

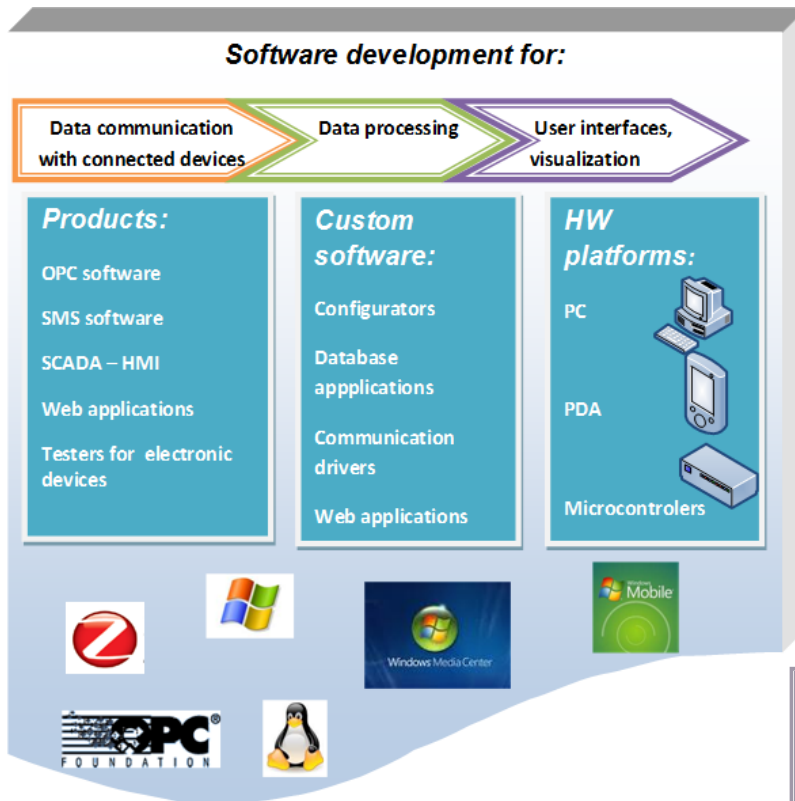


Solutions using our software products



SAE – Automation, s.r.o. Nová Dubnica
Solid And Effective partner at development of your
products and industrial automation

OpcDbGateway, SAEAUT SNMP OPC Server, SAEAUT OPC WebExplorer
and others allow to solve broad spectrum of tasks in various areas



Scope of our products and services:

- Electrotechnical, machine, automotive and chemical industry
- Traffic
- Water resources management
- Oil and gas industry
- Power industry
- Telecommunication
- Environment
- Asset and building management
- Agricultural
- IT infrastructure for small bussines customers
- Offices

Quality

The company has certified system for quality management built and maintained in accordance with ISO 9001:2008. The certificate covers design, development and deployment of the software solutions for industrial automation.



You can buy our software products directly from also trough our e-commerce provider. The price list, including all ordering details, is available at:

<http://www.saeautom.sk/sk/prod>

Using of our products, as well as hardware and software of other vendors, we provide **turn-key solutions** in the area of control and monitoring of technological processes, devices, buildings, computer wired and wireless networks, WiFi, GSM and GPRS communication, remote alarms, remote measurement, control, diagnostics, service, download, logging, SCADA, complex IT infrastructure solution for small business. We also offer **custom software development** for PC, PDA, microcomputers and web..

Software development for PC and PDA

Operating systems and platforms	Microsoft © Windows 7/2000/XP//2003, WINDOWS Vista™, Windows Small Business Server 2003, Microsoft © Server 2003, 2008, Microsoft® Sharepoint® Services, Flash, Microsoft © Silverlight, Microsoft Media Centre
Development tools - Microsoft® MSDN Subscription	Visual Studio.Net , Visual Studio 6.0 - Visual C++, Visual Basic, Office SharePointDesigner 2007 MCML for development of Windows Media Center applications
Development tools - Borland®	Delphi 8
Development tools - other	C/C++, Java, JScript, VBScript, Visual SourceSafe, Eclipse
Database technologies	Microsoft® SQL Server, MSDE, MS Access, SQL Base, MySQL, Oracle
Software - technologies	Web services, AJAX, COM / DCOM, ODBC ActiveX, OPC, XML,

