ICONICS

THE ICON

Hit the Street Running
With ICONICS V9 Automation Suites

GENESIS64™

BIZVIZ™

GENESIS32™

CELEBRATING 20 YEARS
ICONICS
20
1986-2006
OF SOFTWARE AUTOMATION

From the Desk of

**Russ Agrusa
President & CEO
ICONICS**

ICONICS is now in its 20th year of providing innovative software products for the industrial automation, manufacturing and building controls markets. Over the years, we have increased our market share in our traditional HMI and SCADA markets and we are well positioned to increase our reach into many new exciting areas.

With the release of our complete suites of HMI/SCADA and Manufacturing Intelligence Version 9 products, ICONICS has realized its vision of "Shop Floor to Top Floor" shrink-wrapped automation tools, which require little to no development. Our vision of providing one development tool for multiple targets enables our customers to create applications for any Microsoft operating system, including those for mobile devices, Pocket PCs, Windows® NT and XP Embedded, and Windows CE. We can scale these applications up to large, multinode, distributed applications using any Windows operating system. Our trademark "OPC-To-The Core™" technology provides immediate, scalable, highly reliable, secure automation solutions.

DataWorX™32, one of our traditional products, now has OPC Redundancy and OPC Tunneling with patented Data Aggregation. Alarm Analytics™, BridgeWorX™, ReportWorX™ and PortalWorX™ provide system integrators with powerful, shrink-wrapped, out-of-the-box tools to easily integrate different systems, databases and real-time information with each other and with enterprise systems such as SAP.

Looking back over the past 15 to 20 years, there have been unimaginable technological improvements that have completely changed our lives. Just 15 years ago, the following had yet to exist: e-mail, Internet, GPS navigation, cell phones, DVDs (or CD-ROM for that matter), Windows OS, plasma or LCD flat screens, online search, OPC, Worldwide Web, wireless communication, PDAs (Palms, Pocket PCs), 32-bit computing or panel computers.

How many of you remember online bulletin boards (BBSs)? 8, 5¼, and 3.5 inch floppy disks? Paper tape? Even fax machines are disappearing.

We are about to embark on a wave of new technology and product innovation. Microsoft has invested over $20 billion on research and development over the last five years. Intel and Advanced Micro Devices have invested equally large sums accelerating hardware and software technology.

Intel and AMD have continued to aggressively apply Moore's Law. The physical limitation of semiconductors seems to have been reached. Breaking the 4 Gigahertz barrier has proved an extremely difficult, if not impossible, task. To overcome this, the hardware chip manufacturers combine processors. We're now seeing Dual Core, Quad Core and soon Eight Core processor and computing capabilities.

Further accelerating technology adoption will be the switch to 64-bit computing. Forecasts are that, within a year, 64-bit servers will be the only ones available, and within 24 months, 64-bit will be the only choice for desktops and workstations.

The next five years will see the rapid adoption of many new technologies such as:
- Virtual Earth and MapPoint
- Windows Vista/64-bit Operating Systems
- Smarter Phones with Integrated GPS
- Integrated Desktop/Workgroup/Web Search
- Inking for Annotating HMI and Operators
- Rapid Secure Credential Authentication
- Support for Hardware-accelerated Video
- Gigabit and 10 Gigabit Ethernet
- Quad and Eight Core 64-bit Processors
- OPC UA with Web Services
- Portals and Dashboards for the Masses
- Delivery of Information to Any Device

Not since the introduction of 32-bit microprocessors and Windows 95, in 1995, have so many forces converged to create a true technological revolution. We're about to embark on a journey, transitioning from 32-bit to 64-bit computing. Aided by exciting new software technologies (e.g. operating systems such as Microsoft Windows Vista, databases and manufacturing automation software), a whole new set of applications will take maximum advantage of the new boost in raw computing power. This will change everything we do at work, at home, and how we collaborate. The innovation may start in the office and home, but will be rapidly available for Manufacturing, Automation and Building Controls solutions.

