

PcVue

Scada Solutions



- Industry
 - Building/Utilities
 - Infrastructures

PcVue Supervision

PcVue V7 is a new generation of SCADA software. It is characterised by modern ergonomics and by tools based on object technology to reduce and optimise applications development. Developed by ARC Informatique using the latest tools from Microsoft (Visual C#, MFC, ActiveX and .NET), it incorporates Microsoft-developed user interface standards and the security features of Windows 2000 and XP.

This new PcVue range was conceived from the recommendations of integrators, OEMs and end-users, then developed using ARC's considerable experience in the industrial automation sector.

PcVue is more than simple software for graphic animation; it is a product able to meet industrial standards of reliability and performance while still maintaining the user-friendliness of an office application.

PcVue is a flexible solution intended for the supervision of industrial processes, utilities and infrastructures.

PcVue meets the requirements of both straightforward single-user applications and of complex client-server applications with redundant capability.

PcVue also offers a thin-client solution using WebVue. This software operates within a normal browser either on an intranet or via the Internet, with the necessary controls for security and safety.

Recent developments to PcVue range integration with the company's other products, including MES (Manufacturing Execution Systems), CAM (Computer Assisted Maintenance), SCM (Supply Chain Management) and ERP (Enterprise Resource Planning).



- ✓ Version for Windows 2000 and Windows XP, ✓ Dynamic configuration, ✓ Graphic interface using Document/View architecture, ✓ Stand-alone and client-server configurations, ✓ Server redundancy, ✓ Historical and real time trends, ✓ Advanced alarm manager, ✓ An access rights system compatible with 21 CFR Part 11, ✓ Structured database, ✓ Extensive use of object technology, ✓ Recipe management, ✓ Report generator, ✓ Scheduler, ✓ Timetables, ✓ VCR facility, ✓ Optimised event driven communication, ✓ DDE, OPC and DLL connections, ✓ ActiveX and Java Bean container, ✓ Import/export of data configuration in .CSV format, ✓ Recording to DBMS via ODBC or ADO, ✓ User programs in Microsoft VBA, ✓ Multi-media interface.

User-friendliness

• Immediate familiarity

To minimise training time, the configuration tools use the standard rules of presentation adopted for Windows 2000 and XP environments: tabs of related properties, assistance with configuration, contextual menus, drag and drop editing etc. PcVue is supplied with example projects and a tutorial. Together with the online help, these provide an excellent introduction to application development.

• Dynamic configuration

The Graphical User Interface, structured database, object library - and even the industrial communications, OPC, LonWorks or Multi-nodes - can be modified and validated on-line. Real-time update of mimics, alarm detection and historical data recording continue uninterrupted. A unique feature of PcVue allows several views of the same mimic to be opened simultaneously for dynamic modification and comparison before saving.

• Pre-configured animations

PcVue provides powerful pre-configured animations using single variables, groups of variables and calculated expressions. The animations available range from simple colour change to the powerful macro animations used to create Trend, Alarm and Event log displays. All animations have many options accessible by dialogue box. Applied to a graphic object singly or in combination, the animations offer incomparable flexibility without the need for any scripting.



Complete Graphical Interface

- **Power and simplicity**

PcVue's graphic engine is recognised as one of most powerful yet easiest to use on the market. Numerous features simplify the generation of the user interface: complex vector drawings, imported bitmaps, inserted video clips or ActiveX modules whose properties are directly modifiable at run time, free rotation of texts or drawings, transparent colours etc. Several views of same mimic can be open simultaneously in drawing and run-time modes (using the Microsoft Document/View architecture). Functions that include zooming, copying, layered displays and scrolling within a mimic offer you great scope for customising the display.

- **Security and ergonomics**

The ability to iconise your animated mimics and to use pop-up windows reduces the possibility of missing crucial information. Standard templates (for displayed elements and behaviour) ensure uniformity of your mimics. Multi-level access rights and menus associated with each user ensure that navigation in your application is tailored to the needs and the permissions of each user. The traceability and control of users' actions facilitate the development of applications to comply with the 21 CFR Part 11 requirements of the FDA (U.S. Food and Drug Administration).

