

GENESIS32

V8 Enhancements

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OPC Automation at your fingertips

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GENESIS32 V8 Enhancements

AlarmWorX32 V8 Enhancements

#	Summary
1	Added FREE product support for MSDE and MS SQL.
2	Enhanced the AlarmWorX32 Alarm Report ActiveX: 1. Re-structured it into a multi-threaded application, giving it and the other applications running with it much better performance. It now uses "worker threads" for data retrieval; this significantly improves its responsiveness and the responsiveness of its container. 2. Added the capability to connect to alarm databases over the internet (via WebHMI). 3. Added support to optionally suppress noise on a Return To Normal. This was implemented by adding the check box "Ignore unacknowledged alarms that have returned to normal" on the "settings" page. The default is unchecked (the default behavior is unchanged from older versions). This enhancement affects more than just the sound. When enabled, all alarms that return to normal are automatically treated as Acknowledged, even when they are not.
3	New AlarmWorX32 View32 V8: 1. Significantly improved the performance of the AlarmWorX32 Viewer – approximately 10 times speed increase. Please see the AlarmWorX32 View32 Performance Test Results paper for more information, if needed. 2. Added the option to display "Alarm Toggle Count", a new attribute provided by the Alarm Server 3. Added an option to calculate and show the duration of an alarm in the active state. The time is reset when a new alarm occurs or when there is a change in the active flag. 4. Added an option to allow users to select comments from a pre-configured list. The user can create the list using a named CSV file in the directory of the OCX. This does not prevent the user from adding their own comments. 5. Added additional helper IDs for use in automation calls. Helper IDs were added for subscription, node, description, time in alarm and prog id. 6. Added the option to allow the Alarm Header Bar to be hidden. This can be done by setting the height of the bar to be 1 pixel 7. Improved the AlarmWorX32 Viewer configuration GUI to present the simple (wizard) interface for configuring client filters as the first dialog. Access to the Expression Editor was moved to an "Advanced" button. 8. Simplified the "like" expression so that it no longer requires the user to type in the full syntax. 9. Added the ability to display the Title during design time. 10. Added the capability to configure each column's properties. 11. Improved user-friendliness by having the Ack/Comment dialog no longer appearing after a double click, if the alarm has already been acknowledged. 12. Enhanced the automation interface: a. Added a search/replace capability on alarm filters. b. Added a method that returns a safe array of filter names. c. Added the ColRowInfo, which can be used to obtain the Acknowledge Status of the row. d. Added the ability to select an alarm row based on an index. The syntax is: <code>BOOL SelectRow(long INum); void RemoveSelectedRow(long INum); void ResetSelectedRows();</code>

4	New in AlarmWorX32 Server V8: 1. Added support for Global Aliasing 2. Added support for an "Alarm Toggle" count for each alarm. This new alarm attribute keeps track of the number of times the alarm has entered and returned from the alarm state since it was last acknowledged. Once the alarm is acknowledged, the count is reset. 3. Added the configurable option of requiring users to acknowledge return to normal messages. This option is configurable on a per alarm basis. If configured, the user will have to acknowledge the return to normal (even if the alarm was previously acknowledged) to clear the alarm from the viewer. 4. Added support for having a DA Tag represent Alarm Delay. This tag can be written to by an OPC Client, providing run-time control of this function. 5. Added continuous monitoring of the ACK Required bit for each alarm whereas in the past, AlarmWorX32 Server would read it only at the time of a new alarm. Having this bit continuously monitored provides a means for users to implement automatic acknowledgement of alarms. 6. The V8 AlarmWorX32 Server was tested and found to be in compliance with the OPC AE V1.1 Standard.
5	New AlarmWorX32 Logger V8: 1. Added support for Oracle 9i databases. 2. Added support for printing on a default Chinese printer. Note, if using an English version of Windows, the default language settings should be set to Chinese to be able to view and log the alarms in Chinese. 3. Added the ability to filter out event/alarm messages generated by AlarmOLE.
7	AlarmWorX32 was enhanced to add additional, optional security checking on alarm acknowledges. The alarm viewer will automatically display the login dialog and force the user to login before allowing an acknowledge to certain critical alarms.
6	Enhanced the AlarmWorX32 Container to support VCRWorX32 replay of alarms. This includes an additional, new menuitem for starting up the VCRWorX32 Control Panel.
8	Enhanced the Alarm Server Configurator to show a warning message if the user changes "Default Alarm Server Conf." To something else.

AlarmWorX32 Multimedia V8 Enhancements

#	Summary
1	Enhanced the AlarmWorX32 MMX Pager Agent to support sending multiple pages in a single phone call to the pager service.
2	Enhanced the AlarmWorX32 MMX Pager Agent's paging algorithm adding a delta wait to the algorithm. This algorithm enables better synchronization between the pager and MMX Server, enabling updates from the Server when sending of pages in batches.
3	Enhanced the AlarmWorX32 MMX Mail Agent to support the ability to disable the Acknowledge ability. A new registry setting was added called ReadDelete (dword). If set to 4, the agent will not attempt to read email (outgoing only).
4	Enhanced the AlarmWorX32 MMX Sound Agent adding the ability for the user to set pitch, speed, and volume.
5	Added configuration utility for using fax agent with plug-in cards
6	Added alarm processing support for phone agent
7	Added lease line support for the phone agent
8	Enhanced the AlarmWorX23 MMX Marquee Agent adding Header/Trailer support.