ICONICS has been investing in all the latest software technologies and continues to be an early adopter of OPC, SNMP and many other industry standards such as .NET, Manufacturing Intelligence, Portals, Windows CE, and Windows Vista and is positioned to quickly take advantage of these technologies.

EDITOR'S NOTE:
Many of the advances mentioned by Russ will be showcased at ICONICS' 2006 Worldwide Customer Summit, being held in Boston this September. See the back cover for details. ◀

ICONICS Granted Several U.S. Patents

ICONICS has recently received several U.S. patents, continuing its technological leadership as an Automation Solution Provider.

Patent 7,017,116 led to ICONICS' development of MobileHMI™ and Pocket GENESIS™. Patent 7,003,558 resulted in ICONICS' DataWorX32 Data Aggregation and Redundancy technology.

Both join ICONICS' existing patent 6,834,388, which was implemented into ActiveX ToolWorX™. ◀

An Abundance of Features Added to NEW GENESIS32 V9
Redundancy, Tunneling, Recipe Mgmt., SNMP, UA, SAP Connectivity & More!

Over 500 new features have been added to V9 of ICONICS **GENESIS32™**, the industry's first and only fully scalable suite of OPC, SNMP, Web-enabled HMI and SCADA applications. Designed from the ground up to take advantage of the entire range of Microsoft® Windows® operating systems, the GENESIS32 Automation Suite delivers unparalleled performance and cost savings due to its design around open standards. ICONICS developers worked very hard to ensure that the suite remains backward compatible with older versions.

GENESIS32 V9 centers on easy and reliable integration of information from the most popular simultaneous data systems. With V9, it's easy to connect to core sources of data storage including: IT infrastructures monitored by SNMP, plant floor infrastructures communicating over OPC, and enterprise databases such as SQL, SAP and Oracle, through real-time, intelligent data mining. The GENESIS32 HMI/SCADA software suite incorporates data mining technology to provide the most flexible connectivity for machine builders, automotive, pharmaceutical, oil/gas, water, energy/utilities and many other applications.

Several new products have been introduced, including new **DataWorX32 Redundancy**, **OPC Tunneling**, and **MonitorWorX™**. This new feature-loaded version also incorporates powerful data-mining and integration technology that

SNMP Network Monitoring

enables visualization and reporting of real-time or enterprise data sources, including Microsoft SQL Server, SAP, Oracle, plant historians, SNMP and OPC data.

Significant Features Available in GENESIS32 Version 9 Include:

- NEW Recipe Management System
- Native SNMP and OPC UA connectivity
- **DataWorX32** OPC Tunneling - for remote third-party OPC connectivity
- Easy-to-Configure OPC Redundancy - includes real-time OPC alarm and historical data
- Full OPC Compliance

OPC Tunneling

- Unified Data Manager - centralized schedules, groups, recipes and more
- SAP BAPI connectivity
- **WebHMI™** - provides remote access to your application using just a standard Web browser through intranet, Internet or dial-up connections
- **MonitorWorX** - centralized diagnostics and monitoring of all applications
- **AlarmWorX™32 Multimedia** Agents - for Skype and new marquees
- **ScriptWorX™2006** - runs as a service with multitasking VBA 6.4
- OPC-UA-enabled graphics
- Open Data Mining Technology - connects to Microsoft SQL Server, MySQL, Oracle, Microsoft Access, ODBC, OLEDB, SAP and virtually any other database
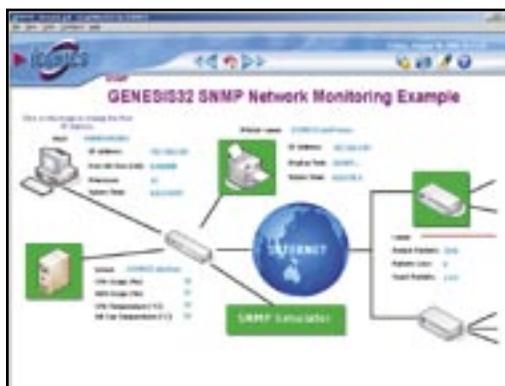

