

### Enterprise Data Bridging With No Programming

#### Summary

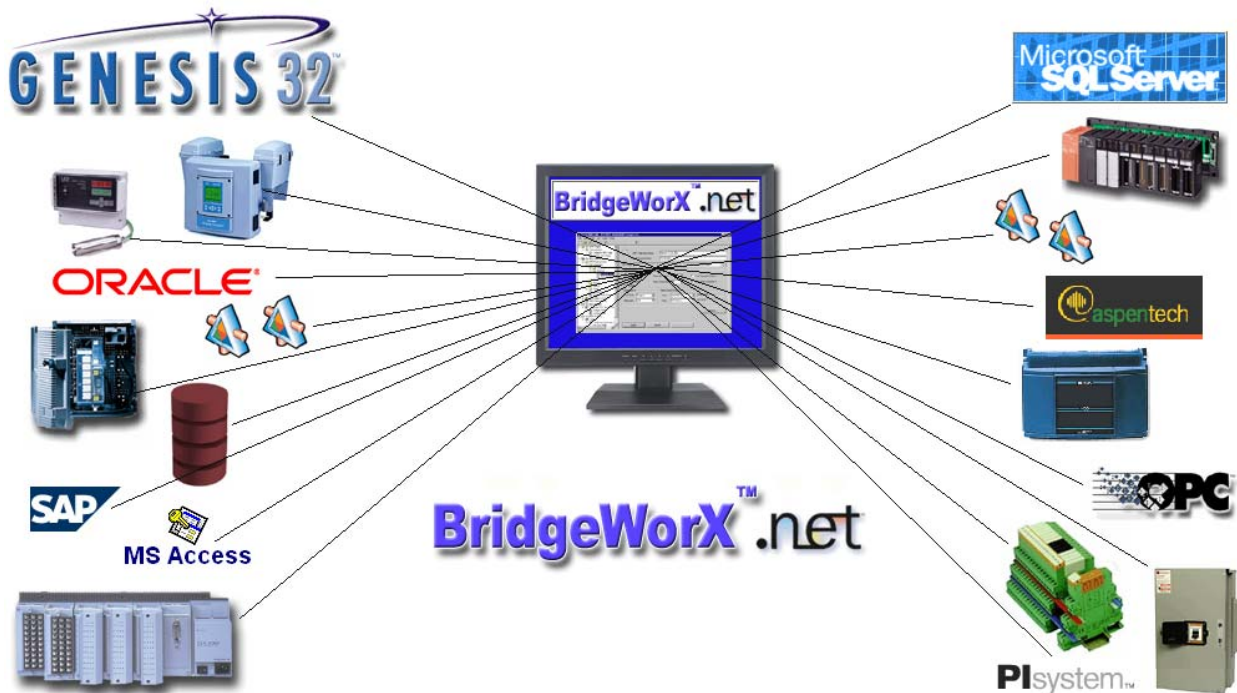
Looking for a data integration and interface management product that requires no programming, automatically collects all pertinent information from the source and target systems and exchanges data to and from the device to the enterprise? Look no further than **BridgeWorX.Net**. This user friendly, easy to configure, transaction based product works with OPC, most databases such as Microsoft® SQL Server®, Microsoft Access, Oracle, SAP and other ODBC compliant databases.

#### Powerful Microsoft.NET Technology

**BridgeWorX.Net** is designed from the ground up based on Microsoft .NET technologies, and is written in the Microsoft C# (C-Sharp), VB.NET and ADO.NET programming languages. Connecting to source and target systems is fast, efficient and easy to configure. ICONICS brings you the most advanced data integration and interface management tool available today, taking maximum advantage of Microsoft's most powerful technologies. **BridgeWorX.Net** uses Microsoft.NET technology to move data from the source systems to targets systems.

#### The Ideal Data Integration for Manufacturing

**BridgeWorX.Net** can not only move data from any database platform to another, but it can also transform data to and from the manufacturing floor to MES solutions and ERP applications by making use of open standards OPC and ODBC compliant data sources.



# Open Database Connectivity

Powerful Microsoft .NET technology allows the data mining of virtually any corporate database.