- **Historical and real time trends**

Any number of historical or real time trend charts may be embedded in a mimic. At run-time the user is supplied with a wide range of tools with which to manipulate their contents: zoom, cursor, dynamic assignment of the variables to traces, etc. The various levels of configuration allow the application developer, and optionally the supervisory user, to customise and manage the behaviour of trends.

- **Report generation and playback**

PcVue has an integral report generator. Reports may be printed in real time or from recorded data and may be generated on demand, on event or scheduled. Recorded events may also be replayed interactively through mimics using a VCR-style dialog box, either a frame at a time or continuously without disrupting the run-time operation of mimics.

- **Alarm manager**

To meet today's diverse demands, the format and presentation of alarms is highly configurable. Alarm messages may be printed, viewed in alarm lists and archived. You can configure alarm behaviour using groups, filters, sorting, acknowledgement and masking. You can also create alarm counters and associate specific actions with an alarm. Alarms can be acknowledged directly from mimics and automatically broadcast to all nodes on the network.

- **Scheduler**

The scheduler function enables you to execute recipes using a programmed timetable. Fully configurable actions can be programmed for a fixed date and time, or recurrently taking into account exception periods for public holidays and other calendar events. Subject to the user's access rights, the Scheduler's configuration can be modified at run-time.



Object Technology

- **Object Libraries**

PcVue is supplied with object libraries containing hundreds of 2D and 3D pre-animated objects. Each object can easily be modified and saved without the need for specialised tools. New reusable objects may be created either from scratch or by changing the properties of an existing object and saving it with a new name. Complete new libraries of objects adapted to your application may be created.

Moreover, any modification of an object is automatically propagated through the application without compilation, manual modification or script editing. The flexibility of the tool and the ability to import external images assist with the building up of object libraries customised to suit your business.



- **Structured database**

Since it is arranged as a hierarchical structure, the PcVue database allows you to structure your data in a way that reflects the outside world. Searching for information and navigation through the various areas of the application are far easier and more natural than with a non-structured database. Attributes of domain and nature for each variable offer you additional selection criteria. Structuring the data in a way that reflects the outside world provides the additional benefits of creating applications that are easier to understand and maintain.

- **Generic objects**

The pre-configured animations in combination with the structured database let you easily build generic objects and mimics. These are directly reusable without compilation or script modification, just by inheriting the operational context. Any modification to a generic object is automatically propagated to any mimic where it is used. By using generic objects, PcVue saves you time and guarantees uniformity of presentation when developing your application.

Connectivity and Flexibility

- **Optimised industrial communication**

PcVue's native event-based communication manager supports both serial and TCP/IP drivers with protocols available for most manufacturers including Schneider - Open Modbus Master/Slave, Mitsubishi, Siemens - S7 Read/Write and Yokogawa etc. Communication is optimised by eliminating unnecessary data exchanges. PcVue supports all versions of Echelon's LNS and, amongst other benefits, allows online modification of the LON DB (polling/binding). Further benefits include support of protocols with date-time stamping at source (PLC), redundancy of acquisition and remote access by PSTN. A blank driver and a development kit are available for creation of specific, non-standard protocols.

- **OPC**

PcVue includes both an OPC client and server (Data Access 1.2 and 2.0) for exchange of real time data with 3rd party communication servers including PLC drivers, pager systems and maintenance software.

- **Scripts**

PcVue developers have a variety of options for producing and executing structured programs. By writing Microsoft VBA or SCADA BASIC scripts, you can adapt the functionality of the product to your specific needs. Using VBA you can access the methods, events and properties of an ActiveX contained with a PcVue mimic, together with the project environment, database variables, PcVue's own native drawing elements and external DLL programs. Together with the triggering of software modules from events, cyclically or from schedules, these features provide a complementary toolkit that multiplies the power of your application.

- **ActiveX**

PcVue mimics behave as a container for both ActiveX controls and Java Beans. A developer can simply integrate, into any mimic, components from independent developers or equipment manufacturers. ActiveX properties are accessible for reading and modification using VBA. They may also be bound directly to the real time values of database variables without the need for programming.