Recipe Management

ICONICS takes maximum advantage of a wide and diverse set of communications and connectivity technologies. The GENESIS32 Suite, BizViz Suite and Pocket GENESIS products support a wide variety of communications options, including the following open communication standards and protocol technologies:

- OPC Data Access (DA)
- OPC Alarm and Event (A/E)
- OPC-Compliant Historical Data Access (HDA)
- Powerful User Extensibility with OLE
- Patented GenBroker Communications for DCOM, TCP/IP and SOAP/XML
- OPC Tunneling for 3rd-party Communications
- Microsoft VBA, Java Script, VB Script
- SNMP Communication to IT Infrastructure
- SAP BAPI and SAP NetWeaver
- Patented ActiveX Toolkits - rapidly create OPC-enabled ActiveX components
- Create Custom Tasks - in VB, C and C++
- Project Management and Debugging Tools - enable you to manage (download, upload, run, stop and debug) applications remotely from a development station
- ICONICS iFix, Wonderware Converters
- Support for Rockwell Controllogix, PLC2, 3 and 5, Schneider Modbus, Profibus DP, DeviceNET, ControlNET, Siemens S7–MPI/PPI, Siemens S5–RK512, GE-Fanuc SNP/SRTP and many others.

For more information, including additional features and benefits, visit us online at **www.iconics.com.**

World's 10th Largest Airport Utilizes ICONICS Automation Solutions

**Amsterdam Schiphol Airport
The Netherlands**

Schiphol Airport chose the Johnson Controls version of GENESIS32 including GraphWorX32 and AlarmWorX32 and other components for this project. The airport is the 10th biggest in the world based on total number of passengers (about 44 million) and 14th based on the number of tons of cargo shipped.

The new suite of software tools now runs on over 30 PCs for the application of monitoring over 300,000 tags. The project was implemented by Johnson Controls Inc., Netherlands on the M5 version of GENESIS32, which runs on three Microsoft Windows terminal servers and allows the 30 opera-tors to work on the system simultaneously. The entire Schiphol facility is monitored and controlled by a central building operations center. Included in the building controls are systems for:

- HVAC
- Fire
- Security
- Lighting
- Telephone
- Water Systems

The complete project consists of 10,000 GraphWorX32 displays. The system handles over one million alarms and events per month.

The provided solution is based on an open system, making it easier to develop bigger projects in the future. Also, it's now easy to retrieve data out of the systems without writing converters.
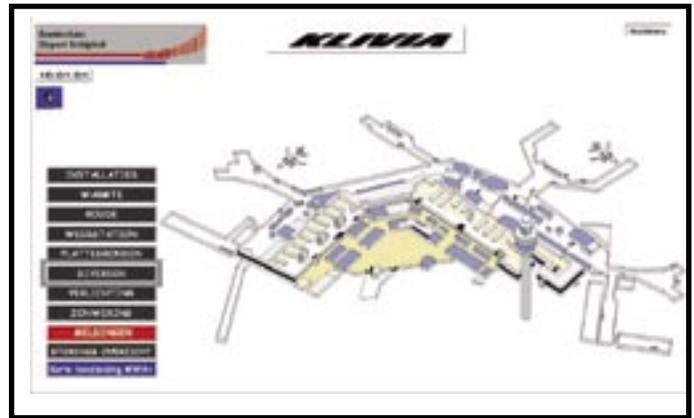
One of the biggest advantages for the customer is easy expansion of the system to other platforms including Web browsers such as Internet Explorer (via WebHMI) and mobile operating systems such as PocketPC (via Pocket GENESIS).