**BridgeWorX.Net** can integrate information from different data sources and move data to different target systems. Data sources such as Microsoft SQL Server, Microsoft Access, ODBC, OLEDB, MSDE, Oracle, AspenTech, OSI PI, OPC HDA (Historical Data Access), OPC A&E (Alarm and Events) and OPC real-time information can all be accessed and moved. **BridgeWorX.Net** uses Web services technology to data mine other Web services over the Internet or intranets.

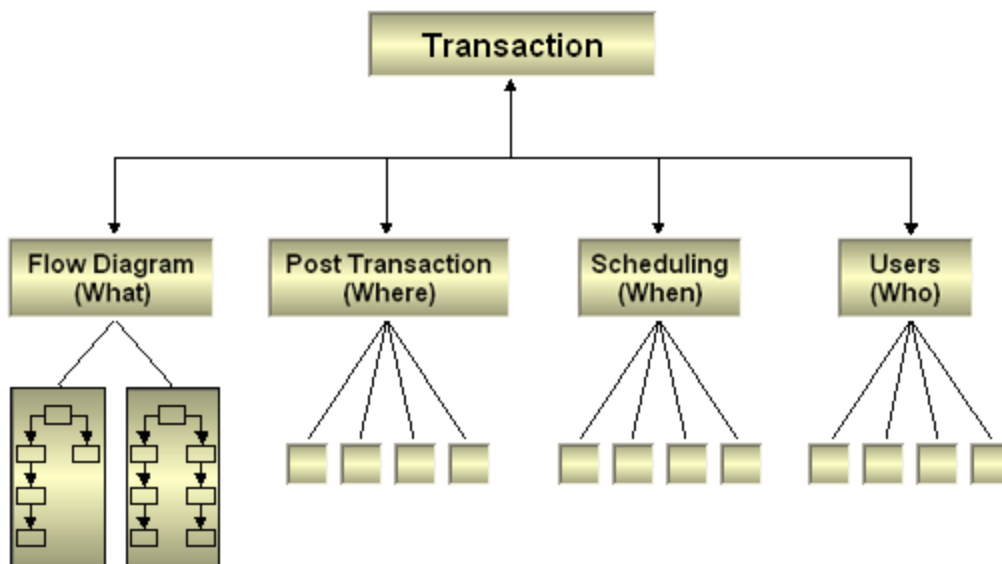
## Connect to Any Data Source

This revolutionary data integration and interface management product connects with any data source, such as Microsoft SQL Server, Microsoft Access, Oracle, SAP and any customer database using powerful data integrator technology. Move information from real-time OPC data sources as well as historical data sources. **BridgeWorX.Net** integrates with OPC, most databases, Web services and others such as:

- **Most SCADA, and DCS Systems**
- **Maintenance Systems**
- **MES, ERP and Plant Historians**
- **LAB Information Systems**
- **Custom Corporate Databases**

## Transactions and Tasks

The key concept of BridgeWorX is the **transaction**. The **transaction** is a set of data transfer tasks (operations), defined by the user; to be executed in a user configured order. The transaction represents a user-configured flowchart of data operations and data transfers, prioritized by the user, with optional precedence constraints (i.e. do step 2 only if step 1 succeeds) and completion actions.



## Post-Transaction Tasks

One feature that is unique to BridgeWorX is the concept of actions after a transaction has been processed. Each transaction reaches one three (3) states and a set of actions can be associated with them. The states are:

- **On Completion** post – transaction task – will be executed when the data transaction operation finishes, regardless the success or failure status
- **On Success** post – transaction task – will be executed when the data transaction operation finishes successfully;
- **On Fail** post – transaction task – will be executed when the data transaction operation fails.