9	Enhanced the AlarmWorX32 MMX Pager Agent's paging algorithm improving the support for multiple pages. The thread support for handling tap pages was switched to a strict periodic poll. Whenever the thread triggers, all queued page requests between time n and +5 seconds will be sent, assuming they are to the same service provider. The new method allows for multiple pages with more consistent operation. This change is for periodic multiple page request operations.
10	Enhanced the AlarmWorX32 MMX Pager Agent to support PA going through a dedicated channel on the Dialogic card. Previously, Call-out and PA used the same channels. To support this feature, the PAReserve registry setting was added, and the CALLIN/CALLOUT configuration is used. If the registry setting is set, only PA lines will be used for PA. Open line will not.
11	Enhanced the AlarmWorX32 MMX Marquee Agent adding a special "keypad" screen that allows for insertion of any and all ASCII characters (0-255), giving users better control over what is output.
12	Enhanced the AlarmWorX32 MMX Marquee Agent adding support for the Adaptive Ethernet marquee.
13	Enhanced the AlarmWorX32 MMX Pager Agent to use a multi-line edit box for the TAP Diagnostic Dialog box for displaying the text of the message most recently sent to the pager engine. In the previous version, a single-line edit box was used, severely limiting the ability to view the entire message.
14	Enhanced the AlarmWorX32 MMX Pager Agent's TAP diagnostic box adding a Cancel function.
15	Enhanced the AlarmWorX32 MMX Pager Agent's TAP diagnostic box so that if the user closes it while it is enabled, it will automatically re-display the next time a page is sent. In the previous version, it was necessary to restart the MMX Server to get the diagnostic box to redisplay.
16	Enhanced the AlarmWorX32 MMX Marquee Agent adding a Bitmap skin feature, enabling users to customize / brand-label their application.
17	Enhanced the AlarmWorX32 MMX Configurator to check if the user is using Infinite Loop or Loop X Times and has no delays configured. If it finds this condition, it warns the user to use delays to avoid creating a large queue of actions. Not adding these delays could cause messages (including Acknowledge and Return-to-Normal) to be delayed greatly.
18	Enhanced the AlarmWorX32 MMX Pager Agent making the GUID optional. In previous versions, the GUID was required.
19	Updated the AlarmWorX32 MMX Pager Agent's services.inf file and added the thirdparty reg file for updating the SMS modem configuration.
20	Enhanced the AlarmWorX32 MMX Phone adding support for Flash write and update. Previously this was only available with the standard write.

Carousel V8 Enhancements

#	Summary
1	Greatly improved Carousel provides many new features: 1. Runtime selectable display lists 2. New improved GUI Status Panel indicates current display and timing information 3. Define new display lists while running (identical to GENDEMO) 4. User definable display lists 5. User definable display list timing

New Data Mining V8 Feature

#	Summary
1	New Data Mining Technology - Integrated Database Connectivity feature - Brings database access to all ICONICS Products, similar to OPC access - Supports reads and writes to/from many types of databases and spreadsheets including: - MS Access - MS SQL - Oracle 8.x and 9.x - MSDE - MS EXCEL - ODBC, OLEDB databases - Includes a database connection wizard & database object browsing - Includes a powerful Data Mining Server Configurator - Supports the ability to create database connections with the Unified Data Browser. (No need to pre-configure connections or tags at the server) - Supports powerful aliasing capabilities - for indexing into tables - Easy to use "Datasets" enable - Access to database tables - Single field read or write - Column read or write - Row read or write - Two-dimensional array read or write - Simple SQL Commands - New "Data Manipulators" provides ability to manipulate a database using: - Stored procedures - Simple SQL command when the database server does not support stored procedures
2	New Data Mining ActiveX Control - Provides ability to view whole tables, rows, or columns from any open database - Connect to databases through ADO (OLEDB, ODBC, Access, JET, TEXT, or CSV) - Alternatively connect to databases through the ICONICS Data Mining Server - Automatic updates and screen refresh - Supports Global Aliasing
3	New Data Manipulator ActiveX Control - Simplifies the GraphWorX32 / VBA / VBScript interface to Data Manipulators - Eliminates any need for complex (VB) code for determining when a Data Manipulator has completed a Stored Procedure Call or a SQL Command

DataSpy V8 Enhancements

#	Summary
1	Enhanced DataSpy to add an "Update Count" column in Monitor View window to see the number of updates.
2	Enhanced the DataSpy EnterValueDlg to support writing to the VT_EMPTY and VT_NULL values.
3	Enhanced DataSpy to support the ability to write to an array of variants.
4	Enhanced DataSpy to show error descriptions on GenBroker data items.
5	Enhanced DataSpy to support browsing HDA.

