www.cimon.com

Total Solution for Industrial Automation

CIMON-SCADA

ULTIMATEACCESS

USER MANUAL

TREATMENT SYSTEM
3 SINTER PLANT SINTER MACHINE
SINTER MACHINE
BY-PASS
COOLER
MAIN BLOWER
IGNITION

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Chapter 1. Introduction

The CIMON-SCADA is a Microsoft Windows based software program for industrial automation. The CIMON-SCADA is made of the CimonD, which is the integrated program for editing, and the CimonX, the integrated program for running.

The CIMON-SCADA is system software of high efficiency in all respects including fast system speed, open system architecture, powerful function of network, users' convenience and etc.

Also, the CIMON-SCADA is designed software operated on Microsoft Windows 98/Me/2000/XP/Server2003/Vista to process much information with high speed and enables to use powerful functions such as Multi-Tasking, Multi-Threading, OLE Automation and ActiveX. And it supplies the solution for remote monitoring/controlling. So, the CIMON-SCADA can be applied to large-scale systems as well as small-scale systems.

Features

Open System Architecture

The CIMON-SCADA, which is designed as Open System Architecture, satisfies particular requirements from various users easily and provides high flexibilities such as easy linking with other software systems.

- The CIMON-SCADA supports OLE Automation. And the application program outside of the CIMON-SCADA acquires easily the data of the CIMON-SCADA.
- The CIMON-SCADA links with general databases by using ODBC.
- The CIMON-SCADA opens the CIMON-Net protocol (RS232, TCP/IP) that is used for exchanging data between the CIMON-SCADA s. The data of the CIMON-SCADA can be set or referred by a other system.
- It is available to use a OCX Component on a graphic pages.

Supporting Various Networks

The CIMON-SCADA supports system redundancy essential to the reliability of a large-scale system.

- The CIMON-SCADA uses fully the network function of Windows OS.
- As the CIMON-SCADA supports diverse network structures such as Stand Alone, Peer to Peer, Client/Server, it can be applied to the whole fields from small-scale systems to large-scale systems.
- The CIMON-SCADA supports diverse protocols.

Linking with Relational Database

The CIMON-SCADA can be linked freely with relational database systems by using ODBC. As the CIMON-SCADA supports standard SQL, all the DB applications such as revising, adding and deleting records are available.

Supporting Internet

In case the CIMON-SCADA is used in Internet Web server, current equipment status can be monitored and controlled with web-browser from a remote computer.

Making Graphic Page Conveniently

As the CIMON-SCADA provides diverse types of wizard and symbol library, a system can be configured easily. The prepared objects can be registered to symbol library and used whenever necessary. It is easy to expand a system, as the CIMON-SCADA supports OCX component developed by 3rd party, as an object in the CIMON-SCADA.

Basic Script

The CIMON-SCADA supports Basic Script Language. You can use the CIMON-SCADA script very easily without any special training. The CIMON-SCADA provides five hundreds of functions including link with OLE object and input/output of files. Especially, the CIMON-SCADA offers the functions to support SQL so that you can inquire and search data from relational database.

Compatibility of Data with Diverse Application Software

- The data in a tag database is compatible with Microsoft Excel.
- It is available to use the report forms prepared by Microsoft Excel, Word and etc.
- It is available to use a various graphic file formats, such as Auto-CAD, Adobe PhotoShop, Corel Draw and etc.

1-1. Feature of Functions

Acquisition of Real-Time Data

- Objectified I/O Driver from a system: Supporting diverse Drivers
- Using network functions to maximum
- High system efficiency through the delivery of data in Event type

Management of Real-Time Database

- Convenient management with the type and function similar to the Explorer
- Finding/Replacing for convenient management of large-scale database
- Compatibility of database with Excel
- Analog / Digital / String / Group Tag
- Virtual Tag : Simulation, Tag for internal operation

Alarms

- Prior work in a system
- Management of alarms by zones and priorities
- Alarm Summary, file, printer, alarm sound, Pager calling
- Digital tag alarm: ON, OFF, ON→OFF, OFF→ON, ON↔OFF
- Analog tag alarm: Absolute value, deviation value, rate of change

Trend

- Historical trend / Real-time trend
- YT graph / Multiple graph / XY graph / ST graph

Reports

- Use of the form made by outer application programs such as Excel or Word
- Can use Excel form files without Excel program.
- Outputs on time or by events

Data Logging

- Saving the history for important tag values for a long time
- Logging at regular intervals or event
- Logging in a file or with a printer
- Basic Script function to refer to logged data
- Showing the historical trend of logged data

Security

- Registration of operator in 100 levels
- Saving the history for log-in/log-out of operator

Graphic Editor

- Object Based Graphic editor
- Convenient work by using toolbar
- Provision of a wizard and a library with various graphics
- Linked with database editor automatically
- Zoom-in/Zoom-out
- Find/Replace

Monitor Pages on Runtime

- Linked with real-time database
- Use of diverse animations
- User’s assignment function key (Function Key and special keys)
- Function to show Tool-Tip in touch zone
- Work-Space: Simultaneous monitoring of multi-pages
- User’s definition menu

Network

- Stand-Alone system: Application for simple automation
- Distribution system
  - ✧ Distributing a large-scale process to independently detailed process
  - ✧ Easy conversion of Stand-Alone system to distribution system
- Redundancy
  - ✧ Application to highly reliable system
  - ✧ Supporting all the specifications of redundancy

Open Architecture System

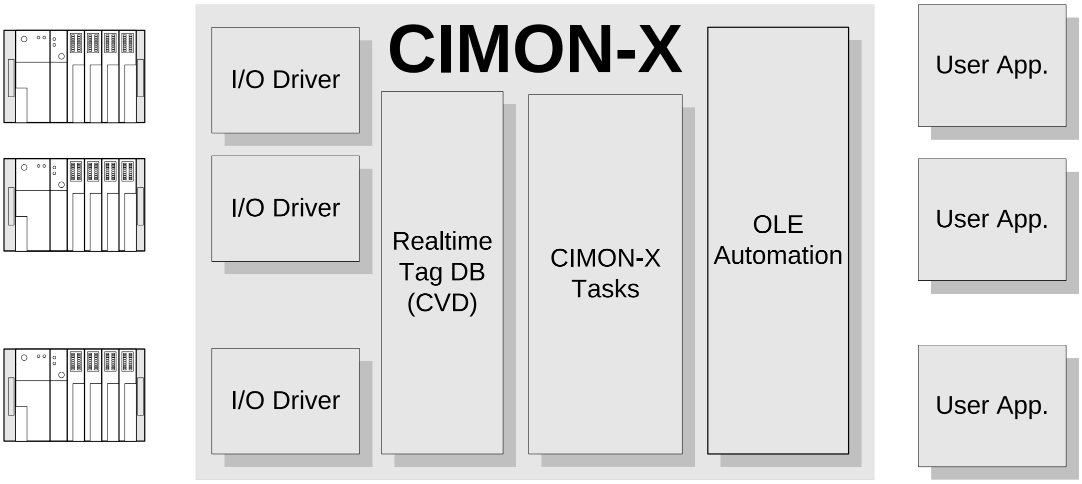
- Link with relational database by using ODBC
- Link with user's program by using OLE Automation
- Expansion of applicable range through opening the CIMON-NET
- Free use of outer OCX as animation object

Other Functions

- Use of internal user's program in Basic Script
- Remote monitoring/controlling through Internet
- Important event logging in a system
- Detailed on-line help
- Supporting Multi-Media

1-2. Configuration

- Development system (CimonD) and Runtime system (CimonX)
- I/O Driver
- Real-time database
- Internal task
- Open system by using OLE Automation



The CIMON-SCADA is composed of the CimonD, which is a development system, and the CimonX, which is a runtime system. The CimonD has a built-in manager necessary to construct and to maintain diverse systems, such as the database manager for the information about real-time tags and the graphic editor for SCADA window.

The real-time database of On-Line system, which is constructed by the CimonD, will be continuously revised and managed by the CimonX. The diverse data registered in real-time databases from I/O devices such as PLC are acquired through I/O drivers.

Though these data have the peculiar form of non-processed device, they will be processed as the data of engineering unit in the CIMON-SCADA, will be saved in the real-time database (CVD) and will be managed by diverse tasks in the CIMON-SCADA.

The CIMON-SCADA is equipped with Open system structure like OLE Automation. In case that a user makes a program on special purpose, the CIMON-SCADA can be operated as OLE Automation Server for the program. Through this, user’s program can refer to the information about real-time database or revise.

1-3. Computer Environment

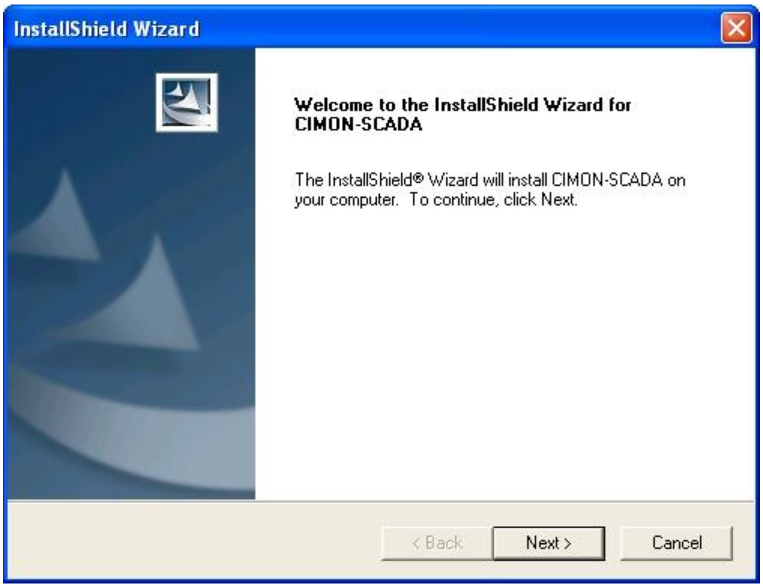
The minimum requirements of the system to execute the CIMON system software are as follows.

Item	Requirement
O/S	Windows 98/Me/2000/Server2003/XP/Vista
Computer CPU	IBM Compatible over Pentium (586)
Memory	32 MB and Over
Floppy Disk	3.5" 1.44 MB
Hard Disk	200 MB and Over
Graphic Adapter & Monitor	VGA, SVGA, XGA
Keyboard	101 key
Mouse	Mouse for Windows
Printer	Printer for Windows
Serial Port	If necessary
Others	Multi-Media Board (Sound Card) Ethernet Board (LAN Card) Data Link Board Field Bus Board Mini Map Board Touch Panel Key Lock (Including standard)

1-4. Installing the CIMON-SCADA

The following procedures are executed to install the CIMON-SCADA. As the files in the CD are compressed, they cannot be installed by using copy command.

1. CIMON-SCADA CD in the CD-ROM Driver
2. Run the execution file in CIMON-SCADA CD.
   (You can also download SCADA installation file from website www.cimon.com)

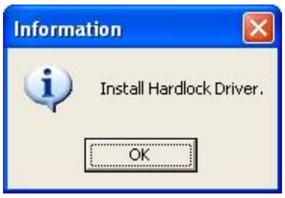

InstallShield Wizard
< Back
Next >
Cancel

Welcome to the InstallShield Wizard for CIMON-SCADA

The InstallShield® Wizard will install CIMON-SCADA on your computer. To continue, click Next.

3. Clink Next Button to install CIMON-SCADA.

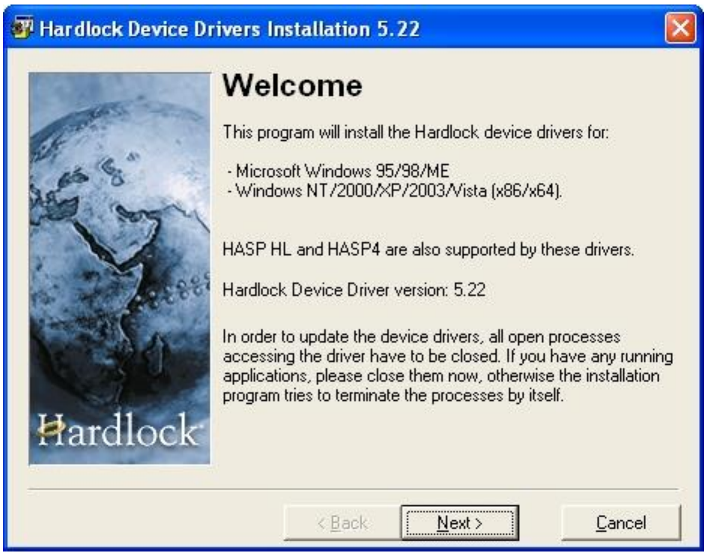
4. After files are copied, following Information dialog is displayed.


Information
OK

Install Hardlock Driver.

5. Click “OK” button, and then following Hardlock Device Driver Installation dialog is displayed. Click OK button.

[Note] If you installed the CIMON-SCADA before, you may skip this step by clicking the “Cancel” button.


Hardlock Device Drivers Installation 5.22
Hardlock
< Back
Next >
Cancel

Welcome

This program will install the Hardlock device drivers for:

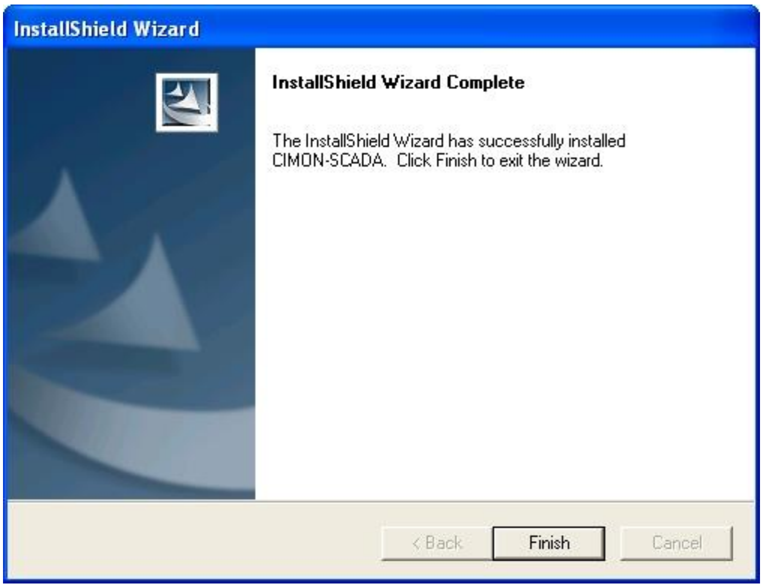
- Microsoft Windows 95/98/ME
- Windows NT/2000/XP/2003/Vista (x86/x64).

HASP HL and HASP4 are also supported by these drivers.

Hardlock Device Driver version: 5.22

In order to update the device drivers, all open processes accessing the driver have to be closed. If you have any running applications, please close them now, otherwise the installation program tries to terminate the processes by itself.

6. After CIMON-SCADA installation completed, following dialog is displayed.



InstallShield Wizard Complete

The InstallShield Wizard has successfully installed CIMON-SCADA. Click Finish to exit the wizard.

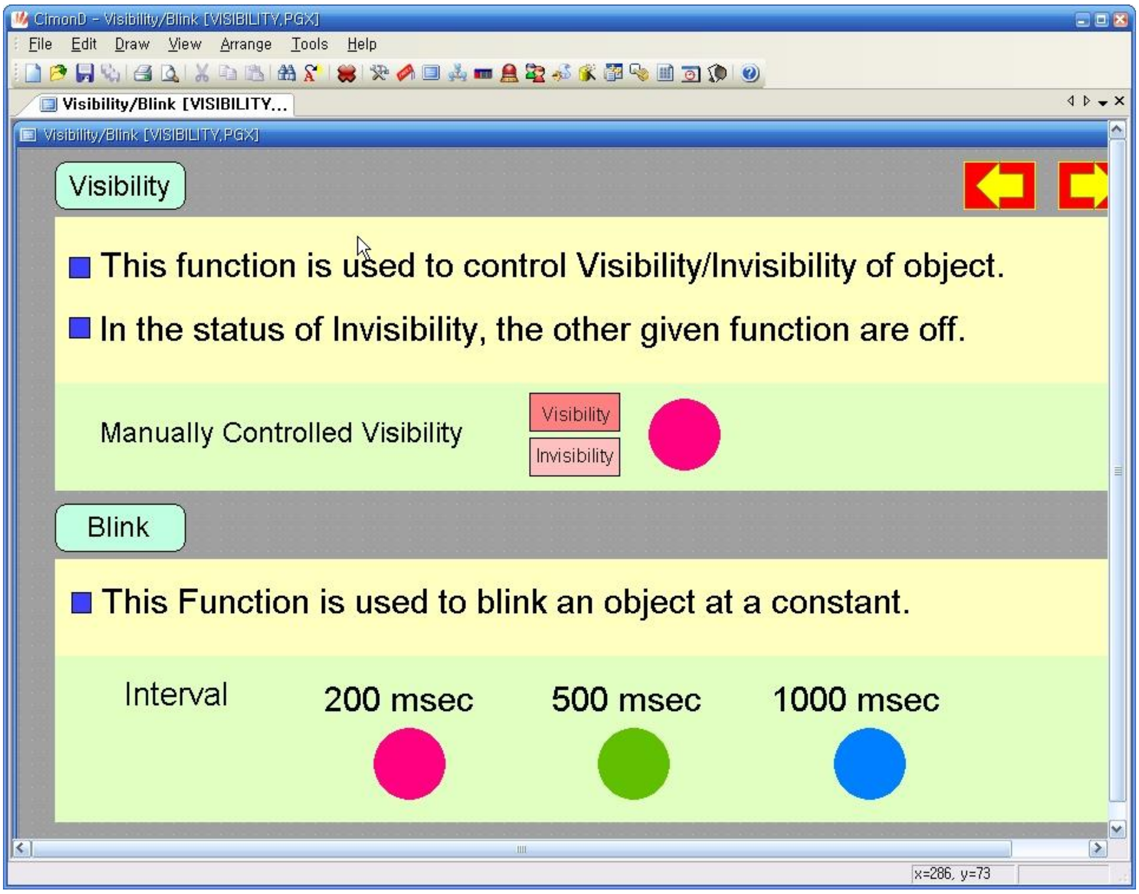
7. If the CIMON-SCADA is normally set up, the CIMON folder will be created in the Program of Windows Start menu. The execution file of the CimonD and the CimonX are registered in the folder.

8. Install a keylock (USB dangle license Type) on your computer.

1-5. Starting the CIMON-SCADA

Select the Program in Windows Start menu – CIMON – CimonD to run the CIMON-SCADA development program.

Or move to the folder where the CIMON-SCADA is installed in Windows Explorer and double-click **CimonD.exe** to run it.


CimonD - Visibility/Blink [VISIBILITY.PGX]
File Edit Draw View Arrange Tools Help
Visibility/Blink [VISIBILITY...
Visibility/Blink [VISIBILITY.PGX]
Visibility
Visibility
Invisibility
Blink
x=286, y=73

This function is used to control Visibility/Invisibility of object.

In the status of Invisibility, the other given function are off.

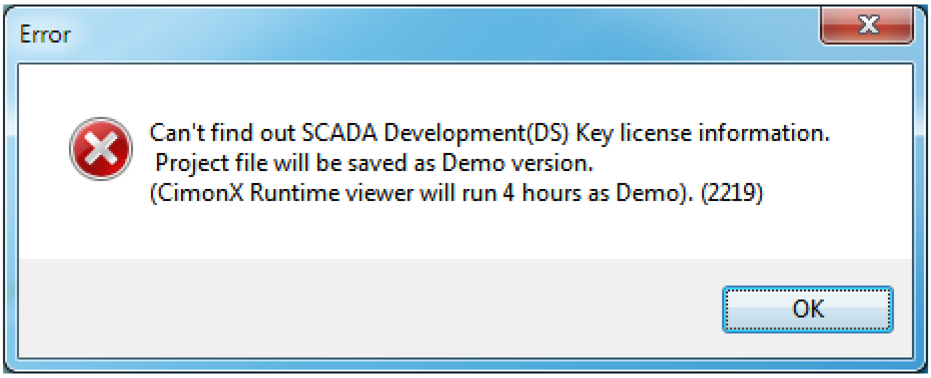
Manually Controlled Visibility

This Function is used to blink an object at a constant.

Interval 200 msec 500 msec 1000 msec

< Initial CimonD Screen>

If the CimonD is run without a keylock, the following dialog will be displayed. After that, the contents of the work will be saved as demo mode.



Can't find out SCADA Development(DS) Key license information.
Project file will be saved as Demo version.
(CimonX Runtime viewer will run 4 hours as Demo). (2219)

If the above message pops up, take action as follows.

1. Make sure whether the keylock is installed on the parallel or USB port of the computer properly
2. Install keylock device driver again. The keylock device driver setup file **hldrv32.exe** is in hldinst folder of Cimon folder.

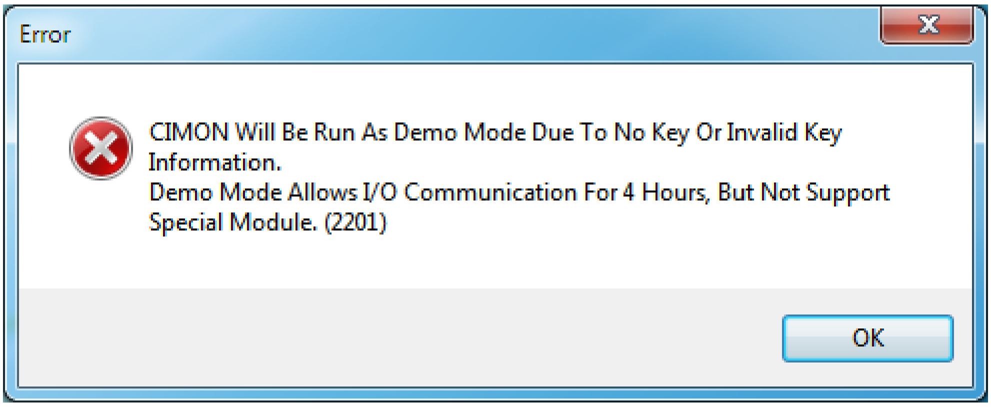
The CimonX can run as same as the way to run the CimonD.

Select the Program in the Start menu of Windows – CIMON – CimonX menu to run the CIMON-SCADA runtime program or move to the folder where the CIMON-SCADA is installed in the explorer of Windows and double-click **CimonX.exe** to run it.

If the CimonX is run, it will run with the recently edited project in the CimonD.

The followings are the Error dialog boxes appearing when the CimonX runs.

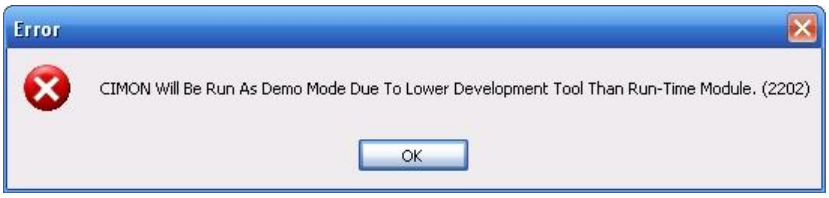
1. "CIMON Will Be Run As Demo Mode Due To No Key Or Invalid Key Information. Demo Mode Allows I/O Communication For 4 hours, But Not Support Special Module.



CIMON Will Be Run As Demo Mode Due To No Key Or Invalid Key Information.
Demo Mode Allows I/O Communication For 4 Hours, But Not Support Special Module. (2201)

Take action as explained in the above CimonD and select the corresponding menu to run again.

2. "CIMON Will Be Run As Demo Mode Due To Lowwer Development Tool Than Run-Time Module"

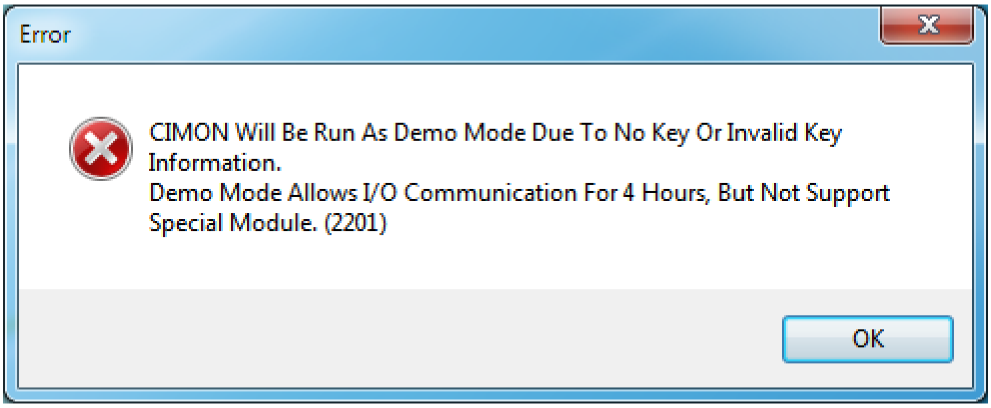


CIMON Will Be Run As Demo Mode Due To Lower Development Tool Than Run-Time Module. (2202)

In this case, exit the CimonX, select the Database in the Tools menu of the CimonD. If the Database manager appears, select the Save in the File menu to save again. Select the Exit in the File menu of the CimonD and Run CimonX again.

3. "CIMON Will Be Run As Demo Mode Due More Registered Real Tags Than Real Tags Supported In

Run Time Module. Demo Mode Allows I/O Communication For 30 Minutes, But Not Support Special Module.”

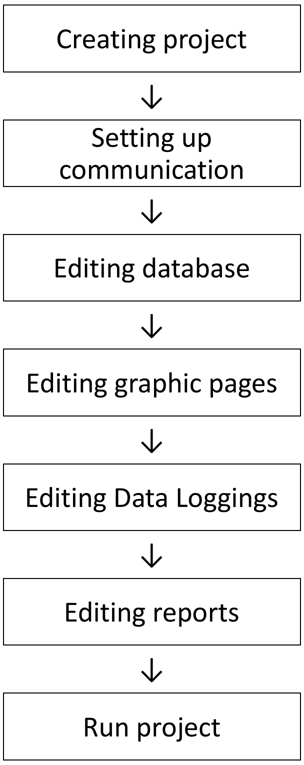


CIMON Will Be Run As Demo Mode Due To No Key Or Invalid Key Information.
Demo Mode Allows I/O Communication For 4 Hours, But Not Support Special Module. (2201)

If the Error dialog box as above is displayed, the product should be upgraded because the capacity of the project is larger than the one of the currently installed product.

1-6. Execution Flow Chart

Select the menus to edit and run as the following order by using the CimonD. The following order is a general example to execute a project. If necessary, you may change the order. But, you should start from creating a new project.