Firmware development for microcontroller embedded systems and PLC

Development tools	PK51 KEIL Software C/C++ Assembler CodeWarrior Development Studio for Freescale 56800/E Digital Signal Controllers
Microcontroller embedded systems and PLC	MCS51, AVR, Motorola DSP, Brodersen Controls RTU-COM, GC-10, RTU-32, ZigBee wireless technology, nesC, MeshNetics + RitCloud XPort

Products - overview

- **OPC servers**
 - SAEAUT SNMP OPC Server Basic
 - SAEAUT SNMP OPC Server Enhanced
 - SAEAUT SNMP OPC Server Professional
- OPC Server/Client, SCADA, tool for integration of applications
 - OpcDbGateway
- OPC Client + visualization
 - OPCAdapter Basic
 - OPCAdapter Enhanced
- Web visualization application
 - SAEAUT OPCWebExplorer
- SMS software
 - SAEAUT SMS Server
 - SAEAUT SMS Server Professional
 - SAEAUT SMS Service
 - SAEAUT SMS Client
 - SAEAUT Web SMS Client
 - SAEAUT SMS Library (MFC) Standard
 - SAEAUT SMS Library (MFC) Distribution
- SAEAUT DFR downloader
- SAEAUT SOFTWARE SUPPORT Package
- SAEAUT USB hardware key (dongle)

ORDER, DELIVERY AND PAYMENT TERMS

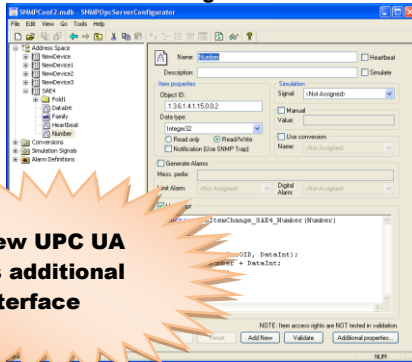
You can place your order online, by fax, phone or e-mail. Online orders are processed immediately and therefore more quickly than other methods. It is the preferred method of ordering. Online shopping system is powered by ShareIt, it includes secured payment methods through Internet, cheques or bank transfers for easy and comfortable ordering online.



Products overview

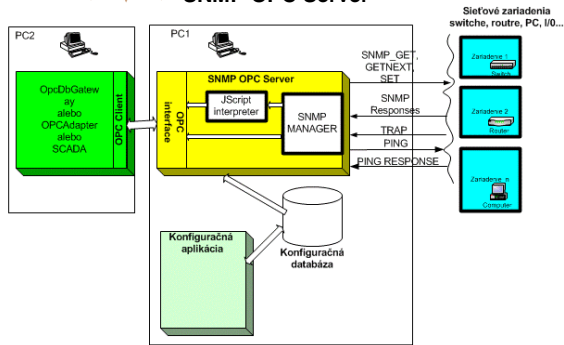
SAEAUT SNMP OPC Server with configurator

Configurator



New OPC UA as additional interface

SNMP OPC Server



SNMP OPC Server enables to:

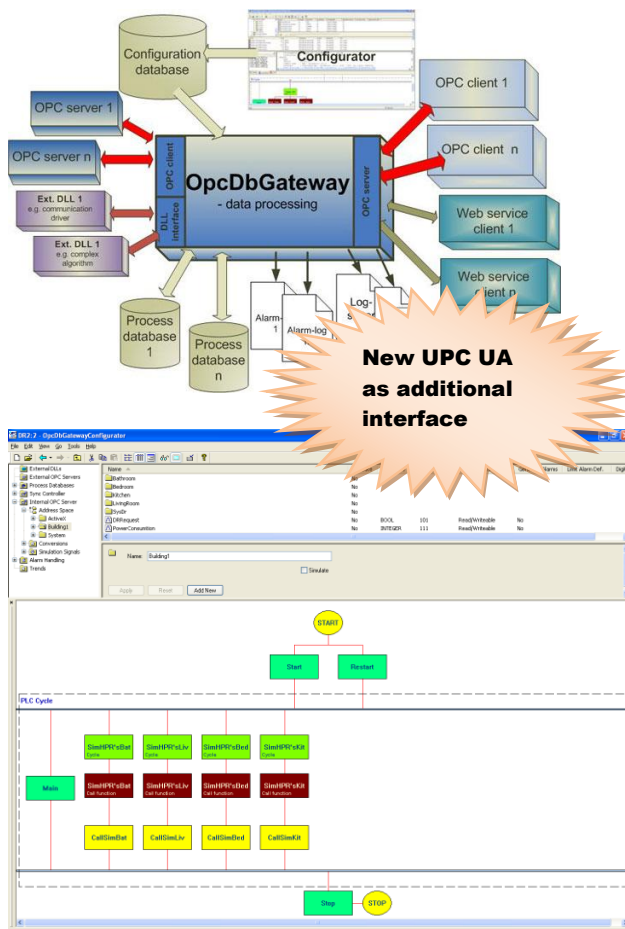
- acquire information or change variables in manageable network devices with SNMP agents
- integrate monitoring of network devices into a system of control and monitoring of technological process
- receive notifications from SNMP agents by utilizing special messages - traps
- trace response time, eventually operability of not manageable devices
- log activity into a log file
- implemented specifications: OPC DA 1.0, 2.05 a 3.0, OPC AE 1.0, OPC XML DA, **OPC UA 1.1**, SNMPv1 a SNMPv2c

