

Figure 1 Visualisation of data in a tree view

Introduction

SAEAUT OPC WebView™ is a web application enabling to visualize data from different devices and data sources in a web explorer by unified way. It enables access to those data easily by choosing of URL, for example as <http://localhost/WebView/> in a web explorer. Of course, the name “localhost” can be replaced by a remote server (where the application is running) accessible over Internet. Access to the data on the device is for the application mediated by an OPC DA server. The SAEAUT OPC WebView™ itself behaves as an OPC DA client. The OPC DA server which is used must be run on the same computer or on a computer within LAN.

How it works

OPC DA Servers enable to OPC DA applications working with data from different devices by unified way independently on the type of the communication driver used to access data on the device. Visualisation of those data can be either **application specific** enabling proper structuring of visualisation data,

highlighting the most important data or even creation and animation of graphical objects based on data values, or **universal with unified visualisation of data** from different OPC servers.

Address spaces of the OPC servers are either **none-structured**, or more often they have a **tree like structure** where OPC items are properly placed within folders of the address space tree structure.

Universal visualisation can be implemented as a **tree view** (Figure 1) of the OPC items going out from the tree structure of the OPC server address space. Except of OPC items itself, also folders, where OPC items are placed, are shown. It can be visualised also as **none-structured list of OPC items** (Figure 2). This way, it is possible to look through many data items without necessity to unpack the folders in the tree view.

Item name	Item value	Quality
ActiveX.OPCDBCComboBox.DataSource	C:\Program Files\OpcDtgGateway\Data\ProcessDB.mdb	good
ActiveX.OPCDBPLTComboBox.DataSource	C:\Program Files\OpcDtgGateway\Data\ProcessDB.mdb	good
ActiveX.ReportViewer.ExcelProgramPath	C:\Program Files\Microsoft Office\Office\EXCEL.EXE	good
ActiveX.ReportViewer.SnapviewProgramPath	C:\Program Files\SnapShot Viewer\SNAPVIEW.EXE	good
ActiveX.SacChart.DataSource	C:\Program Files\OpcDtgGateway\Data\ProcessDB.mdb	good
DIExampleData11	5	good
DIExampleData12	24	good
DIExampleData13	0	good
DIExampleData14	18	good
DIExampleData15	1	good
DIExampleData16	1	good
DIExampleData17	3	good
DIExampleData18	3	good
DIExampleData19	4	good
DIExampleData20	1	good
DIExampleData21	1	good
DIExampleData22.PLCPeriodCounter_Copy	308	good
DIExampleData23.PLCPeriodCounter_CopyPlus10	318	good
OPCSimDA.Increment_Byte	157	good
OPCSimDA.Increment_Currency	0.0660	good
OPCSimDA.Increment_Date	7. 3. 1900 21:36:00	good
OPCSimDA.Increment_Double	66.900000000000005	good
OPCSimDA.Increment_Dword	669	good
OPCSimDA.Increment_Float	66.89955	good
OPCSimDA.Increment_Integer	669	good
OPCSimDA.Increment_Long	669	good
OPCSimDA.Increment_Short	-99	good
OPCSimDA.Increment_String	for development	good
OPCSimDA.Increment_Word	669	good
OPCSimDA.Simulation_Ramp	81	good
OPCSimDA.Simulation_SpeedCount	670	good

Figure 2 Visualising of data items within a list view

To make the visualisation really universal, **it must be automatically adapted to the OPC server address space** without change in its implementation. A part of the programmer’s API according to the OPC DA specification are also methods to

browse address space of the OPC server. Using those methods, the SAEAUT OPC WebView can provide mapping of the OPC server address space and adaptation on that. If we change address space using configuration application of the OPC server the visualisation of data will be automatically adapted to that.

How you can get it

SAEAUT OPC WebView™ is offered on request cost free to those our customers who bought one of our products OpcDbGateway™ or SAEAUT SNMP OPC Server Professional™.

How you can use it

SAEAUT OPC WebView™ is delivered preconfigured for one of above mentioned products. You can use it either immediately without change to provide visualisation of data items from your OPC server over web, or you can adapt it to another OPC server, and even to enhance it on a complete application specific visualisation. The application is delivered with complete source codes. It is implemented in ASP.NET using modules programmed in C#. It uses .NET Framework 4. You can modify or enhance it using a software development environment as e.g. Microsoft Visual Studio 2010.

As its enhancement, also its modification delivered with OpcDbGateway can be perceived. OpcDbGateway enables monitoring of its runtime application through so-called system variables which are accessible (alike as data from external devices) through OPC items. To watch them, special web page within SAEAUT OPC WebView™ has been created (Figure 3).

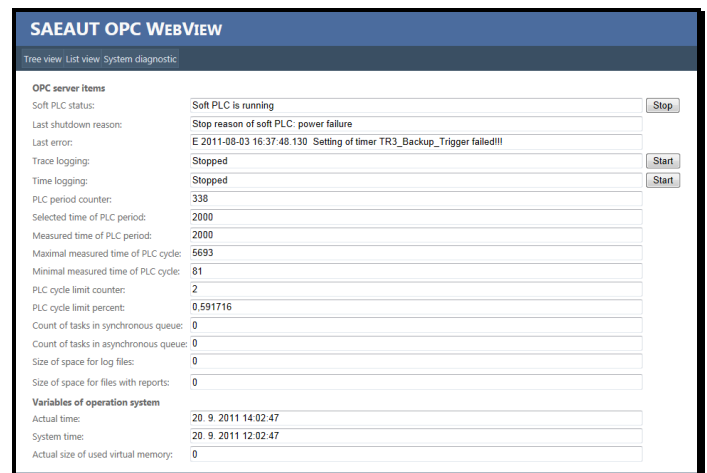


Figure 3 Visualisation of the system variables from OpcDbGateway

In the basic implementation, SAEAUT OPC WebView™ is prepared to communicate with one OPC DA server. If you want to use it to visualise data from more OPC DA servers, it is useful to use it together with OpcDbGateway which except of own OPC DA server has also own OPC DA client to which more external OPC servers can be connected. Except of this, data from them can be handled, saved to databases, put to log-files. OpcDbGateway can be also enhanced with programmed modules which can be used e.g. to implement communication drivers for those devices to which you do not have OPC servers.