Creating project
Setting up communication
Editing database
Editing graphic pages
Editing Data Loggings
Editing reports
Run project

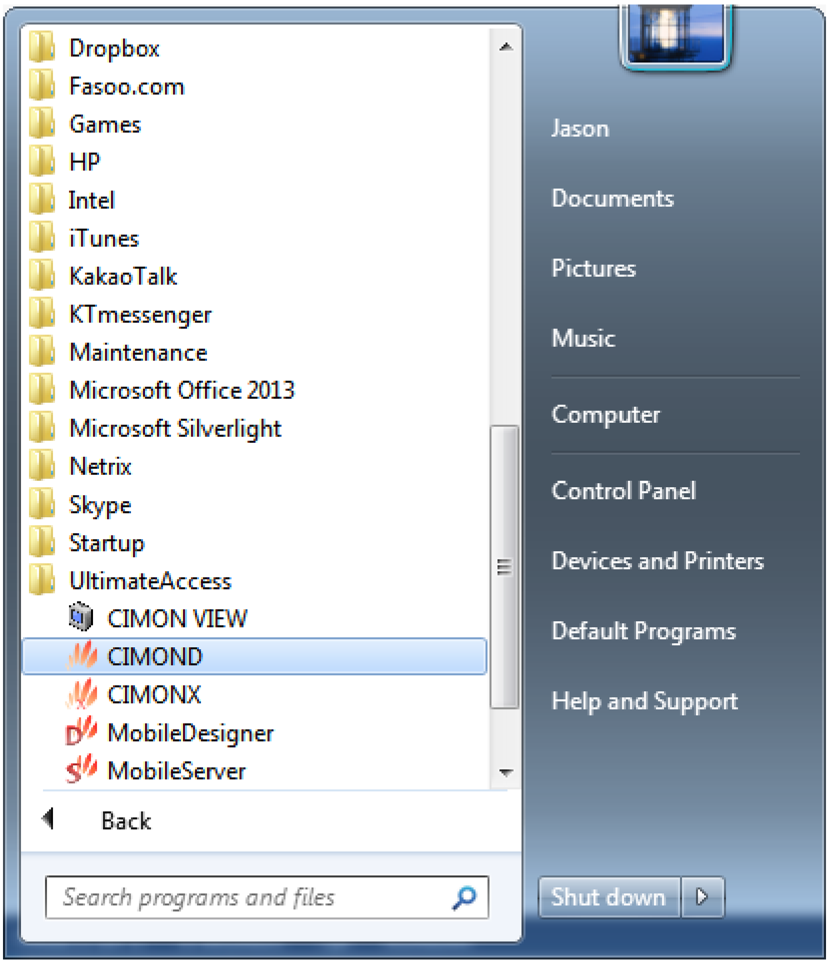
Chapter 2. CimonD

The CimonD, which is provided to design, maintain and repair a system conveniently, manages all the data files (Database, Monitoring/Controlling window, Network and other setup files) related to the project developed as a project folder.

Outline of the CimonD

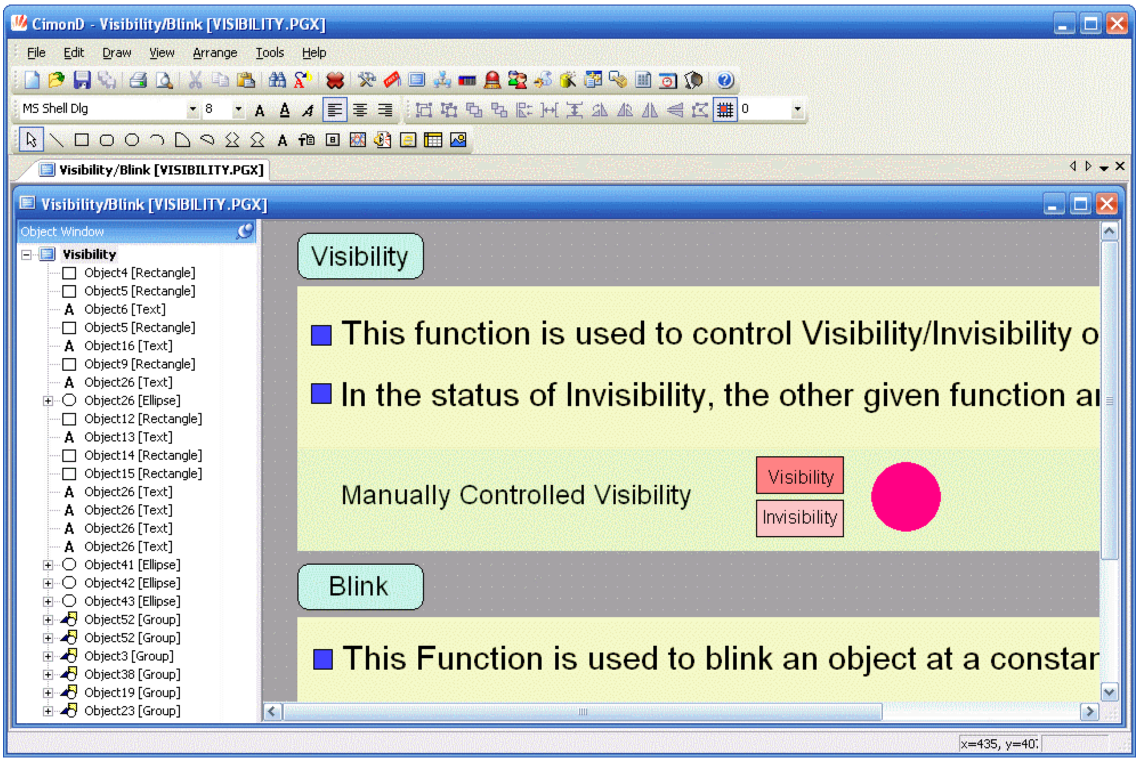
Running the CimonD

The name of the execution file in the CIMON-SCADA Editor is **"CimonD.exe"**. To run the CimonD, select the **"Programs'** in the **'Start'** menu of Windows, or click Windows Explorer to move to the folder where the UltimateAccess is installed and double-click Cimon.D.exe.


Dropbox
Fasoo.com
Games
HP
Intel
iTunes
KakaoTalk
KTmessenger
Maintenance
Microsoft Office 2013
Microsoft Silverlight
Netrix
Skype
Startup
UltimateAccess
CIMON VIEW
CIMOND
CIMONX
MobileDesigner
MobileServer
Back
Search programs and files
Jason
Documents
Pictures
Music
Computer
Control Panel
Devices and Printers
Default Programs
Help and Support
Shut down

Configuration of the CimonD

The CimonD is configured as the following menu and toolbars.


CimonD - Visibility/Blink [VISIBILITY.PGX]
File
Edit
Draw
View
Arrange
Tools
Help
MS Shell Dlg
8
0
Visibility/Blink [VISIBILITY.PGX]
Object Window
Visibility
Object4 [Rectangle]
Object5 [Rectangle]
Object6 [Text]
Object5 [Rectangle]
Object16 [Text]
Object9 [Rectangle]
Object26 [Text]
Object26 [Ellipse]
Object12 [Rectangle]
Object13 [Text]
Object14 [Rectangle]
Object15 [Rectangle]
Object26 [Text]
Object26 [Text]
Object26 [Text]
Object26 [Text]
Object41 [Ellipse]
Object42 [Ellipse]
Object43 [Ellipse]
Object52 [Group]
Object52 [Group]
Object3 [Group]
Object38 [Group]
Object19 [Group]
Object23 [Group]
Visibility
Manually Controlled Visibility
Visibility
Invisibility
Blink
x=435, y=40:

■ This function is used to control Visibility/Invisibility o

■ In the status of Invisibility, the other given function ai

■ This Function is used to blink an object at a constar

The CimonD, with system development tool, defines and sets up the necessary components of a system such as making database, configuring window, setting up communication, setting up system environment and etc. The above picture is just the window of the CimonD when a page is created basically. Each menu of the CimonD will be changed automatically in case of configuring a window or making a database

Types of Data

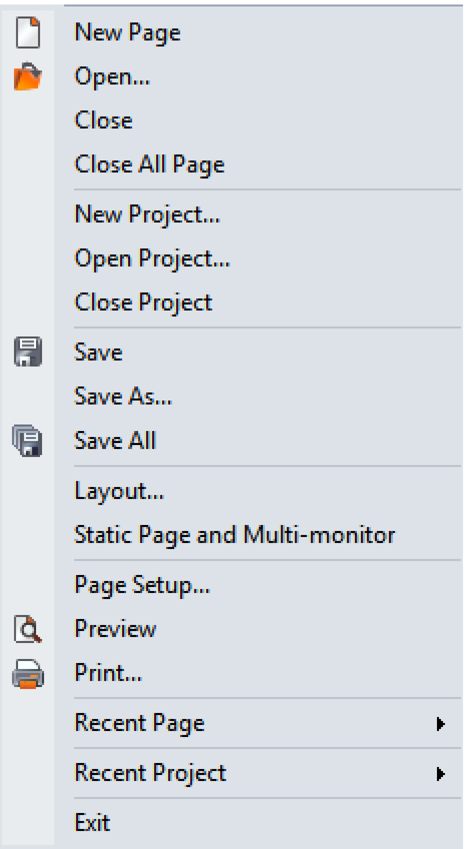
The types of the data file registered to the CIMON-SCADA are as follows.

Item	Extension	Description
Project	prj	Saves Alarms configuration, CimonX configuration, Security, Information on Project, Password for Editing Project, Information on Network and etc.
Graphic Page	pgx	Saves the data about window configuration (page).
	mgx	Saves the page to run the CimonX. In running the CimonX, automatically, pgx file is converted to mgx file. **(Note)** To copy the data about a project to other PC, delete mgx file without fail.
Layout	wgx	Saves the information on the layout of a window. (The name of page file and the position of each window)
Database	dbx	Saves the information on tags.
I/O Devices	dvx	Saves the contents of a set lower I/O device
Data Logging	log	Saves the contents of a set data logging model
	cld	Data file by data logging models (Default is created the serve folder by models in a project folder.)
Reports	rpt	Saves the contents of a set report model. (The logged data for report is saved in File ReportTag.dat.)
Alarms	ALog	Saves On-alarm. (Saved in AlarmBin.Log folder in a project folder.)
Hot Key	hkd	Saves the contents of a set Hot Key.
Scripts	scx	Saves the contents of an edited script
ODBC	sql	Saves the contents of a set ODBC.
Scheduler	sch	Saves the contents of a set schedule.
Group	gtd	Saves the contents of a set tag group.
Trend Panel	ttd	Saves the contents of a set trend panel.

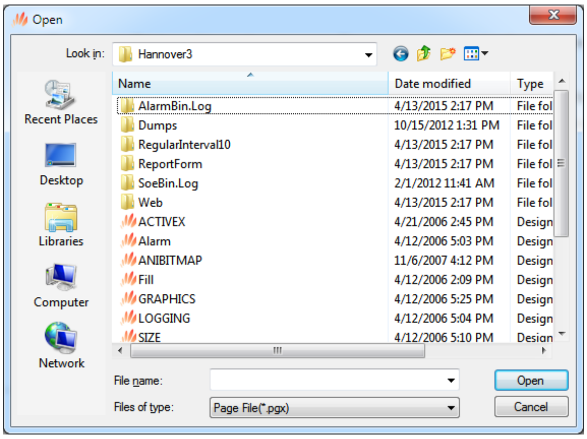
CimonD Menu

Here, the common menus that are always shown and the additional menus according to the contents edited are explained in detail.

File


New Page
Open...
Close
Close All Page
New Project...
Open Project...
Close Project
Save
Save As...
Save All
Layout...
Static Page and Multi-monitor
Page Setup...
Preview
Print...
Recent Page
Recent Project
Exit

New Page	This is used to create a new page. The new page is created in the work zone space of the CimonD.
Open	This is used to select and load an existing file. If you select this menu, the following **'Open'** dialog box will appear. To open a file, assign the Files of type and the Look in the 'Open' dialog box.



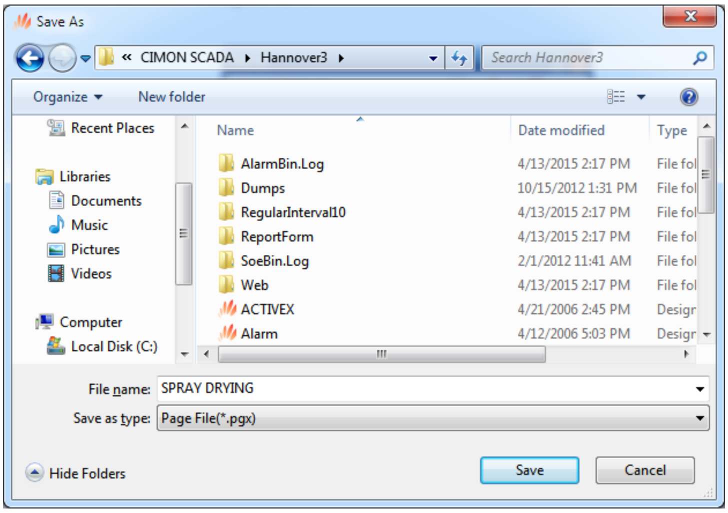
Look in: Hannover3

Name	Date modified	Type
AlarmBin.Log	4/13/2015 2:17 PM	File fol
Dumps	10/15/2012 1:31 PM	File fol
RegularInterval10	4/13/2015 2:17 PM	File fol
ReportForm	4/13/2015 2:17 PM	File fol
SoeBin.Log	2/1/2012 11:41 AM	File fol
Web	4/13/2015 2:17 PM	File fol
ACTIVEX	4/21/2006 2:45 PM	Design
Alarm	4/12/2006 5:03 PM	Design
ANIBITMAP	11/6/2007 4:12 PM	Design
Fill	4/12/2006 2:09 PM	Design
GRAPHICS	4/12/2006 5:25 PM	Design
LOGGING	4/12/2006 5:04 PM	Design
SIZE	4/12/2006 5:10 PM	Design

Files of type: Page File(*.pgx)

Select the driver and the folder where the file locates in the **'Look in'**. Enter the name of the file and press the **'Open'** button. Or double-click the shown file to open. In the Files of type, there are Project files(*.prj), Page files(*.pgx), Layout files(*.wgx), Database files(*.dbx), Data logging files(*.log), Report editing(*.rpt), Hot key files(*.hkd), Script files(*.scx), ODBC setup files(*.sql), Scheduler Files(*.sch) and etc.

New Project	This is used to create a new project. For the detailed explanation about this menu, refer to the Menu related to project and the Creating project in the chapter 5.
Open Project	This is the menu to open an existing project, and if a new project is selected through this menu, a current project will be saved automatically and be closed.
Close Project	This is used to close a currently active project.
Save	This is used to save a currently active document. If a page is saved at the first time, the 'Save As' dialog box will appear to assign the name.
Save As	This is used to save a currently active document as other name. If you select this, the following 'Save As' dialog box will appear. In the dialog box, assign the Save in and the File name, and press the Save button to save the document as an assigned name.

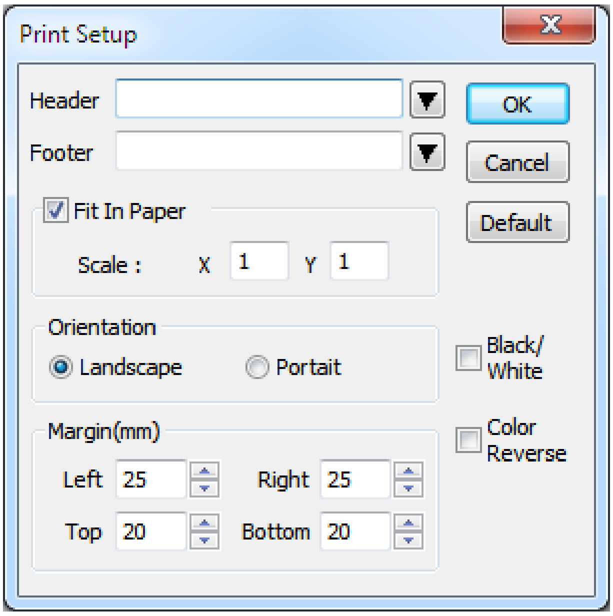

Save As
« CIMON SCADA ▸ Hannover3 ▸
Search Hannover3
Organize ▾
New folder
Recent Places
Libraries
Documents
Music
Pictures
Videos
Computer
Local Disk (C:)
Hide Folders
Save
Cancel

Name	Date modified	Type
AlarmBin.Log	4/13/2015 2:17 PM	File fol
Dumps	10/15/2012 1:31 PM	File fol
RegularInterval10	4/13/2015 2:17 PM	File fol
ReportForm	4/13/2015 2:17 PM	File fol
SoeBin.Log	2/1/2012 11:41 AM	File fol
Web	4/13/2015 2:17 PM	File fol
ACTIVEX	4/21/2006 2:45 PM	Desigr
Alarm	4/12/2006 5:03 PM	Desigr

File name: SPRAY DRYING

Save as type: Page File(*.pgx)

Save All	This is used to save all of edited documents at a time. All data files such as project documents, page documents, database documents, data logging documents and report model are saved.
Layout	This is used to save a currently opened page and a location data in layout data file. This function is used to arrange several monitoring windows on a full window to save them as **‘Layout File’**, and used to open the layout file saved in the CimonX to monitor several pages at the same time.
Static Page	A static window is the one that is always displayed when a system is operated. If you select a position and page, you can see static pages on the CimonX. If you choose Multiple, multiple screens are display on the monitor.
Print Setup	This is used to set up a paper to output a currently configured graphic page with a printer.


Print Setup
OK
Cancel
Default

Header

Footer

☑ Fit In Paper

Scale : X 1 Y 1

Orientation

● Landscape ○ Portait

☐ Black/ White

☐ Color Reverse

Margin(mm)

Left 25 Right 25

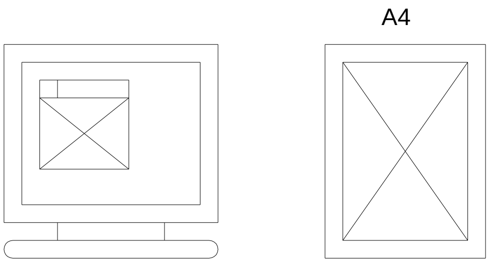
Top 20 Bottom 20

Header This is used to insert a header. The contents displayed may be entered directly or the provided contents by using ▼ button at right.

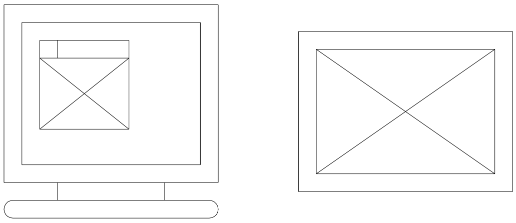
Page Number	Input as %P.
Current Date	Input as %D.
Current Time	Input as %T.
Center	Input as %C.
Left	Input as %L.
Right	Input as %R.
File Name	Input as %F.

Footer This is used to enter a footer. The method to enter and the contents displayed are as same as the explanation in the above header.

Fit in Paper The size of a current page window is outputted to fit in paper.

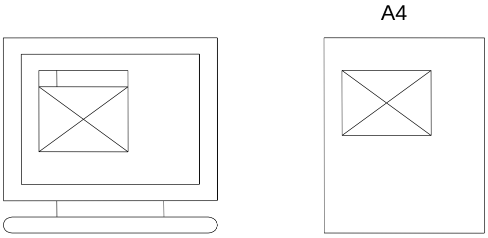


Potrait

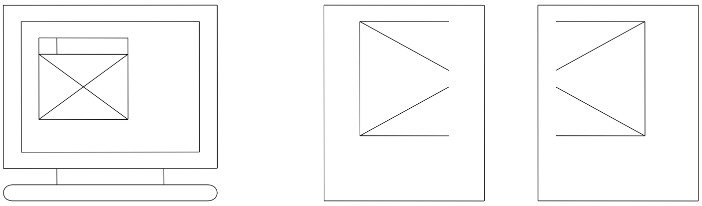


Landscape

Scale	This is used to set up the size of the window printed as the ratio to the size of a paper. The paper size can be set up in the **'Control panel',** which is provided as standard program from Windows.



X = 1, Y =1

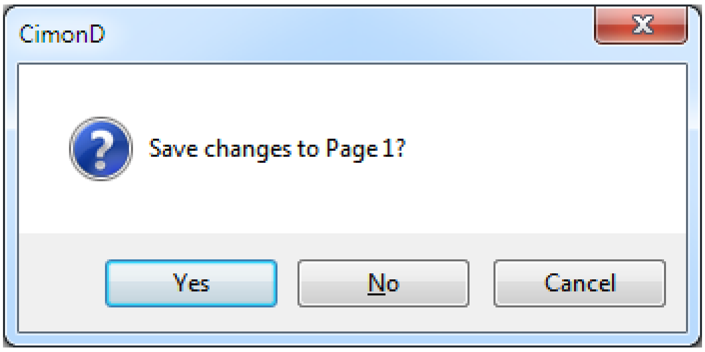


X=2, Y = 1

Orientation	This is used to adjust orientation as landscape/portrait.
Option	If the Invert is selected, a window will be outputted inversely. The other colors will be outputted as they are.
Margins	Assign the margins for printing in mm as a user desires.
Default	This is used to set up all items as the default provided from a system.

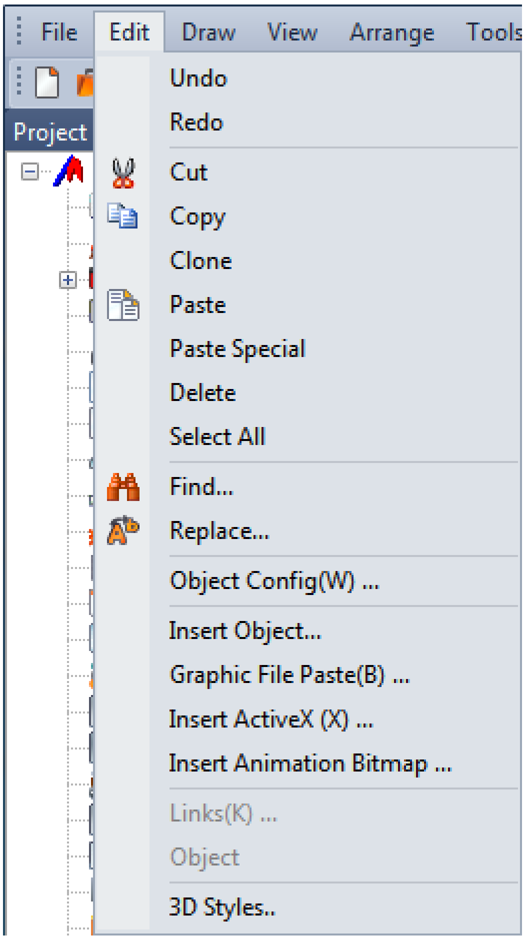
Preview	This is used to preview the form of the window outputted actually before it is outputted with a printer.
Print	This is used to output a currently displayed page with a printer.
Recent Page	Recently opened pages are displayed up to 4 pages. If you select a desired page, the page will be opened.
Recent Project	The projects in which you have worked recently are displayed up to 4 pages. If you select a desired project, a currently active page will be closed and the selected project be opened.
Exit	This menu is used to exit the CimonD. If there are the works in the database and the window devices before exiting, the dialog box asking whether save them will appear.

To save them, press the **'Yes'** button. Otherwise, select the **'No'** button. If you don't want to exit, press the **'Cancel'**.


CimonD
Yes
No
Cancel

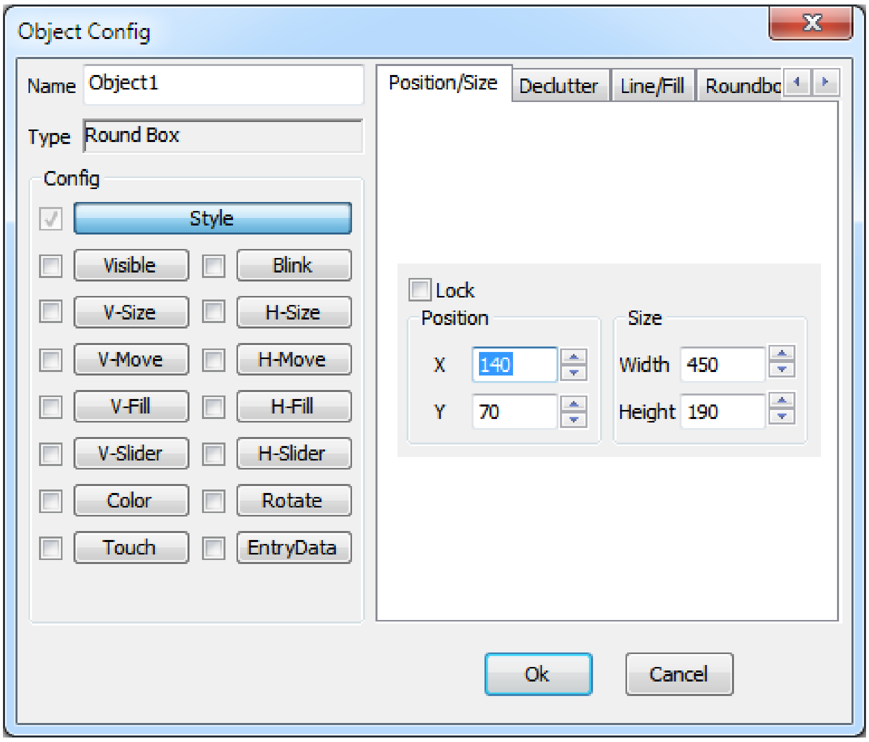
Save changes to Page 1?

Edit


File
Edit
Draw
View
Arrange
Tools
Project
Undo
Redo
Cut
Copy
Clone
Paste
Paste Special
Delete
Select All
Find...
Replace...
Object Config(W) ...
Insert Object...
Graphic File Paste(B) ...
Insert ActiveX (X) ...
Insert Animation Bitmap ...
Links(K) ...
Object
3D Styles..

Undo	This is used to cancel a processed command just before. The Undo command is available up to 10 times.
Redo	This is used to redo the content input canceled.
Cut	This is used to copy a selected object to a clipboard and remove it from page.
Copy	This is used to copy a selected object to a clipboard.

Clone	More than one object can be created simultaneously by cloning an object. If the original object has configured tags, those corresponding tags can also be duplicated or created according to increased value specified by the user
Paste	This is used to paste the contents copied from a clipboard to the page.
Paste Special	This is used to paste the contents copied from other format to the page.
Delete	This is used to delete a selected object.
Select All	All objects on the page are selected.
Find	This is used to find a specific string. The location found can be assigned. Enter a desired string in the Find what and assign the Find in. And press the **'Find Next'**. To find a string in other locations, press the **'Find Next'** button continuously, entering the Find what.
Replace	This is used to replace the string found with other string. It is available to assign the Find by Items and the Find In to replace it. Input the string found in the Find What and the string to replace in the Replace With. Press the **'Find/Replace'** button. 'Replace all' is used to replace the string, which is entered in the Find What, for all tags.
Object Config	This is used to select the functions to the object.