DataWorX32 V8 Enhancements

#	Summary
1	Enhanced DataWorX32 to run as an NT Service.
2	Enhanced DataWorX32 to support separate configuration and runtime portions.
3	New DataWorX32 GUI with greatly improved ease of use
4	Added Online Configuration
5	Backwards Compatible with DataWorX23 v7.x (imports/exports 7.x configuration files)
6	Based on new ICONICS OPC ToolWorX v3.1 inheriting key features: 1. New OPC DA 3.0 Support 2. New OPC XML native Support 3. Complete OPC compliance with DA 3.0 and XML
7	Configuration stored in a database (for easy manipulation and viewing)
8	New Automation Interface (Enhanced runtime feature set, more limited configuration - because the configuration is stored in a database)
9	Added support for refreshing outputs on an individual register basis (rather than forcing all registers at once) and whether or not the output should be refreshed every "X" seconds.
10	Enhanced the automation interface to allow the quality of an OPC tag (one that is not connected to an Input) to be changed.
11	Enhanced the automation Interface adding the FindTag() function. This function is simply a search function for the use of a specific tag. It returns a true/false based on whether the tag was found.
12	Enhanced the automation interface to add functions to get the Register Input and to get an array of Register Outputs.
13	Enhanced the handling of expressions that have circular references. If it finds a circular reference it will indicate that to the user and will calculate the quality based on the quality of OPC tags.

Expression Editor Enhancements

#	Summary
1	Added many string operations and functions geared towards IT applications including: 1. len(String) - String Length 2. substring(String,StartPos,Length) - Substring Extraction 3. replace(StringSource,StringFindWhat,StringReplaceWith) - Substring Replacement 4. left(String,Length) - Left Substring 5. right(String,Length) - Right Substring 6. concat(String1,String2) - String Concatenation 7. IndexOf(StringToSearch,StringToFind,StartIndex) - String Search 8. trim(StringToTrim,CharactersToRemove) - Trim Left and Right 9. trimleft(StringToTrim,CharactersToRemove) - Trim Left 10. trimright(StringToTrim,CharactersToRemove) - Trim Right 11. tolower(String) - Lower Case Cast 12. toupper(String) - Upper Case Conversion
2	Added string operations that make it possible to parse strings that represent various engineering units. Through these functions it is possible to parse strings that represent either feet/inches (e.g. 12'3"),or navigational deg/min/sec (e.g. 67d12'8") to a decimal format, meters and decimal degrees respectively.

3	Added a resize grip on the corners of the Expression Editor dialog to make it more apparent that it is resizable.
4	Added two math constants: PI and e.
5	Changed the font used by the Expression Editor to be fixed width to make it easier to read the expressions and to format them.
6	Added support for using Global Aliases in the expression editor
7	Reorganized the Expression Editor functions into subcategories to improve usability.
8	Enhanced the Expression Editor to make the functions easier to use. Each function is now listed with descriptive parameter names, like "if(BooleanCondition,ValueIfTrue,ValueIfFalse)".
9	Added support for the standard double quote as a constant string delimiter. Also kept support for the "\$" and "\$\$ delimiters for backward compatibility.
10	Added access to the Timestamp from a Tag through the new V8 Unified Data Browser. a. Create an expression b. Insert an OPC tag: the Unified Browser will open on the screen c. In the unified browser select a tag d. In the unified browser click on the button with 3 dots on the side of the tag name "..." e. The Extended Point Syntax Editor will be opened f. Check the Attribute field and select "timestamp" g. Make sure in the process point to set the type to "string" because the timestamp will show a date as a string
11	Expanded the Expression Editor help for GENESIS32 8.0.
12	Enhanced support for quality in functions.

GenBroker Enhancements

#	Summary
1	Improved the performance of GenClient/GenBroker TCP/IP communications.
2	Added support for OPC DA 3.0 communications.
3	Added support for OPC XML-DA communications.
4	Added optimization for the SOAP/XML communications
5	Added support for concurrently executed browsing (by the new Unified Data Browser
6	Improved the security of GenClient/GenBroker communications by adding the concept of ClientIDs, and by enhancing GenBroker and the GenBroker configurator to support a user-configurable list of node names/ip-addresses that can make a connection to GenBroker. When a client node that is not in the list tries to make a connection, GenBroker continuously returns an error code to the client node. This is implemented using ClientIDs, which is a piece of information that every GenClient sends about itself. This information is sent in the very first request to GenBroker. GenBroker then may deny communication with a client or it may modify its behavior, depending on the ClientID.
7	Enhanced GenClient to support an option to redirect all points referred to as \\default\host\server\item to a specific node. The \\default\host refers to the local node by default. To change it, insert a string value "DefaultHost" into the registry at HKEY_LOCAL_MACHINE\SOFTWARE\ICONICS\GenBroker\GenClient.
8	Added support for prepending a string to the OPC group name. This is required for certain OPC Servers, so that the OPC clients have write rights
9	GenClientWrapper was made safe for scripting.
10	Added browsing of NT Domains.
11	Improved OPC Item caching mechanism.