With 300,000 tags, three servers and 30 operator

stations, the Schiphol project is one of the biggest Building Automation systems in the world. The system has now been operational for well over three years with plans for expansion.

Building Controls Start Screen

Thermo Systems Standardizes on ICONICS for Pharmaceutical Solution

**Thermo Systems
East Windsor, NJ**

With over 20 years of experience, Thermo Systems is a leader in the design and installation of mission-critical, PLC-based control systems with expertise in the automation of validated pharmaceutical HVAC systems, utility systems and validated manufacturing applications. Based

Cooling Tower Controls

in East Windsor, NJ, with a branch office in Pittsburgh, PA, the company serves customers throughout North America as well as overseas.

Thermo Systems utilizes the latest technology from manufacturers such as ICONICS, focusing on interoperability using the OPC standard. The company designs open architecture systems that ensure end-user flexibility.

Recently, Thermo Systems implemented ICONICS GENESIS32 (including Graph-WorX™32, TrendWorX™32 and Alarm-WorX32) for a variety of control system applications. These include the automation of pharmaceutical HVAC, industrial chiller plants, pharmaceutical manufacturing, hospital lab controls HVAC, as well as bio-pharmaceutical and aerospace facilities.

Thermo Systems recommends ICONICS GENESIS32 to customers who require a cost-effective solution with a wide range of programs and features. The company's engineers and customers value GraphWorX' user-friendliness as well as the ease with which users can add points and develop graphics, aliases and pop-up files. ICONICS ReportWorX is used to provide customers with easy-to-use, full-featured custom data reports. WebHMI allows for a secure way to provide Internet and intranet connectivity within several applications for Thermo customers.

GENESIS32 makes it easy to create applications that comply with the latest FDA regulations. Audit trails, enforced logins and restricted security access are integrated into every GENESIS32 software system.

Customers who are deploying GENESIS32 in an FDA 21 CFR Part 11 application will enjoy these benefits:

- Maximum security with integrated popular biometrics
- Operational accountability through sequence checking
- Accurate audit trail information of who did what, when, where, and why
- Applications that are designed for the FDA 21 CFR Part 11 regulation

NEW BizViz V9 Accelerates Manufacturing Intelligence Adoption

BizViz V9 allows customers to benefit from the momentum of manufacturing intelligence. Enterprise decision makers are empowered with real-time, accurate information to drive global operational efficiency and strengthen competitive market advantage, all from a shrink-wrap format solution. The software provides real-time data aggregation, enables connectivity to multiple data sources and establishes manufacturing context with KPIs presented intuitively via digital dashboards and portals. The V9 release is stuffed with over 250 NEW features, all geared toward making you more productive and agile in your day-to-day business.

PortalWorX V9 introduces exciting new Web parts for charting, KPI visualization, simplified tree navigation, portal customization and much more. The new look and feel of the Administration Interface including enhanced Single Sign On functionality makes managing portals a snap. Be sure to check out our amazing Industry Sample Portals for Automotive, Building Controls, Food and Pharmaceutical, Oil and Gas, and Water and Wastewater.

Take your reports even further with **ReportWorX** V9, featuring a completely revamped, intuitive Template Designer. Powerful parameter enhancements include dynamic report naming, configurable restrictions on parameter values, and more control over the presentation and order of parameters on the Web Interface. Real-time reporting has never been easier.
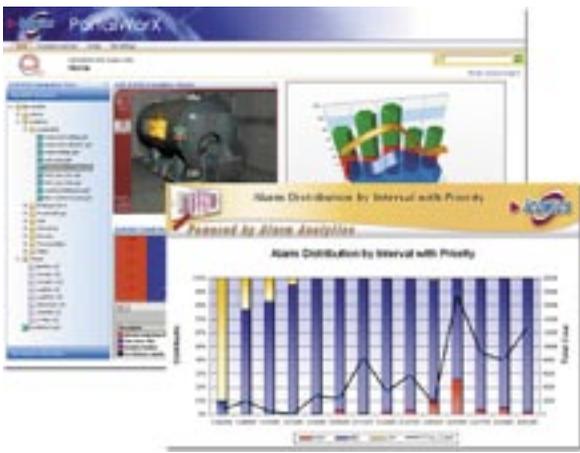
BridgeWorX V9 boasts a vastly improved Transaction Diagram Designer packed with enhancements to reduce the time it takes to build a transaction. Zoom and pan, create data connectors on the fly, and leverage the data mapping wizards to quickly bridge hundreds or even thousands of points with a few simple clicks. Experience it for yourself with BridgeWorX V9.