Object Config

Name: Object1

Type: Round Box

Config

☑ Style

☐ Visible ☐ Blink

☐ V-Size ☐ H-Size

☐ V-Move ☐ H-Move

☐ V-Fill ☐ H-Fill

☐ V-Slider ☐ H-Slider

☐ Color ☐ Rotate

☐ Touch ☐ EntryData

Position/Size | Declutter | Line/Fill | Roundbo

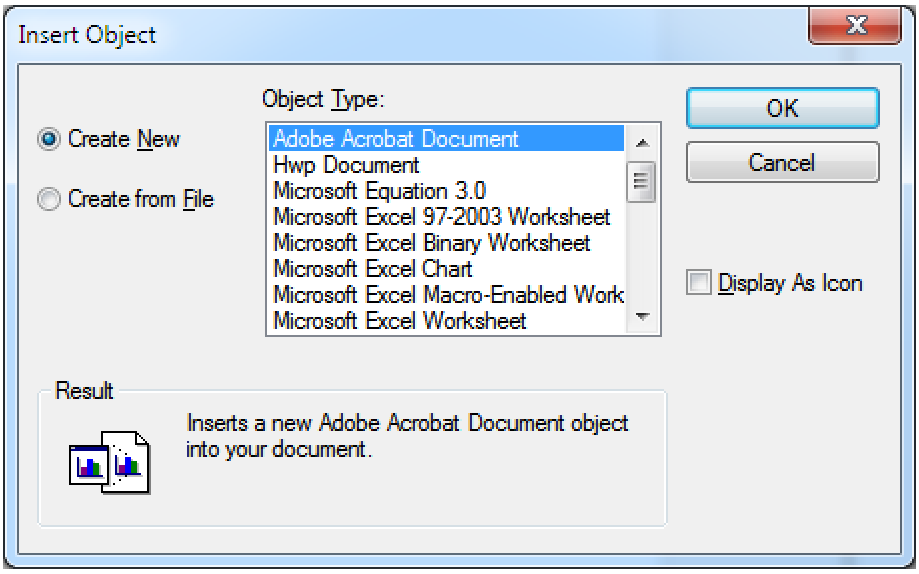
☐ Lock

Position: X 140, Y 70

Size: Width 450, Height 190

Ok Cancel

Insert Object	This is used to bring several types of the object provided from Windows to a window. If you select this item, the following dialog box will appear.


Insert Object
Object Type:
OK
Cancel
Display As Icon
Result

● Create New

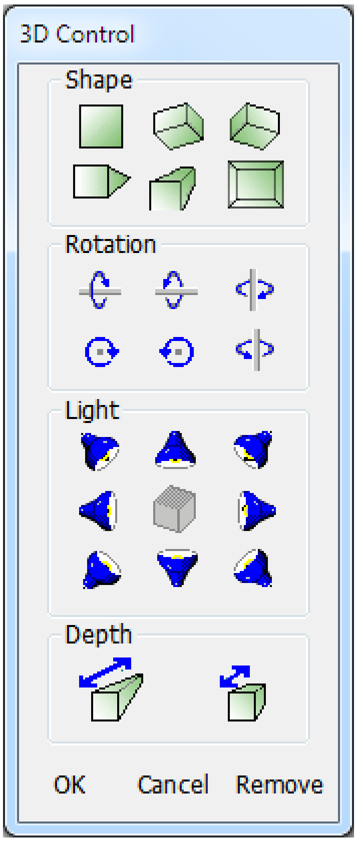
○ Create from File

Object Type:
- Adobe Acrobat Document
- Hwp Document
- Microsoft Equation 3.0
- Microsoft Excel 97-2003 Worksheet
- Microsoft Excel Binary Worksheet
- Microsoft Excel Chart
- Microsoft Excel Macro-Enabled Work
- Microsoft Excel Worksheet

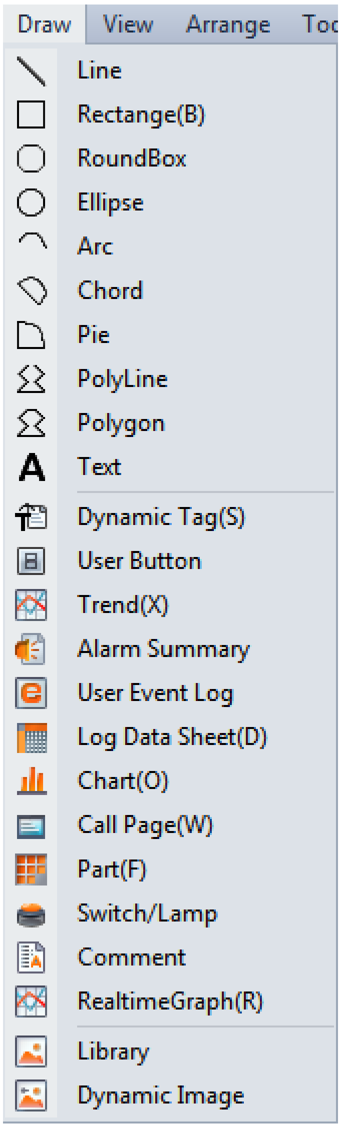
☐ Display As Icon

Result: Inserts a new Adobe Acrobat Document object into your document.

Graphic File	This is used to insert a graphic file in Bitmap type to a window.
Link	This is used to change the link status of the object pasted to a monitoring/controlling window.
Object	This is used to run the editor for a selected object.
3D Style	This is used to change the style of the selected object to 3D.

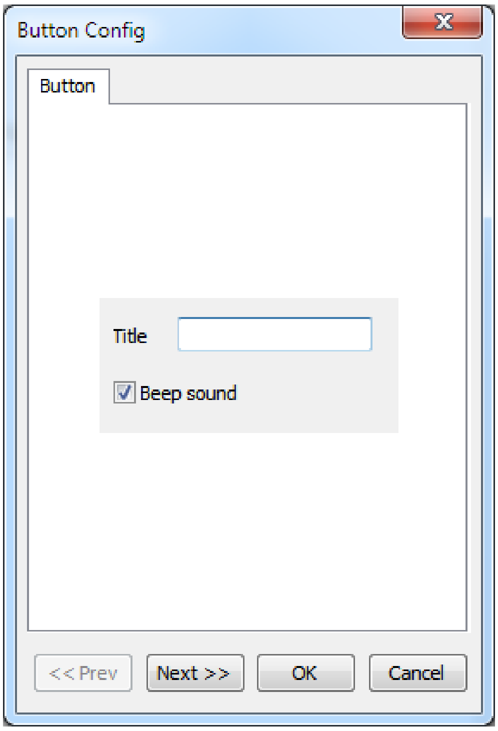

3D Control
Shape
Rotation
Light
Depth
OK
Cancel
Remove

Draw


Draw
View
Arrange
Too
Line
Rectange(B)
RoundBox
Ellipse
Arc
Chord
Pie
PolyLine
Polygon
Text
Dynamic Tag(S)
User Button
Trend(X)
Alarm Summary
User Event Log
Log Data Sheet(D)
Chart(O)
Call Page(W)
Part(F)
Switch/Lamp
Comment
RealtimeGraph(R)
Library
Dynamic Image

Line	This is used to draw a straight line. While pressing the Ctrl key, you are able to draw a horizontal line or a vertical line.
Rectangle	This is used to draw a rectangle. While pressing the Ctrl key, you are able to draw a square.
Round Box	This is used to draw a Round Box. While pressing the Ctrl key, you are able to draw a squared round box.
Ellipse	This is used to draw a circle or an ellipse. While pressing the Ctrl key, you are able to draw a circle.

Arc	This is used to draw an arc.
Chord	This is used to draw a chord.
Sector	This is used to draw a sector.
Polyline	This is used to draw a single line or the line linked with several lines. Dragging at this time, you can draw a polyline at your option.
Polygon	This is used to draw the closed line of which the first vertex and the last vertex are linked. Dragging at this time, you can draw a polygon at your option.
Text	This is used to enter a text. You are able to change font, size and etc by using the Font toolbar.
Dynamic Tag	This is used to display a tag value. The specific value of a tag by a tag 의한 variable and the value by a numeric function as well as the current value of a tag can be displayed. (Refer to the Tag value in the Drawing Object for the details)
User Button	This is used to insert a button object to a current page.



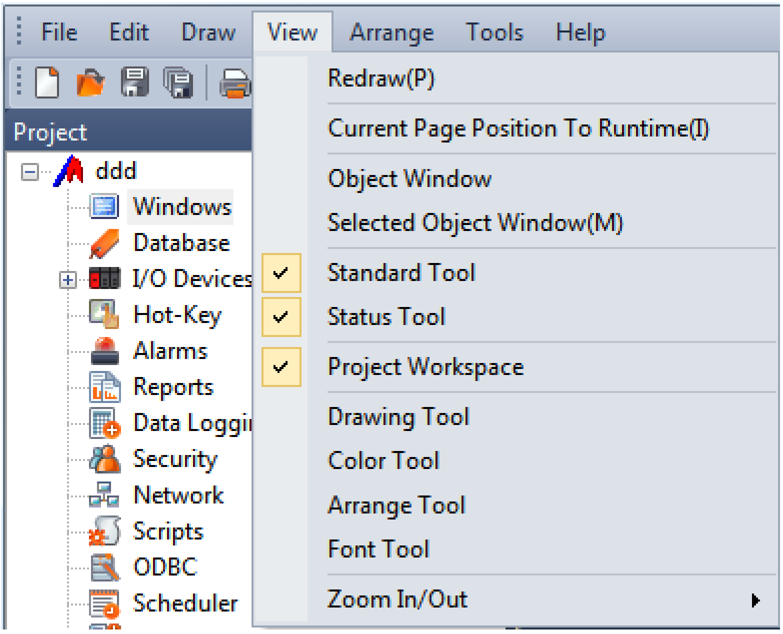
Title

☑ Beep sound

Title	This is used to enter the title displayed on a button.
Beep Sound	This is used to set up whether beep sounds on clicking a button.
Action Script	If you select the **'Next>>'** in a **'Button Config'** dialog box, the following **'Action Script'** dialog box will appear. This is used to define the action run when a button is selected. How to set up is as same as the Add Hot Key in Chapter 18 Hot Key.
Action	The types of the action using a button are 'Open Page', 'Close Page', 'Replace Page', 'Write Tag Value', 'Write Digital Value', 'Command Expression' and 'Setup Hot Key'
String	This is used to enter the string displayed on a tool tip window when the mouse is positioned on a button.
Security	This is used to set up a security level. The value from 1 to 100 can be set up. The less number is, the higher authority is. For example, if the security level of a button is set up as 50, only the users with 50 and less can use the button.

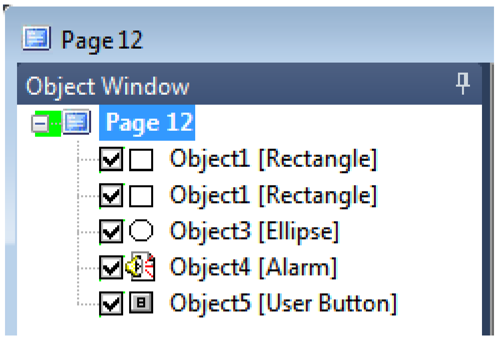
Trend	This is used to insert a trend graph object to a current page. (Refer to the Chapter 14 Trend for the details.)
Alarm Summary	This is used to insert an alarm summary object to a current page. (Refer to the alarm summary of the Chapter 7 Alarms for the details)
User Event Log	This is used to insert a user event log object to a current page. (Refer to the Chapter 20 User Event Log for the details)
Log Data Sheet	This is used to insert a log data sheet object to a current page. (Refer to the Chapter 21 Log Data Sheet for the details)
Library	This is used to insert an object in a library to a window. If you drag the object inserted from a provided library with the left button of the mouse to put on an active page, the object will be inserted. Again, the object can be edited as a desired shape by zooming in or out.

View

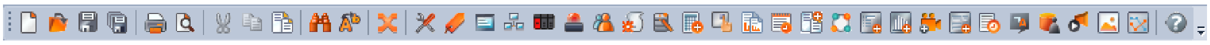

File
Edit
Draw
View
Arrange
Tools
Help
Project
ddd
Windows
Database
I/O Devices
Hot-Key
Alarms
Reports
Data Loggi
Security
Network
Scripts
ODBC
Scheduler
Redraw(P)
Current Page Position To Runtime(I)
Object Window
Selected Object Window(M)
✓ Standard Tool
✓ Status Tool
✓ Project Workspace
Drawing Tool
Color Tool
Arrange Tool
Font Tool
Zoom In/Out

Object window, Drawing tool, Color tool, Arranging tool and Font tool are used to edit a page window. These tools will be explained in the chapter 6 Monitoring/Controlling Window in detail. Here, they are explained briefly. The view menu is used to show or hide each toolbar. In front of the shown toolbar, check mark is shown.

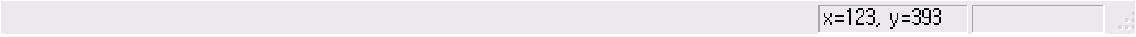
Object Window If you select this **'Object Window'** in the menu, a check mark will be shown and the object window will appear on the left hand of each monitoring window.


Page 12
Object Window
Page 12
☑ Object1 [Rectangle]
☑ Object1 [Rectangle]
☑ Object3 [Ellipse]
☑ Object4 [Alarm]
☑ Object5 [User Button]

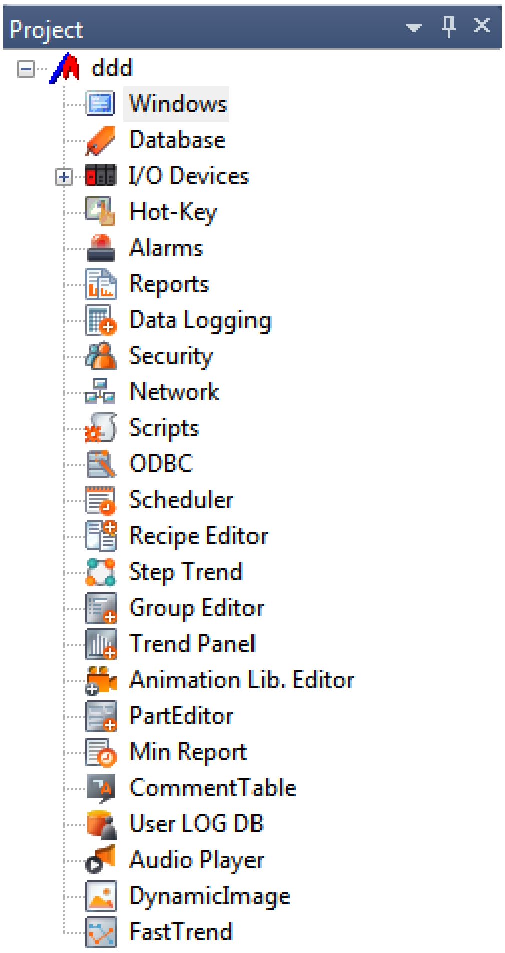
Standard Tool This is to image the specific commands in the icons to use the CimonD in editing the windows devices and database conveniently. If you select the **'Standard Tool'** in the menu, a check mark will be shown and the standard toolbar will appear.



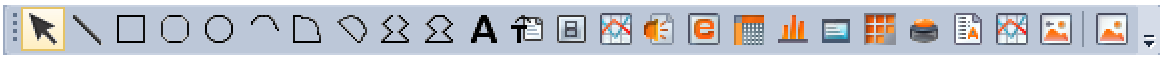
Status Tool This is positioned at the bottom of a window to show the brief help for each function. As same as the standard tool, if you select this, a check mark will be shown and the status toolbar will appear.



Project WorkSpace If you select this **'Project WorkSpace'** in the menu, a check mark will be shown and the project workspace will appear on the left hand.


Project
ddd
Windows
Database
I/O Devices
Hot-Key
Alarms
Reports
Data Logging
Security
Network
Scripts
ODBC
Scheduler
Recipe Editor
Step Trend
Group Editor
Trend Panel
Animation Lib. Editor
PartEditor
Min Report
CommentTable
User LOG DB
Audio Player
DynamicImage
FastTrend

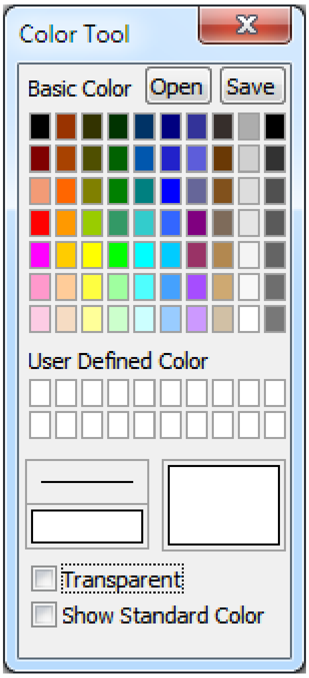
Drawing Tool The drawing toolbar is shown as below.



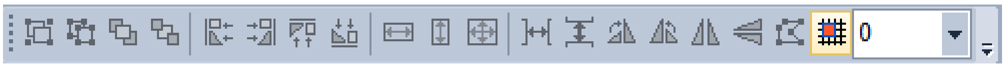
Color Tool 1. Palette: This is used to assign the prepared colors. If you double-click it, you will be able to make a color directly.

2. Line: This is used to assign the thickness and shape of a line.

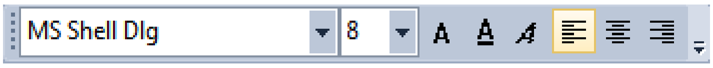
3. Transparent: This is used to make the Fill of an object transparent.


Color Tool
Basic Color
Open
Save
User Defined Color
Transparent
Show Standard Color

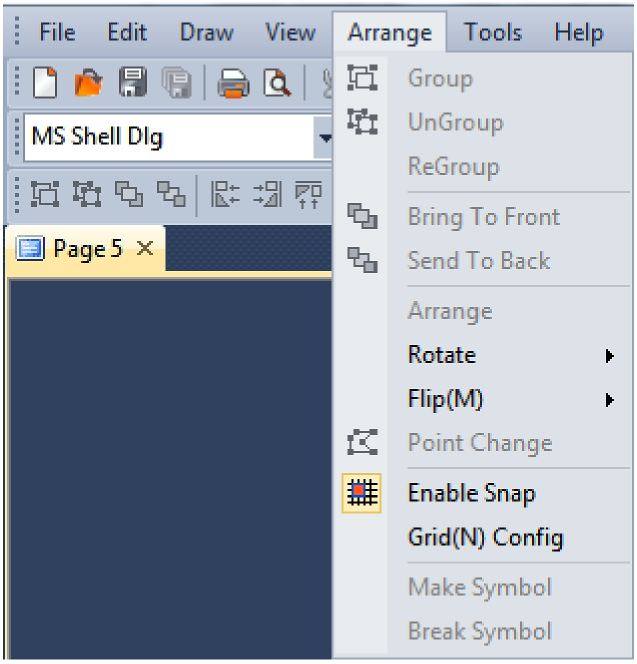
Arranging Tool This is used to arrange objects on the page.



Font Tool This is used to assign the properties of a string.

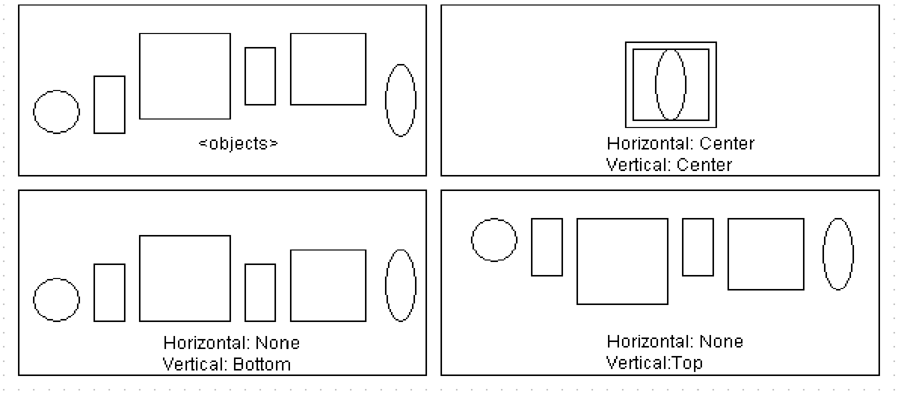

MS Shell Dlg
8

Arrange


File
Edit
Draw
View
Arrange
Tools
Help
MS Shell Dlg
Page 5
Group
UnGroup
ReGroup
Bring To Front
Send To Back
Arrange
Rotate
Flip(M)
Point Change
Enable Snap
Grid(N) Config
Make Symbol
Break Symbol

Group	If you select this menu while selecting 2 and more objects, they will grouped as one.
Ungroup	This is used to ungroup a selected group object as each object. If you select **'Ungroup'** after selecting the group object, it will be separated into each object again.
Regroup	This function is used so that a group object has original control function in case that you select the **'Ungroup'** and the **'Regroup'**, when you edit the group object to which control function is granted after it is created with several objects.
Bring To Front	This is used to bring a selected object among overlapped objects to the front.
Send To Back	This is used to send a selected object among overlapped objects to the back.

Align This is used to align two and more objects vertically/horizontally. This is used to set up the position of objects vertically (From top to bottom) or horizontally (From left to right).


<objects>
Horizontal: Center
Vertical: Center
Horizontal: None
Vertical: Bottom
Horizontal: None
Vertical:Top

Rotate This is used to rotate an object in a desired direction.

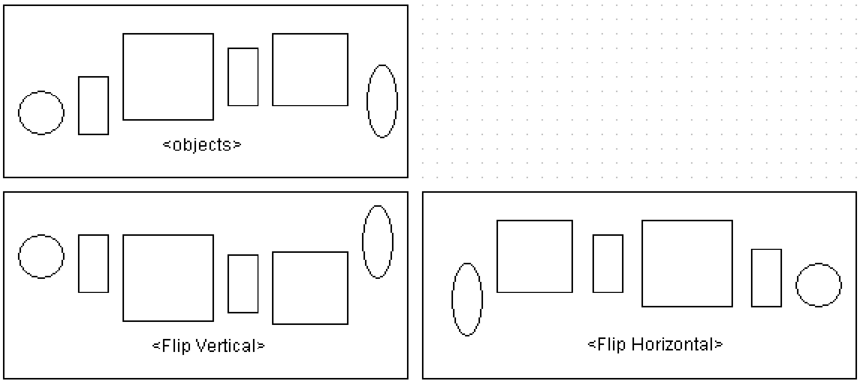
90˚ Clockwise : This is used to turn a selected object 90-degree clockwise.

90˚ Counterclockwise : This is used to turn a selected object 90-degree counterclockwise.

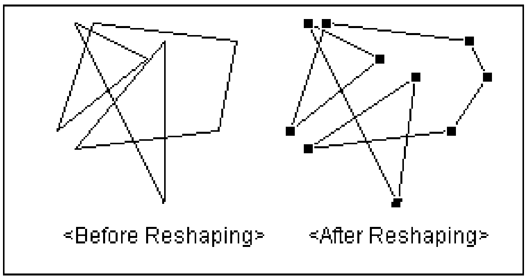
Flip This is used to flip an object vertically/horizontally.

Flip Vertical : This is used to flip a selected object vertically.

Flip Horizontal : This is used to flip a selected object horizontally.



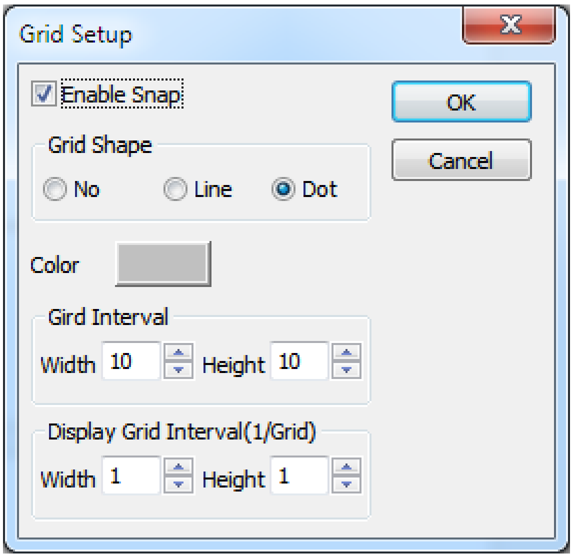
Point Change This is used to reshape a line, a rectangle, an ellipse, a chord, a polyline and a polygon object.



The above picture is the example of reshaping. The left is a polygon object. If you select this object and click the Reshape button, each vertex of the polygon will be displayed. If you select and move the line between the vertexes with the mouse, the new vertex will be created and the polygon will be reshaped.

Enable Snap This is used to snap a selected object to grid. Assign horizontal and vertical spacing between the grids and snap an object to grid.

Grid(N) Config This is used to arrange objects and change the height or the width of a grid.



☑ Enable Snap

Grid Shape
○ No ○ Line ● Dot

Color

Gird Interval
Width 10 Height 10

Display Grid Interval(1/Grid)
Width 1 Height 1

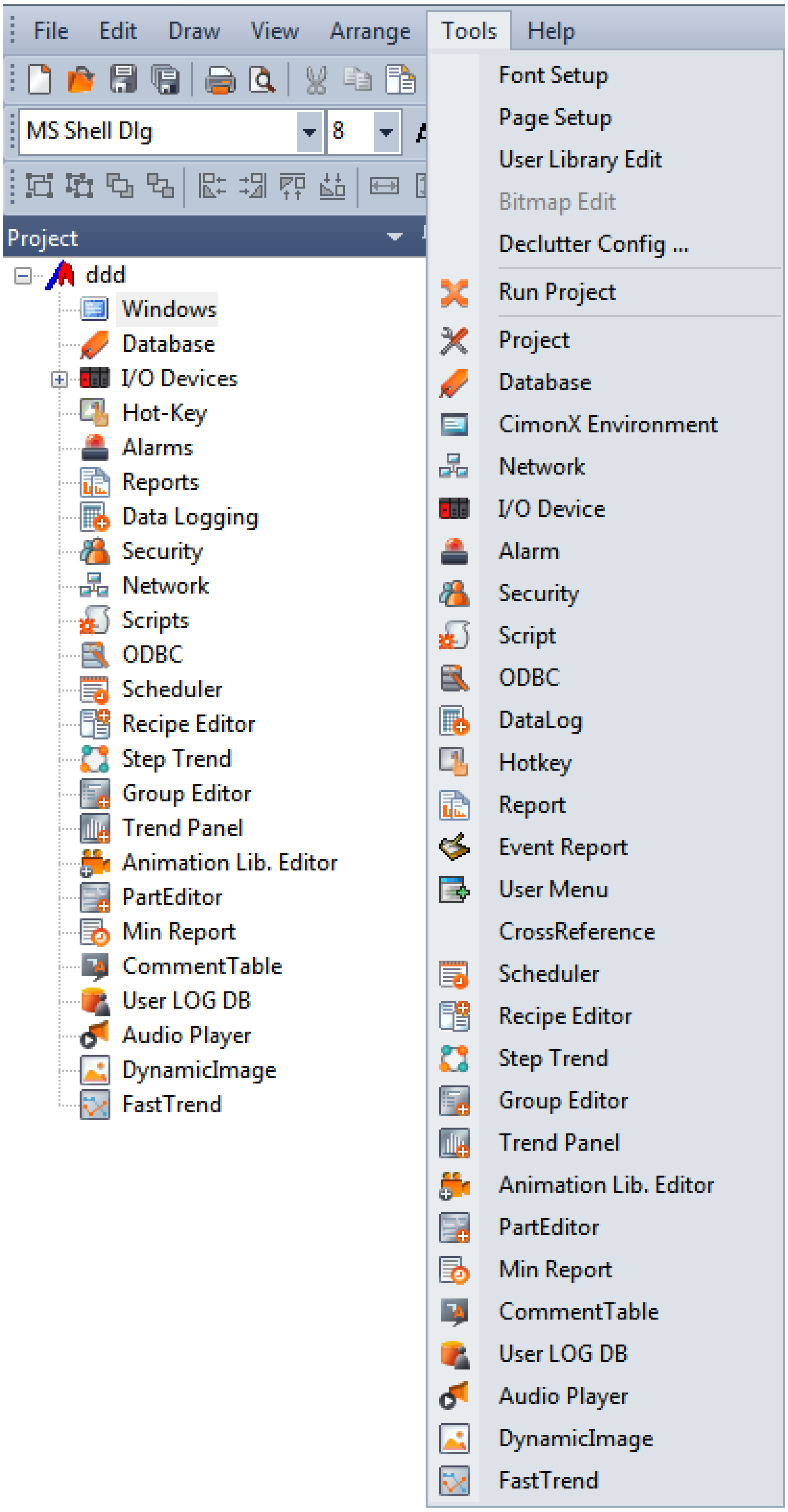
Enable Snap	If you select this option, a graphic object will be moved following a grid.
Grid Shape	This is used to assign the grid shape displayed. No : Grid is not displayed. Line : Grid is displayed with lines. Dot : Grid is displayed with points.