12	Improved detection and recovery from callback connection failure
13	Improved performance with the querying of HDA Attributes
14	Added support for optional IOPCShutdown interface for DA servers.
15	Added new optional client side caching (caching available within GenClient)
16	Significantly improved the performance of GenEvent handling (by using asynchronous calls).
17	Added support for Language switching for WebHMI applications.
18	Enhanced GenClient to support the ability to specify a requested data type by extending tag name syntax. The type name must be on the very end and separated with (pipe). This works in extended syntax, (ie. tag: must be on the beginning). The allowed type names are: ▪ Variant type names beginning with "VT_" (eg. VT_I2, VT_R8, VT_BSTR) ▪ The same without the "VT_" (eg: I2, R8, BSTR), or ▪ Some "human readable" names for the most often used types: CHAR, SHORT, LONG, BYTE, WORD, DWORD, FLOAT, DOUBLE, STR, STRING. Some examples are: ▪ tag:ICONICS.Simulator\SimulatePLC.Sine FLOAT ▪ tag:ICONICS.Simulator\SimulatePLC.Ramp VT_I4 ▪ tag:ICONICS.Simulator\SimulatePLC.Random BSTR
19	Enhanced the GenBroker Configurator to allow "whole line" selection of GenBroker Server in the server list dialog.
20	Enhanced GenClientBrowser adding a method to get node name and server name when browsing.
21	Enhanced GenClient to support a way to force the use of OPC 1.0.
22	Enhanced the GenBroker Configurator to use XML 4.0.
23	Enhanced GenBroker's automation interface adding functions that enable the disconnection of remote users.
24	Enhanced GenBroker to add options to restrict functionality. The functionality is divided into the following parts: ▪ Data Access ▪ Alarms & Events ▪ HDA ▪ Global Aliases ▪ Language Aliases ▪ MMX ▪ Security ▪ Licensing and registration ▪ Browsing When a function is disabled, the related functions return an error to all clients.

GENDEMO V8 Enhancements

#	Summary
1	New GENDEMO highlights new product features.
2	New GENESIS32 and BizViZ V8 Key Features
3	New GENDEMO slides highlight key OEM features
4	New GENDEMO slides highlight Security Market features
5	New BizViZ GENDEMO product slides

GenRegistrar Server / Licensing Enhancements

#	Summary
1	Enhanced the License Monitor automation interface adding methods for reporting the nodes connected to the server and application usage (number of points and the client units being used and available).
2	GenRegistrarServer and GenRegMonPP were enhanced to support the option of using the (GenEvent) server provided timestamps rather than timestamps from the client node for time-stamping OPC Server setpoint changes.

GenTray Enhancements

#	Summary
1	Enhanced GenTray to support running the new V8 DataWorX32 as a service.
2	Enhanced GenTray to support single click editing for items in 'startup' or 'Shutdown'.
3	Enhanced GenTray to make the splash screen optional (added a check box to disable it).

GraphWorX32 Enhancements

#	Summary
1	Increased the maximum display size to 30,000 x 30,000 pixels.
2	Added the capability to create customized tool tips for GraphWorX32 objects
3	Enhanced GraphWorX32's navigation between different tab-able items. Using a preferences checkbox, it is now possible to distinguish between active and highlighted items. 1. This means it is possible to move the mouse over the screen, and although the mouse cursor would show as the pointing finger/hand, the focus rectangle would remain at the last selected item (DE/Pick). Only when the mouse is clicked would it move from the focus rectangle to the clicked on item. 2. Additionally, GraphWorX32 knows where the currently selected item (focus rectangle) is, and therefore it is now possible to continue tabbing from this location onward (i.e. GraphWorX32 won't forget where the last active item was due to accidental mouse movement). 3. Thirdly, through another preferences checkbox, it is possible (when tabbing) to "not" automatically move into data entry mode.
4	Improved Script Validation.
5	Improved support for Relative Paths
6	Improved Set Working Directory Dialog
7	Improved Automation Interface
8	Added Support for FTP Upload for Web Publishing.
9	Added the option for disabling Security Messages and Login Dialog
10	Greatly increased performance of Global Alias resolving by adding caching.
11	Added smart Alias resolution in Update Shared Objects. Significantly optimized by adding checking so as not to re-resolve aliases that were previously resolved prior to a screen switch.
12	Added several new Pick Actions to GraphWorX32: 1. New pick action to trigger a Data Mining OPC Server database transaction. 2. New pick action to trigger the execution of a ReportWorX report. 3. New pick action to trigger the execution of a BridgeWorX transaction. 4. New pick action to load the VCR Control for a WebHMI client.