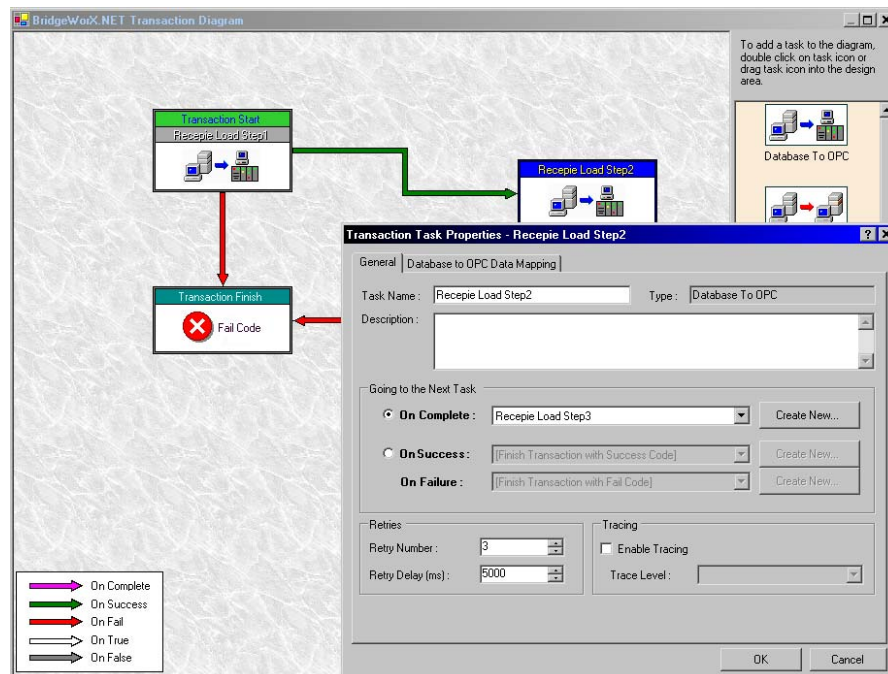
## Conditional Post-Transaction Task Actions

Each post-transaction task actions can contain a combination of different actions including the following

- E-mail action
- Write to NT Event Log
- Write to OPC Tag(s)
- Running an “Insert”, “Update” or “Delete” SQL queries on the Database server
- Calling a database stored procedure
- Calling a Web Service method

## User-friendly Workflow Based Configuration

**BridgeWorX.Net** has a very distinctive visual transaction data-mapping configuration wizard, which enables the users to easily configure data movements to and from real time OPC manufacturing devices to corporate information systems.



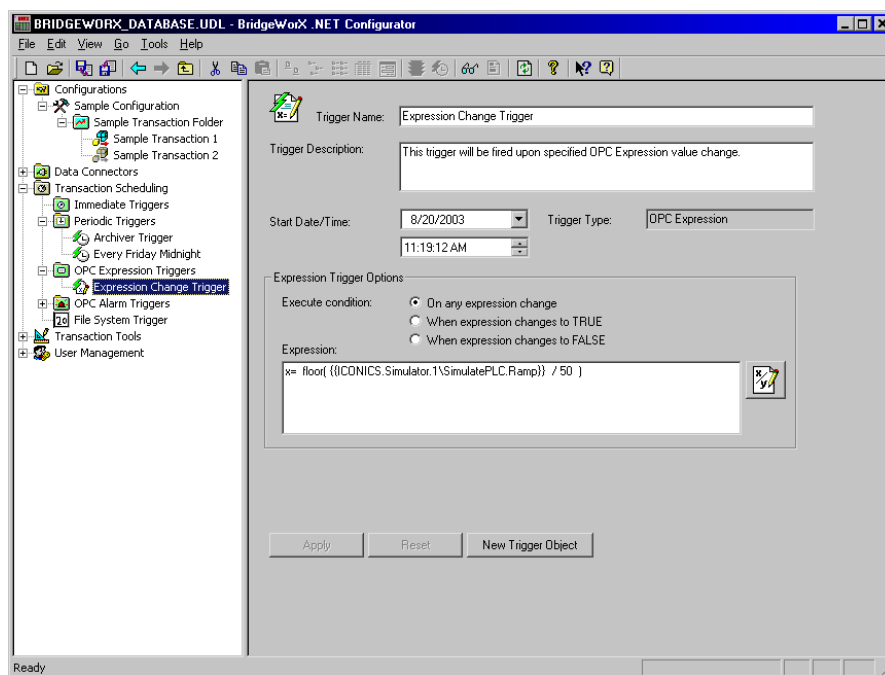
## Security and Users

This is the final piece in defining the transaction. Users can be configured to execute the transactions. **BridgeWorX.Net** ties in fully and completely with your Windows NT Security architecture. Transaction can be restricted on a 3-tier basis: Visualization, Execution, and Management. Users are authenticated over the Web with their NT login credentials, which are then checked against **BridgeWorX.Net**'s security access rights. The ability to launch the **BridgeWorX.Net** Configurator can also be restricted using GENESIS-32 Security.