Configurator enables to:

- discover connected network devices with the help of in-built IP scanner
- recognize static model of connected network devices (switches, routers, PC) or other devices that run a SNMP agent (I/O modules) using in-built MIB (Management Information Base) browser
- create static information network model based on data listed above and to transfer it into the OPC server's address space
- program the processing of variables by using JScript editor, create new JScript variables accessible through OPC interface
- set alarms for particular variables, including JScript variables
- define level of activity logs
- monitor connected devices using in-built OPC client

Our products SAEAUT SNMP OPC Server, OpcDbGateway and SAEAUT SMS Server Professional can be bought also with license USB key enabling transfer of license between computers.

OpcDbGateway with configurator



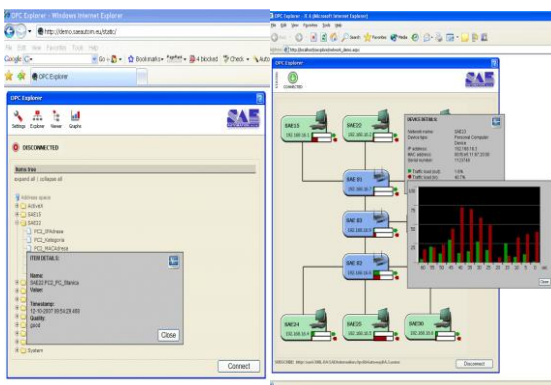
Monitoring, control of technological processes and devices

- connecting of various device using OPC servers
- connecting of various device via SW drivers for I/O modules for PC
- processing and archiving of technological data into process databases, text or XML files
- processing and control of alarms
- creation of reports
- starting of external programs and scripts
- data proxy between multiple OPC server
- interface between external OPC servers and database system
- enables to execute SQL commands for data manipulation in process databases
- enables multiple database connections to work with more process databases in the same time
- implemented specifications: OPC DA 1.0, 2.05 a 3.0, OPC AE 1.0, OPC XML DA, **OPC UA1.1**
- **using enhancement dll's various complex algorithms, e.g. communication drivers, dynamic system simulations can be integrated as configurable modules**

Configurator enables to:

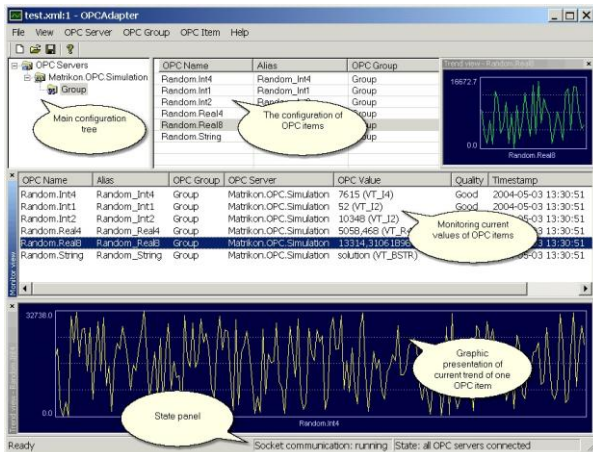
- integrate complex (configuration) for data processing applications easilz using configuring instead of more laborious programming. . The graphical user interface to define and review tha application structure facilitates this task very much.
- monitor connected devices using in-built OPC client
- browse standard or alarm log files
- validate configuration and easily locate possible errors
- search items in the configuration