13	New Format Painter function, (similar to Format Painter supported by MS Office).
14	Added support for VCRWorX32 – ability to "replay" the screens using historical data from the Trend Logger Database. Please see the description the new VCRWorX32 feature in GENESIS32 V8.
15	Enhanced GraphWorX32 scripting to allow disabling of scripts on start/load.
16	Added support to allow you to save a changed template file without VBA. Previously, if you wanted to change your template file, you were not given this option and thus if you reapplied that template, all the gdf's using that template were then saved with VBA.
17	Added automation methods for supporting various zoom functions including: ViewHome, ViewUnzoom, ViewPan, ViewZoomPercent, ViewFitToWindow, and ViewShowWholeDisplay.
18	Added capability to customize the "CONFIRM" dialog box when entering a set point. It can now support a description.
19	Added support for the new Client-side caching capabilities added to GenClient for the V8 release.
20	Added support for an easy way to pan a zoomed-in GraphWorX32 screen. GraphWorX32 now supports an ALT-Click/Drag option, whereby if the user Alt-Clicks on anything other than a pick dynamic / Data entry, the mouse icon turns to a Hand icon, and the user can alt-drag around the view.
21	Added support in GraphWorX32 for the new Data Mining ActiveX. It is accessible through the ActiveX toolbar in GraphWorX32.
22	Added an option within GraphWorX32 for disabling security messages and the Login Dialog.
23	New GraphWorX32 Keypad capability V8 1. It is now re-scalable in relation to the screen resolution, where: ▪ VERY SMALL --> 1 / 5 of the screen resolution ▪ SMALL --> 1.75 / 5 of the screen resolution ▪ MEDIUM --> 2.5 / 5 of the screen resolution ▪ LARGE --> 2.75 / 5 of the screen resolution ▪ VERY LARGE --> 4 / 5 of the screen resolution 2. Provides support for extra large size by default 3. Provides new registry entry for specifying custom size 4. Provides new API for setting custom size 5. Improved Automation Interface
24	Enhanced GraphWorX32 to support the ability to get a reference to the parent symbol of an object.
25	Enhanced the GraphWorX32 support for simulating a mouse click in VBA. It now displays the popup menu on the top of the object rather than at the top-left corner of the screen.
26	Enhanced the GraphWorX32 display of current date/time to automatically switch to the VCR Playback data/time when the when screen is switched to VCR Playback mode.
27	Added new automation functions GetLocalVariables, GetLocalAliases to GraphWorX32. These functions are used by the new Unified Data Browser for retrieving information.
28	Improved the GraphWorX32 handling of saving changes to displays. In previous versions, if you were updating shared objects over multiple screens, the changes made in the first/source display are not saved. Now GraphWorX32 will prompt the user to ask them if they wish to save the changes before proceeding to the next display.
29	Added event OnViewChange which provides the current zoom level on each change of the view.
30	Added design time mouse and keyboard events that provide what object was selected.

31	Enhanced the GraphWorX32 viewer to support Language Switching when running in WebHMI applications (within the Internet Explorer Container).
32	Enhanced GraphWorX32 to allow the changing of the language alias in Process Points Tags.
33	Enhanced GraphWorX32 to support the capability of changing the color of the Flash dynamic through VBA.
34	Enhanced GraphWorX32 to support alias embedding. With this new feature, it is now possible to have the name of the global alias be derived from a local alias. For example, <#<<sensor>>#>, whereby <<sensor>> can be resolved to create two valid global aliases <#PrimarySensor#> and <#SecondarySensor#>.
35	Enhanced the GraphWorX32 Edit Connections Dialog, adding an EXPORT CSV button.
36	Enhanced the GraphWorX32 printing capabilities. One can now specify on a per display basis if it is to be printed with a white background. This can now be set via the display properties, application preference, or through the automation methods. In addition, there are new events OnPrePrint and OnPostPrint which allows you to dynamically modify the display before and after printing.
37	Added exposure of currently logged user and group to expressions.
38	Added support for specifying and modifying the order of the existing color sub dynamics, and to support the ability to remove a color "sub" dynamic.
39	Enhanced the GraphWorX32 OnViewChange function to raise an event when ThisDisplay changes its view (e.g. user changed window size, or zoom).
40	Added a means to get a reference to an already open GraphWorX32 display that is in design mode through GenRegistrar, with AutoGenRegistrar calling method GetDispath with szKey parameter "GWX_DESIGN_MODE". This feature has to be enabled by registry key Gwx32\Compatibility Properties\DesignTimeRegistration.
41	Enhanced the GraphWorX32 GetVisibleObjectFromPosition function to support getting design time mouse and keyboard events. It provides the object and location were clicked.
42	Added new event to the GraphWorX32 OnViewChange function to support detection of zoom changes.
43	Enhanced GraphWorX32 layer support, adding a toolbar for maintaining layers (like in Photoshop).
44	Enhanced GraphWorX32 Pick Action support to add an optional Confirmation. This will enable users to implement select-checkback-execute functions on WebHMI.
45	Enhanced GraphWorX32 support of Global Aliasing to allow aliasing of item names within popup menus.
46	Enhanced the GraphWorX32 support for third party ActiveX controls. Through registration, their properties (Object Name, Description, Share Keyword, and Custom Name) can now be shown within GraphWorX32.
47	Enhanced GraphWorX32 support for applying templates to multiple displays, especially for the case when those displays reside in multiple directories.
48	Enhanced the GraphWorX32 DataEntry Confirm Dialog box, adding a new customization message builder for all confirmation methods.
49	Enhanced GraphWorX32 to support resolving aliases placed in the file name field for the pick action launch application.
50	Enhanced GraphWorX32 to support the display/entering of OPC VT_DATE values.
51	Enhanced the GraphWorX32 printing capabilities. Printing with white background now supports the display properties, application preferences, and an automation method for setting these values. In addition, there are new events OnPrePrint and OnPostPrint which allow the user to dynamically modify the display before and after printing.
52	Enhanced GraphWorX32 to make it feasible to use the Load Tab labels with Language switching.

