

BridgeVIEW 2.0 SCADA Software

Delivering the Power of Multithreading, OPC, and Distributed Computing Tools

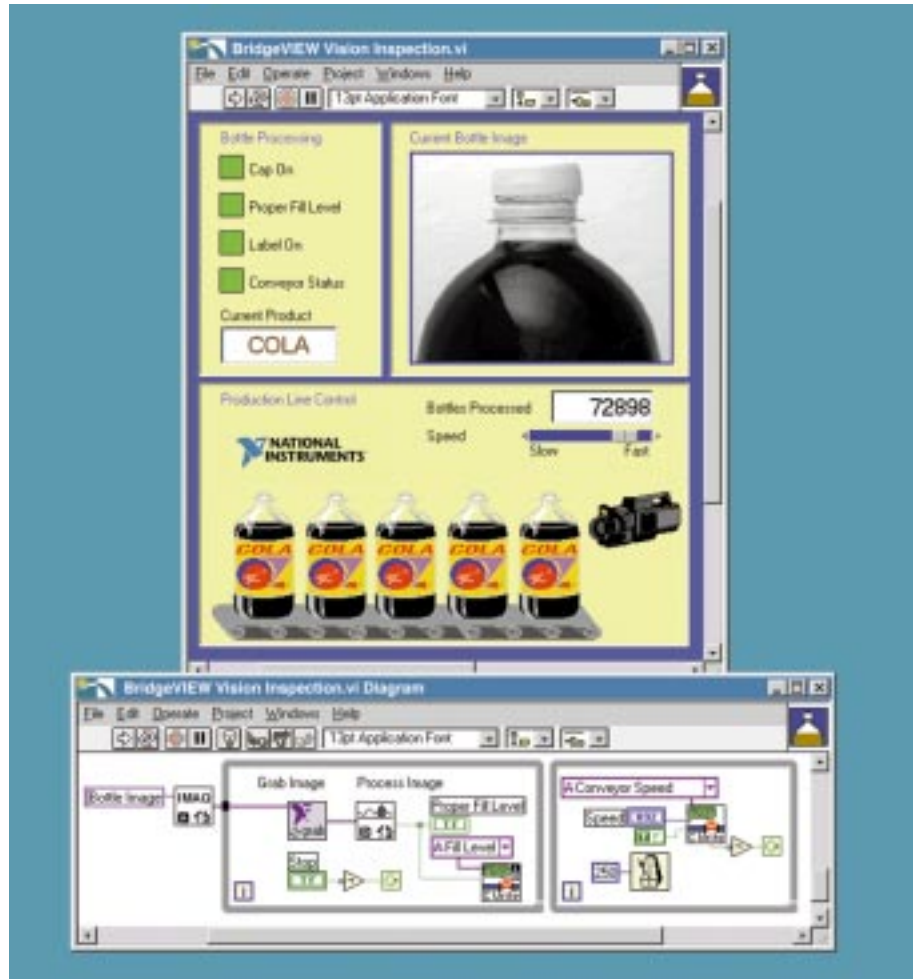
National Instruments has announced a new version of the company's graphical programming software for industrial-strength measurement, automation and process control applications. BridgeVIEW 2.0 combines popular software technologies, including the powerful G language of LabVIEW, together with an efficient, event-driven data engine to give engineers and system integrators the power to develop flexible automation solutions quickly and easily. In addition, because BridgeVIEW is easily integrated with the company's machine vision and motion control software and hardware, top manufacturers are using it today in production line, process control, pilot plant, remote monitoring, and HMI/SCADA (Human Machine Interface/ Supervisory Control And Data Acquisition) applications. The new version of BridgeVIEW delivers many powerful application development technologies, including:

- Multithreading
- Full OPC client support
- ActiveX container
- BridgeVIEW automation and TCP/IP server
- Distributed computing tools
- Translation and documentation tools
- Programmatic menu bars and undo

Novice and expert users alike will benefit from these new features, developing faster and more reliable measurement and automation applications that take advantage of industry-standard technologies. BridgeVIEW Version 2.0 is available for Windows NT/95.

Multithreading

The benefits of multithreading are numerous, including better reliability and throughput, better microprocessor utilization, and the ability to take advantage of multiprocessor machines. Up until now, however, because of the difficulty in writing multithreaded applications in