Color	This is used to select the color of a grid.
Grid Interval	This is used to assign the width and height of Grid spacing. Enter an integer from 1 to 100 as the value. The bigger value is, the wider grid spacing is.
Display Grid Interval	This is used to assign displayed grid spacing. The value corresponds to the multiple of spacing. That is, if the value is 1, the grid is displayed at the grid spacing. If it is 2, the grid is displayed at double grid spacing. Enter an integer from 1 to 100 as the value.

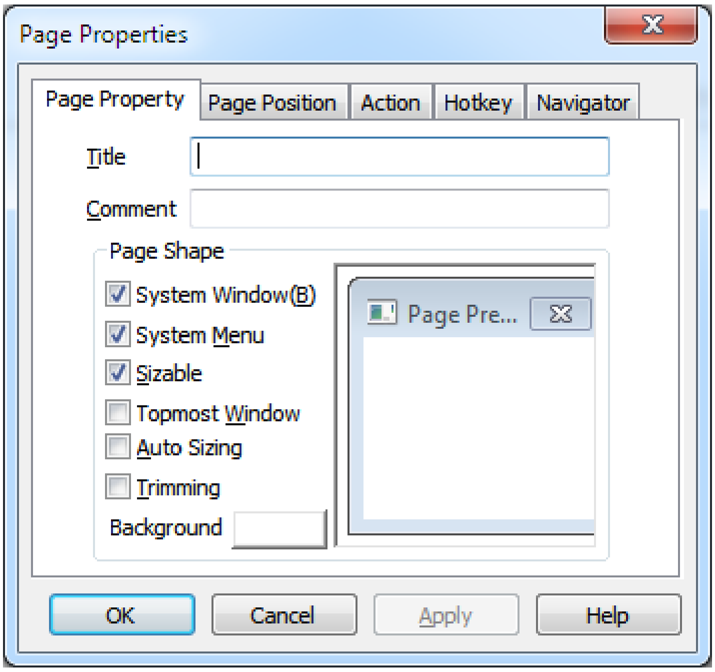
Make Symbol If you assign an object as the **'Make Background'**, the object cannot be selected. Accordingly, it cannot be edited. This is used to prevent a big size object from being selected unintentionally.

Break Symbol This is used to release all the objects assigned to a background. If the object is released, it is available to edit it.

Tools


File
Edit
Draw
View
Arrange
Tools
Help
MS Shell Dlg
8
Project
ddd
Windows
Database
I/O Devices
Hot-Key
Alarms
Reports
Data Logging
Security
Network
Scripts
ODBC
Scheduler
Recipe Editor
Step Trend
Group Editor
Trend Panel
Animation Lib. Editor
PartEditor
Min Report
CommentTable
User LOG DB
Audio Player
DynamicImage
FastTrend
Font Setup
Page Setup
User Library Edit
Bitmap Edit
Declutter Config ...
Run Project
Project
Database
CimonX Environment
Network
I/O Device
Alarm
Security
Script
ODBC
DataLog
Hotkey
Report
Event Report
User Menu
CrossReference
Scheduler
Recipe Editor
Step Trend
Group Editor
Trend Panel
Animation Lib. Editor
PartEditor
Min Report
CommentTable
User LOG DB
Audio Player
DynamicImage
FastTrend

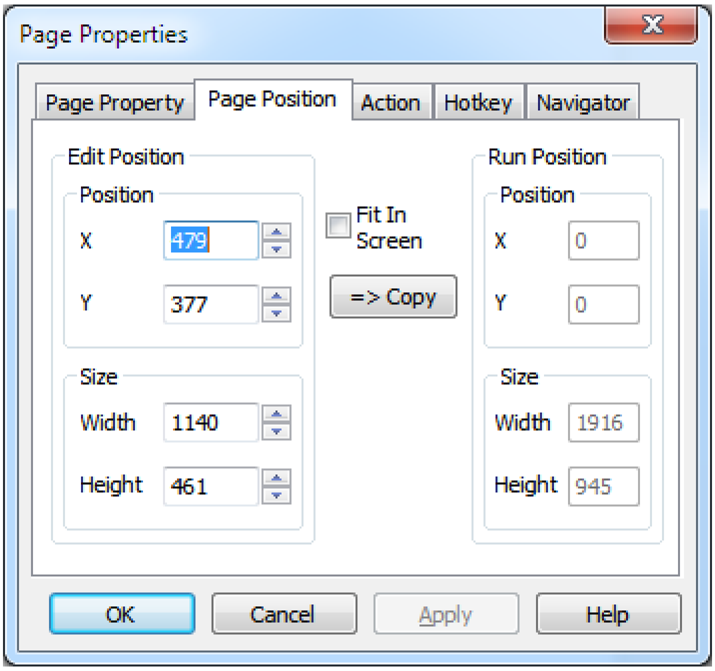
Font Setup	This is used to assign Font, Style and Size on a page window.
Page Setup	This is used to configure a currently active page window. The tab control is composed of Page Configuration, Position, Action and Hot key.



☑ System Window(B)
☑ System Menu
☑ Sizable
☐ Topmost Window
☐ Auto Sizing
☐ Trimming

Page Property

Title	This is used to enter the title of the page displayed in a title bar. The limited conditions 1. It is available to set up in the combination of English, Korean, numeric and special character. 2. There is no limitation on the number of the characters entered.
Comment	This is used to enter the description about a current page window. The limited condition is as same as the Title.
System Window	This is used to set up whether a page is Window type or Dialog Box. If you do not assign the **'Title Bar'**, it will be the window of the dialog box type.
System Menu	This is used to assign the Title Bar (Icons) menu on the left top of a page window. There are Return, Move, Size, Icon, Full Window and Close in it.
Sizable	This is used to assign whether page size is variable.
Topmost Window	This is used to assign whether this page is always on the front.
Auto Sizing	This is used to set up whether the contents of a page are zoomed in/out fit in the size of a window automatically in case the size of a page is changed.
Trimming	This is used to set up whether a user selects the part of a page with the mouse to zoom in partly.
Background	This is used to assign the background color of a page.



Edit Position

Position

X 479

Y 377

Size

Width 1140

Height 461

☐ Fit In Screen

Run Position

Position

X 0

Y 0

Size

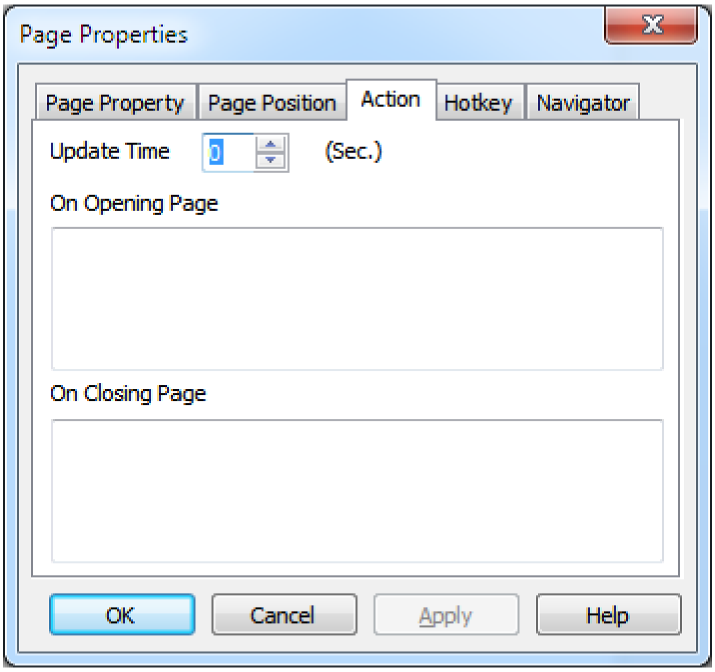
Width 1916

Height 945

Page Position

This is used to assign the Edit Position and the Run Position of a page.

Edit Position	This is used to assign the position of the page window edited. The position of a current page appears as a default value.
Run Position	This is used to assign the position and size of a page window in the CimonX.
Fit in Screen	This is used to adjust the position and the size of a page fit in a whole window automatically and show when it is run. If this option is selected, the value at a running position will be disregarded.
Copy	If you press the **'Copy'** button after adjusting an edit position, the coordinates value at the edit position will be changed to the coordinates at the changed running position.


Page Properties
Page Property
Page Position
Action
Hotkey
Navigator
On Opening Page
On Closing Page
OK
Cancel
Apply
Help

Update Time 0 (Sec.)

Action

This is used to define the action run when a corresponding page is opened or closed.

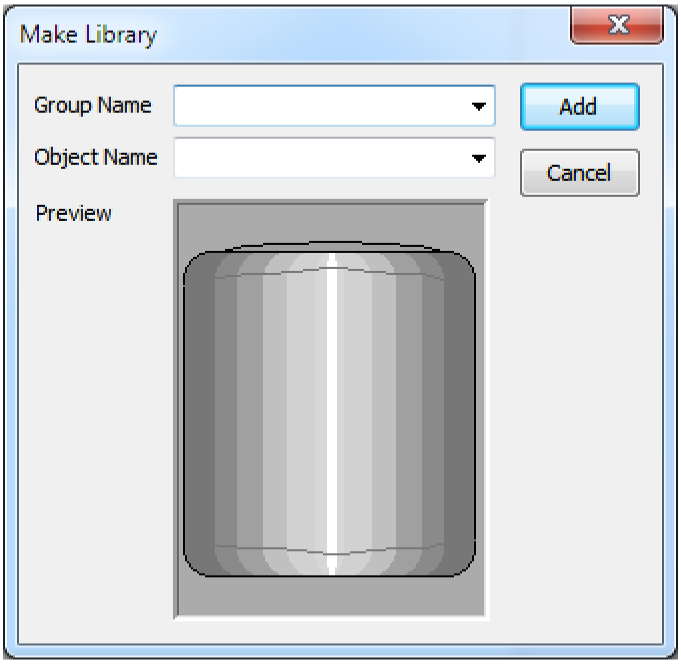
For example, a script can be run or a tag value can be set up.

On Opening Page	This is used to define the action run when a page is opened. For example, to run a script, enter the script-run command of RunScript("ChangeAnaValue").
On Closing page	This is used to define the action run when a page is closed. For example, to run a script, enter the script run command of StopScript("ChangeAnaValue").

Hot key

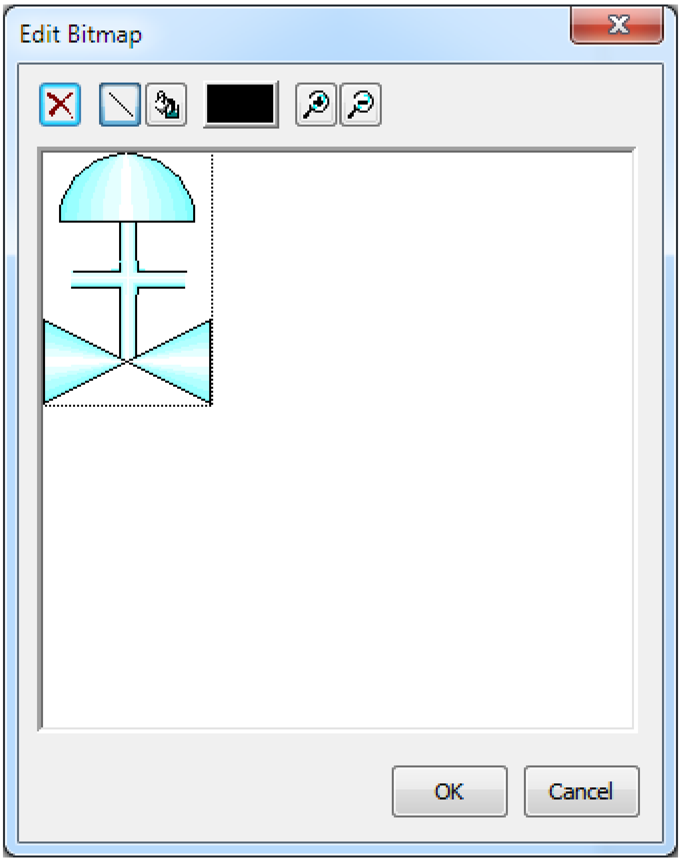
This is used to assign the Hotkey module for the action applied to a page.

User Library Edit This is used to register/delete a user's own library object in addition to the library provided from a system as standard.



Group Name	This is used to select or enter the group name of a library. To create a new group, enter a peculiar group name. Created library data is saved in file type in the following location. **CIMONFolder\UserLib\GroupName.dat**
Object Name	This is used to the name of the picture registered to a library.
Preview	This is used to show the library object added.
Add	This is used to add a library object.
Cancel	This is used to cancel adding a library object.

Bitmap Edit This is used to edit the bitmap object added to a page. If you select this menu while you are selecting a bitmap object, an Edit Bitmap dialog box will appear.



Cancel	This is used to cancel the contents of the work performed just before.
Line	This is used to set up as Draw Line mode.
Fill	This is used to set up as Fill mode.
Color	This is used to select a color. If you press the Color icon, the palette will appear. Select a desired color in it.
Zoom In	This is used to zoom in an object.
Zoom Out	This is used to zoom out an object.
OK	This is used to register edited contents.
Cancel	This is used to cancel editing a bitmap.

Run Project For the execution of the CimonX, refer to the chapter 3 CimonX.

Project For the details, refer to Chapter 4 Drawing and Object configuration

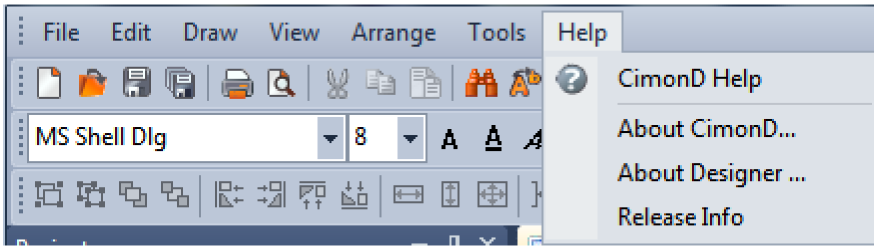
Database For the details, refer to Chapter 5 Database.

CimonX Environment For the details, refer to Chapter 3 CimonX.

Network For the details, refer to Chapter 15 Network.

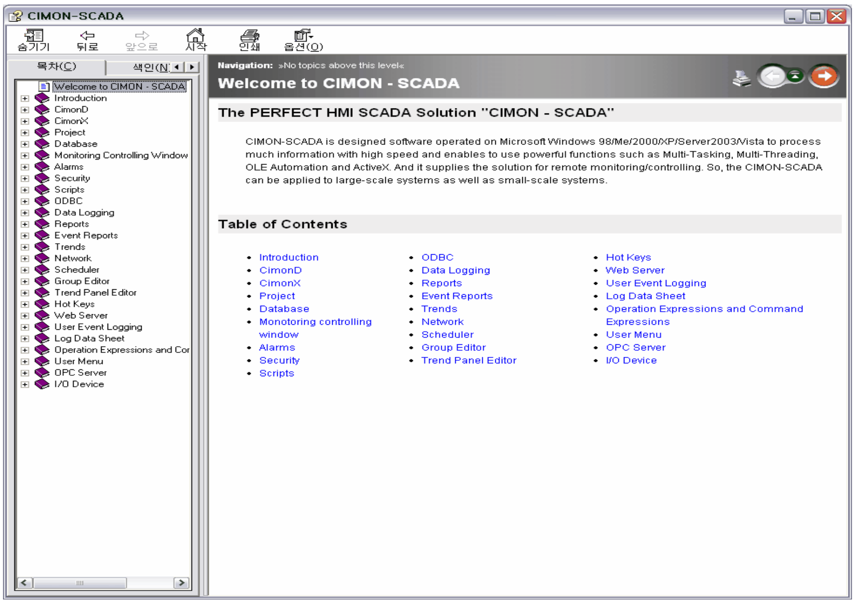
I/O Device	For the details, refer I/O Device Manual at the HELP menu in CimonD.
Alarm	For the details, refer to Chapter 7 Alarms.
Security	For the details, refer to Chapter 8 Security.
Script	For the details, refer to Chapter 9 Scripts.
ODBC	For the details, refer to Chapter 10 ODBC.
DataLog	For the details, refer to Chapter 11 Data Logging.
Hot Key	For the details, refer to Chapter 18 Hot Keys.
Report	For the details, refer to Chapter 12 Reports.
Event Report	For the details, refer to Chapter 13 Event Reports.
User menu	For the details, refer to Chapter 22 User menu
Scheduler	For the details, refer to Chapter 16 Scheduler.
Group Editor	For the details, refer to Chapter 17 Group Editor and Trend Panel.
Trend Panel	For the details, refer to Chapter 17 Group Editor and Trend Panel.
Part Editor	For the details, refer to Chapter 23 Part Editor.
User LOG DB	For the details, refer to Chapter 24 User LOG DB.

Help



CimonD Help The help about how to use the CimonD appears.

If you select a desired item by using the contents or the index, the help for the corresponding item will be displayed.


CIMON-SCADA
숨기기
뒤로
앞으로
시작
인쇄
옵션(O)
목차(C)
색인(N
Welcome to CIMON - SCADA
Introduction
CimonD
CimonX
Project
Database
Monitoring Controlling Window
Alarms
Security
Scripts
ODBC
Data Logging
Reports
Event Reports
Trends
Network
Scheduler
Group Editor
Trend Panel Editor
Hot Keys
Web Server
User Event Logging
Log Data Sheet
Operation Expressions and Cor
User Menu
OPC Server
I/O Device
Navigation: »No topics above this level«

Welcome to CIMON - SCADA

The PERFECT HMI SCADA Solution "CIMON - SCADA"

CIMON-SCADA is designed software operated on Microsoft Windows 98/Me/2000/XP/Server2003/Vista to process much information with high speed and enables to use powerful functions such as Multi-Tasking, Multi-Threading, OLE Automation and ActiveX. And it supplies the solution for remote monitoring/controlling. So, the CIMON-SCADA can be applied to large-scale systems as well as small-scale systems.

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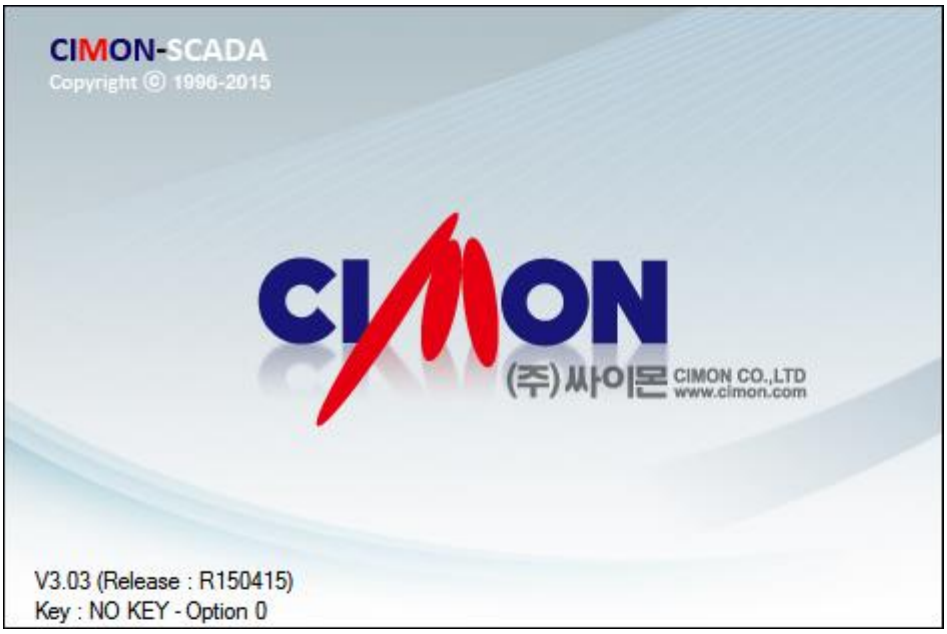
- User Event Logging
- Log Data Sheet
- Operation Expressions and Command Expressions
- User Menu
- OPC Server
- I/O Device

About CimonD You can check the version of CimonD and Keylock License information.


CIMON-SCADA
CIMON
(주)싸이몬 CIMON CO.,LTD
www.cimon.com

Copyright © 1996-2015

V3.03 (Release : R150415)
Key : NO KEY - Option 0

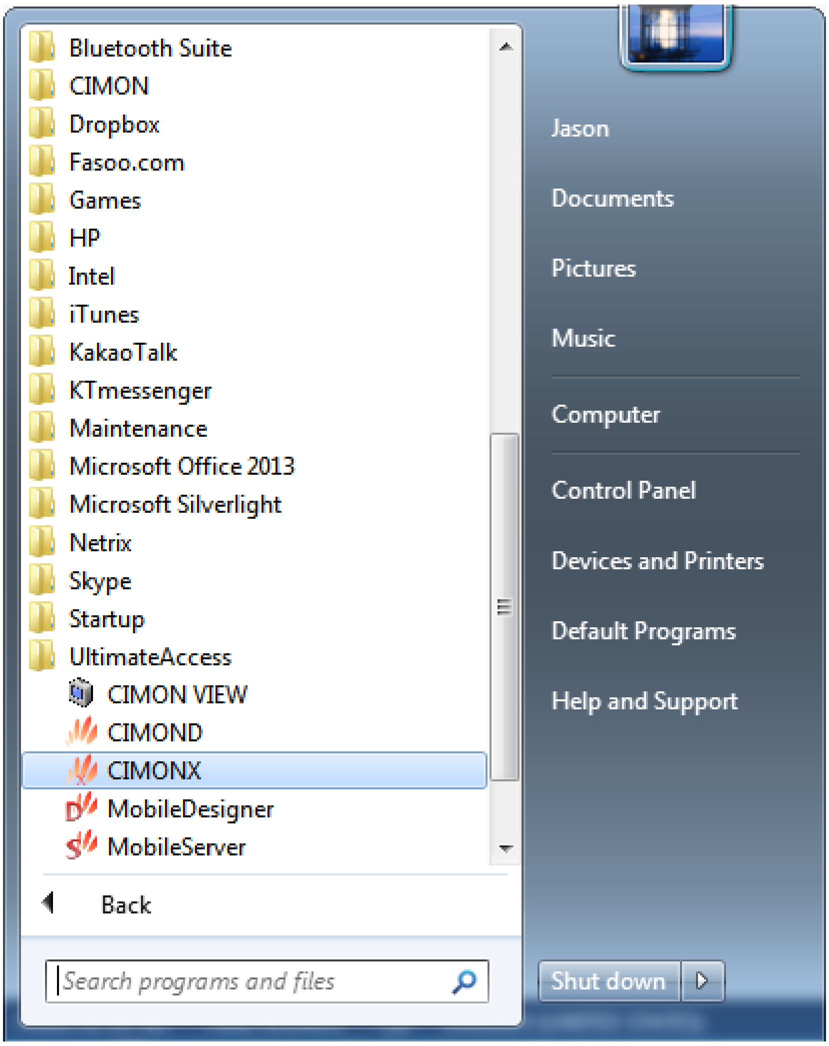
Release Info Release Note pops up.

Chapter 3. CimonX

The CimonX is used to run the project that has been edited in the CimonD. The CimonX keeps site status in a database through communication with registered low-level I/O Devices and a monitoring window shows the site status by using diverse control functions allowed according to tag value. An alarm occurs and a registered report is outputted, according to defined alarm contents.

3-1. Running CimonX

Select the **'Program' – 'UltimateAccess' –'CimonD'** in the **'Start'** menu of Windows.

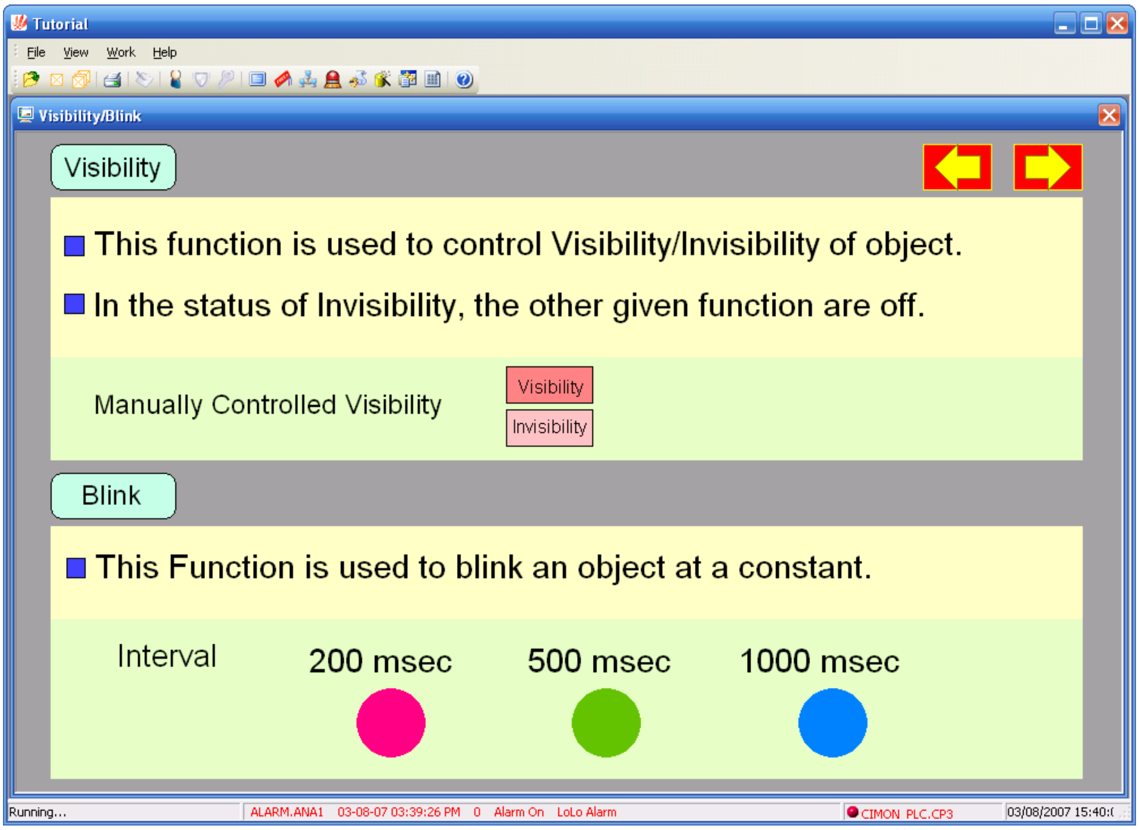

Bluetooth Suite
CIMON
Dropbox
Fasoo.com
Games
HP
Intel
iTunes
KakaoTalk
KTmessenger
Maintenance
Microsoft Office 2013
Microsoft Silverlight
Netrix
Skype
Startup
UltimateAccess
CIMON VIEW
CIMOND
CIMONX
MobileDesigner
MobileServer
Back
Search programs and files
Jason
Documents
Pictures
Music
Computer
Control Panel
Devices and Printers
Default Programs
Help and Support
Shut down

Or click Windows Explorer and move to the folder where the CIMON is installed. And double-click CimonX.exe to run.