SAEAUT OPCWebExplorer



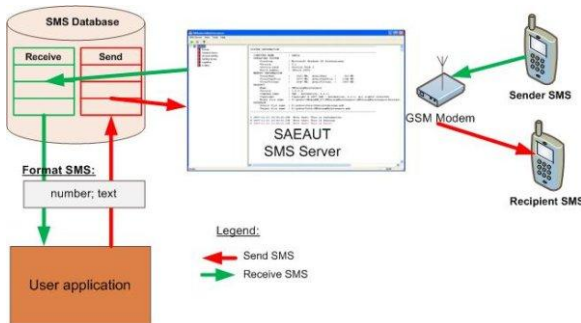
- „thin“ web client for data access to any OPC server with OPC XML DA interface
- in basic version it enables to read / write OPC variables listed in a transparent tree structure or as a list
- it is possible to extend to a **complete visualization application** for control and monitoring of technological processes, testing, ...
- when changing OPC server's address space, just a simple import of configuration file is needed – no programming required
- OPC Explorer web application utilizes OPC XML DA wrapper and AJAX technology – this technology allows to reduce amount of data transferred over network

OPC Adapter



- enables to access data, provided by OPC servers, by applications that do not use OPC technology – using TCP/IP connection on the same computer, a computer in the same or another domain, or via Internet
- can run without user interface as Windows service or with interactive user interface (this is used for configuring as well)
- source code of sample application, that communicates with OPC Adapter, is provided
- version with interactive user interface allows to use OPC Adapter as simple configurable visualization client – in this case it is useable as data concentrator with visualization putting control and monitoring systems into operation
- at request, it is possible to extend this data concentrator also for devices that do not support OPC technology

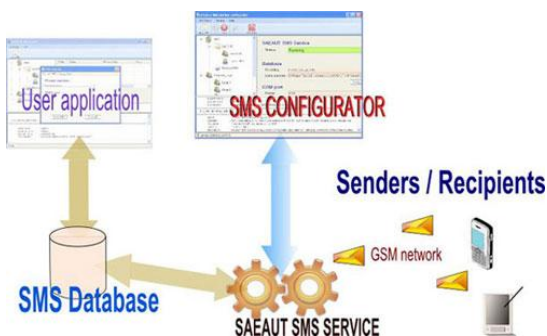
SAEUT SMS Server



Group of applications for **sending and receiving of SMS messages through devices with a GSM modem:**

- cooperation with other applications via shared database
- includes **SMS server** with user interface for configuration of communication parameters, phone numbers, user groups, activity logs
- includes a sample of a simple client application for entering phone number and text message, that runs on the same computer or on a computer in the same domain as SMS server
- includes a sample of simple **web application** with similar features as previous example that offers the **operation via Internet**

SAEUT SMS Service



It enables sending and receiving of individual and group SMS using personal computer and **provides SMS services for other client applications in LAN or internet.** It can be used as complete one user's SMS solution as well.

It can be placed either on server or on a desktop computer. A GSM modem or an Internet connection to the chosen SMS web gateway is necessary for its functionality (not provided in all product versions).

Product contains:

1. Runtime application without user interface implemented as the OS Windows Service
2. The configuration application with user interface having two purposes:

- The setting up of the runtime application functionality and features
- The client application to edit and browse of the sent and received SMS

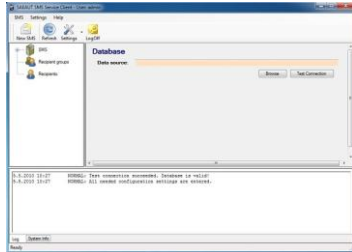
Customer applications using SMS functionality can be implemented by two ways:

- as external application connected to the SAEUT SMS Service trough shared database
- as VBA (Visual Basic for Applications) application implemented directly in the MDB database file delivered

with the product

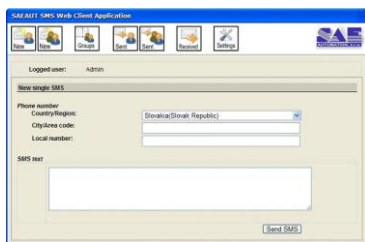
The conceptual difference comparing with above described SAEAUT SMS Server: - using of Windows Service instead of compact application with UI enables to use SAEAUT SMS Service in more powerful applications.