The BizViz suite also includes **MobileHMI** for real-time delivery of KPIs and alerts to mobile devices, as well as a brand new **Alarm Analytics** module (*see below for more information*). All BizViz products leverage centralized communication for SAP Connectivity, Unified Data Management, SNMP and OPC Connectivity.

BizViz is designed from the ground up on Microsoft .NET technologies and integrates with Office SharePoint Server. It bridges the gap between manufacturing and corporate business information systems. With data-mining and analytics at its core, extensive connectivity to plant floor and corporate IT systems is never more than a mouse click away. Revolutionary data-mining and integration technology allows data-bridging, viewing and reporting of any real-time or enterprise data source, including Microsoft SQL Server, Oracle, SAP, plant historians, OPC real-time data and more.

For more information, including additional features and benefits, visit us online at: *www.iconics.com*.

NEW Alarm Analytics: Turn Raw Data into a Competitive Advantage
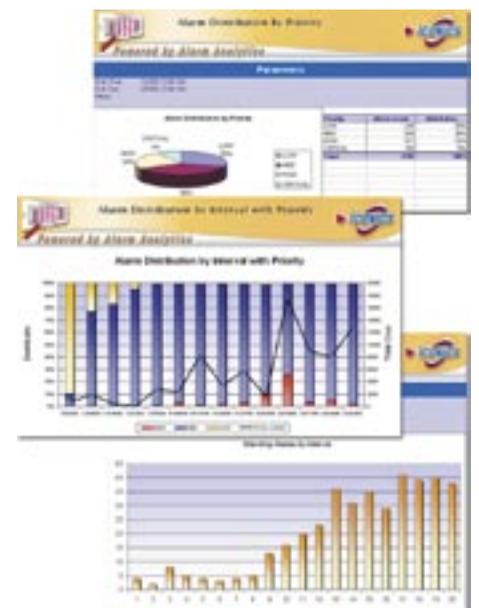
NEW in V9 ICONICS' Alarm Analytics helps customers utilize industry standards-based alarm management, reporting and analysis within a familiar Microsoft Excel environment. The solution also comes complete with ICONICS ReportWorX and AlarmWorX32 Logger software for greater functionality.

Meeting both OSHA and EEMUA specifications, Alarm Analytics provides users with 15 industry standard reports for quick presentation of KPIs such as alarm distribution, tag frequency/chattering, cross-correlations, operator response time and operator changes by interval.

Manufacturing intelligence is evolving. We continue to add more analysis tools, such as Alarm Analytics, to help customers recognize patterns and prevent future problems.

BizViz™ Alarm Analytics Benefits Include:

- **Wide Compatibility and Acceptance** due to conformity to industry standards.

- **Ease of Use** due to seamless integration with ICONICS ReportWorX and AlarmWorX32 components.
- **Intuitive Presentation** of recorded alarm-related data via Web-based tool.
- **Convenient Results Storage** with AlarmWorX32 integration with standard open databases (Access, Microsoft SQL, Oracle, MSDE).
- **Quick Report Output** from the ReportWorX Template Designer to the Web, PDF, e-mail, printers or fax.

For more information, including additional features and benefits, visit us online at: *www.iconics.com*.