3-2. Configuration of the CimonX

The CimonX defines and sets up database monitoring necessary for on-line window monitoring, and the components of the system necessary for operating a system such as Alarm monitoring, Trend and etc.

The CimonX is configured with the following menus and toolbar.



Visibility

- This function is used to control Visibility/Invisibility of object.
- In the status of Invisibility, the other given function are off.

Manually Controlled Visibility — Visibility / Invisibility

Blink

- This Function is used to blink an object at a constant.

Interval 200 msec 500 msec 1000 msec

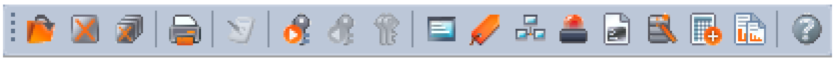
Running… ALARM.ANA1 03-08-07 03:39:26 PM 0 Alarm On LoLo Alarm CIMON PLC.CP3 03/08/2007 15:40:(

The main menu types of the CimonX are changed according to internal application program similarly to the CimonD.

Make a note about the change of the main menu not to confuse.

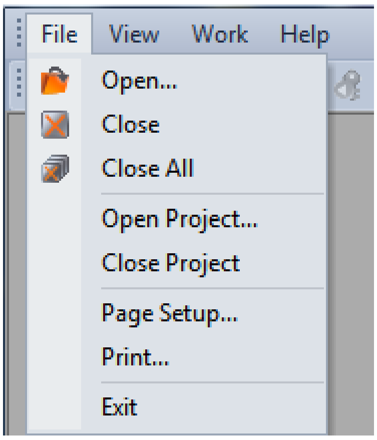
First, common menus are explained and additional menus will be explained in corresponding parts in detail.

The following picture is the standard toolbar of the CimonX.

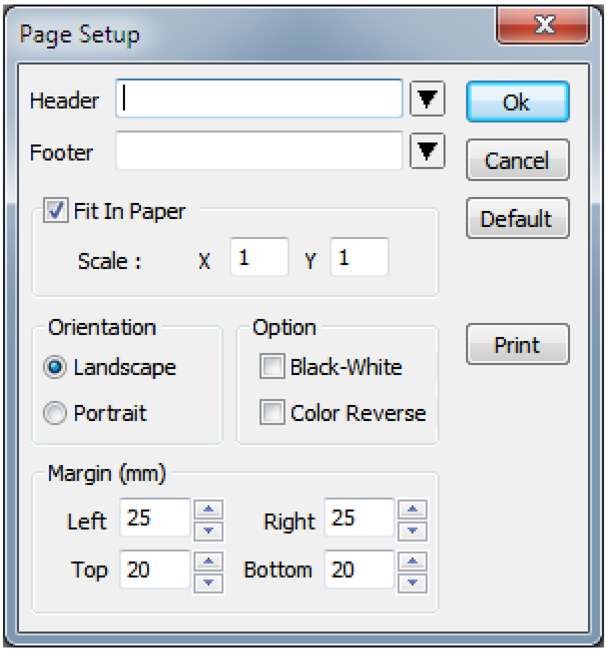


3-3. Details of CimonX

File


File
View
Work
Help
Open...
Close
Close All
Open Project...
Close Project
Page Setup...
Print...
Exit

Open	This is used to select and open an existing page or layout. Select the Folder and enter the File name. Press the **'Open'** button or double-click on the file. The available Files of Type are Page file(*.pgx) and Layout file(*.wgx).
Close	This is used to close a currently active page window.
Close All	This is used to close all the currently opened pages in the CimonX.
Open Project	This is the menu to open an existing project.
Close Project	This is used to close a currently active project.
Page Setup	This is used to set up a paper to output a currently configured graphic page with a printer. If you select this menu, the **'Page Setup'** dialog box will appear as follows.


Page Setup
Ok
Cancel
Default
Print

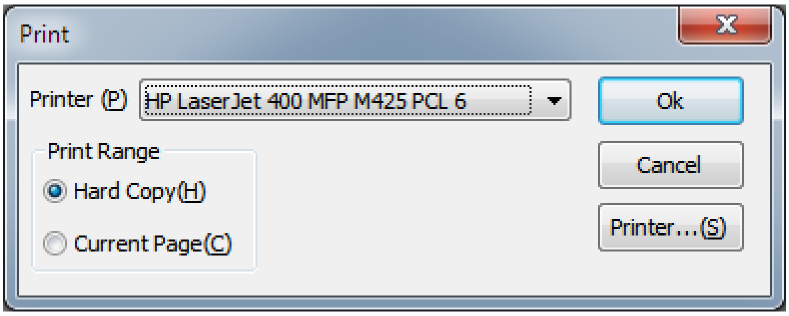
Header
Footer
☑ Fit In Paper
Scale : X 1 Y 1
Orientation
● Landscape
○ Portrait
Option
☐ Black-White
☐ Color Reverse
Margin (mm)
Left 25 Right 25
Top 20 Bottom 20

Header	This is used to insert a header. The contents displayed may be entered directly or the items provided by using ▼ button at right may be entered.

Page Number	Enter as %P.
Current Date	Enter as %D.
Current Time	Enter as %T.
Center	Enter as %C.
Left	Enter as %L.
Right	Enter as %R.
File Name	Enter as %F.

Footer	This is used to insert a footer. The method to enter and the contents displayed are as same as the explanation in the above header.
Fit in Paper	The size of a current page window is outputted to fit in paper.
Scale	This is used to set up the size of the window printed as the ratio of it to the paper size.
Orientation	This is used to adjust orientation as landscape/portrait.
Option	If the Invert is selected, a window will be outputted inversely. The other colors will be outputted as they are.
Margins	This is used to assign the margins for printing in mm at user's option.
Ok	This is used to register the contents of Setup.
Cancel	This is used to cancel Setup.
Default	This is used to set up all items as the default provided from a system.
Print	This is used to print an active page.

Print This is used to output a currently displayed page with a printer. If you select this menu, the following Print dialog box will appear.



Print

Printer (P) HP LaserJet 400 MFP M425 PCL 6

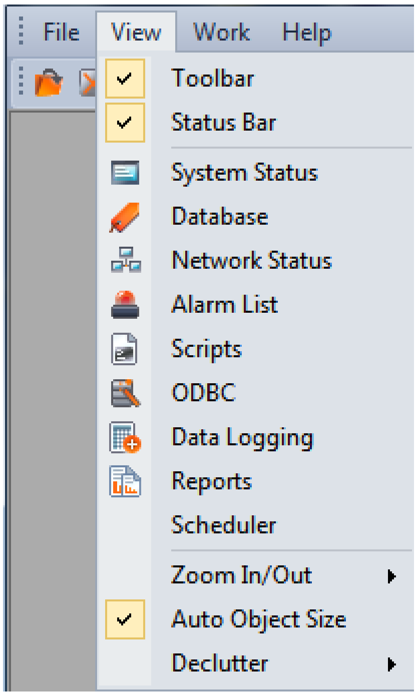
Print Range
● Hard Copy(H)
○ Current Page(C)

Printer	This is used to select the printer outputted.
Print Range	This is used to select the Hard Copy or the Current Page.
Ok	If you press this button, a page window will be printed with the printer.
Cancel	If you press this button, printing will be cancelled.

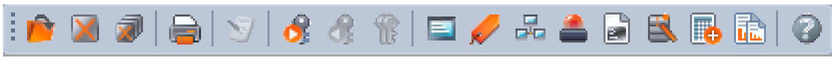
Printer — This is used to show the printer setup window provided from the manufacturer of a selected printer. Select the detailed option on the window.

Exit — This is used to exit the CimonX.

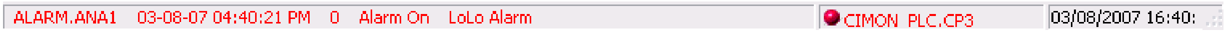
View


File
View
Work
Help
✓ Toolbar
✓ Status Bar
System Status
Database
Network Status
Alarm List
Scripts
ODBC
Data Logging
Reports
Scheduler
Zoom In/Out ▸
✓ Auto Object Size
Declutter ▸

Toolbar — This is to image specific commands in icons to work more conveniently. If you select the **'Toolbar'** in the menu, a check mark will be shown and the standard toolbar will appear.



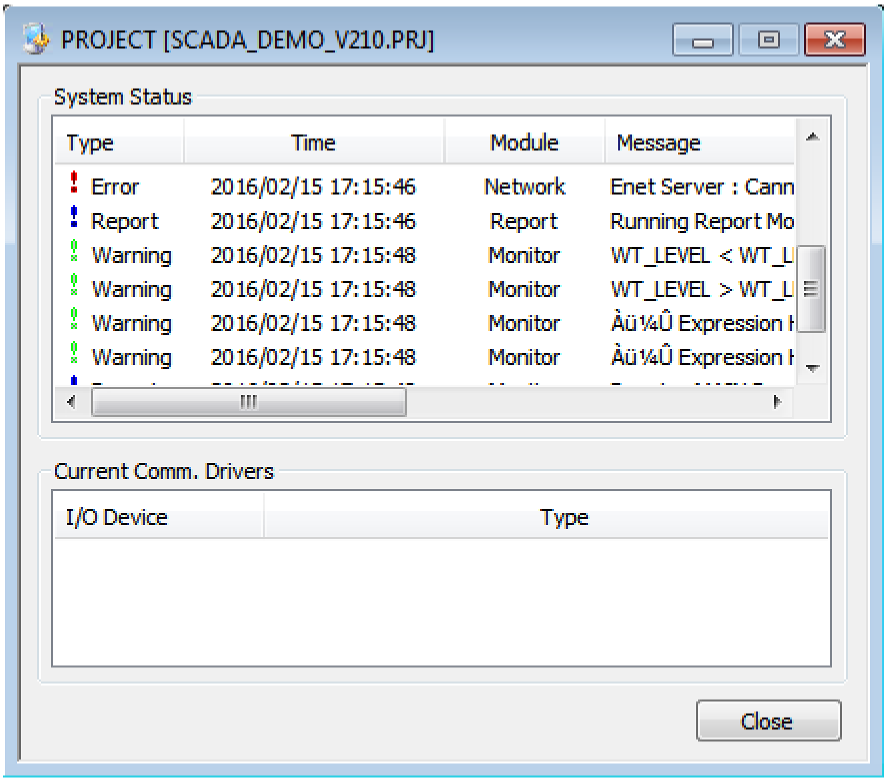
Status Bar — This is shown at the bottom of a Window as default and can be assigned when the CimonD is set up. The following, as example of a general setup, shows a recent alarm, a communication status icon and current time.



```
ALARM.ANA1   03-08-07 04:40:21 PM   0   Alarm On   LoLo Alarm   CIMON  PLC.CP3   03/08/2007 16:40:
```

The communication status icon is set up in color. Blue means normal. Red means abnormal and yellow means communication Disable or Demo status.

System Status This is used to provide the monitoring for the events occurring in each module with which a system is configured and the status of communication drivers after the CimonX is run. This shows the contents selected from the logging item setup part in the project manger of the CimonD. The window is as follows.



Type	Time	Module	Message
Error	2016/02/15 17:15:46	Network	Enet Server : Cann
Report	2016/02/15 17:15:46	Report	Running Report Mo
Warning	2016/02/15 17:15:48	Monitor	WT_LEVEL < WT_L
Warning	2016/02/15 17:15:48	Monitor	WT_LEVEL > WT_L
Warning	2016/02/15 17:15:48	Monitor	Àü¼Û Expression I
Warning	2016/02/15 17:15:48	Monitor	Àü¼Û Expression I

I/O Device	Type

Type	This shows the type of the events occurring in a system.
Time	This shows the time when the events occur in a system.
Module	This shows the name of the modules for which the event occurs in a system.
Message	This shows the message for the events occurring in a system.
Device	This shows the name of communication devices.
Type	This shows the type of the communication devices.

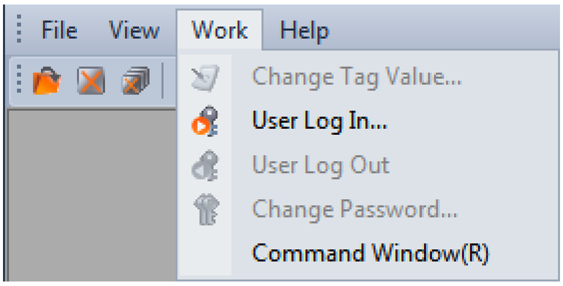
[Note] If **"As the address of tag [TAGNAME] is not registered to the communication block, communicates individually"** message appears in the messages for events in a system, click the menu to exit the CimonX and to register the address to the entire communication blocks in the I/O Device setup of the CimonD. The tags communicated should be registered to entire communication block so that the performance of a system is not dropped

Database	This is used to monitor the values of the tags registered to a database in list type and change the tag values manually. Refer to the database window part for the details. The window is as follows.
Network	This is used to show the status of communication by registered devices and stations. Refer to the network window part.
Alarm List	This is used to show alarm-occurring status. Refer to the alarm window part for the details.
Scripts	Make sure the contents of a registered script. If you select a script in the tree window on the left, the contents of the corresponding script will be displayed on the right. It is not available to edit the script in the CimonX.
ODBC	Make sure the contents of a registered ODBC. If you select a DBMS in the tree window on the left, the contents of the corresponding querys will be displayed on the right. It is not available to edit the script in the CimonX.
Data Logging	Make sure the contents of a registered data-logging model If you select a logging model in the tree window on the left, the contents of the corresponding model will be displayed on the right. It is not available to edit the model in the CimonX
Reports	Make sure the contents of a registered report model. If you select a report model in the tree window on the left, the contents of the corresponding model will be displayed on the right. It is not available to edit the model in the CimonX
Scheduler	Make sure the contents of a registered schedule. You can modify a registed schedule and add a new schedule or model in on-line mode. Refer to chapter 16 for the details.

Zoom In/Out	This is used to zoom in or out a currently active page. Select a desired scale or user definition in the sub menu.	
	Scale	If you select among 200, 175, 150, 125, 100, 75, 50, 25 %, a page will be shown in the scale.
	User Definition	Enter a scale at user's option or assign it by using the slider bar. The scale can be assigned from 25% to 800%.

Auto Object size This is used to assign the scale of a window automatically in case of changing the size of a page. In case that the size of a window is changed while this is selected, the scale will be adjusted fit for the changed size. Otherwise, the scale will be kept as it is and the size of the window will be adjusted.

Work



Change Tag Value This is used to change a tag value manually.

User Log In This is used to log in as a registered user. If you are logged in, you will be able to use the functions for the level and less.

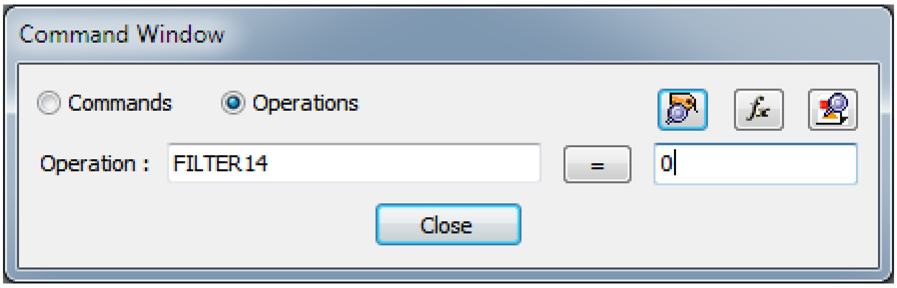
User Log Out This is used to log out a logged-in user.

Change Password This is used to change the current password of a logged-in user. If you It is used to change the current password. If you enter a current password and a new password, the password of a corresponding user will be changed.

Command Window You can run a simple command or get a result of operations

If you select it, the following command window dialog box will appear.

Enter a command or operation, and then click ‘Run’ or ‘=’ button.



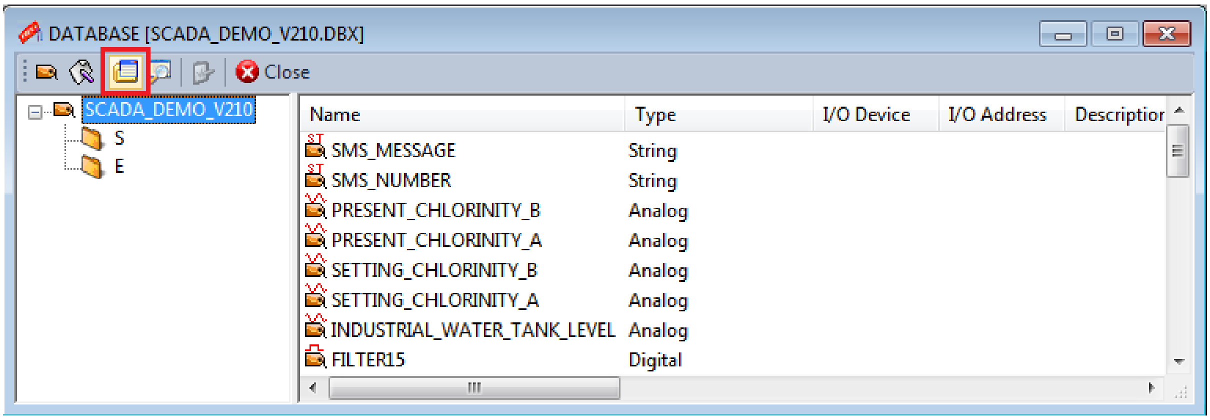
○ Commands ● Operations

Operation : FILTER14 = 0

Database Window

In the **‘Database Window’** of the CimonX, there are Editing Mode and Monitoring Mode. The Editing Mode shows the information about registered tags in a database. The Monitoring Mode shows the current value, status and alarm status of tags. And if a tag is select in the Monitoring Mode, it is available to change the value of the tag manually.

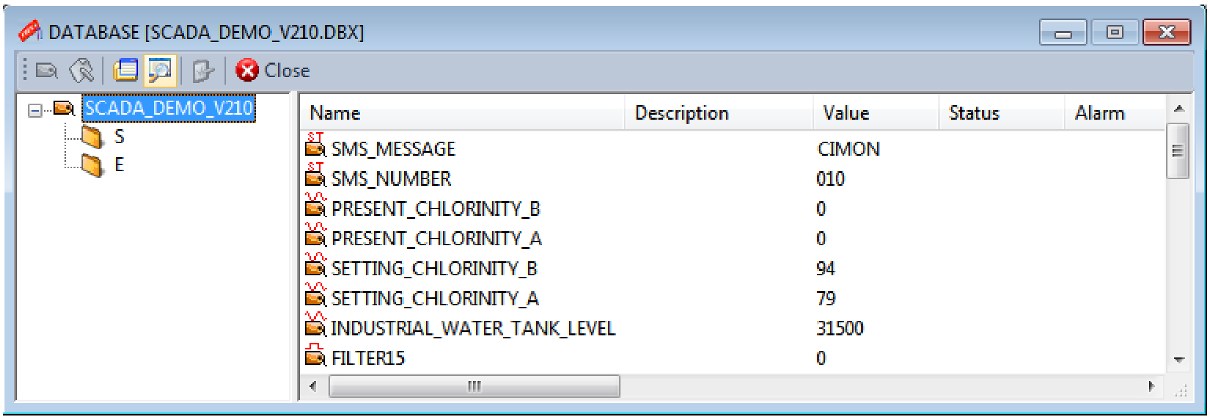
Editing Mode If you click the **‘Editing Mode’** icon in a Database Manager, the window will change as below.



Name	Type	I/O Device	I/O Address	Descriptior
SMS_MESSAGE	String			
SMS_NUMBER	String			
PRESENT_CHLORINITY_B	Analog			
PRESENT_CHLORINITY_A	Analog			
SETTING_CHLORINITY_B	Analog			
SETTING_CHLORINITY_A	Analog			
INDUSTRIAL_WATER_TANK_LEVEL	Analog			
FILTER15	Digital			

‘Name’, ‘Type’, ‘I/O Device’, ‘I/O Address’ and ‘Description’ of the tags are shown.

Monitoring Mode If you click the **‘Monitoring Mode’** icon in a Database Manager, the window will be as follows. ‘Tag Name’, ‘Description’, ‘Tag Value’, Current Status’, ‘Alarm Status’ are displayed on the right of the window.



Close
SCADA_DEMO_V210
S
E

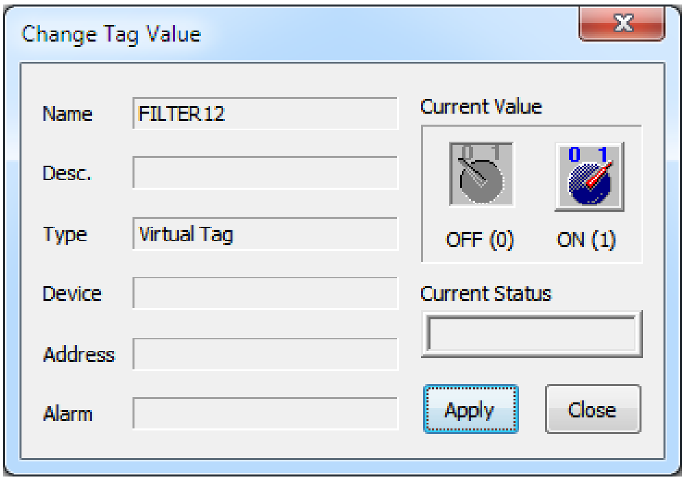
DATABASE [SCADA_DEMO_V210.DBX]

Name	Description	Value	Status	Alarm
SMS_MESSAGE		CIMON		
SMS_NUMBER		010		
PRESENT_CHLORINITY_B		0		
PRESENT_CHLORINITY_A		0		
SETTING_CHLORINITY_B		94		
SETTING_CHLORINITY_A		79		
INDUSTRIAL_WATER_TANK_LEVEL		31500		
FILTER15		0		

Change It is used to change the tag value.

Tag Value

Digital Tag

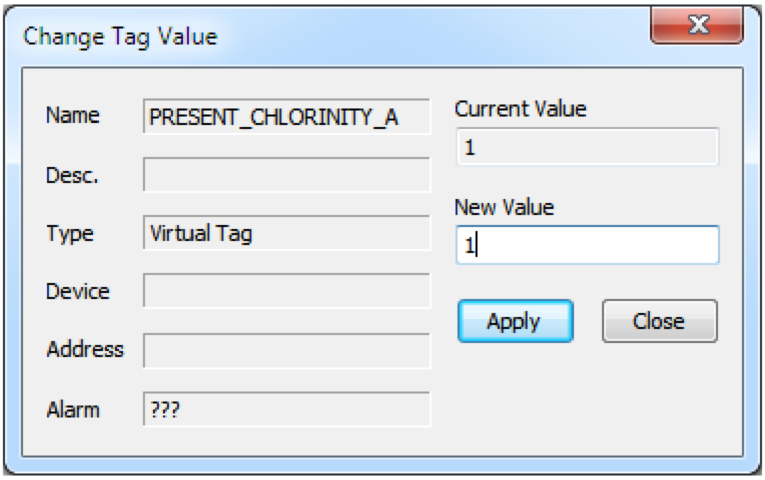


Change Tag Value
Current Value
OFF (0)
ON (1)
Current Status
Apply
Close

Name	FILTER12
Desc.	
Type	Virtual Tag
Device	
Address	
Alarm	

Current Value	This is used to show current status as an icon.
Apply	It is used to change the current value.

Analog Tag

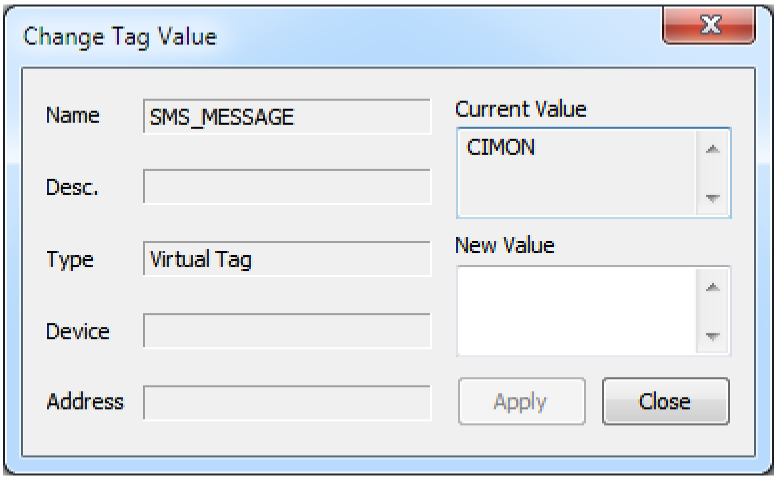


Change Tag Value
Apply
Close

Name	PRESENT_CHLORINITY_A
Desc.	
Type	Virtual Tag
Device	
Address	
Alarm	???
Current Value	1
New Value	1

Current Value	This is used to show the current value of a tag.
New Value	This is used to set up the value changed.
Apply	This is used to assign a tag value as a changed value.

String Tag



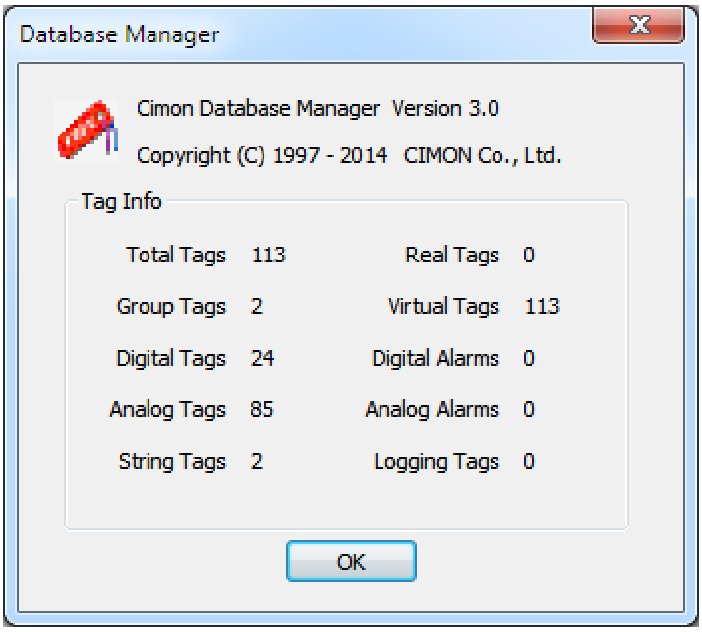
Change Tag Value

Name SMS_MESSAGE
Desc.
Type Virtual Tag
Device
Address
Current Value CIMON
New Value

Current Value	This is used to show the current value of a tag.
New Value	This is used to set up the value changed.
Apply	This is used to assign a tag value as a changed value.

