OPCWare Client Developer

OPCWare Client Developer – OPC Client Applications Made Easy

OPCWare Client Developer is a suite of ActiveX Controls for Rapid OPC (OLE for Process Control) Data Access Client Development. OPC is a standard software interface based on Microsoft COM, that is used for exchanging data between devices and software in process applications. *OPCWare Client Developer* brings the power and flexibility of the OPC Data Access 2.0 Automation Interface to automation clients, without the need to learn or use the OPC automation object model, and without dealing directly with COM objects, collections or handles!

Read and Write PLC Data to and from the Factory Floor or the Office

This suite of ActiveX components enables simple and complex reading and writing of OPC data to/from HMI applications, databases, spreadsheets, etc. OPCWare Client Developer is an OPC Data Access (OPC DA) client. OPC DA is used to move real-time process or production data between PLCs, DCSs, and other control devices and HMIs, databases and even office applications!

40% Faster Development Time, Simple to Learn and Use

Many developers have tried other methods such as automation wrapper DLLs (typically called OPCDAAuto.dll) to OPC-enable applications written in Visual Basic or other compatible languages, but ran into difficulty. As the number of I/O increases, the applications become more and more difficult to maintain, with several lines of code involved in reading an item, several more lines involved in writing an item and still more code involved in managing the configuration.
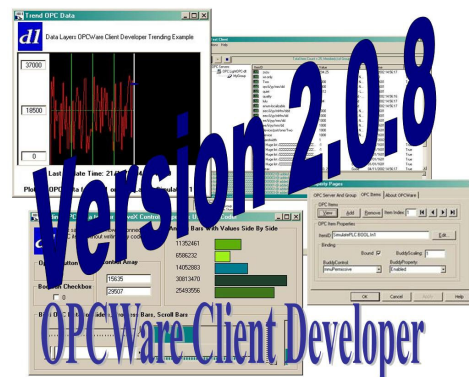
In most cases, it will cost almost as much again the next time around. Surely there must be an easier way...high quality, commercial, productivity-orientated, reusable software components is the way. That's *OPCWare Client Developer* in other words. Industry studies conducted by the META Group suggest that reused code shows a 75% reduction in defects compared with new code, and reusable components enable the final product to be delivered 40% faster (ComponentSource).

Typically, there is no requirement for any real understanding of the underlying OPC technology when using *OPCWare Client Developer*.
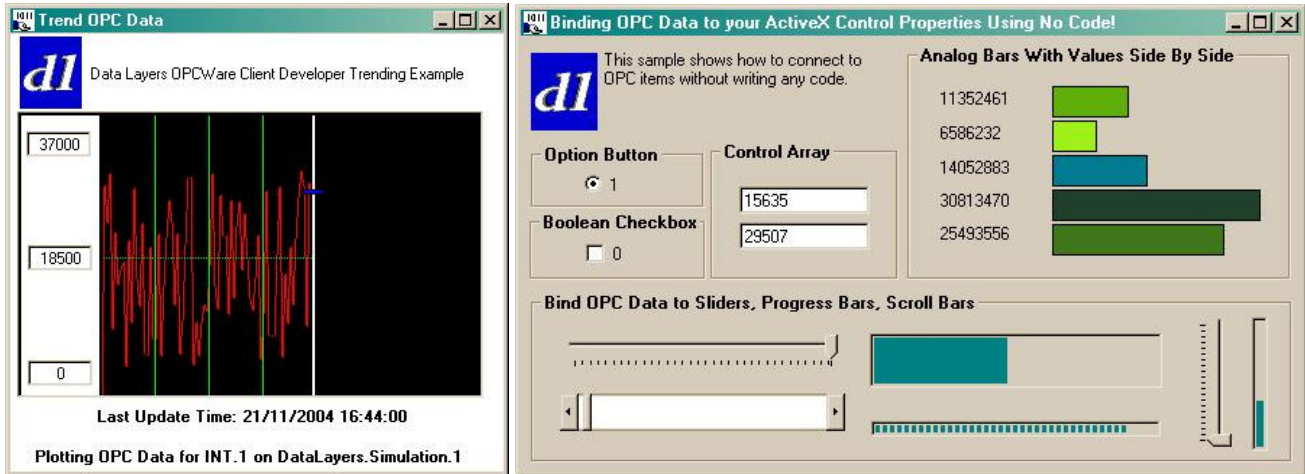
Support for Multiple Development Languages and Environments

Of course, when using a language other than VB6, it is difficult to find examples (or support). With VC++ or Delphi the custom interface can be used, again examples are available elsewhere. However, with these languages, it is necessary to write considerable amounts of code just to be able to read and write a few I/O points, so the value of using *OPCWare Client Developer* becomes apparent again.