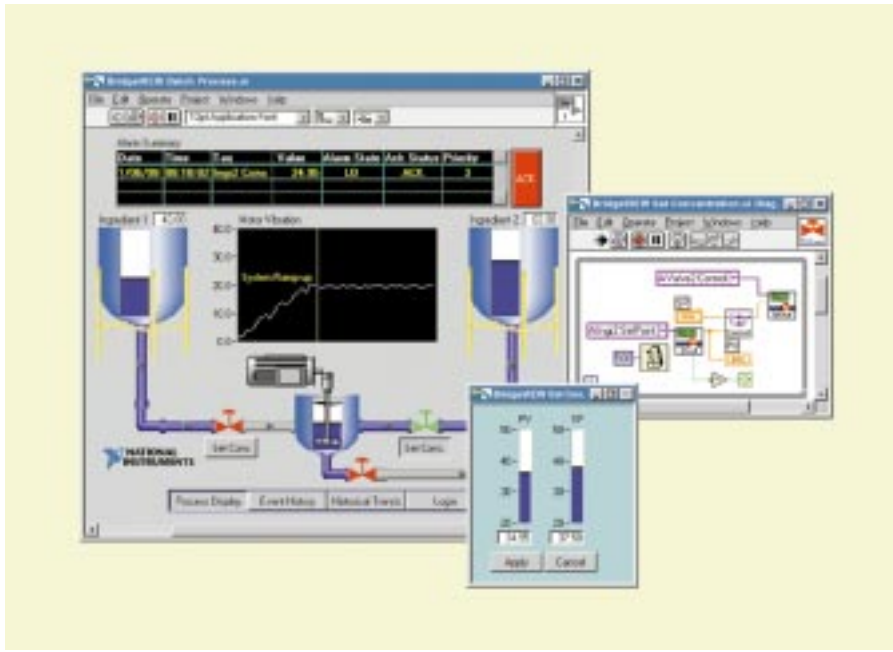


text-based, or sequential languages, multithreading technology has been limited to expert programmers. Previous versions of BridgeVIEW featured multithreading capabilities, however, in version 2.0, all BridgeVIEW applications created by users are automatically multithreaded without any code modifications. Because of the G graphical programming language in BridgeVIEW, users already design applications that can execute in parallel on separate threads. For example, an application developed in previous versions of BridgeVIEW is automatically multithreaded when opened in BridgeVIEW version 2.0. Thus, users benefit from the advantages of multithreading

without having to learn new programming techniques. Advanced users can use a simple dialog box for control over specific threads to run parts of their applications at higher or lower priority.

Full OPC Client

BridgeVIEW 2.0 is a full OPC client capable of communicating with any OPC server conforming to the OPC Foundation specification. Based on OLE and ActiveX, Component Object Model (COM), and Distributed COM (DCOM) technologies, OPC defines a set of standard objects, properties, and methods for process con-



control and automation software applications. An OPC server provides an interface to OPC objects, so that client applications can control devices and manage device data in a generic fashion. OPC clients can therefore communicate with any OPC server independent of the particular hardware device or I/O handled by the server. In addition, DCOM enables an additional level of functionality for OPC so that a client application can use objects located on other networked computers. Therefore, BridgeVIEW can execute and collect data from OPC servers that are running on any computers on the network.

ActiveX Container

BridgeVIEW 2.0 is now an ActiveX Container, meaning users can easily drop any 32-bit custom control (OCX) or ActiveX document onto a BridgeVIEW front panel to efficiently reuse software components that have already been written. This opens BridgeVIEW to the same enormous supply of ActiveX controls available to more traditional programming environments, such as Visual Basic and Visual C++. Examples of ActiveX controls and documents include a web browser, a Word document, an Excel spreadsheet, a calendar control, ComponentWorks controls, a HiQ document, or any other ActiveX-compatible control available from a wide variety of software suppliers. Users can edit these objects directly on the BridgeVIEW panel or control their

methods and properties using simple graphical programming. This ability to reuse components developed in other environments means that users can easily integrate BridgeVIEW with other software tools throughout an organization. This helps maximize code reuse and development efficiency while using the best development tool for a given task.

BridgeVIEW Automation and TCP/IP Server

BridgeVIEW Version 2.0 is an ActiveX automation server, meaning any ActiveX automation client can easily control the BridgeVIEW system or call BridgeVIEW programs directly. With this interface, ActiveX automation clients, including C, Visual Basic, Microsoft Excel, LabWindows/CVI, or even another BridgeVIEW application can easily call BridgeVIEW VIs (Virtual Instruments) directly from another program. The BridgeVIEW automation server encompasses the TCP/IP server interface, which enables BridgeVIEW client applications to easily control other BridgeVIEW applications directly over a network. Thus, with the BridgeVIEW ActiveX automation and TCP/IP server, users can create large, distributed systems that leverage open standards and the best programming tools for a given task.

Distributed Computing Tools

BridgeVIEW 2.0 provides tools that systems developers can use to quickly and

easily create distributed applications, whereby various sections of code can execute on different machines across a network. A BridgeVIEW application can seamlessly view data from devices attached directly to the local computer or across the network. In addition, BridgeVIEW can distribute programs to execute on other computers on the network. These easy-to-use tools make it possible for users to distribute processor-intensive programs to other machines for faster execution as well as create remote monitoring and control applications that users can control in a distributed computing environment.

Documentation and Translation Tools

With the documentation tools in BridgeVIEW 2.0, users can automatically generate documentation for their application in HTML and RTF formats simplifying the generation of user manuals, function reference manuals, or on-line help systems. With the translation tools in BridgeVIEW 2.0, users can export text associated with a program out to a file, where users can then translate it and import it back into the program. For even greater flexibility, users can choose from these language files at run time, thus giving them the ability to create truly multilingual applications. These tools can save software developers numerous hours of documentation and translation as well as help expand their markets to users they have not been able to reach before.

Programmatic Menu Bars and Undo

BridgeVIEW 2.0 also delivers two new features that can increase productivity—programmatic menu bars and a multistep "Undo." These features, proven to accelerate application development time, demonstrate yet another way National Instruments continues to improve their products and tools to the end-user's needs.

National Instruments, headquartered in Austin, Texas, manufactures software and hardware products for PCs and workstations that engineers and scientists worldwide use to build measurement and automation systems for a wide variety of research and industrial applications. National Instruments is on the web at <http://www.natinst.com>.