Database Manager

This is used to show the information about a currently registered tag. The information about a database manager is added to the Help menu in case the database window is active. If you select this, the following window will appear.



Database Manager

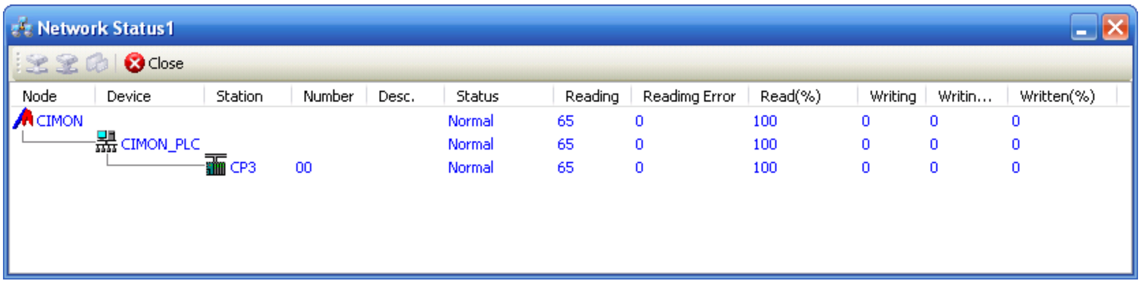
Cimon Database Manager Version 3.0
Copyright (C) 1997 - 2014 CIMON Co., Ltd.

Tag Info

Total Tags	113	Real Tags	0
Group Tags	2	Virtual Tags	113
Digital Tags	24	Digital Alarms	0
Analog Tags	85	Analog Alarms	0
String Tags	2	Logging Tags	0

Network Window

This is used to show the communication status of I/O devices in detail. It shows the number of ‘Status’, ‘Read’, ‘Read Error’, ‘Write’ and ‘Write Error’ by the stations of each device. And this is used to enable/disable communication by stations and to reset a counter.

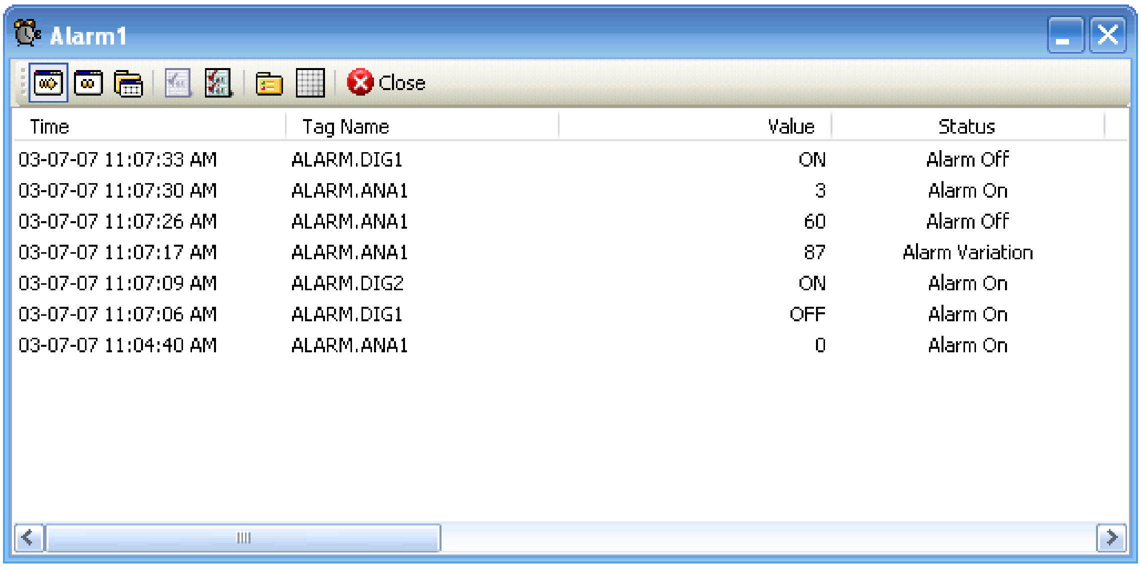


Node	Device	Station	Number	Desc.	Status	Reading	Readimg Error	Read(%)	Writing	Writin...	Written(%)
CIMON					Normal	65	0	100	0	0	0
	CIMON_PLC				Normal	65	0	100	0	0	0
		CP3	00		Normal	65	0	100	0	0	0

Comm Enable	This is used to enable the communication of a selected device or station. It is available to use this item in case that the communication of a selected device or station is disabled.
Comm Disable	This is used to disable the communication of a selected device or station. It is available to use this item in case that the communication of a selected device or station is enabled.
Counter Reset	This is used to reset the counter value of ‘Read’, ‘Read Error’, ‘Write’ and ‘Write Error’ as 0.

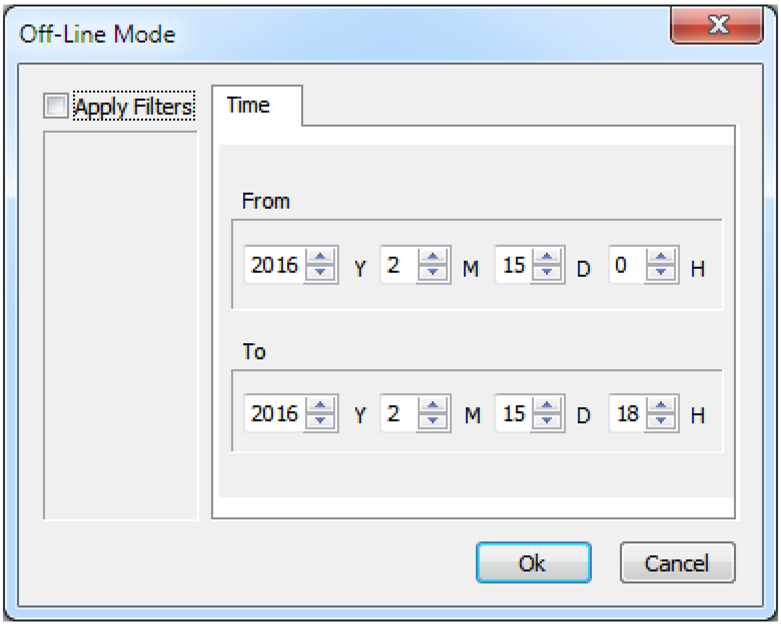
Alarm Window

This is used to show a current alarm and historical alarms. And the alarm selected on this window or all alarms can be acknowledged. Display type can be changed and contents be filtered.



Time	Tag Name	Value	Status
03-07-07 11:07:33 AM	ALARM.DIG1	ON	Alarm Off
03-07-07 11:07:30 AM	ALARM.ANA1	3	Alarm On
03-07-07 11:07:26 AM	ALARM.ANA1	60	Alarm Off
03-07-07 11:07:17 AM	ALARM.ANA1	87	Alarm Variation
03-07-07 11:07:09 AM	ALARM.DIG2	ON	Alarm On
03-07-07 11:07:06 AM	ALARM.DIG1	OFF	Alarm On
03-07-07 11:04:40 AM	ALARM.ANA1	0	Alarm On

On Line Mode	This is used to show a current alarm. If a new alarm occurs, it will be added to an alarm list
Pause	This is used to set up a window Off-Line. That is, a new alarm is not added to a window though it occurs.
Off-Line Mode	This is used to show historical alarms. If you select this menu, the following **'Off-Line Mode'** dialog box will appear.



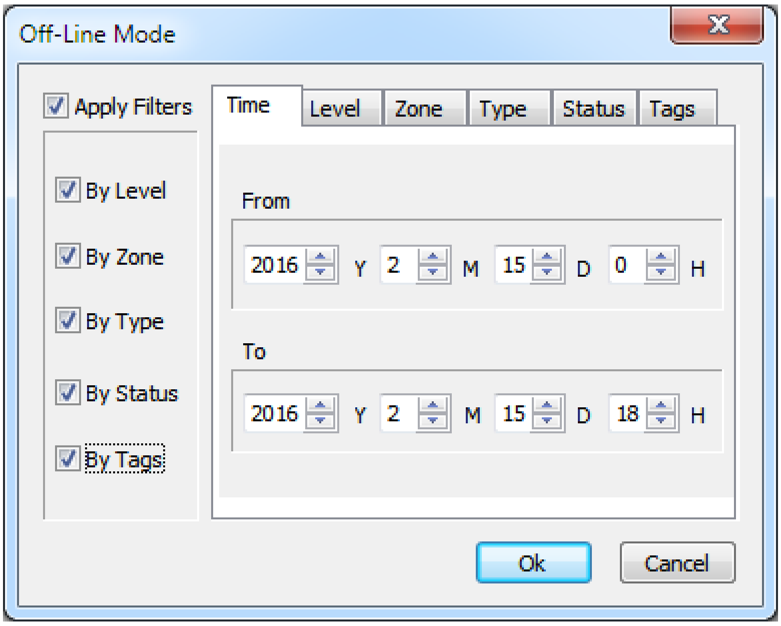
From

2016 Y 2 M 15 D 0 H

To

2016 Y 2 M 15 D 18 H

Alarm Time	This is used to set up the range to display historical alarms as From and To.
Apply Filters	If you select this, the filter items selected will be shown. Select a desired filter among them to show alarms.



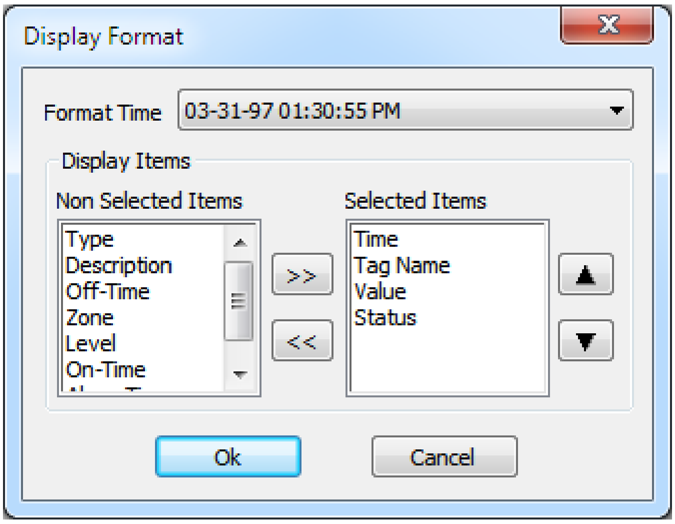
☑ Apply Filters

☑ By Level
☑ By Zone
☑ By Type
☑ By Status
☑ By Tags

From
2016 Y 2 M 15 D 0 H

To
2016 Y 2 M 15 D 18 H

Alarm Ack	This is used to acknowledge a selected alarm in an alarm list.
Alarm Ack All	This is used to acknowledge all current alarms.
Display Format	This is used to assign the items and the format outputted in an alarm list. If you select this menu, the **'Display Format'** dialog box will appear as follows.



Format Time 03-31-97 01:30:55 PM

Display Items

Non Selected Items
Type
Description
Off-Time
Zone
Level
On-Time

Selected Items
Time
Tag Name
Value
Status

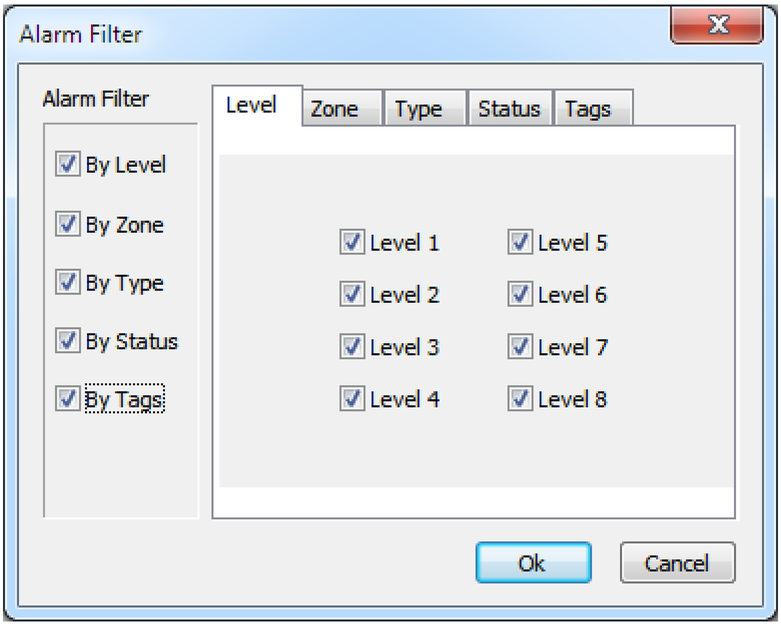
Format Time	This is used to assign the time format shown in an alarm list. Select one among total 45 time formats. The provided formats are as follows.

13:30	97-3-31 1:30:55 PM	3/31 13:30
1:30 PM	1997/3/31 13:30	3/31 1:30 PM
13:30:55	1997/3/31 1:30 PM	3/31 13:30:55
1:30:55 PM	1997/3/31 13:30:55	3/31 1:30:55 PM
13 H 30 M	19973/31 1:30:55 PM	3-31 13:30
13 H 30 M 55 S	1997-3-31 13:30	3-31 1:30 PM
3 M 31 D	1997-3-31 1:30 PM	3-31 13:30:55
3/31	1997-3-31 13:30:55	3-31 1:30:55 PM
3-31	1997-3-31 1:30:55 PM	97/3/31 13:30
97 Y 3 M 31 D	3 M 31 D 13 H 30 M	97/3/31 1:30 PM
97/3/31	3 M 31 D 13 H 30 M 55 S	97/3/31 13:30:55
97-3-31	97 Y 3 M 31 D 13 H 30 M	97/3/31 1:30:55 PM
1997 Y 3 M 31 D	97 Y 3 M 31 D 13 H 30 M 55 S	97-3-31 13:30
1997/3/31	1997 Y 3 M 31 D 13 D 30 M	97-3-31 1:30 PM
1997-3-31	1997 Y 3 M 31 D 13 H 30 M 55 S	97-3-31 13:30:55

Selected Items	This is used to assign the diverse information outputted in an alarm list. The assigned items are as follows.
Time	This is used to show the latest time when alarm status has been changed
Tag Name	This is used to show the tag name for a corresponding alarm.
Value	This is use to show tag values when alarms occurred or are released. An analog tag is displayed as a value and a digital tag is displayed as a string to show status.
Status	This is used to output the status of alarms. (Example, Alarm ON, Alarm Off, Alarm Variation and etc.)
Type	This is used to output the type of alarms. (Example, Hi Alarm, LOLO Alarm, OFF Alarm, ON->OFF Alarm and etc.)
Description	This is used to output the string showing each alarm status. (Example, Sting showing HiHi Alarm, Sting showing Alarm OFF, String showing Alarm Ack and etc.)
Off Time	This is used to output the time when alarms were released.
Zone	This is used to output Alarm Zone (A ~ P).
Level	This is used to output Alarm Level (1 ~ 8).
On Time	This is used to output the time when alarms occur.

Alarm Time	This is used to output the hours when alarms have been kept. (Example, 00:03:25) Assign the items shown and select them with <<, >> button. (Using Shift, Ctrl key, you can select several items.) To assign the order of selected items, assign one of selected items and press ▲, ▼ button. And the order of the assigned items will be changed.
Ok	If you press this button, the message of alarm list will be changed and appear as assigned selected-items and order.
Cancel	This is used to close a **'Display Format'** dialog box.

Alarm Filter This is used to collect desired alarms among the alarms in an alarm list by using 6 alarm filters such as level, zone, type, status, time and tag. If you select this, the 'Alarm Filter' dialog box will appear.



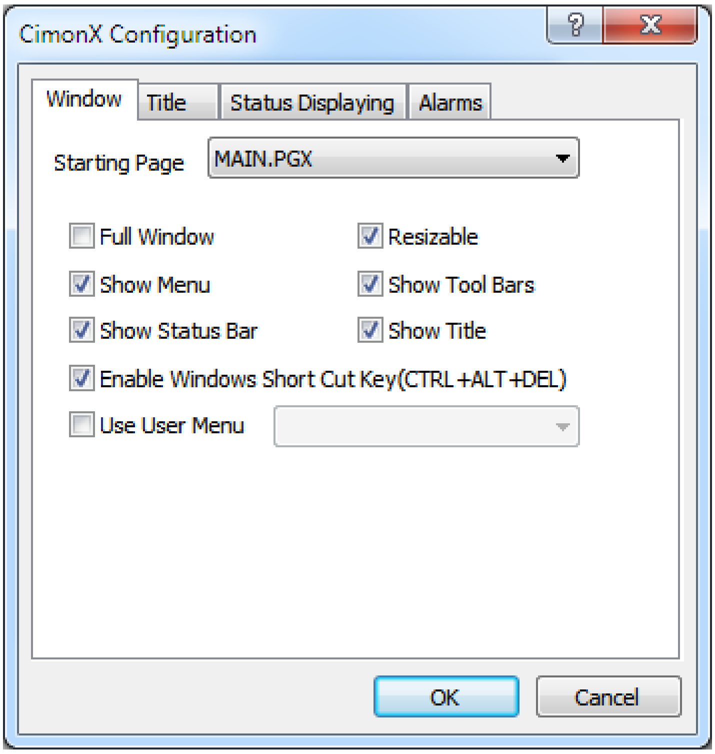
☑ By Level
☑ By Zone
☑ By Type
☑ By Status
☑ By Tags

☑ Level 1
☑ Level 2
☑ Level 3
☑ Level 4
☑ Level 5
☑ Level 6
☑ Level 7
☑ Level 8

The contents for each item are as same as those for the filter of historical mode.

3-4. Setting up CimonX

This is used to assign the appearance of the window that an operator see when the CIMON is run after a completed system is installed at a site. If you select the **'CimonX Environment'** in the Tools menu of the CimonD, a **'CimonX Configuration'** dialog box will appear as follows. The dialog box is composed of four setup items.



Starting Page: MAIN.PGX

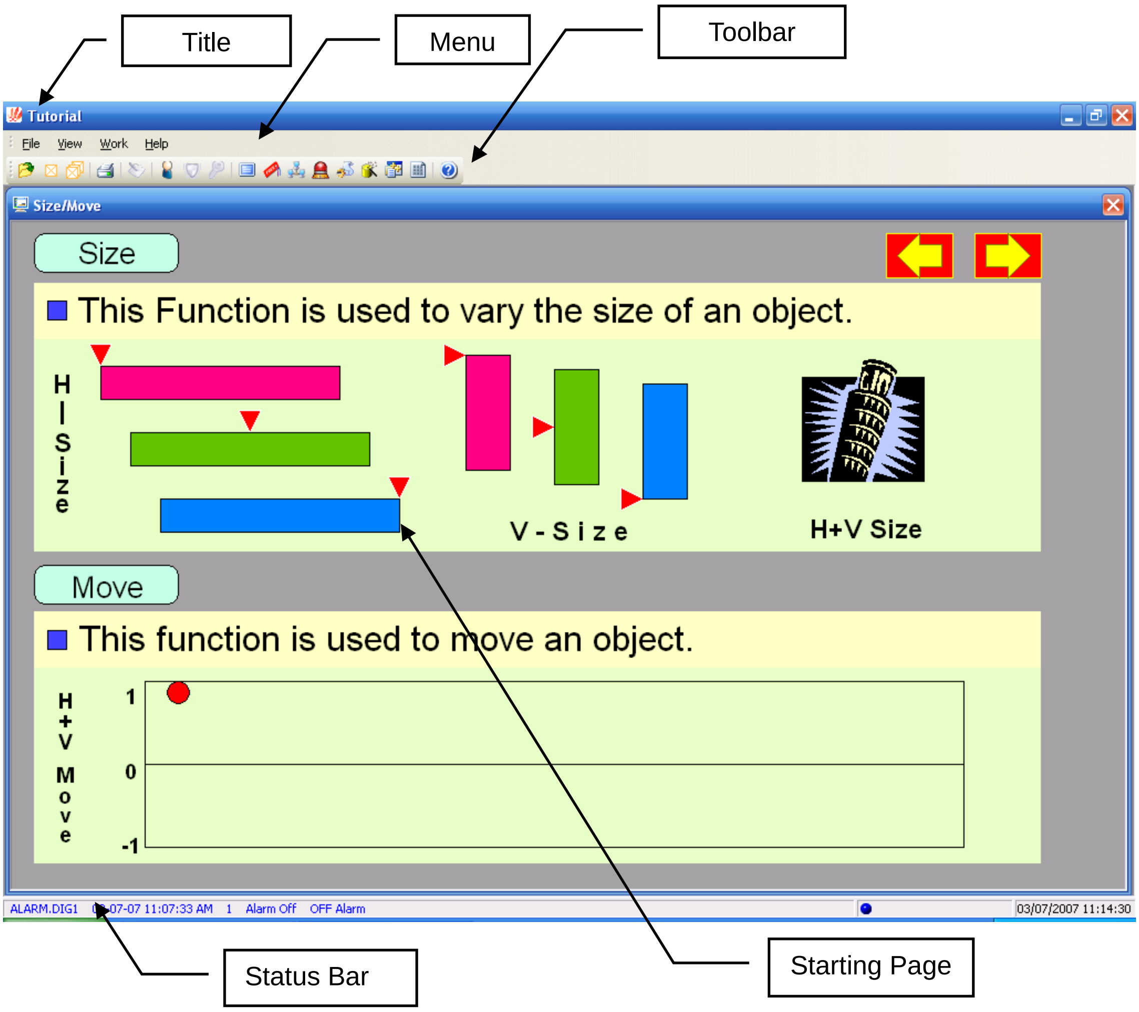
☐ Full Window
☑ Resizable
☑ Show Menu
☑ Show Tool Bars
☑ Show Status Bar
☑ Show Title
☑ Enable Windows Short Cut Key(CTRL+ALT+DEL)
☐ Use User Menu

Window

This page is used to assign the general appearance of the CIMON.

Starting Page	This is used to set up the window showed first when the CimonX is run. If you press the combo box, all the pages created in a current project and the lists of layouts are enumerated. Select the window used as a starting page among them.
Full Window	This is used to select whether the CiminX is run on full window.
Resizable	This is used to select whether an operator is able to vary the size of a window. If you select, the size of a window will be varied. Otherwise, that is not.

Show Menu	This is used to select whether a Main Menu is shown.
Show Tool Bars	This is used to select whether a toolbar is shown.
Show Status Bar	This is used to select whether a status bar is shown. Only if this item is selected, 'Status' page will be included to the dialog box.
Show Title	This is used to select whether a title is shown at the top of a window. Only if this item is selected, the page to set up a 'Title' will be included to the dialog box. Here, assign the detailed appearance of the window title.

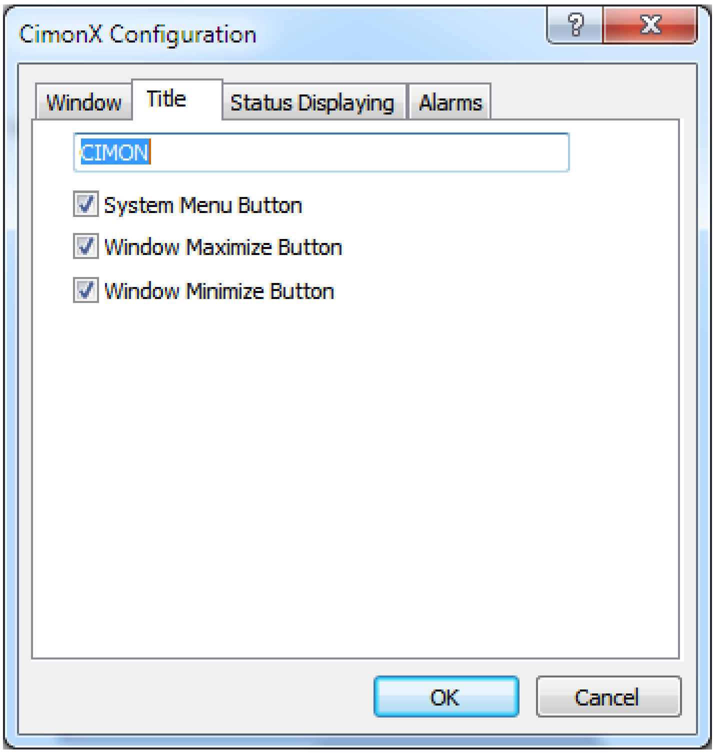

Title
Menu
Toolbar
Tutorial
File
View
Work
Help
Size/Move
Size
This Function is used to vary the size of an object.
H
I
S
i
z
e
V - S i z e
H+V Size
Move
This function is used to move an object.
H
+
V
M
o
v
e
1
0
-1
ALARM.DIG1
-07-07 11:07:33 AM
1
Alarm Off
OFF Alarm
03/07/2007 11:14:30
Status Bar
Starting Page

Enable Windows Shortcut Key	This is used to select whether Windows Shortcut Key are used.

Use User Menu	This is used to select whether User menu is used. Refer to Chapter 23 for the details

Title

This page is used to set up the detailed appearance of a title of the CIMON.



CIMON

☑ System Menu Button

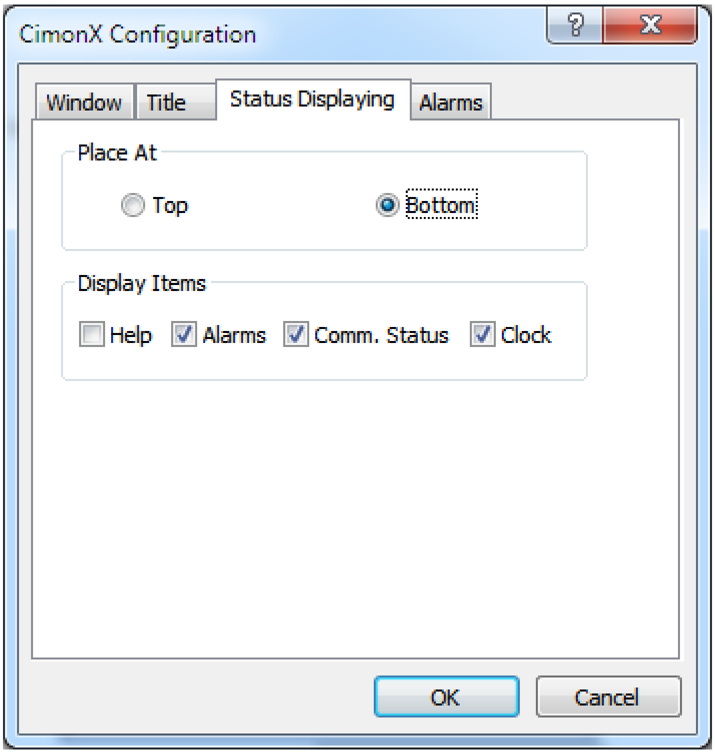
☑ Window Maximize Button

☑ Window Minimize Button

Title	This is used to enter the tile of the window shown.
System Menu Button	This is used to select whether a system menu is shown as an icon-type menu at the left top. There are 6 menus such as window back, move, resize, icon, full window, close in system menu.
Window Maximize Button	This is used to select whether a window maximization button is shown at the right top. If you select this, a window maximization button will be shown. Otherwise, it is not displayed.
Window Minimize Button	This is used to select whether a window minimization button is shown at the right top. If you select this, the window minimization button will be shown at the right top. Otherwise, It is not shown.