## Advanced Scheduling Support

The powerful **BridgeWorX.Net** Scheduling Engine allows for the simultaneous execution of transactions. These transactions can be triggered on the following criteria:

- **Manually based on direct operator commands**
- **Periodically based on time and/or date**
- **Based on alarms or events**
- **Based on real-time OPC tags**
- **Based on expressions or calculations**
- **Based on database value**
- **File attribute change**



## Troubleshooting and performance monitoring tools

The **BridgeWorX.Net** Configurator will provide several tools to troubleshoot and monitor the transactions. Some of the monitor views that will be provided are

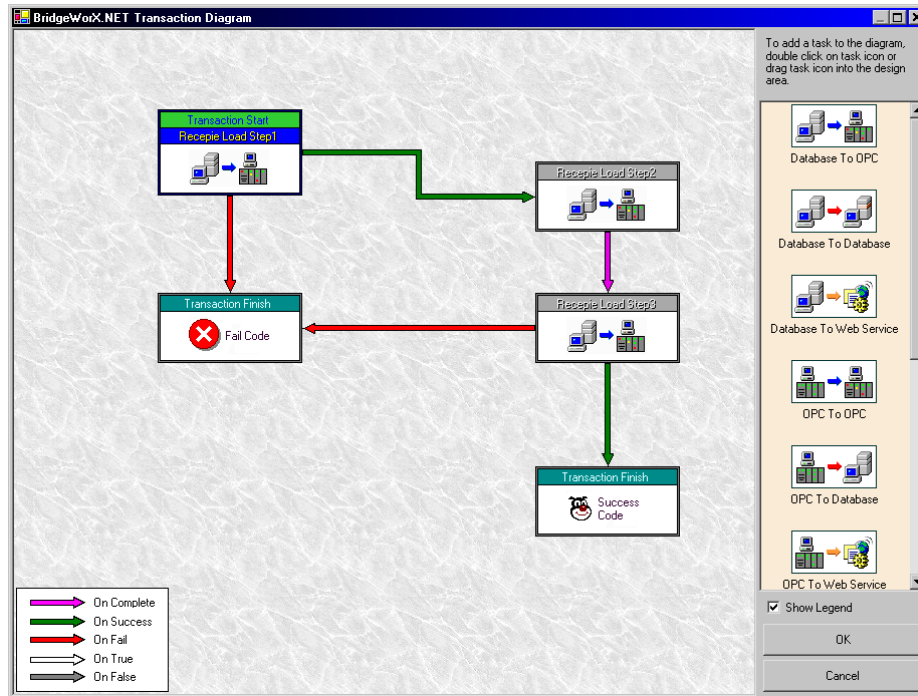
- Viewing status information for transactions and post-transactions tasks executed
- Viewing diagnostic information for Scheduling
- Viewing, filtering and sorting events, posted to GenEvent
- Monitoring selected OPC Tags and **BridgeWorX.Net** registers



## Transaction Blocks

**BridgeWorX.Net** comes with several transaction blocks that can be configured to carry out data integration and interface management among automation systems, MES and ERP applications. One of unique features is the definition of user defined “Logic” and diagram “Flow”.

- OPC to DB
- OPC to OPC
- OPC to Web Service
- WEB Service to OPC
- WEB Service to Database
- WEB Service to WEB Service
- FTP
- DB to DB
- DB to OPC
- DB to Web Service
- NT Event Block
- Delay Block
- Conditional Execution block
- User Custom Block in .NET



## No Custom Programming Required

**BridgeWorX.Net** provides a complete solution requiring no coding for data extraction from source to data transfer to the destination. It eliminates the need for knowledge of the participating source and destination systems.

