OPC Adapter

SAE-Automation – Solid And Effectively working partner for development of YOUR products and industrial automation

The system for connecting of a control and monitoring systems trough network and language platforms, or trough Internet

What is the OPCAdapter?

OPCAdapter is a software application for processing eventually visualising data from various automation devices of diverse suppliers with communication drivers implemented as OPC servers. For example: programming logical controllers (PLC), various intelligent sensors and actuators.

The advantage of the OPC technology is the fact, that it is very wide-spread industry standard. Its disadvantage is that it is based on the use of COM and DCOM technology and this fact limits its using almost only on Microsoft platforms. OPCAdapter removes this disadvantage, because data from/to OPC servers transfers from/to other applications, using communication driver over TCP/IP that does not use the COM or DCOM. This communication can proceed between two applications running on the same computer, or between applications on two computers located in different network domain or trough Internet too.
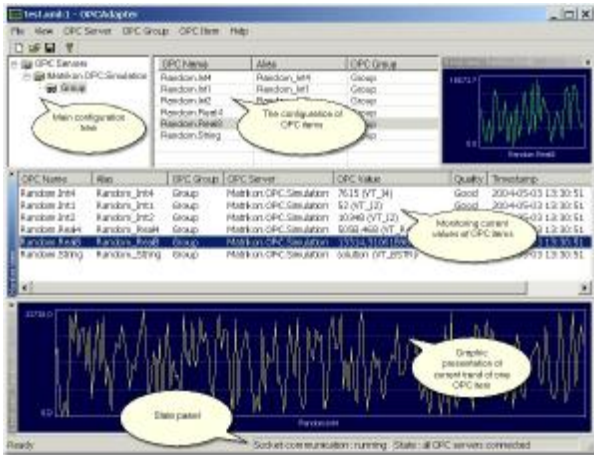

Figure 1.: *The application OPCAdapter with the user interface.*

For example the user application (which does not use COM) that is implemented in program language Java and is running on the same computer as OPCAdapter saves data collected using OPCAdapter to the database. This application represents the client to the OPCAdapter and OPCAdapter represents OPC client to the connected OPC servers. OPCAdapter and this user application communicate among each other through Windows sockets.

How can be OPCAdapter used?

- As gateway between your application and OPC servers implemented according to the specification OPC Data Access 2.0x.
- As self-contained application for collecting and visualization data from a technological process. There is the possibility to select which data will be displayed graphical and which only using characters.
- As OPC client for testing your OPC servers with possibility to browse on local and/or remote servers too. It allows storing this browsed configuration to the XML file.
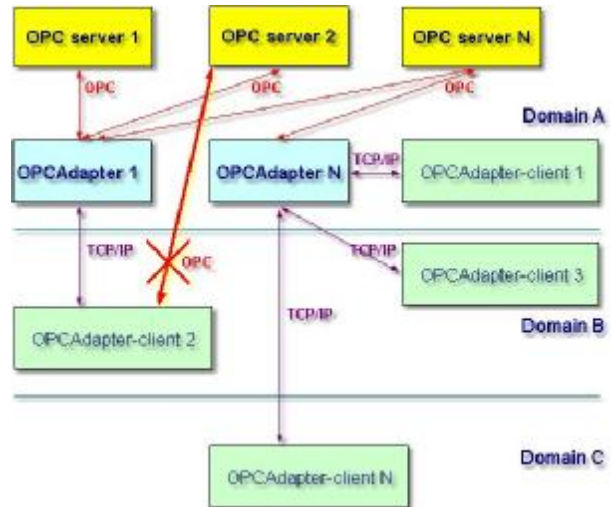

Figure 2.: *The connection of controlling and monitoring system between network domains.*

Which Components has the OPCAdapter software Package?

- OPCAdapter - NT service is the runtime application without a user interface.
- The application with the user interface (Figure 1) is applicable to create and tune a configuration of connected devices, or for simple monitoring of transferred data. It can provide the full OPCAdapter functionality, or it can be used only as configuration tool for OPCAdapter - NT service.
- The application OPCAdaptorSocketClient (Figure 5) is an example of the client of OPCAdapter, which simply presents data transferred from OPCAdapter through special communication protocol over TCP/IP layer. It is implemented in development environment Microsoft Visual C++ 7.x. and it is supplied with full source files.