Status

This page is used to set up the detailed appearance of a status bar. In case 'Show Status Bar' is selected in the above 'Window' page, the page can be edited. Brief description, contents of the recent alarm, communication status and clock can be shown in the status bar.


CimonX Configuration
Window
Title
Status Displaying
Alarms
OK
Cancel

Place At

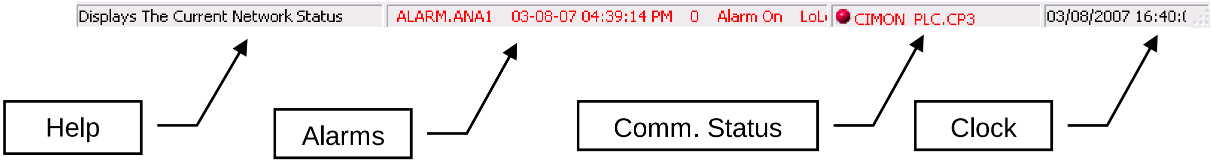
○ Top ● Bottom

Display Items

☐ Help ☑ Alarms ☑ Comm. Status ☑ Clock

Place At (At the top/At the bottom)

This is used to select whether a status bar is shown at the top or at the bottom. Generally, a status bar is located at the bottom.


Displays The Current Network Status
ALARM.ANA1 03-08-07 04:39:14 PM 0 Alarm On LoL
CIMON PLC.CP3
03/08/2007 16:40:
Help
Alarms
Comm. Status
Clock

Help	This is used to show the brief description about a corresponding menu when the mouse is put on a menu or a toolbar.
Alarms	This is used to show the alarm occurring in a whole system to this area at once. The

detailed display can be assigned in the “alarm” page.

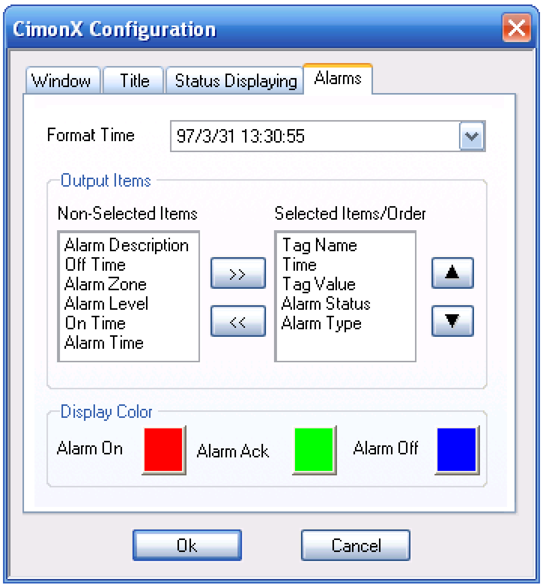
Comm. Status This is used to show the communication status of a whole system in colors. It is displayed in total three colors and the meanings are as follows.

- Blue: This is used to display that all the functions of communication are operating normally.
- Yellow: This is used to display that the function of communication in a current system is not operating. It is the case of demo mode or that all communication devices are disabled.
- Red: This is used to display that an accident occurs in a part or all of communication functions in a system.

Clock This is used to show the current time of a system.

Alarms

This page is used to set up the detailed contents shown on a status bar. This page can be edited in case the “Displayed Items (Alarms)’” is selected in the above “Status” page.



Format Time: 97/3/31 13:30:55

Output Items

Non-Selected Items:
Alarm Description
Off Time
Alarm Zone
Alarm Level
On Time
Alarm Time

Selected Items/Order:
Tag Name
Time
Tag Value
Alarm Status
Alarm Type

Display Color

Alarm On 🟥 Alarm Ack 🟩 Alarm Off 🟦

Format Time Select one among 45 alarm time display formats. The provided formats are as follows.

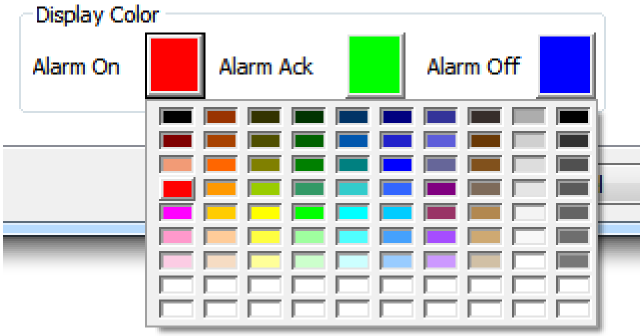
13:30	97-3-31 1:30:55 PM	3/31 13:30
1:30 PM	1997/3/31 13:30	3/31 1:30 PM
13:30:55	1997/3/31 1:30 PM	3/31 13:30:55
1:30:55 PM	1997/3/31 13:30:55	3/31 1:30:55 PM
13 H 30 M	19973/31 1:30:55 PM	3-31 13:30
13 H 30 M 55 S	1997-3-31 13:30	3-31 1:30 PM
3 M 31 D	1997-3-31 1:30 PM	3-31 13:30:55
3/31	1997-3-31 13:30:55	3-31 1:30:55 PM
3-31	1997-3-31 1:30:55 PM	97/3/31 13:30
97 Y 3 M 31 D	3 M 31 D 13 H 30 M	97/3/31 1:30 PM
97/3/31	3 M 31 D 13 H 30 M 55 S	97/3/31 13:30:55
97-3-31	97 Y 3 M 31 D 13 H 30 M	97/3/31 1:30:55 PM
1997 Y 3 M 31 D	97 Y 3 M 31 D 13 H 30 M 55 S	97-3-31 13:30
1997/3/31	1997 Y 3 M 31 D 13 H 30 M	97-3-31 1:30 PM
1997-3-31	1997 Y 3 M 31 D 13 H 30 M 55 S	97-3-31 13:30:55

Output Items This is used to assign detailed items and order to display the information about occuring alarms. The Non-Selected Items are arranged on the left list and the Selected Items/Order on the right list according to output order. Use the Move button (<< or >> Button) and the Position button to make the format of alarm message.

Alarm On This is used to assign a color to display the message for the case that an alarm occurs or the type of an alarm is changed (From Hi alarm to HiHi alarm). The color is assigned by pressing the color button on the right and selecting a desired color in the below color palette.

Alarm Ack This is used to assign a color to display an acknowledged alarm. If an alarm is released among acknowledged alarms, this will be not displayed. The color is assigned by pressing the color button on the right and by selecting a desired color in the below color palette.

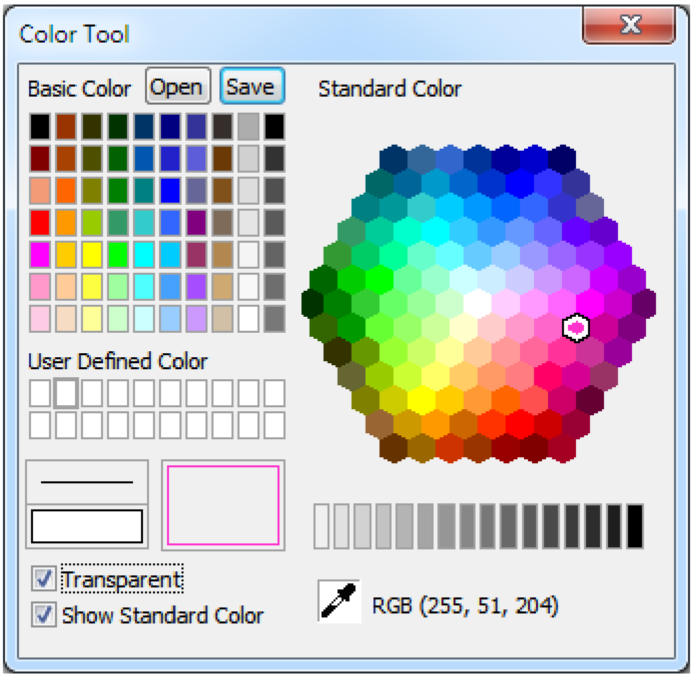
Alarm Off This is used to assign a color to display the message for the case that an alarm is not acknowledged and naturally becomes released after it occurred. The color is assigned by pressing the color button on the right and selecting a desired color in the below color palette.


Display Color
Alarm On
Alarm Ack
Alarm Off

Chapter 4. Drawing and Object configuration

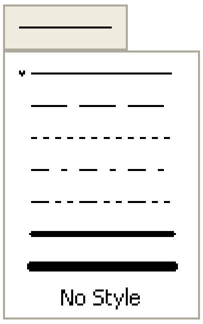
4.1 Color Palette

To define the color of a figure, a line, a text and a pattern, define the **'Line Color'** and the **'Fill Color'** in the Color Toolbar. A palette provides 91 colors as standard and a custom color can be set up and used. If you select a color in the palette while selecting a figure or a text, a selected object will be changed.

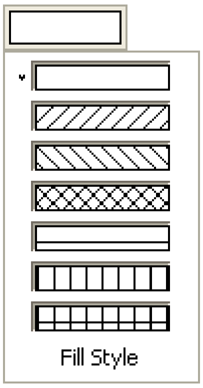


☑ Transparent
☑ Show Standard Color
RGB (255, 51, 204)

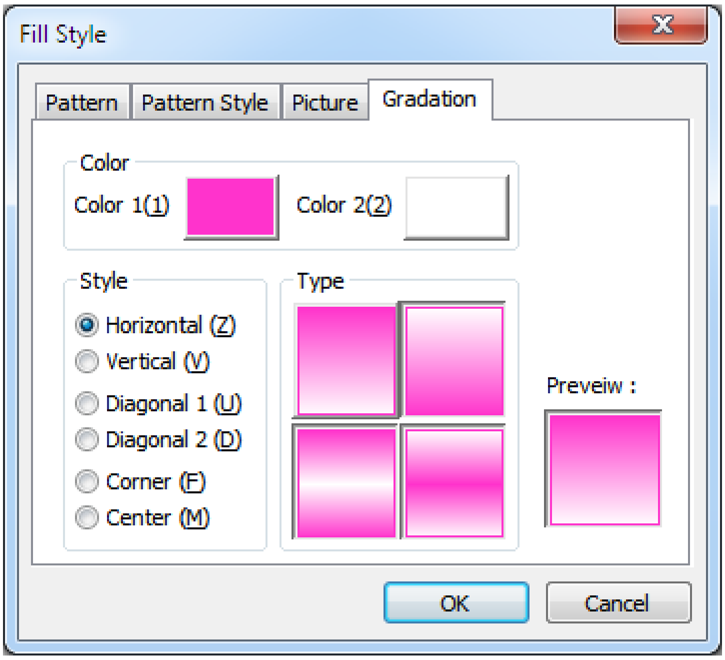
Color	Bring the mouse on a color in the palette. And click the Left button to assign **'Line Color'** on a desired color and the Right button to assign **'Fill Color'** on a desired color.
Line	There are the thicknesses and the types of a line.



Pattern There are several Fill patterns. If you click the box, pattern types will appear as follows. Select a desired pattern among them.



Gradation If you select ‘Fill Style’ in the above picture, Threr are Pattern, Pattern Style, Picture and Gradation Fill Styles. If you click Gradation, Fill Styles will appear as follows. And then Select a desired gradation among them.



Color
Color 1(1)
Color 2(2)

Style
● Horizontal (Z)
○ Vertical (V)
○ Diagonal 1 (U)
○ Diagonal 2 (D)
○ Corner (F)
○ Center (M)

▶ How to use

1. Choose Color 1.
2. Choose Color 2.
3. Choose Gradation Style and the press ‘OK’.

*Horizontal-Gradation will be drawn from top to bottom or from bottom to top..

*Vertical-Gradation will be drawn from left to right or from right to left.

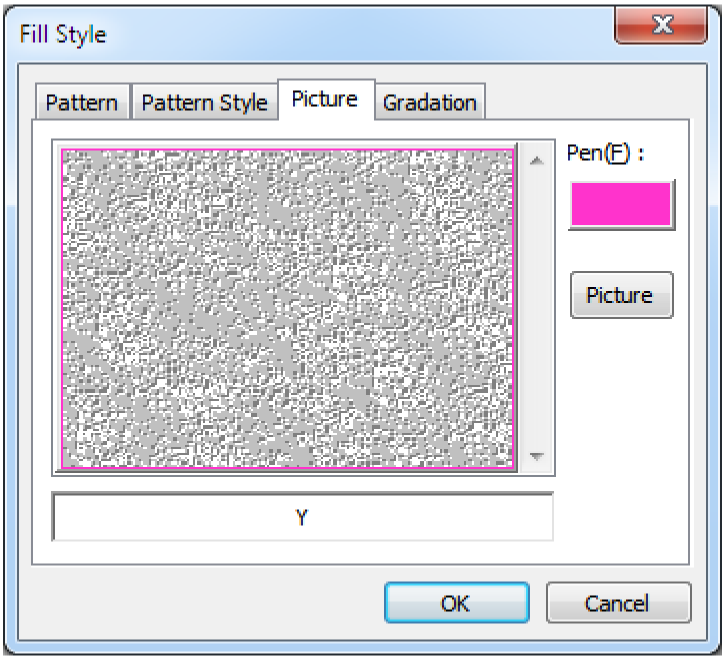
*Diagonal 1-Gradation will be drawn upwand diagonally.

*Diagonal 2-Gradation will be drawn downwand diagonally.

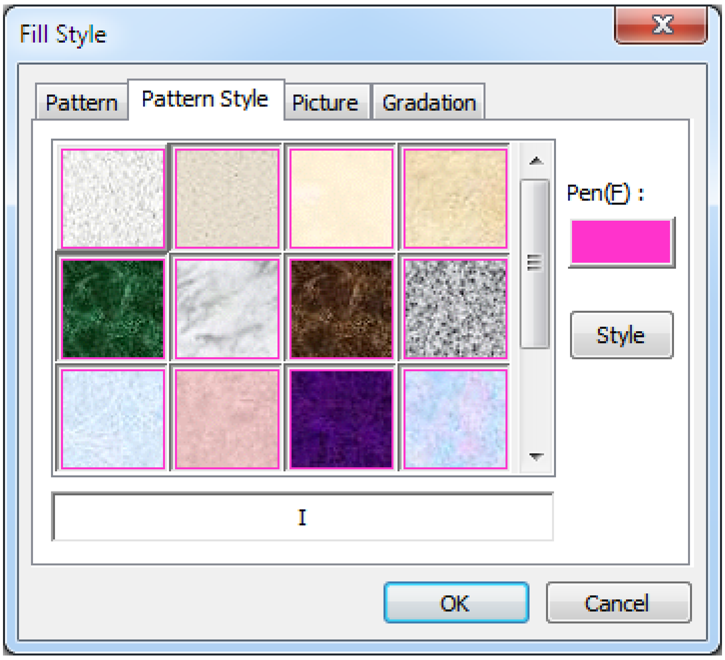
*Corner-Gradation will be drawn from corner.

*Center-Gradation will be drawn from center.

Pictuer If you click 'Picture' in Fill Style, Picture will appear as follows. And then Select a desired picture pattern style among them.

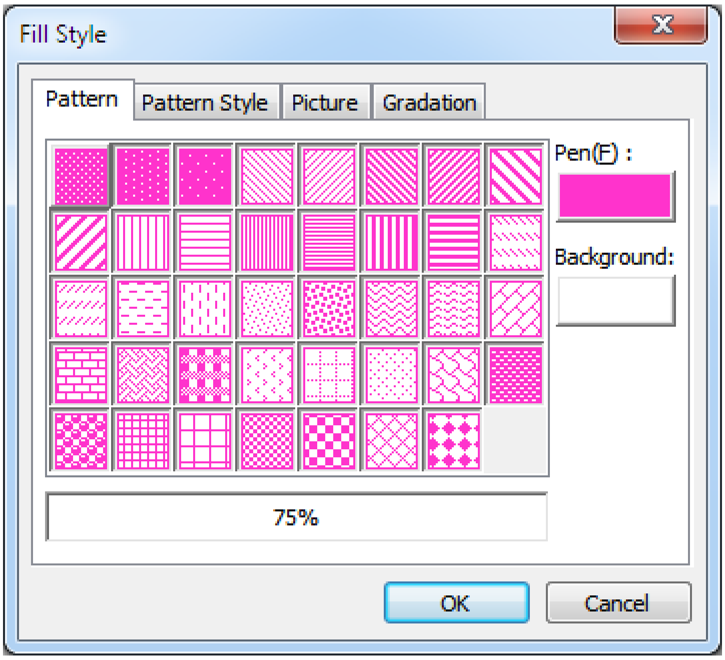

Fill Style
Pattern
Pattern Style
Picture
Gradation
Pen(F) :
Picture
Y
OK
Cancel

Pattern Style If you click 'Pattern Style' in Fill Style, Pattern Style will appear as follows. And then Select a desired pattern style among them.


Fill Style
Pattern
Pattern Style
Picture
Gradation
Pen(F) :
Style
I
OK
Cancel

If you want to use another pattern style, Click the 'Style' button and then select it.

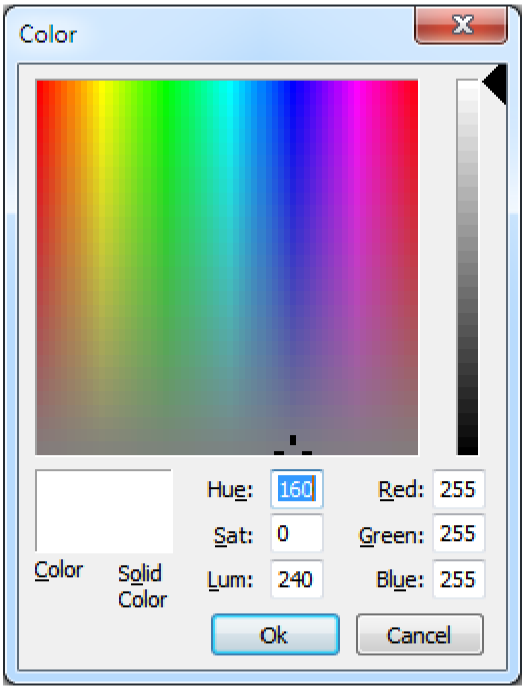
Pattern If you click ‘Pattern’ in Fill Style, Pattern will appear as follows. And then Select a desired pattern among them.



You can choose pen color and background color by using the ‘Pen’ button and the ‘Background’ button.

Transparent If you check this box, the Fill of an object will be transparent.

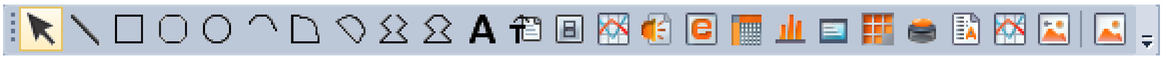
User Definition In addition to the 70 colors provided as standard, a custom color can be set up. If you double-click on the palette, a Colors dialog box will appear. If you click a desired color, the clicked color will appear in the **‘Color’**. If a desired color is made after you assign the value for hue, chroma, luminosity, red, green and blue to combine the color, press the **‘Ok’** button. And the color double-clicked in the first palette is changed to a User Definition color.



Color
Color
Solid Color
Ok
Cancel

Hue: 160
Sat: 0
Lum: 240
Red: 255
Green: 255
Blue: 255

4.2 Drawing an Object



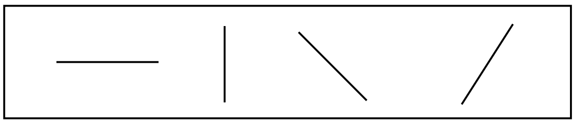
Line This tool is used to draw a line.

▶ How to use

1. Move the mouse into the starting point of a line.
2. Press the left button of the mouse and drag it to a desired direction.
3. Release the mouse after the desired line is completed.

☞ While pressing the Ctrl key, you are able to draw a horizontal or a vertical line.

▷ Completed



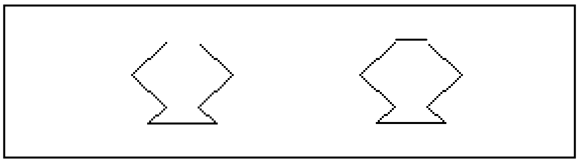
Polyline, Polygon This tool is used to draw a curve, the line linked with several lines and a polygon.

▶ How to use

1. Move the mouse into the starting point of a line.
2. Click the left button of the mouse and release it.
3. Move the mouse and draw an imaginary line.
4. If you click the left button of the mouse once more when a desired line is completed, an imaginary line will be completed.
5. Repeat the above 3, 4 as many as you need.
6. If you double-click the left button of the mouse on the vertex of the last imaginary line, and a polyline or a polygon will be completed.

☞ In case of a polygon, the first vertex and the last vertex are linked automatically.

▷ Completed



Rectangle This tool is used to draw a rectangle and a round box.

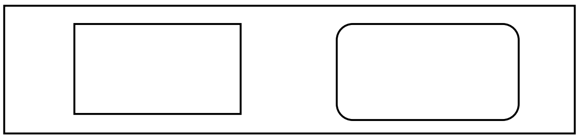
Round Rectangle

▶ How to use

1. Move the mouse into the vertexes of a rectangle.
2. While pressing the left button of the mouse and dragging it, draw an imaginary rectangle.
3. Release the mouse after a desired rectangle is completed.

☞ While pressing the Ctrl key, you are able to draw a square and a squared round box

▷ Completed



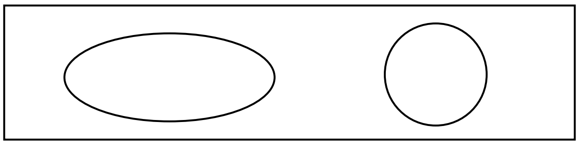
Ellipse This tool is used to draw an ellipse or a circle.

▶ How to use

1. Move the mouse into the vertexes of a rectangle where a circle or an ellipse can be put.
2. While pressing the left button of the mouse and dragging it, draw an imaginary circle or an imaginary ellipse.
3. Release the mouse after a desired circle or a desired ellipse is completed.

☞ While pressing the Ctrl key, you are able to draw a regular circle.

▷ Completed



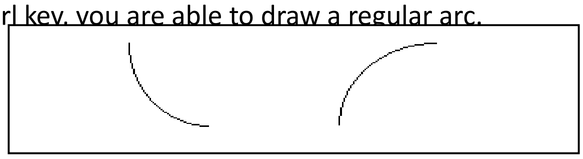
Arc This tool is used to draw an arc.

▶ How to use

1. Move the mouse into the position where an arc can be put.
2. While pressing the left button of the mouse and dragging it, draw an imaginary arc.
3. Release the mouse after a desired arc is completed.

☞ While pressing the Ctrl key, you are able to draw a regular arc.

▷ Completed



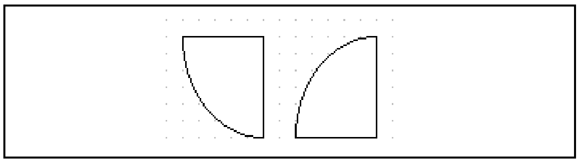
Sector This tool is used to draw a sector.

▶ How to use

1. Move the mouse into a desired position.
2. While pressing the left button of the mouse and dragging it, draw an imaginary sector.
3. Release the mouse after a desired sector is completed.

☞ While pressing the Ctrl key, you are able to draw a regular sector.

▷ Completed



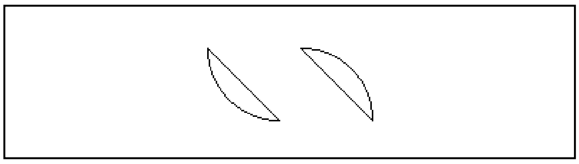
Chord This tool is used to draw a chord.

▶ How to use

1. Move the mouse into a desired position.
2. While pressing the left button of the mouse and dragging it, draw an imaginary chord.
3. Release the mouse after a desired chord is completed.

☞ While pressing the Ctrl key, you are able to draw a regular chord.

▷ Completed



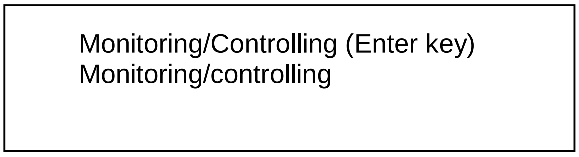
Text This tool is used to draw text on a window.

▶ How to use

1. Click the left button of the mouse on a desired position.
2. Enter a desired text by using the keyboard. If you press the Enter key, you are able to enter a text in the next line continuously.
3. Click the outside of the text Input Window after you finish entering the text.

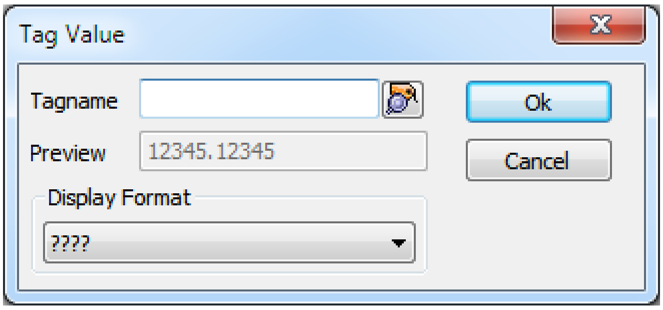
☞ You are able to change font, size and etc in the Font Tool.

▷ Completed



Monitoring/Controlling (Enter key)
Monitoring/controlling

Tag Value This is used to display the numeric value and text of data like the tag value which a user want on a monitoring page window.



Preview 12345.12345

Display Format ????

Tag Name	This is used to assign the tag name monitored. If you press the **'…'** button aside, a **'Select Tag'** dialog box will appear.
Preview	This is used to preview the tag value style displayed after a tag name and a format are set up.
Display Format	This is used to assign the tag value format displayed on a page window. The Formats provided as a default are as follows. ???? : This is used to display in the format corresponding to a tag value. ####: This is used to display in integer type. ####. 0: This is used to display by the first decimal place. ####. 00: This is used to display by the second decimal place. ####. 000: This is used to display by the third decimal place. #, ###: This is used to display integer type and to divide that by three digits. #, ###. 0: This is used to divide it by three digits and to display by the first decimal place. #, ###. 00: This is used to divide it by three digits and to display by the second decimal place. #, ###. 000: This is used to divide it by three digits and to display by the third decimal place. HHHH: This is used to display in hexadecimal number (HEX Code).

Option to Format

If a user wants another format in addition to the above seven format types (Binary number, hexadecimal number, octal number and so on), he can modify a system file and add the result to option.

Character Format

(1) Number of Whole Figure [/W]

Ex.) /W20: The number of whole figure is 20 characters.

If it is not entered, only the characters, which can be displayed in status character zone, will be displayed.