Environments such as PowerBuilder and Matlab are not typically associated with HMI applications. As ActiveX containers, these environments can be used to leverage the value of components, but they are not the target market of most OPC server vendors so little or no OPC client support is available for those environments. These are just some of the various scenarios where the benefits of *OPCWare Client Developer* are really pronounced and apparent.
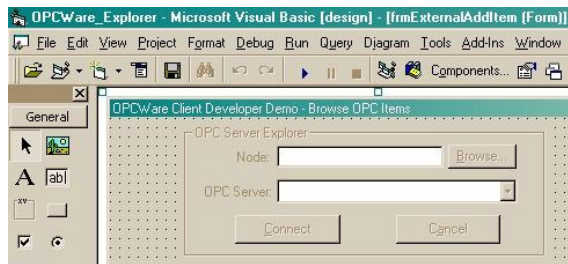
OPCWare Client Developer

Above: Sample screenshots of applications developed with OPCWare Client Developer
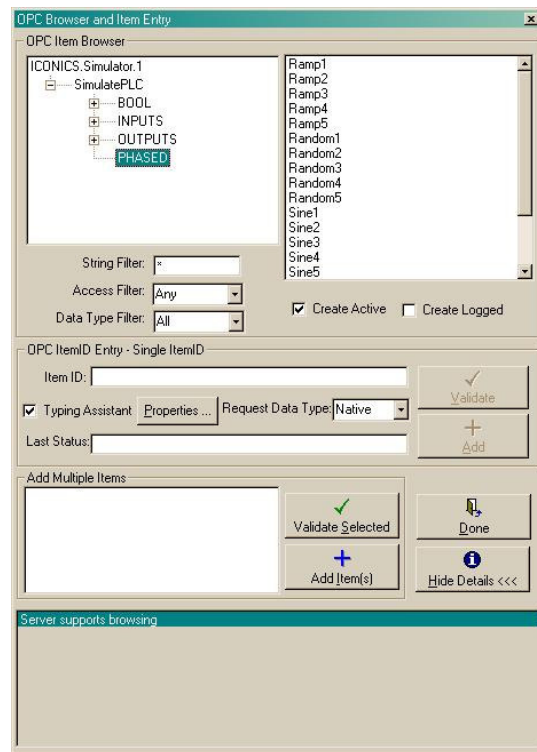
OPCWare Client Developer ActiveX Controls

The *OPCWare Client Developer* ActiveX control suite includes four controls that are used to browse and connect to available OPC servers, to perform easy read and write operations of OPC data, and to bind the OPC data values to properties of other ActiveX controls on Visual Basic forms. The four *OPCWare Client Developer* ActiveX controls are:

1 OPCWareServerExplorer

OPCWareServerExplorer is a control that is used to browse and select available OPC Servers. OPCWareServerExplorer allows end-users to browse the network and connect to any available OPC Server. This control is normally used in conjunction with the OPCWareItemExplorer control.
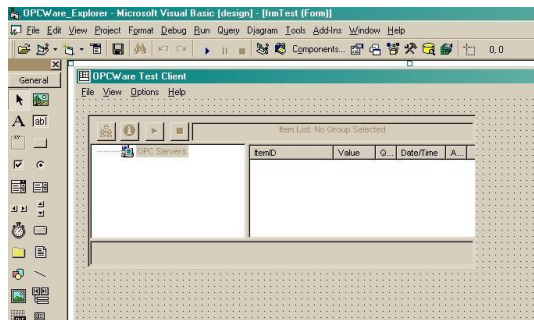
2 OPCWareItemExplorer

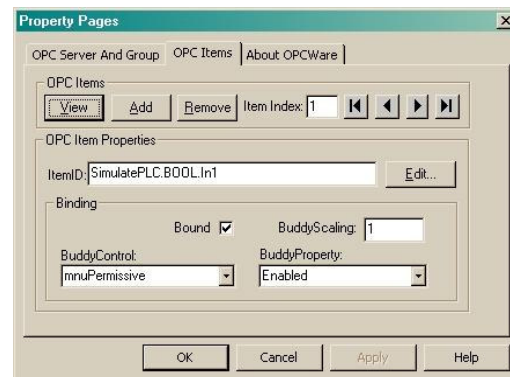OPCWareItemExplorer is a control that is used to browse and select the available OPC Items on a selected OPC Server.