- The help file that includes detailed description of the communication protocol and manual for creating user client applications, which are able to communicate with OPCAdapter.

Which Other Useful Properties has the OPCAdapter?

- It is able to connect/disconnect every OPC server extra or together.
- It happens often in control and monitoring of technological process that it is necessary to power down some equipment and consequently its OPC server is disconnected too. OPCAdapter has the ability to set the period for automatically trying to connect disconnected OPC server again.
- The configuration, which is stored in XML file, gives the possibility to use it in the user client application on remote computer for reconstruction of OPC servers address space.
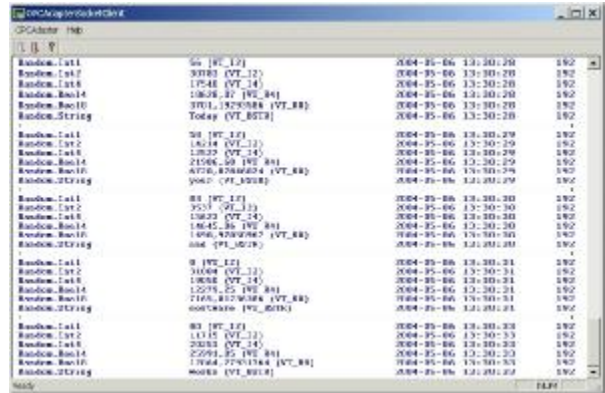
Figure 3.: *The connection of the controlling and monitoring systems between language platforms.*
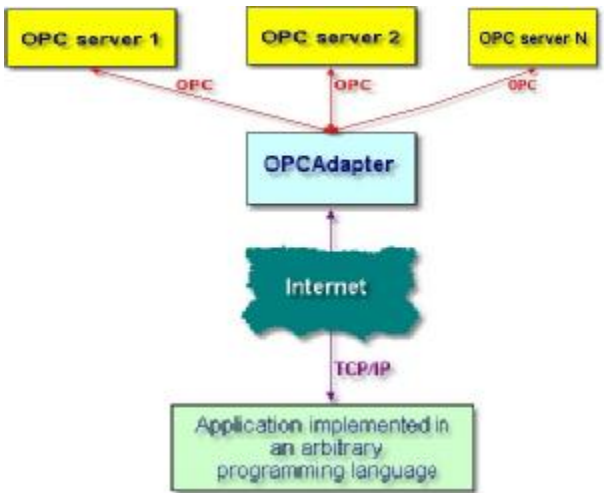
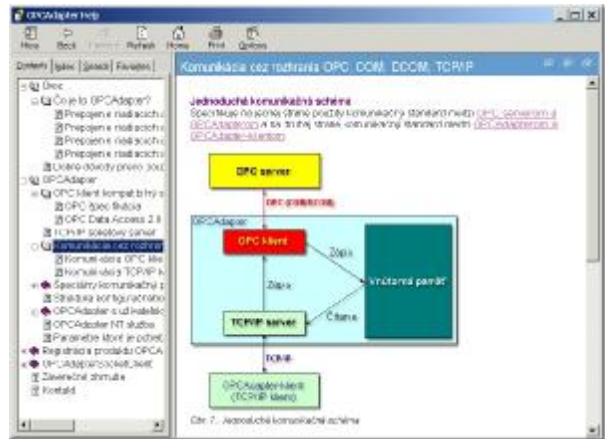**Figure 4**.: *The connection of controlling and monitoring systems in Internet.*

Figure 5.: *The application OPCAdaptorSocketClient, a simple presentation of the transfer data.*

Figure 6.: *User's guide.*

What can SAE-Automation, s.r.o. (company limited) Nová Dubnica offer in connection with the OPCAdapter?

- Deliveries of OPCAdapter software package.
- Implementing of complete control and monitoring systems using application OPCAdapter.
- Development of the user client applications.
- Extension of OPCAdapter with data collecting from different devices not using communication drivers implemented as OPC servers.
- Development communication drivers for the OPCAdapter server side by needs of your application – it means, that we are implementing the communication between your application and OPCAdapter.