53	Enhanced GraphWorX32 support for language switching. The confirmation dialog box for data entry can be language sensitive, and the "description" of an object can use aliases.
54	Enhanced the GraphWorX32 Automation Interface to support getting at the objects within an applied template. These are available through automation by GetVisibleObjectFromName where the name is the layer.
55	Added a checkbox in GraphWorX32 for the confirmation on Slider, Pick, and Pushbutton dynamics, similar to what was implemented on the Data Entry.
56	Enhanced GraphWorX32 the Drop down menu to multiple pick actions per menu item.
57	Enhanced GraphWorX32 to support being able to set/retrieve certain properties of the display (e.g. to be able to set the working directory for the active document), and to be able to retrieve previously configured characteristics, such as display size, etc.
58	Enhanced GraphWorX32 Layer Visibility so it can be easily tied to a security group or level.
59	Enhanced the GraphWorX32 Automation Interface to support access to Language Alias when in configuration mode. Now the language can be selected when in configuration mode.
60	Enhanced Web Publishing from ProjectWorX32 to support displays with an embedded alarm viewer that have a fully-pathed name for the configuration file.
61	Prepared GraphWorX32 for MS WindowsXP logo.
62	Implemented registry entries for GWX timeouts for obtaining security, for launching and external application, and for sending a system wide message. The default value of all three timeouts is 60 seconds.
63	Enhanced GraphWorX32 to support exporting the Edit Connections Dialog.

Language Aliasing Enhancements

#	Summary
1	Added support for Language Switching to WebHMI.
2	Added a server side as well as client side cache to Language switching in order to have displays quickly resolve translation strings.

ProjectWorX32 Enhancements

#	Summary
1	Added the ability to create a new project from an existing SourceSafe project.
2	Enhanced ProjectWorX32 to enable SQL Configurations in AWX Logger and Server.
3	Full Compatibility with BizViz ReportWorX and MobileHMI
4	Enhanced the Search/Replace function. It now supports all GENESIS32 configurators for OPC tag names, descriptions, etc.
5	Added support for a Global Search and Replace on individual files.
6	Added support for publishing AWX and TWX files using the Publishing Wizard automation interface.
7	Added an Application Preferences page
8	Added support to associate the .PWX file with ProjectWorX32 and make it double clickable so that when you double click on it, it asks you if you want to unpack that particular archive.
9	Added capability to launch the Unified Data Configurator
10	Added ImportXML and ExportXML to the OLE Automation for the configurators