SAEAUT SMS Service Client



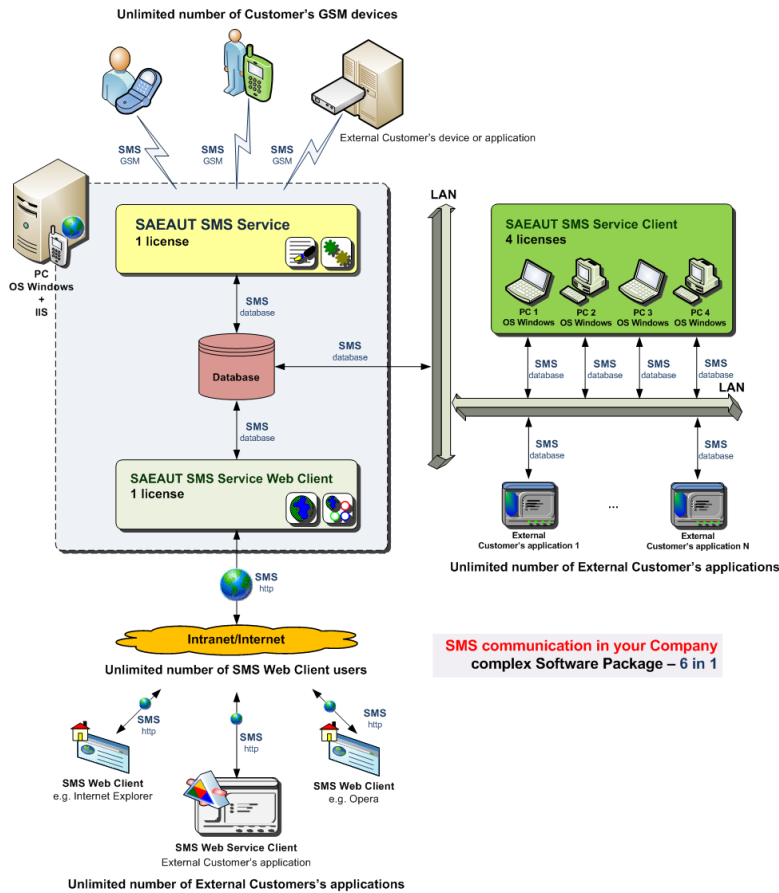
It enables sending/receiving individual or group SMS in LAN using software SAEAUT SMS Service. It can be placed on the same or different computer in LAN. It uses shared SMS database. Authenticated user has access only to own received/sent SMS.

SAEAUT SMS Service Web Client



SAEAUT SMS Web Client is the web application running in a web server which uses services provided by the software SAEAUT SMS Service. It enables editing and sending of individual and group SMS using user interface in web browser. Authenticated user can browse own sent SMS..

SAEAUT SMS Server Professional



The software bundle SAEAUT SMS Server Professional is budget priced solution consisting of SAEAUT SMS Service (1 licence), SAEAUT SMS Service Client (4 licences) SAEAUT SMS Service Web Client (1 licence).

It contains:

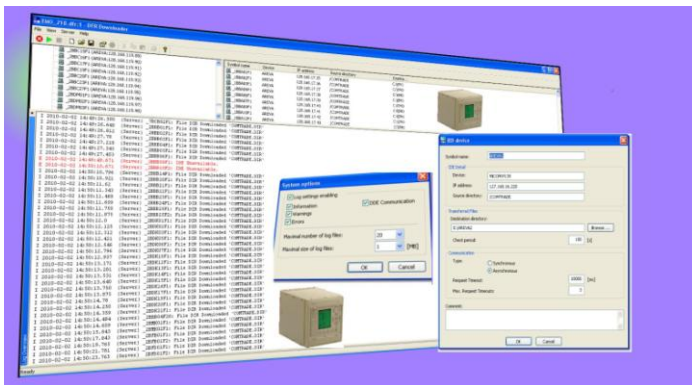
- Runtime application without user interface (UI) implemented as an OS Windows Service enabling SMS communication over GSM modem or web gateway. It can be placed on a PC with server or desktop operating system
- The configuration application usable also as a client application with UI (placed on the same PC as runtime application)
- Standard LAN client application (placed on different PC's in LAN)
- Web application enabling access to the runtime application using UI in a web browser. (It requires web server, e.g. MS IIS server)

Customer applications using SMS functionality can be implemented by two ways:

- As external application connected to the SAEAUT SMS Service trough shared database
- As VBA (Visual Basic for Applications) application implemented directly in the MDB database file delivered with the SAEAUT SMS Service.

