CZK / per month / station. These services are for free for users of more than 20 stations.

Operating costs for GSM/GPRS data services for users of prepaid SIM cards range from 1 - 3 CZK per day /station. This price depends on number of busy channels, frequency of recording and interval of data transfer. These costs are approximately half for users of tariff SIM cards (without tariff payments).



Reliable, easily expanded and cost-effected data acquisition system with wide software

GPRS communication

Low purchase and operational costs

Easy expanding

Auto-diagnostics

Warning SMS system

Long-term operating from self-batteries

Data hosting on producer's server

Water Supply
Hydro-meteorology
Science & Research

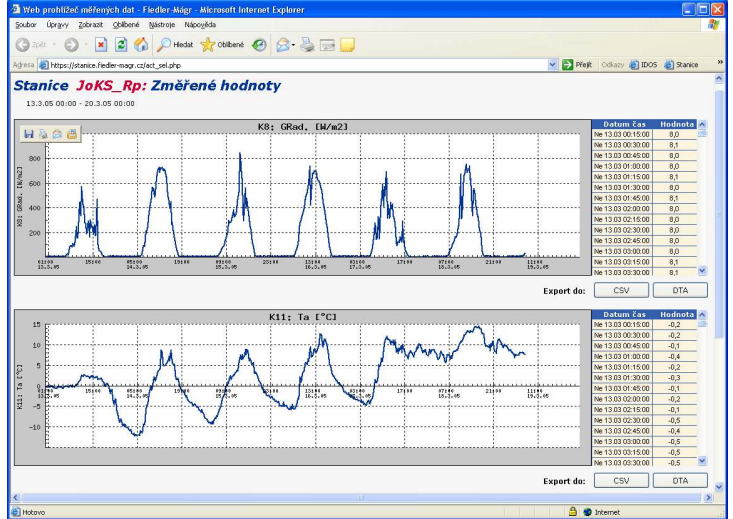
FIEDLER-MÁGR Electronics for ecology
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Tel.: 420/386 358 274, 420/603 569 565

Full list of products and price list are available on:
www.fiedler-magr.cz
e-mail: fiedler@fiedler-magr.cz

Data hosting, data acquisition and data visualization

Data hosting is service provided for users of telemetric stations. On a secured server of FIEDLER-MAGR Company a large saving place for measured data sent from stations M4016, M4316 and M4516 was set. Registered users have access to this data whenever and from wherever through standard web browser. Data hosting enables data visualization, data export and station control including their parameterization. Users therefore don't have to set up their own server not even provide operation and services

Displaying of measured data by web browser:



Tablet of monthly statistics:

Hosting features

Registered clients have access to data saved in a database on server through standard web browser. Other selected users connected to the Internet have different access to server.

Start page of each telemetric station is configurable by users and might include statistic chart and graphical display of selected channels, photographs or technological screen made on request.

Specific display of analogue channels and binary channels process for selected period, provides page of graphs and charts. Administrator of an area might configure for separate channels different types of display from simple line graphs through compounded graph with more channels to special single use graphs, which are for example compass card used in meteorology.

Statistic charts display daily minima/maxima including times of their occurrence and balance flow (rain-falls) divided into daily and monthly totals.

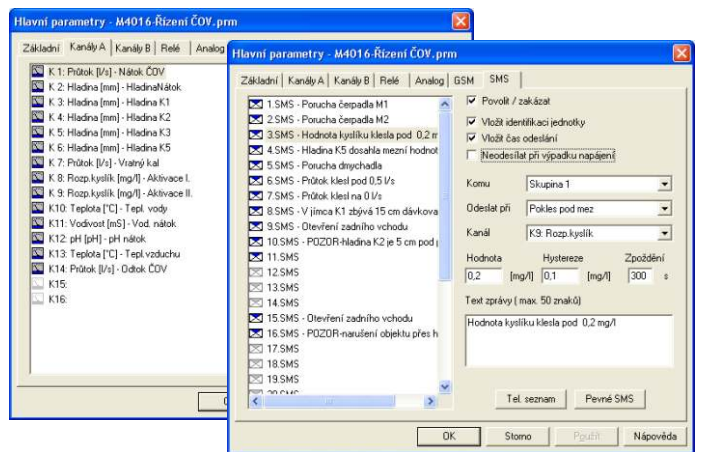
All data displayed might be easily exported from server right into Excel programs or MOST programs for further processing in own PC. Only pressing of one button can easily do this.

Automatically generated and sent files with exported data might make use of existing dispatching programs for its own installed visualization.

By the medium of server, partial (common user) or total (administrator of the area) parameterization of telemetric stations at a distance might be done. Each change of parameters is registered on the server including copy of parametric file, data and time of change, name of client, who has changed parameters.

Upgrade of telemetric station software (FW) might be done through server in a distance. Actual version of FW of all types of stations even of MOST programs is accessible for free on producer's server (unlimited upgrade for authorized clients).

Chosen parameters of M4016 stations (channels and SMS):

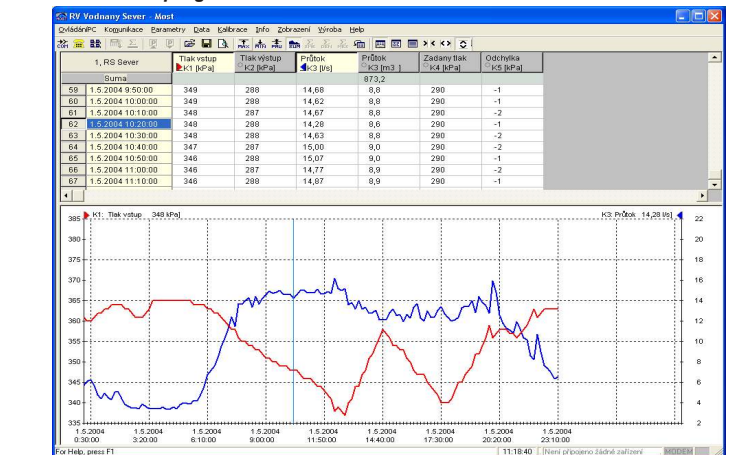


Software MOST

Manageable program for station parameterization M4016 and STELA. Program also displays actual measured items and conditions of binary inputs/outputs and also evaluates basic measured data. Loading data into program is possible to realize either by cable from attached station, by export of data file from server or by dial-up.

Besides of graphical and chart display of data, program offers averaging of measured items, data selection from any time period, limiting values searching, balance calculation and data print in a form of a message, including automatic monthly separation.

Vizualizace dat v programu MOST:



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