11	Added a Global Search/Replace Report of what been had been changed/updated in ProjectWorX32. This report shows success and failure, lets the user know which items are read-only.
12	Enhanced ProjectWorX32 to support Drag-and-Drop from one project to another in MMC. You can now drag and drop one or more files from a category in a project to the same category in another project.
13	Enhanced the performance of ProjectWorX32's file copy function. The previous version could only copy one file at a time. Version 8 ProjectWorX32 employs a "bulk" copy function.
14	Enhanced ProjectWorX32 to extend the list-tag capability seen in GraphworX32 to other applications that support multiple tags. The ability to list tags was extended to: ▪ TrendWorX32 container ▪ MobileHMI Configurator ▪ MMX Configurator ▪ Trend logger configurator ▪ Alarm Server Configurator
15	Enhanced ProjectWorX32 to support multiple-select actions. In previous versions, cut, copy and delete operations can only be done on one file at a time. In version 8, items that support source safe operations can be multi-selected and checked in/out. Items that can be exported to HTML can also be multi-selected to publish all of them.
16	Enhanced ProjectWorX32 to support the ability to select multiple files and add them all. In the previous version, you could only add one file at a time in the "add file" menu.
17	Enhanced ProjectWorX32 to support packing/unpacking OPC Data Spy.
18	Enhanced the ProjectWorX32 help system making it more consistent with the rest of GENESIS32. Also revised many of the menus making them customizable in the resource .dll.
19	Added an indicator to ProjectWorX32 to show you are logged into source safe. An indicator is now seen in text form as (SOURCESAFE ON) in the bottom left corner of the window
20	Enhanced ProjectWorX32 to use the default HTML editor to edit HTML files.
21	Enhanced ProjectWorX32 to support the ability to compact any MS Access database by right clicking on any .mdb file (in category that supports .mdb files).
22	Search and replace function in ProjectWorX32 was given a face-lift. Items are now grouped into categories in a tree. You can turn an entire category on/off or you can turn an individual item on/off. You can also select/deselect the entire tree with one menu item.
23	Enhanced ProjectWorX32 to add an "Undo Activation" menu. If the user clicks on an active item, they will have an "Undo Activation" menu available. There are, however, two exceptions: ▪ "Undo Activation" will not work on an "Active" project because wiping out the active item in an active project can have adverse affects on the running configuration. ▪ "Undo Activation" will not work for OLE Express/Gen Broker files. For this particular category, one Item MUST be selected as "active".
24	Enhanced ProjectWorX32 so that is no longer picks up nor prompts the user to add ldb files to the project.
25	Enhanced ProjectWorX32 so that the packing log is put at the top of the HTML file so that the user can see the changes without having to scroll to the bottom of the file.
26	Enhanced ProjectWorX32 to allow the user to rename the project when they click on Add New Project.
27	Added the latest Simulator OPC Server to the ProjectWorX32 tree.
28	Enhanced ProjectWorX32 to add an OEM-able "TraceWorX32" string to the "System Tools".
29	Added date and time to the ProjectWorX32 Publishing log.
30	Removed the 'Successful Export' message box on the ProjectWorX32 Publishing tool. This eliminates the potential need to click many "successful export" messages.

Security Enhancements

#	Summary
1	Enhanced GENESIS32 Security to support for the SAFLink biometric login and consequently, all SAFLink supported biometric devices.

TrendWorX32 Enhancements

#	Summary
1	New V8 Trend Viewer: 1) New and improved Look and Feel 2) Added support for stackable plots 3) Added support for background images 4) Added a customizable background printing option 5) Support for multiple ranges displayed/printed using the new plot style 6) Option to disable the background while printing 7) Improvements to the user interface for configuring the Viewer including a significant re-organization of the tabs and the fields on each tab. 8) Fully backward compatible with the previous plot style. 9) Compatible with VCRWorX32 playback operation. 10) Support for multi-selection inside stackable plots 11) Scale selection with a double click. 12) Added Chart Title and labels on X/Y Axis. These string labels can be OPC Tags, Global/Language Aliases or, simply, user-defined strings. 13) X-axis improvements. 14) Right-justifies the numbers on the y-axis. 15) Tick marks on both x and y axis and gives the user the ability to select how many minor tick marks to show on X/Y axis and the ability to configure different numbers of tick marks for X and Y axis. 16) Rearranged the General Tab inside the properties page to give it a more user-friendly aspect. 17) Provided greater flexibility on the display of timestamps. The user can now specify "show timestamp on every N-th, grid line". 18) Added a scroll bar to range window in the Trend Viewer. 19) Added support for Different geometric shapes for points. 20) Added the option of having the Toolbar NOT float but be part of the Viewer itself.
2	Enhanced the TrendWorX32 Viewer and GenBroker communications to speed up replay of Historical data via GenBroker. Displays with auto-updating historical pens may be much faster (up to 4-5 times).
3	Enhanced the TrendWorX32 Viewer to recognize regional settings for date formatting without the need to set default language aliases or to have international dll's.
4	Added FREE product support for MSDE and MS SQL.
5	Added new TrendWorX32 Upsize Database Utility
6	Added new Data Mining ActiveX to the TrendWorX32 Container.
7	Oracle Data Logging now requires a separate product license.
8	Added support for logging to Oracle 8.1x servers. (Logging to Oracle versions 8.x and Oracle 9i is supported). Also improved the efficiency of truncating existing historical tables with large numbers of records.
9	Improved TrendWorX32 SQL Server load balancing for data logging a large number of database groups. TrendWorX32 SQL Server will now utilize fewer threads in the case that multiple database groups are configured both for data updates as well as for data writes to the historical database. AS such, MS SQL and MSDE will have more resources to boost their performance and overall TrendWorX32 SQL Server will use fewer memory resources. MS