Such application examples (descriptions and source codes) can be downloaded from <http://www.saeautom.sk/download>.

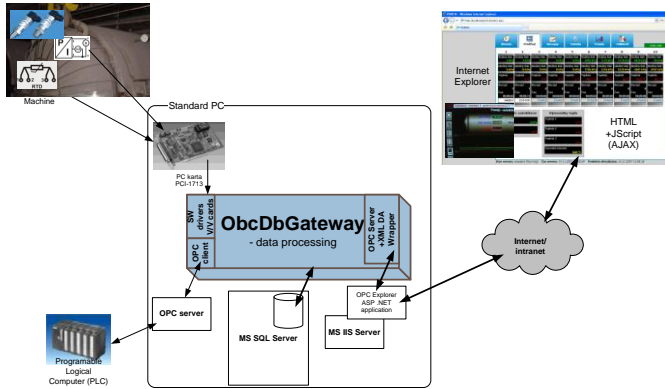
SAEAUT DFR downloader



A part of integrated communication solutions according to the standard IEC 61850 is also download of the digital fault records from feeder management protection and control modules (IED). The download according to this standard can be done also using file services of the MMS protocol (ISO/IEC 9506). Suppliers of the products for communications according to the IEC 61850 commonly try to cover the whole spectrum of the possibilities offered by this standard. The software product **SAEAUT DFR Downloader** was developed with the goal to cover only the functionality of the digital fault record downloads with the perspective to enhance it later also with automatic evaluation of records, sorting and eventually also a reduction of records according to the defined criteria. The product can use MMS communication drivers from other suppliers

EXAMPLES OF USAGE

SCADA HMI System using OpcDbGateway with SAEAUT OPCWebExplorer to provide web-HMI



Control and monitoring of technological processes for production of square blocks

- PC with input/output cards, operating system (e.g. Windows XP Professional), IIS web server, database server (e.g. SQL Server 2005), installed V/V module drivers
- OpcDbGateway – control and monitoring, storing into process databases
- OPC Explorer – visualization, control over Internet, intranet

In case of connecting programmable logical computers (PLC) on the same computer, OPC server for communication with PLC is installed as well.

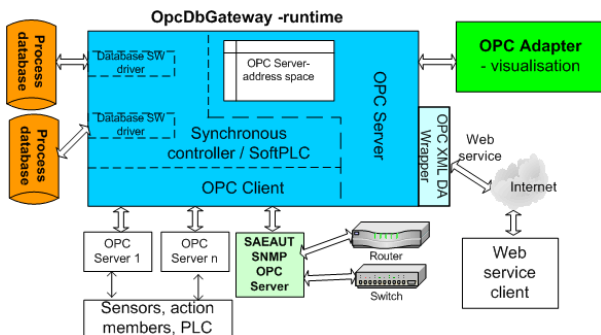
PC controlled test equipment for microcontroller devices



Computer controlled test equipment for automatic testing of complex microcomputer modules and logging of results into database or text files.

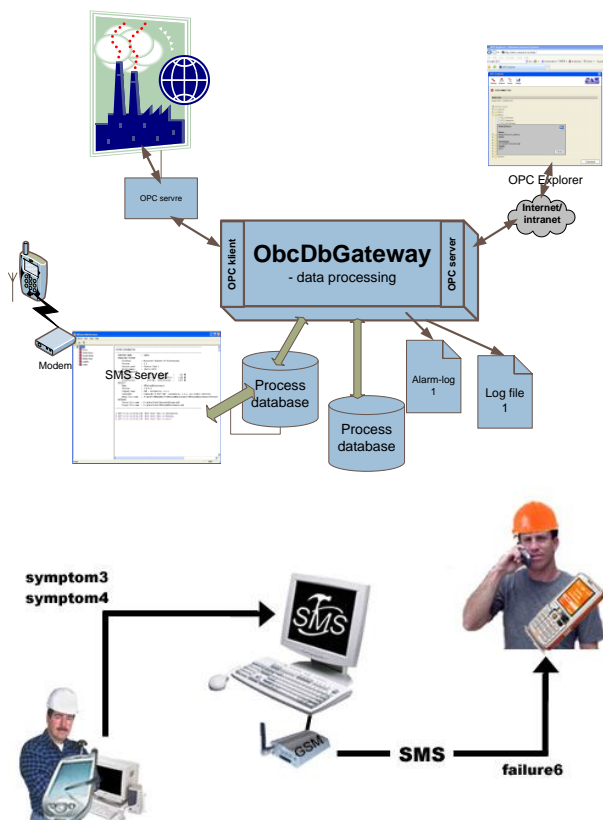
- PC with input/output cards, operating system (e.g. Windows XP Professional), IIS web server, database system (e.g. SQL Server 2005)
- OpcDbGateway – control and monitoring, storing into process databases
- SAEAUT OPCWebExplorer – visualization, control over Internet, intranet