California Water Company Deploys ICONICS GENESIS32 HMI/SCADA

Cucamonga Valley Water District
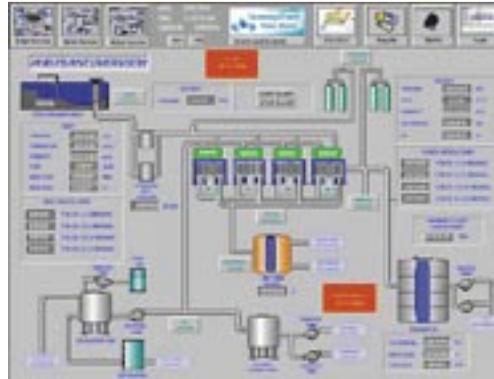**Rancho Cucamonga, CA**

The mission of the Cucamonga Valley Water District (CVWD), headquartered in Rancho Cucamonga, California is "to provide high quality, safe and reliable water and wastewater services, while practicing good stewardship of natural and financial resources." Its service area includes Rancho Cucamonga, and portions of Upland, Ontario and San Bernardino County; a population of approximately 170,000 customers within a 47-square-mile area.

CVWD, a public corporation, functions as a Special District; an independent unit of local government serving the needs of a community. With approximately 45,000 water connections and 35,000 sewer connections, CVWD is one of the leading water suppliers in the region.

The District selected ICONICS' GENESIS32 Enterprise HMI/SCADA suite integrated with AlarmWorX32 Multimedia distributed enterprise-wide alarm notification system, ReportWorX enterprise reporting, charting and analysis software, WebHMI Web-based real-time automation software, Pocket GenBroker communications bridge, OPC ToolWorX, AB OPC Server and SQL/MSDE logging.

Cucamonga Valley Water District began an expansion project intended to simultane-

Water Plant Overview

ously bring Web-based and mobile functionality to its control system. The organization needed such features in an HMI/SCADA solution that would integrate with existing systems and operating systems (moving from Microsoft Windows 2000 to XP).

Working with engineering partner Black & Veatch, CVWD sought a Web-enabled solution that wasn't processor-intensive, a mobile component for employees in remote locations and comprehensive reporting abilities. GENESIS32, coupled with WebHMI and Pocket GENESIS mobile industrial software, fulfilled expectations.

WebHMI provides a browser-based alternative to single PC—based software. Pocket GENESIS allows CVWD to monitor and control their system away from the plant environment. The plant is able to utilize ReportWorX to fulfill their reporting requirements to the California Department of Health. In fact, ICONICS met all of CVWD's requirements through multiple phases including monitoring, reporting and alarming.

Advanced Fuel Cell Technology Enabled by ICONICS Web Capabilities

FuelCell Energy, Inc.
Danbury, CT

FuelCell Energy, Inc. is a world leader in the development and manufacturing of high-temperature hydrogen fuel cells for ultra-clean electric power generation. The company's patented Direct FuelCell® (DFC®) technology combines high efficiency, ultra-low emissions, simplicity and value for

HMI in Action at FuelCell Energy

stationary power generation. Their products range in size from 250 kilowatts (kW) to 2.4 megawatts (MW), and are designed for a wide range of customers, including hospitals, universities, hotels, utilities, and wastewater treatment facilities.

In creating their HMI, FuelCell Energy had specific guidelines and requirements, including:

- Secure remote connectivity
- Robust system reliability
- Ease of use for maintenance
- GUI with advanced features
- Communications based on OPC
- Standard VBA scripting

FuelCell Energy, Inc. uses multiple ICONICS solutions in the monitoring and control of their fuel cell products, specifically the GENESIS32 Enterprise Edition HMI/SCADA application; WebHMI Web-based, real-time automation software; and the AlarmWorX32 distributed enterprise-wide alarm and events management system.