	Access data logging may slightly degrade in performance.
10	Enhanced the TrendWorX32 Logger / SQL Server to support periodic refresh of tags. TrendWorX32 SQL Server will now refresh slowly changing tags utilizing new support from GenClient. This feature is controlled by a registry setting and it is by default enabled. The registry setting is HKEY_LOCAL_MACHINE\SOFTWARE\ICONICS\TWXSQLSvr\Data\Refresh Data (DWORD). Set it to a value of 0 disables this feature. The data refresh intervals are calculated as follows: ·If data collection rate is less than or equal to 1 hour, refresh rate will be 5 times the data collection rate ·If data collection rate is less than or equal to 6 hours, refresh rate will be 3 times the data collection rate ·If data collection rate is less than or equal to 12 hours, refresh rate will be 2 times the data collection rate ·If data collection rate is less than or equal to 24 hours, refresh rate will be 24 hours
11	Enhanced the TrendWorX32 SQL Data Logger so that it can now be configured to function as an H.D.A Historical replay server, serving historical data to clients from the master SQL database. Each remote TrendWorX32 SQL Data Logger shares part of the master TrendWorX32 SQL Data Logger H.D.A historical replay server configuration.
12	Added messages to the TrendWorX32 Logger Tracing support to report DeActivate and Activate for the dBs configuration group and messages for the Data Point group.
13	Enhanced TrendWorX32 Logger / SQL Server to support data source names in the OPC HDA Attributes, a new feature for supporting the VCRWorX32 feature.
14	Improved TrendWorX32 Logger error reporting. TrendWorX32 SQL Server will now post an NT event log if MSDE data logging is enabled with out proper MSDE bit licensed. TrendWorX32 SQL Server will enter a 2-hour demo.
15	Enhanced the TrendWorX32 Viewer to add Global Alias support for the URL.
16	Enhanced the TrendWorX32 Report to allow up to 10 significant digits for data format in csv target file or as many as TrendWorX32 Logger can log.

New Unified Data Browser V8

#	Summary
1	New Unified Data Browser V8 1. Common and unified data browser for all your data needs, including: OPC Data Access, OPC Alarm/Events, OPC HDA, Global Aliases, Databases, Local Aliases, Language Aliases, etc) 2. Multi-threaded and better performing than previous Browsers 3. Improved Graphical User Interface (MS Windows XP Look and Feel) 4. Multi-tabbed, Resizable, Persistent 5. Includes support for new GENESIS32 Data Mining features

New Unified Data Configurator V8

#	Summary
1	New Unified Data Configurator V8 1. Graphical based tool for configuring VCRWorX32 and for setting up the GENESIS32 TrendWorX32 Logger and the GENESIS32 AlarmWorX32 Server. 2. Allows selection of OPC Tags from existing GraphWorX32 screens or by using the Unified Data Browser 3. Automatically generates the DA Tag to HDA Tag translation file needed by VCRWorX32 (for translating DA Tag Names to their HDA equivalent)

	4. Provides an easy-to-use configuration utility for editing the TrendWorX32 Logger Configuration database. 5. Provides an easy-to-use configuration utility for editing the AlarmWorX32 Server Configuration database 6. Generates Trend Logger & Alarm Server configuration files.
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New VCRWorX32 (Video Control and Replay Optional V8 Feature)

#	Summary
1	New VCRWorX32 1. Replays historical (logged) data through GraphWorX32 Screens and the TrendWorX32 Viewer ActiveX 2. Replays historical (logged) alarms and events through the AlarmWorX32 Viewer 3. Compatible with HDA databases 4. Includes a "Multi-media Player" like control for controlling playback 5. Includes selectable skin options for the player-control 6. Supports Full and Micro versions of the player-control 7. Supports Play, Fast Forward, Slow Motion, Reverse, Pause and Single Step 8. Supports powerful search capabilities to locate historically logged data 9. Compatible with standard GENESIS32 screens and databases

WebHMI Enhancements

#	Summary
1	New Web-based Language Switching
2	New Web-based VCRWorX32 playback capabilities
3	Supports new Login ActiveX Control that lets users connect to the remote Security server from within GWX. Security Login (Login, Logout, Change password, Logged user list) are possible from within GWX.
4	Supports new keypad capability
5	Supports FTP upload for WebHMI publishing (as well as HTTP).
6	Runs on Windows Server 2003, Windows 2000, Windows XP Home, Windows XP Professional, and Windows NT.
7	Thin Client WEB Technology
8	Does not require any software loaded onto remote machines
9	Zero install Web Capability
10	Adds to existing GENESIS32 stations
11	Serves OPC real-time data to remote browsers
12	Serves Report and Chart to remote browser
13	Serves OPC Alarms to remote browsers
14	Serves Historical and Trend data to remote browsers
15	Firewall friendly
16	Includes NT Level Security
17	Supports Apache and Microsoft IIS Web Servers
18	Enhanced (GraphWorX32) automation method makes it possible to add print screen functionality to a WebHMI client (using VBScript).

Wonderware Converter V8 Enhancements

#	Summary
1	Greatly improved Wonderware Converter 1. New Wonderware Converter Application Notes and examples 2. New Wonderware Converter Whitepaper 3. Supports latest Wonderware versions and is more complete and exact

Miscellaneous Enhancements

#	Summary
1	Enhanced VBScripting adding IntelliSense to the VBScript editor.
2	Created a utility to setup the Windows XP SP2 Firewall for GENESIS32. The utility is called IcoFirewallUtility. It can be run silently from an installation (using the /q command line option) or it can be run at anytime by a user. The utility enables all EXEs in Common Files/ICONICS and in Program Files/ICONICS/GENESIS32/BIN. It also enables all local OPC Servers.