- **Multiple stations and redundancy**

PcVue uses a shared database system when used in a networked multi-station application. The change from single station to distributed architecture on an Ethernet TCP/IP network is as easy as logging onto a LAN. Using its built-in redundancy features, PcVue makes it possible to ensure continuity of data collection in the event of failure of a system component. Redundancy supports both dual communication networks and dual PcVue stations. Each component and each station has a validity status allowing you to review the condition of the control system in real time.

- **Centralised configuration**

The management of multi-station systems requires advanced tools to ensure the coherence of the configuration data and deployment on all of the stations, especially for geographically distributed applications. PcVue's centralised configuration control enables you to ensure the management and traceability of the various versions of applications and their modifications. It also supports automatic updating of the stations that make up the supervisory system. At each start-up of a station on the network, PcVue automatically carries out consistency checks of the versions in use.



• ODBC and ADO

Powerful capabilities for interoperability by SCADA software is required for integration of the company's IT system within the MES framework of applications, optimisation of site management or even computer-assisted maintenance. Using PcVue, you can organise and structure the production of historical data to suit its subsequent use. The historical data and the recipes can be managed in a DBMS via the ODBC or ADO standard interfaces. They are then accessible from any other node on the network to ensure the management of ranges, batches and online updating of the properties of recipes managed by the SCADA system. The use of ADO or SQL requests from PcVue is the simplest and most universal solution on the market for this purpose. It supports data exchanges with the DBMS and allows you to adapt and customise the contents and configuration of data exchanges with other applications.

• DataVue

DataVue enables you to compose requests to explore and analyse the historical data produced by PcVue. DataVue is an easy-to-use application designed for personnel in manufacturing services, maintenance, quality, and production. It is the ideal solution for sharing your production data

simply with third party products (spreadsheets, DBMS, etc.). Using Datavue's configuration tools, you can easily define your reports and assessments to reflect your key performance indicators (KPIs).

• WebVue

WebVue is the solution that gives you access to the data provided by a PcVue application via intranet/Internet technologies. WebVue requires no local application. Instead it applies the 'thin client' principle to a PC running Windows, Linux or any other operating system that supports a Java-enabled internet browser. You can create your own gateway to production data and provide occasional or distant users with dedicated mimic views, trends, alarm lists or historical data. You can also configure links with other sites through HTML pages.

Using WebVue you can also acknowledge alarms and operate remote controls on your installations. Security is safeguarded using PcVue's user rights system and encrypted data transmission. WebVue is the ideal tool to provide real time functions for maintenance staff to perform remote diagnosis of machinery, for engineers to optimise process components or even for staff in charge of manufacturing to monitor and respond to production data.



All the Solutions you need in one Software package!

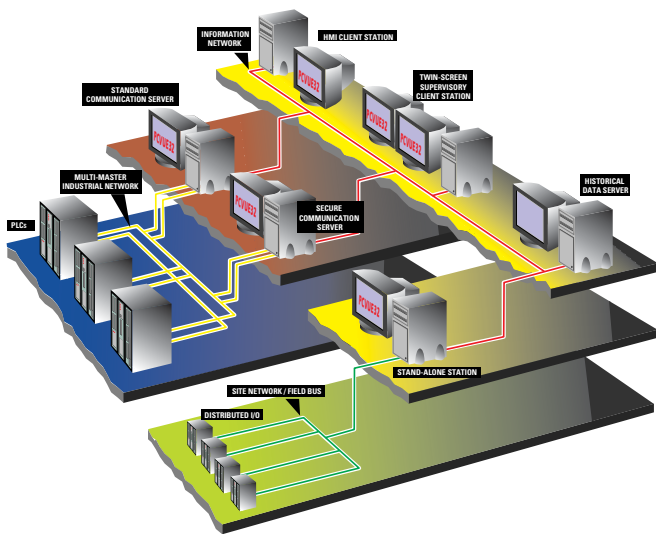
• Example of a PcVue Application

PcVue offers a system perfectly adapted to your needs, ranging from a low-cost version for projects with few tags, up to elaborate, redundant multi-station architectures with multiple screens per station and tens of thousands of tags:

- ✓ Optimal usage of multiprocessor architectures under Windows XP or 2000.
- ✓ Entry version of the PcVue range with 75 tags.
- ✓ Single stations, communications servers, supervisory client stations, historical data servers and HMI clients.
- ✓ Thin clients for intranet and Internet.
- ✓ Multi-station versions for any compatible TCP/IP network.
- ✓ Redundant systems with configurable broadcasting of messages and operators' actions across the network.
- ✓ Historical data on database servers, maintained through OBCD and ADO.
- ✓ Multi-screen configurations as standard (up to 4 screens per PC).
- ✓ Shared database with configuration of access rights for each I/O point.