FuelCell Energy required a "robust, secure Human Machine Interface" to monitor and allow remote control of the company's power plants as stand-alone systems. The current system is comprised of approximately 20 screens for rich, graphical representation of FuelCell Energy's processes (e.g., trending, alarms and historical alarms).

ICONICS' GENESIS32 system has provided FuelCell Energy with sought-after alarm management and online functionality. Operators can now be alerted during alarm/event conditions for immediate acknowledgement and action. The Web-enabled HMI fosters ease of use and remote monitoring/control throughout the company.

A further benefit is the ICONICS suite's seamless integration into FuelCell Energy's existing operating systems (Windows 2000/XP Professional), with features such as data logging into Microsoft SQL Server and MSDE. In addition, the company's GE Fanuc 90-30 controllers are able to communicate directly to GENESIS32 via Kepware OPC servers.

DataWorX32 First to Feature Complete OPC Tunneling and OPC Redundancy

DataWorX32

ICONICS' patented data bridging, redundancy and aggregation technology, DataWorX32 V9, includes robust OPC Tunneling which supports all OPC standards including OPC Data Access 3.0, OPC Alarm and Events 1.10, and OPC Historical Data Access 1.20.
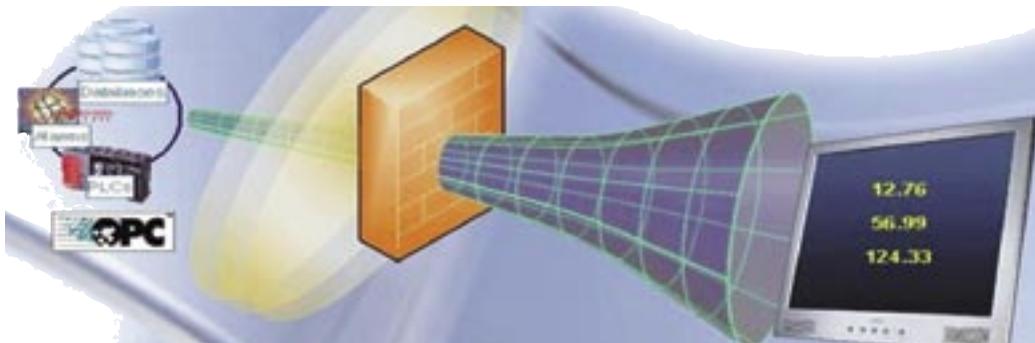
OPC Tunneling connects a remote OPC server to a local client in a robust and secure manner. It also allows for one server to be redirected to more than one location. The powerful graphical user interface allows for easy configuration and a centralized place to manage all remote connections.

The underlying technology behind OPC Tunneling is ICONICS' GenClient/GenBroker™ communication protocol, which provides a faster, more robust communication path than standard DCOM communications. OPC Tunneling communicates through firewalls, LANs, WANs and the Internet.

DataWorX32 OPC Tunneling Features:

- Based on open industry standards
- OPC Data Access 3.0 communication over LANs/WANs/Internet
- OPC Alarm and Events 1.10 communication over LANs/WANs/Internet
- OPC Historical Data Access 1.20 communications over LANs/WANs/Internet
- Communicates through firewalls and Network Address Translators (NAT)
- Provides a robust alternative to standard DCOM communications
- Supports TCP/IP, DCOM and SOAP/ XML communication protocols
- Standard OPC browser interfaces
- Auto discovery of remote OPC servers

For more information on this or any ICONICS solutions, visit us online at *www.iconics.com*.

In addition to OPC Tunneling, DataWorX32 V9 contains many new enhancements, including full-featured redundancy with support for OPC Data, OPC Alarms and OPC HDA Historian.

ICONICS in The News

START-IT
Summer 2006
"'06 Hottest Companies"

PlantServices.com
May 2006
"Automation Giants Tear Down Data Silos"

IAN Inside Products
March 2006
"Manufacturing Intelligence Software"

Microsoft.com
February 2006
"Who Can Make You Smarter?"

