Bristol

Bristol® OpenBSI Utilities - OPC Server

Features

- OPC Data Access 1.0a & 2.0 compatible
- Windows NT, 2000 compatible
- 32 bit multi-threading, multi-processor design
- Automatic database builder from ACCOL and ControlWave® files
- Integrated real-time data monitor
- Supports OPC Browse interface
- Supports COM/DCOM & OLE Automation
- Supports RBE (Report By Exception)
- Primary and Background polling scheme
- OPC Alarm & Event Server support

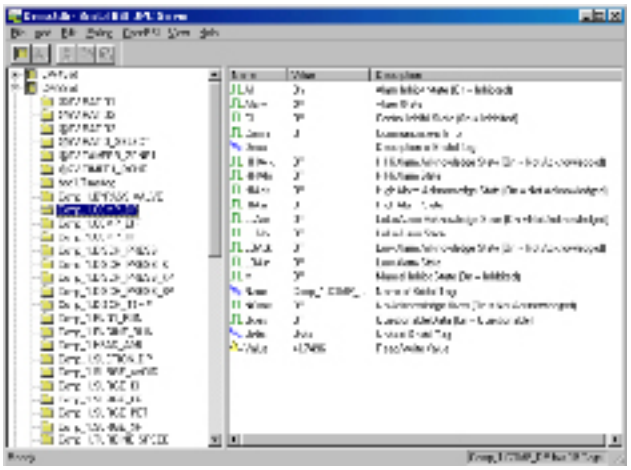
Overview

Emerson Process Management's Bristol® OpenBSI OPC Server is an application layer that provides direct communication to the ControlWave and Network 3000 family of controllers, RTUs, and Flow Computers through the OpenBSI Communication Interface. It supports serial multi-drop, remote telemetry and IP Ethernet LAN communication networks.

OPC (OLE for Process Control) provides a set standard by which software client applications communicate to hardware devices from various manufacturers. The standard was developed by the OPC Foundation comprised of hardware and software suppliers from the process control community. OPC allows the engineer to select best in class hardware and software with confidence in their interoperability.

Architecture

The **O**pen **B**ristol **S**ystem **I**nterface (OpenBSI) is a layer of communications software that provides access to Emerson's Bristol ControlWave® and Network 3000 lines of RTUs, PLCs, controllers and flow computers. Above this communications layer are a group of applications (programs which are known as the **OpenBSI Utilties**. The OPC Server is one of these utilities.



Database Builder

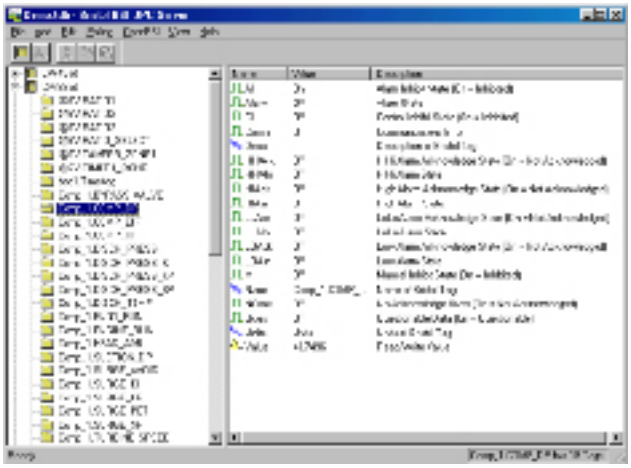
Rapid Database Builder

The OpenBSI OPC Server supports all ACCOL signal attributes and ControlWave variables. It features a very easy to use batch type database builder. All Alarm, Global, and RBE signals are simply selected, in ACCOL, for inclusion in the database. ControlWave variables are selected by checking PDD and CSV in the variable declaration properties. An OpenBSI Signal Extraction Utility builds a text file containing the predefined signals and associated attributes. The OPC Server then adds these signals into the database for each node in the system. The OPC Server database builder can add signals for

Signal Properties

an individual node or automatically for all nodes in the network. In addition, individual signals may be added by typing the name into the Signal Properties box. A .CSV file import/export utility allows editing and documentation of the signal database.