Communication protocols for: ABB, APPLICOM, ALLEN-BRADLEY, CECELEC, CERBERUS, ECHELON, FACTOR CIB, FISHER ROSEMOUNT, GE-FANUC, HARTMANN & BRAUN, HONEYWELL/VERSAPACK, IDEC IZUMI, JOHNSON CONTROL, KLOCKNER-MOELLER, MICON, MITSUBISHI, MODICON, NATIONAL/NAIS, OMRON, PHILIPS, PHOENIX CONTACT, PROFIBUS, ROCKWELL, ROSEMOUNT, SAIA, SCHNEIDER, SIEMENS, SOFREL, TCS, WAGO etc.





The Expert Opinion in Supervision

Renowned as one of the leading European companies producing SCADA and HMI solutions, ARC Informatique has the goal of providing its customers with solutions that enable them to reduce their production costs and boost the productivity of their installations. The company is dedicated to long-term investment in the integration of new technologies into its products. ARC Informatique has offices in Europe, the United States and South East Asia, plus representation through a network of distributors and partners around the world.

The trademarks PcVue, PlantVue, FrontVue, WebVue and DataVue are the property of ARC Informatique.

For more information: → www.arcinfo.com



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Offices

FRANCE ARC Informatique
Headquarters and Paris office
2, avenue de la Cristallerie
92310 Sèvres - France
Tel + 33 1 41 14 36 00
Fax + 33 1 46 23 86 02
E-mail : arcnews@arcinfo.com
Web : www.arcinfo.com
Hot-Line :
Tel +33 1 41 14 36 25

USA PcVue Inc
92 Montvale Ave
3125 - Stoneham
MA 02180 - USA
Tel + 781 438 38 40
Fax + 781 481 93 53
E-mail : pcvueinc@arcinfo.com
Web : www.pcvueinc.com

U.K. Control Technology
International
Regal Chambers
49/51 Bancroft, Hitchin
Hertfordshire, SG51LL
ENGLAND
Tel + 44 1 462 45 77 00 -
Fax + 44 1 462 45 33 77
E-mail : info@ctiweb.co.uk
Web : www.ctiweb.co.uk

SINGAPORE Pcvue Sea
371 Beach Road
#02-12 Keypoint
Singapore 199597
Tel +65 6396 9186
Fax +65 6296 0943
E-mail : pcvuesea@pacific.net.sg

Aix Office
11, rue Louis Colet
13090 Aix en provence
France
Tel + 33 4 42 52 36 83
Fax + 33 4 42 29 74 55
E-mail :
arcaix@arcinfo.com

Grenoble Office
25, chemin de Chaumetière
38240 Meylan
France
Tel + 33 4 76 18 29 12
Fax + 33 4 76 41 06 71
E-mail :
arcgrenoble@arcinfo.com

Lyon Office
7, chemin du Dodin
69570 Dardilly - France
Tel + 33 4 78 35 93 93
Fax + 33 4 78 35 35 92
E-mail : ardlyon@arcinfo.com
Hot-Line :
Tel +33 4 78 35 93 54

Strasbourg Office
BP 311
67008 Strasbourg Cedex
France
Tel + 33 3 88 21 02 10
Fax + 33 3 88 21 02 11
E-mail :
arcstrasbourg@arcinfo.com

also: Argentina, Australia, the Benelux countries, Brazil, Canada, Chile, China, Finland, Germany, Greece, India, Indonesia, Italy, Kuwait, Malaysia, Morocco, Poland, Portugal, South Africa, Spain, Switzerland, Syria, Taiwan, Thailand, Tunisia, Turkey and Venezuela.



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