ControlGlobal.com
February 2006
"HMI Software..."

Manufacturing Business Technology
February 2006
"East Coast Swing"

For more updates, visit us online at *www.iconics.com/news*.

ICONICS to Celebrate 20 Years at 2006 Worldwide Customer Summit

Join ICONICS for our 2006 Worldwide Customer Summit and 20th Anniversary Celebration to be held at the World Trade Center in Boston, MA, from September 25 to 27, 2006.

The theme of the 2006 Summit is "Realizing Operational Excellence." ICONICS customers, system integrators, and sales channel/ OEM partners are all invited. This includes plant engineers/managers, automation directors and IT managers specializing in industrial automation and manufacturing intelligence.

System integrators and partners will gain valuable points toward ICONICS' Certification Programs. For sales partners, events begin on Sunday, Sept. 24 with an evening cocktail reception followed by a "Sales Partner Only" day on Monday, Sept. 25.

All attendees will participate in two action-packed, full days Tuesday and Wednesday, (Sept. 26 & 27). This year's summit will also include expanded Breakout Sessions as well as a Partner Expo area. All interested sponsors should contact Tim Donaldson at *t.donaldson@iconics.com*.

At the 2006 Summit, you will hear from industry experts and peers as they explain today's challenges for industrial automation and manufacturing intelligence through case studies and real-world examples. Join us in Boston as we show you how to turn real-time information into your competitive advantage. ◀

ICONICS 2006 Worldwide Customer Summit
Seaport Hotel and World Trade Center
Boston, Massachusetts
September 25-27, 2006

At ICONICS' 2006 Worldwide Customer Summit, You'll Have the Opportunity to:

- **Learn More About ICONICS' GENESIS32 & BizViz V9 Suites.**
- **Learn How Others Have Used Manufacturing Intelligence for a Competitive Advantage.**
- **Visualize, Analyze and Contextualize Information from Anywhere.**
- **Unlock Hidden Data.** (Connect to and Aggregate Any Data Source in Real Time.)
- **Propagate Information in Real Time.**

Visit *www.iconics.com/summit2006* for more information.

UPCOMING EVENTS & SPECIALS

Training Classes

USA (Foxborough, MA)

Sept. 14-15	GENESIS32 Web & Multimedia
Sept. 28-29	BizViz Suite Training
Oct. 9-11	GENESIS32 Standard
Oct. 9-13	GENESIS32 Accelerated
Oct. 16-19	GENESIS32 Advanced
Oct. 18-19	GENESIS32 Scripting...

International (Plzen, Czech Republic)

Sept. 14-15	GENESIS32 Web & Multimedia
Oct. 17-19	BizViz Suite Training
Nov. 6-8	GENESIS32 Standard
Nov. 6-10	GENESIS32 Accelerated
Nov. 9-10	GENESIS32 Web & Multimedia

For the complete schedule, go to *www.iconics.com/training*.

ICONICS Specials

Through November 30, 2006

- Buy a Version 9 BizViz product between August 30 and November 30, 2006 and get MobileHMI Server FREE!

- Buy a Version 9 Alarm Analytics component between August 30 and November 30, 2006 and receive a FREE Alarm Analytics training at an official ICONICS training facility. Training must be completed by December 31, 2006.

E-mail *orders@iconics.com* for more info.

Industry Events

- **OPC Foundation DevCon 2006**
  October 10-12, 2006
  Munich, Germany
- **ISA Expo 2006**
  October 17-19, 2006
  Houston, TX
- **Weftec**
  October 22-25, 2006
  Dallas, TX
- **SPS/IPC/DRIVES 2006**
  November 28-30, 2006
  Nuremberg, Germany
- **Passenger Terminal Expo**
  December 6-8, 2006
  Ft. Lauderdale, FL

For details, go to *www.iconics.com/events*.