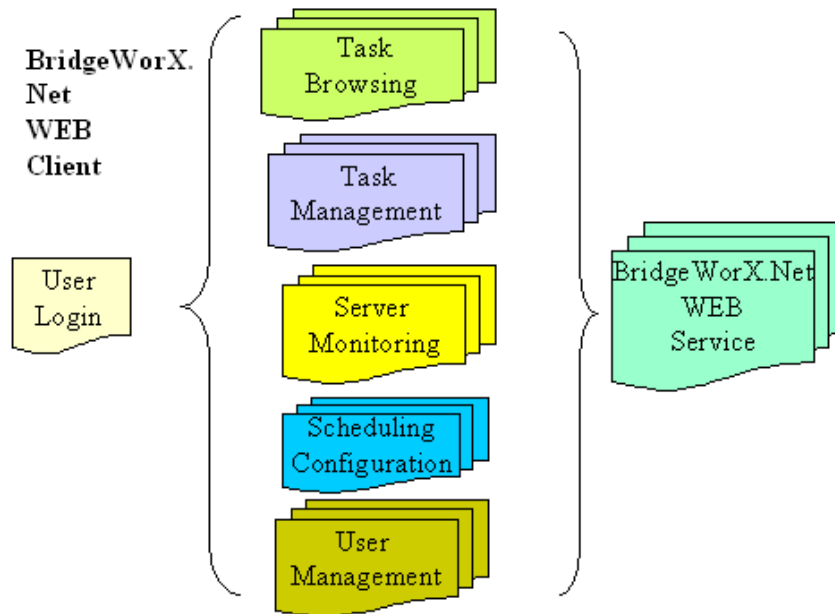
## Cost Savings and Quick ROI

Given **BridgeWorX.Net** unique data-mapping configuration capabilities, and the fact that it requires no coding, results in quicker implementation cycles for data transfer and interface management. The costs associated with time consuming custom programming and extensive training no longer exist. It also eliminates the need for individual specialists for each of the participating systems. **BridgeWorX.Net** will definitely result in quicker ROI!!!



## BridgeWorX.Net WEB Client

**BridgeWorX.Net** also comes with a web client, which is accessing the BridgeWorX WEB Service. The client will interact with the **BridgeWorX.Net** Configuration and repository database and provides the functionality shown below.



## Scaleable Architecture

**BridgeWorX.Net** is completely based on Microsoft.NET and is designed to scale from the simplest, to the most demanding data movements between source and target systems. Create and deploy a few transactions that run simultaneously on a single CPU server, or deploy your applications for an entire enterprise running on multiprocessor servers.

## Totally Complete and Integrated Solution

**BridgeWorX.Net** is tailored to fit your overall system design and requirements and can be integrated with ICONICS HMI SCADA products or any other third-party HMI, SCADA, Control, MES or Visual Basic application. Numerous features in **BridgeWorX.Net** integrate seamlessly with any IT infrastructure. Event logging, native performance monitoring with easy-to-use tools for analysis, debugging and performance optimization.

## Based on Microsoft .NET Web Services

**BridgeWorX.Net** uses Microsoft's newest Web Services technology to deliver Web-based information to any Internet Browser. **BridgeWorX.Net** can connect to any Web services-enabled database to integrate real-time and corporate business data to meet the most demanding data integration needs.

## Time-Saving Configuration Capabilities

Transactions can be quickly configured using an intuitive data-mapping configuration wizard, featuring powerful reusable transactions, post-transaction actions, scheduling actions and user/role management.



## Build Tracking Systems Using BizViz and Genesis 32

Easily build batch reporting systems, process tracking systems using the products from the Genesis 32 and BizViz suites. Since you can move data from any source to any destination, based on specific events at the automation or database layers, you can capture the pertinent data to build your tracking system. Please contact an ICONICS representative to learn more about how systems can be designed and implemented.

## Store and Forward Technology

**BridgeWorX.Net** is best optimized with the Genesis 32 product suite. Consolidate information from multiple TrendWorX stations that are remotely located. The GENESIS32 product suite can provide the Fault Tolerant Architecture to ensure historical and alarm data is always recorded accurately and continuously. **BridgeWorX.Net** extends these Store and Forward capabilities by providing the ability to quickly and easily distribute data to multiple databases and replicate data from remote facilities triggered either manually, based on time, alarms, events, calculations, database values or other criteria.

## Hardware Requirements

### BridgeWorX.Net – Client Side Requirements

- MS Windows 98, MS Windows 98SE, MS Windows Me, MS Windows 2000 Professional, MS Windows XP Home, MS Windows XP Professional
- MS Internet Explorer (IE) 6.0 or later

### BridgeWorX.Net – Server Side Requirements

- Windows 2000, Windows 2000 Server, Windows XP Professional, Windows 2003 Server products
- .Net Common Runtime
- ADO 2.7
- MS SQL Server 2000 (or) MSDE 2000 with SP3a
- Genesis 7.0 or later
- Pentium 4 CPU - 2.0 GHz or greater
- 1 GB of RAM