An integrated real-time signal monitor is a standard feature that is useful in confirming successful communication and viewing live data for signals and their attributes.



Database Builder

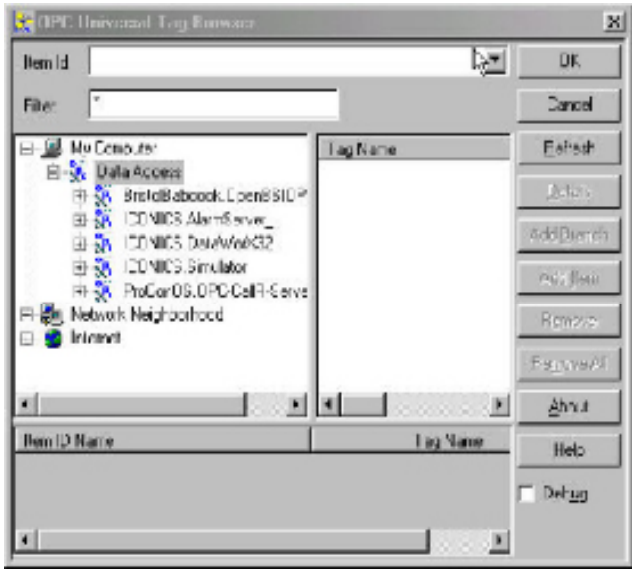
OPC Sample Client

An OPC Client application included with the Bristol OPC Server, provides a rapid method for testing the Server's configuration. The OPC Client is able to browse the PC registry and display the complete list of all installed OPC Servers. It also provides real live data feedback and allows writing value changes through OpenBSI to the Bristol nodes.

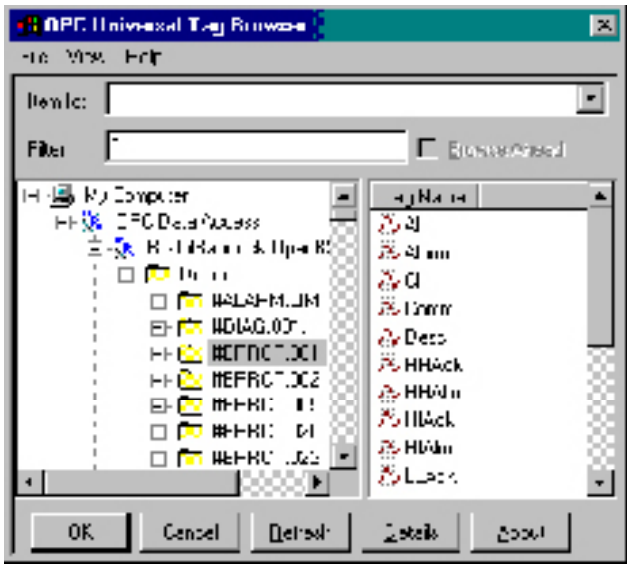
The OPC test Client is also helpful for verifying results and testing other OPC 3rd party applications connected to same server.

Browsing with COM and DCOM

The OpenBSI OPC Server supports full Browse capability, by compliant client applications, of OPC Servers residing on the local PC through COM or any networked PC through DCOM. It is a simple matter of selecting My Computer or a network computer under Network Neighborhood. Then select the Bristol node and signal.



OPC Universal Tag Browser



OPC Universal Tag Browser

Polling Scheme

Signal data values are normally polled based on a request from an active client application such as a display, trend or history collection. Signals not currently on scan due to an active client application can be set to scan at a lower background rate. This feature allows an application to display reasonably current data, upon opening, until current values are collected.

OPC Alarm and Event Server

The OpenBSI OPC Server is compliant with the OPC Alarm and Event specification. It accepts all Bristol time stamped alarm messages and passes them to the OPC Alarm and Event compliant client applications such as the Genesis 32 AlarmWorx software package. Time stamping of alarms, as they occur, is a standard feature in all Bristol RTU, PLC, controller, or flow computers. If communication to the node is interrupted for any reason, the time-stamped alarms are stored in the node and reported to the OPC Server as soon as communication is restored.

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