3 OPCWareX

The **OPCWareX** control offers treeview and listview visualization capabilities (similar to Windows Explorer) for OPC DA Servers, and constituent OPC Groups and OPC Items.

4 OPCWareGroup

Primarily for Visual Basic 5 and 6 developers, OPCWare Client Developer also includes the **OPCWareGroup** control that provides code-free binding of OPC items to any properties of any controls on a Visual Basic form. Of course the programmatic power and simplicity of **OPCWareGroup** control can be used with other languages too.

Main Features and Benefits

Features:
- Works with a variety of Integrated Development Environments, including Microsoft Visual Basic and VBA-enabled applications (e.g. MS Access, MS Excel), as well as other ActiveX containers (See Notes) such as Internet Explorer, VC++, Borland C++ Builder, Borland Delphi and now **Visual Studio .NET**
- Includes a variety of sample applications for the Integrated Development Environments supported

Benefit:
Buy only one tool, reuse it in many environments, for unlimited applications.

Features:
- **Local buffering** (**OPCWareX** control) is used to store all item updates in memory until the host program's collection routine is ready to receive the next set of updates (limited by available memory). This buffering is useful for example if there is a delay with writing to a remote database
- **Unlimited OPC connectivity**, connections can be made to any number of OPC Servers including any number of OPC Groups and OPC Items (**OPCWareX** control)
- **Powerful but simple programmatic functions** for those applications that require more **complex OPC data manipulation**
- **OPC Browsing** of local or remote PCs for OPC Servers (**OPCServerExplorer**) and for OPC Items (**OPCItemExplorer**) available on each OPC Server (some OPC Servers do not support tag browsing)
- Full configuration details can be saved and stored either **programmatically or via user interaction**, and retrieved later, so different configurations can be used for different scenarios(**OPCWareX** control)
- All significant user activities are notified to the client program via events so the **client program is in control** and can supervise/monitor
- **User interface functions** related to editing configurations can be **enabled or disabled** (**OPCWareX** control)

Benefit:
Affordable alternative to leading HMI/SCADA/Historian packages with **runtime free distribution**.

Features:
- Fully **functional out of the box** with code provided in examples
- Easy to create fully functional applications **without writing any code** (**OPCWareGroup** control)
- Ready to use **built-in user interface** that will **save developers weeks** of development time in setting up GUIs (**OPCWareX** control)
- Property pages to **graphically set up** frequently used configuration data including OPC binding details
- Full on-line **context-sensitive help**

Benefit:
Faster application development time with no need for expensive developer training.

Notes: Binding functionality is only available in VB5 and VB6. Certain events that pass array parameters cannot be used with VC++. VC++ users will need to use alternate events and methods which are provided.

Start Writing Powerful PLC to Database Applications Today

The *OPCWare Client Developer* installation package includes extensive Visual Basic source code examples for simple and advanced applications, including one using an MS Access database, and another using a DSN connection, typically used for connecting to enterprise databases such as MS SQL Server or Oracle. Beginner, intermediate and expert VB programmers, writing shop floor or front office applications, can now quickly and easily leverage the power and flexibility of the OPC interfaces to access real-time process data.

Licensing Information

OPCWare Client Developer comes in three versions:
- OPCWare Client Developer Lite - this license covers a single workstation so developers can develop and deploy an application on a single PC
- OPCWare Client Developer Standard – per developer seat - this license features free unlimited runtimes at a single location
- OPCWare Client Developer Professional – per developer seat - this license features free unlimited runtimes at any location

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About Data Layers

Data Layers is based in Cork, Ireland. The company specializes in products and services for industrial automation solutions, and is a member of the OPC Foundation.