Integrated control and monitoring of network infrastructure together with a technological processes



- PC with operating system (e.g. Windows XP Professional), IIS web server, database server (e.g. SQL Server 2005)
- SAEAUT SNMP OPC Server – monitoring of switches, routers, printers, I/O modules communicating using SNMP protocol
- OPC servers for connection of other devices
- OpcDbGateway – control and monitoring, storing into process databases
- SAEAUT OPCWebExplorer – visualization, control over Internet, intranet

Complex condition based SMS messaging



OpcDbGateway can accumulate current data from sensors of technological devices through OPC servers, evaluate them, store processed information into a process database and initialize sending of SMS messages to the maintenance employees. The service can be initialized also on elapsing of a defined time period or under other condition.

The process database of OpcDbGateway can be configured to be used by our application **SMS server**. When OpcDbGateway evaluates conditions for sending a SMS, the information is stored in a process database that is used for the cooperation with SMS server and automatically sends a message to all concerned employees. SMS server can also receive a confirmation message about completing a service intervention. OpcDbGateway can process this message and save it to other database, log file or display it in a web browser (when used with SAEAUT WebExplorer).

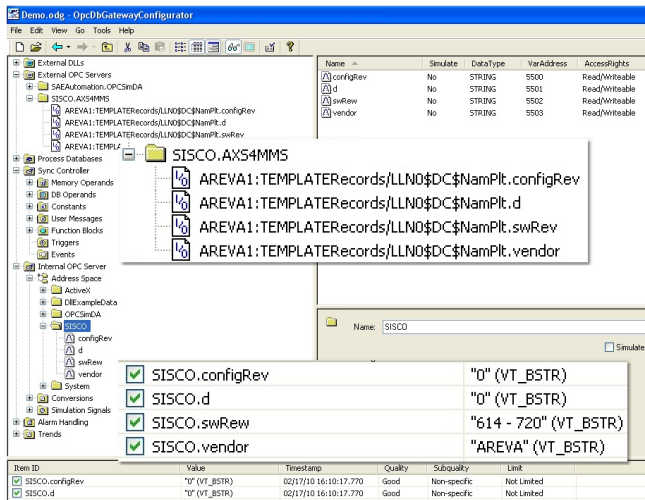
Using of our SMS related products



By using our **SMS reporting** and our (or your) other applications it is possible to ensure, for example:

- Administrative tasks. Information about customer's or employee's request has been closed or is in progress.
- Monitoring of production process with the possibility of informing competent employees about crucial process data values and production status.
- Monitoring of important parameters with the possibility of sending SMS messages, about current values if defined limits are exceeded, as alarms to competent employees.
- In logistics, for control of employees' tasks, eventually informing about current situation of cargo deliveries.
- Informing competent employees (e.g. maintenance employees) about failures or emergency situations without vain delay.

OpcDbGateway handles data from devices supporting IEC 61850



By using our **OpcDbGateway** and other applications it is possible to ensure, for example:

- Monitoring and controlling of real time process data from devices which support IEC 61850 and MMS protocol.
- Archiving of real time process data (IEC 61850 and MMS) into various types of databases (e.g. MS SQL Server, MS Access, etc.).
- Setting various types of alarms for particular real time process data and notification of competent employees about failures or emergency situations without vain delay.
- Triggering various types of events on the basis of a change of real time process data value or elapsed time.
- Visualization of real time process data (IEC 61850 and MMS) user friendly manner through web based application SAEAUT WebExplorer.
- Intermediating of real time process data to other applications over networks Internet and Intranet.