(2) Decimal Point Place [/D]

Ex.) /D2: By second decimal places

(3) Antilogarithm [/F]

/F2: Binary number: The value displayed as binary number. For hexadecimal number, enter /F16. If no value is entered, it is displayed as decimal number.

(4) Option [/O]

/O-,e0
"-" : Sign
"," : Comma
"e" : Engineering
"0" : 0
"U" : Capital Character
"L" : Small character

How to modify a system file

After opening File CimonD.ini in the folder (C:\Windows\CimonD.ini) in which windows is installed, enter [FROMAT STRING] field as follows.

```
[FORMAT STRING]
Serial Numeral (from 1) = Displayed character Flag
```

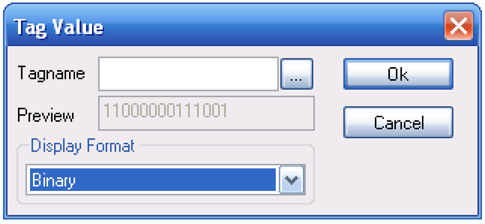
The displayed character and the flag should be separated by space. But each of them should be not separated.
Note : Do not separate by using tab.

Ex) Binary expression

1. Enter the below expression in the CimonD.ini and save CimonD.ini.

```
[FORMAT STRING]
1 = Binary number        /F2
```

2. Run CimonD. If you select a tag value in the Draw menu, the following picture will appear.



Tagname
Preview 11000000111001
Display Format
Binary

3. "Binary Number" is added and displayed in the Format. Here, if you enter a tag name and click the menu to run the CimonX, the corresponding tag value will be displayed in binary number.

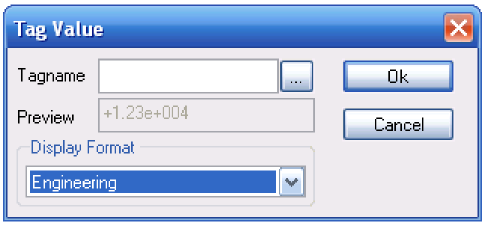
Ex) Engineering expression

1. Enter the below expression in the CimonD.ini and save CimonD.ini.

[FORMAT STRING]

1 = Engineering /Oe/D2

2. Run CimonD. If you select a tag value in the Draw menu, the following picture will appear.



Tagname
Preview +1.23e+004
Display Format: Engineering

3. “Engineering” is added and displayed in the Format. Here, if you enter a tag name and click the menu to run the CimonX, the corresponding tag value will be displayed in engineering number.

Library

Diverse graphic objects in a library are used to make a window. In the library, diverse picture objects are included by applications such as 3-dimensional values, tanks and pipes. They are used to make a window easily and fast with prepared symbols and pictures.

▶ How to use

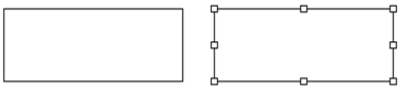
1. Select the Library in the Draw menu or the icon in the draw toolbar.
2. Select a library group on the left side of this dialogue box.
3. Press the left button of the mouse on a desired object among the displayed objects on the right and drag it into a desired position in a page.
4. Adjust the size and the position of the added graphic object on the window.

4.3 How to Select an Object

If you select an object in object-selecting mode (The arrow object in the Drawing Tool is selected.), the rectangles around the object will appear to inform a user of the selected item.

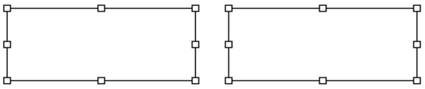
How to select an object

1. Move the mouse on the object selected and press the left button of the mouse. The previously selected object is canceled.



The left rectangle is shown when it is not selected with the mouse and the right rectangle is shown when it is selected with the mouse.

2. To select several objects at the same time, press the Shift key and select other object. And the several objects are selected at the same time.



3. To select and cancel an object while selecting several objects, move the mouse to the object canceled and press the left button of the mouse while pressing the Shift key.

4. If you drag while pressing the left button of the mouse to select the several objects in a zone at the same time, the rectangle with dotted lines will be drawn and the objects in the rectangle will be selected. But, the object overlapped with dotted lines is not selected. If you select a new object, the previously selected object will be canceled.

How to move an object

Drag an object to a desired point while selecting it and release the left button of the mouse.

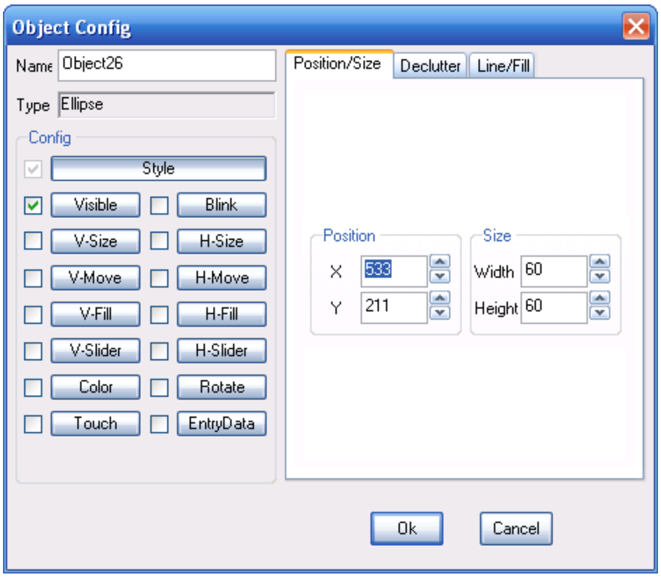
How to copy an object

1. Press the **'Copy'** icon while selecting an object and press the **'Paste'** icon.
2. If you move an object while pressing the Ctrl key, the copied object will be created on the position where it is dragged.

4.4 Object Configuration

To set up the position, the size and the color of an object and the control function, use an Object Configuration dialog box. How to show the Object Configuration dialog box is as follows.

1. Double-click an object.
2. After selecting an object with the right button of the mouse, select the ‘Object Config’ in the displayed floating menu.
3. After selecting an object with the left button of the mouse, select the ‘Object Config’ in the ‘Edit’ menu of the CimonD.
4. If you select other object in the page while the Object Config dialog box is appearing, the contents of the current work will be registered and the contents of the newly selected object will be loaded.

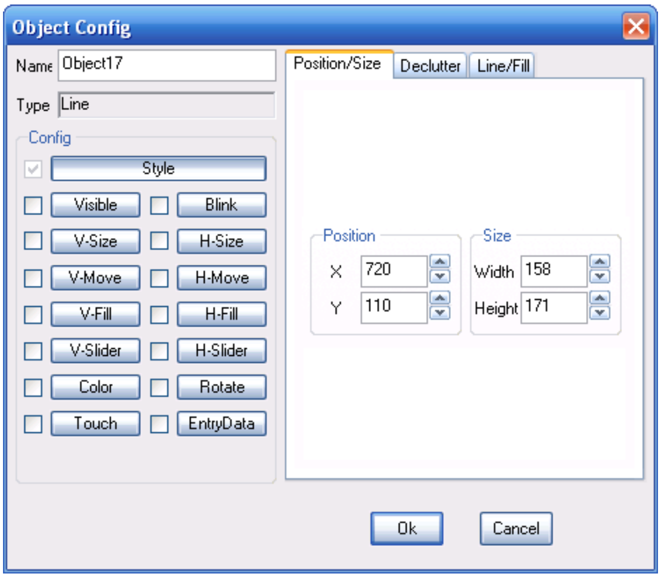

Name: Object26
Type: Ellipse
☑ Style
☑ Visible
X: 533
Y: 211
Width: 60
Height: 60
Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position/Size
Declutter
Line/Fill
Position
Size
Ok
Cancel

Name	This is used to the peculiar name of an object. The name is assigned automatically when an object is created. The name can be changed.
Type	This is used to display the type of a currently selected object (line, circle, group and etc).
Config	This is used to select the Object Configuration and the control function for an object. If you select an item here, the contents of the setup for the item will appear on the right.

4.5 Object Configuration by Object Types

Line

If you draw a line on a page window and double-click on the line object, the information on the line object will be shown in the items of the object configuration.

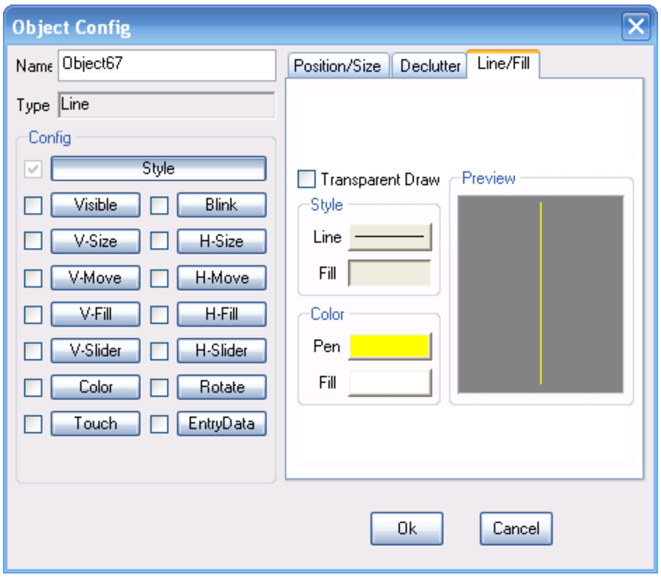

Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position
Size
Ok
Cancel

Name Object17
Type Line
X 720
Y 110
Width 158
Height 171

Position/Size

Position The coordinates value of the position is the one of the vertex at the left top when an object is selected.

Size This is the width and the height of the absolute value in pixel to the drawing direction of a line from the left top.


Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

Name Object67
Type Line
☐ Transparent Draw

Line/Fill

Transparent No meaning for a line object.

Style

Line Various line shape types are provided. If you press the **'Line'** button on the right, seven line types will appear.

Pattern This is not selected for a line object.

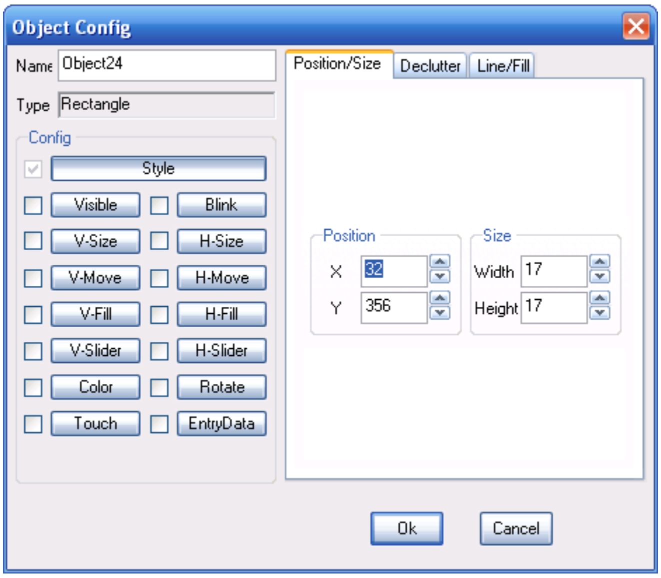
Color

Line This is used to assign the color of a line. If you press the **"Color'** button on the right, the color palette will appear.

Fill No meaning for a line object

Rectangle

If you draw a rectangle on a page window and double-click on the rectangle object, the information on the rectangle object will be shown in the items of the object configuration.



Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position
Size
Ok
Cancel

Name Object24

Type Rectangle

X 32

Y 356

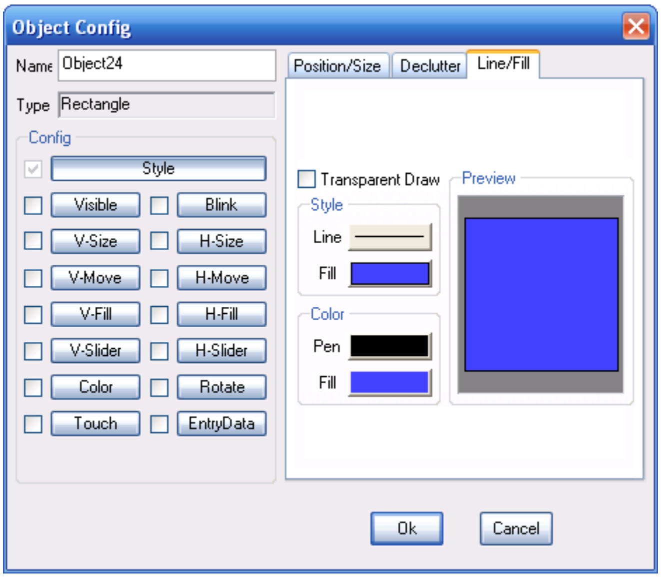
Width 17

Height 17

Position/Size

Position The coordinates value of a position is the one of the vertex at the left top when an object is selected.

Size This is the width and the height of a rectangle in pixel from the left top.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position/Size
Declutter
Line/Fill
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

Name Object24

Type Rectangle

☑ Style

☐ Transparent Draw

Line/Fill

Transparent This is used to show the inside of a rectangle object. The rectangle object is changed to the one with a line. (For example, to select a rectangle object without selecting the **'Transparent'**, press the left button of the mouse on the inside of the rectangle, and it will be selected. But, if you select the **'Transparent'**, the rectangle object will not selected even pressing the left button of the mouse on the inside of it. The picture is changed in the Preview according to selecting this item or not.)

Style

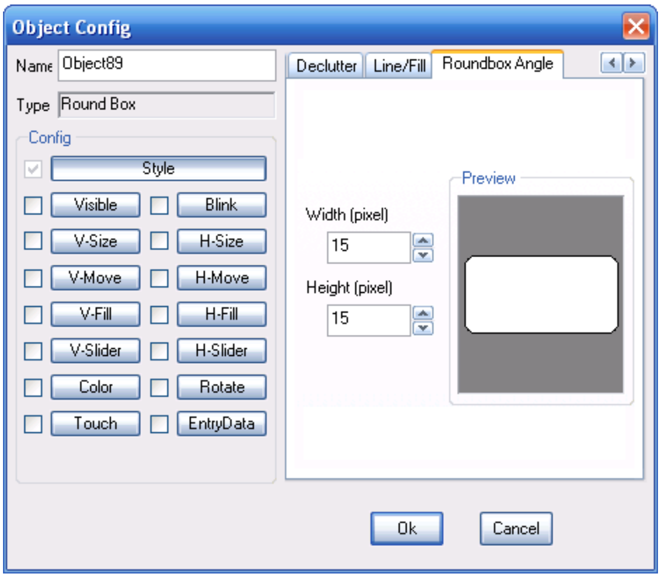
Line	This is used to select the borderline shape of a rectangle object. If you press the **'Line'** button on the right, seven line styles will appear.
Pattern	This is used to select the pattern to fill the inside of a rectangle object. If you press the right button, seven patterns will appear.

Color

Line	This is used to assign the borderline color of a rectangle object. If you press the **'Color'** button on the right, the color palette will appear.
Fill	This is used to assign the color to fill the inside of a rectangle object. If you press the right button, the color palette will appear.

Round Box

If you draw a round box on a page window and double-click on the round box object, the information on the round box object will be shown in the items of the object configuration.



Name: Object89
Type: Round Box
Width (pixel): 15
Height (pixel): 15

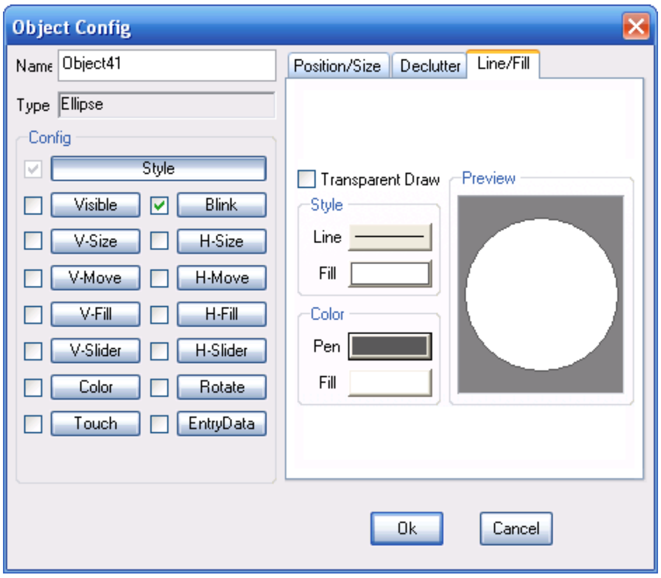
Object Config
Config
Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Declutter
Line/Fill
Roundbox Angle
Preview
Ok
Cancel

Corner Rounding

Width/ Height This is used to set up the ordinate value and the abscissa value from each angular point in pixel.

Ellipse

If you draw an ellipse on a page window and double-click on the ellipse object, the information about the ellipse object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for ellipse.

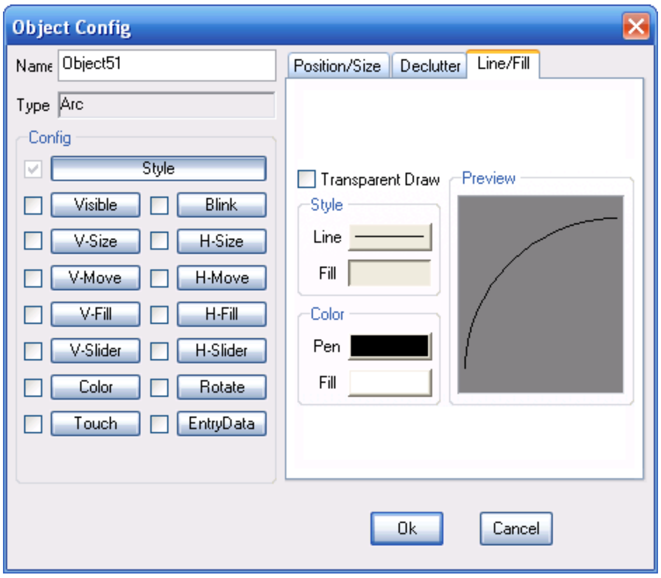


Name: Object41
Type: Ellipse
☑ Blink
☐ Transparent Draw

Object Config
Config
Style
☐ Visible Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Position/Size
Declutter
Line/Fill
Style
Line
Fill
Color
Pen
Fill
Preview
Ok
Cancel

Arc

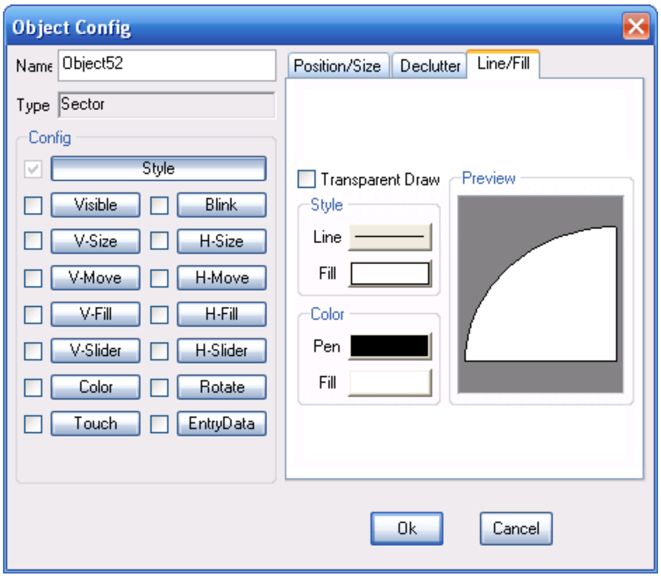
If you draw an arc on a page window and double-click on the arc object, the information about the arc object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for arc.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position/Size
Declutter
Line/Fill
Style
Line
Fill
Color
Pen
Fill
Preview
Ok
Cancel

Name Object51
Type Arc
☐ Transparent Draw

Sector

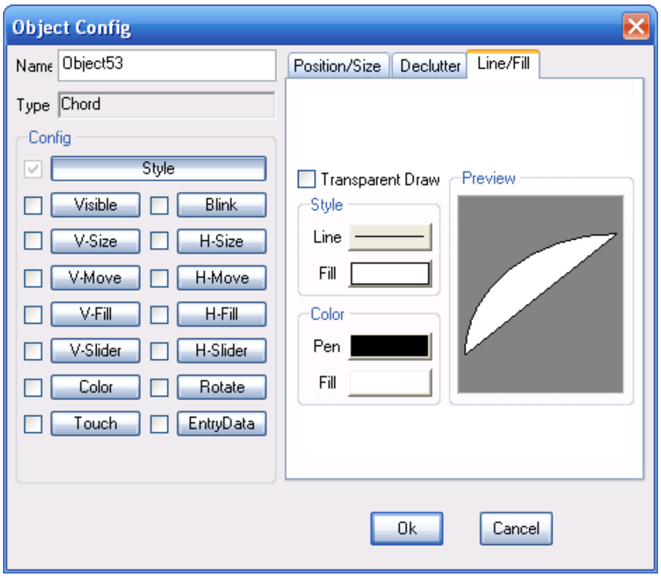
If you draw a sector on a page window and double-click on the sector object, the information about the sector object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for the sector.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position/Size
Declutter
Line/Fill
Style
Line
Fill
Color
Pen
Fill
Preview
Ok
Cancel

Name Object52
Type Sector
☐ Transparent Draw

Chord

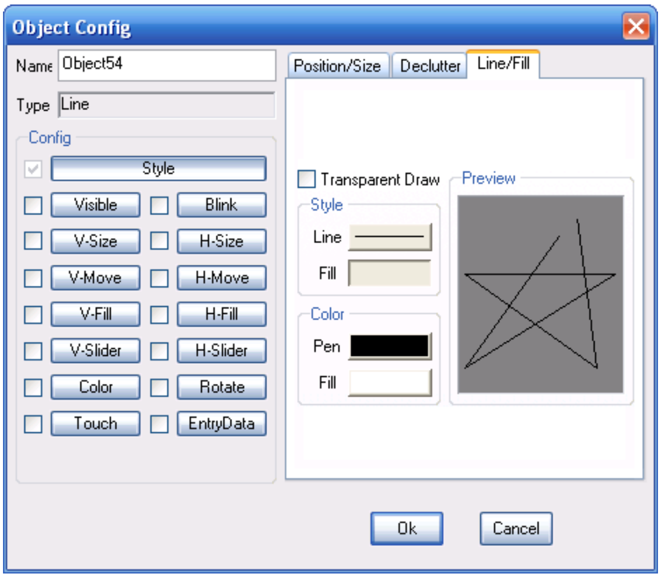
If you draw a chord on a page window and double-click on the chord object, the information on the chord object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for chord.


Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Transparent Draw
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

Name Object53
Type Chord

Polyline

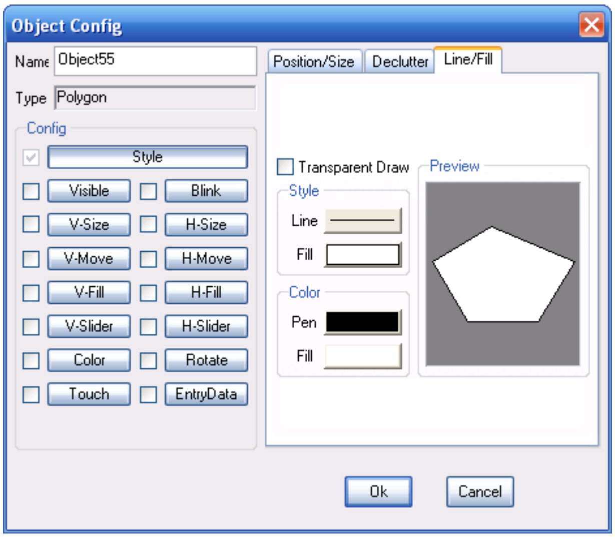
If you draw a polyline on a page window and double-click on the polyline object, the information about the polyline object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for polyline.


Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Transparent Draw
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

Name Object54
Type Line

Polygon

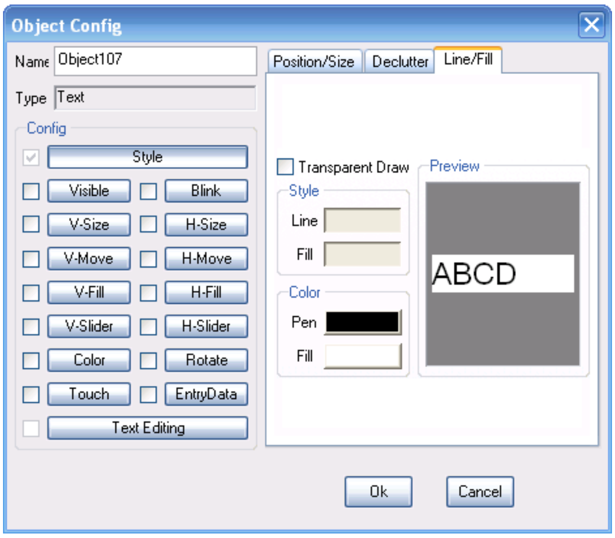
If you draw a polygon on a page window and double-click on the polygon object, the information about the polygon object will be shown in the items of the object configuration. Refer to the previous explanation about a rectangle object for the position/size and line/fill for polygon.


Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Transparent Draw
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

Name Object55
Type Polygon

Text

If you enter text on a page window and double-click on the text object, the information aout the text object will be shown in the items of the object configuration.


Object Config
Position/Size
Declutter
Line/Fill
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Text Editing
Transparent Draw
Preview
ABCD
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

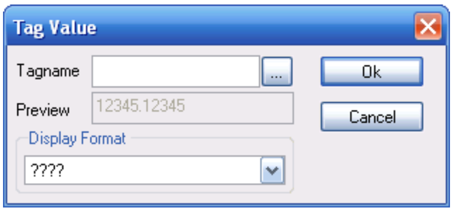
Name Object107
Type Text

Refer to the previous explanation about a rectangle object for the position/size for text. The line/fill cannot be selected but the color of the line and fill can be selected. In case of a text object, the Text Editing button is additionally displayed on the left Configure.

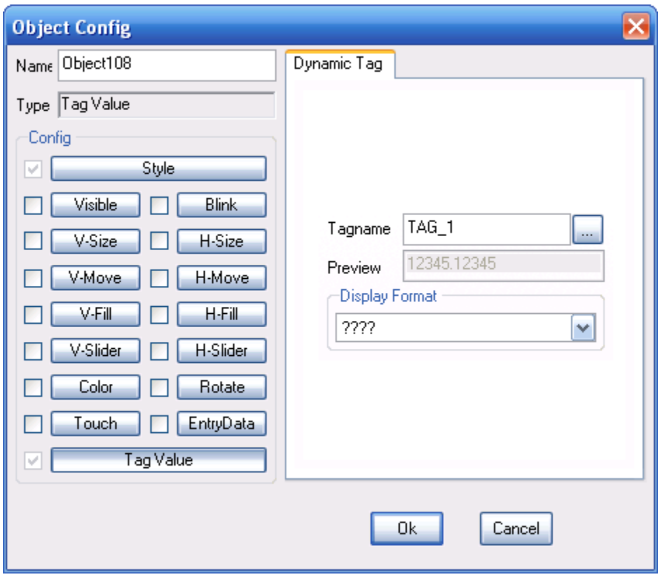
Text Editing This is used to edit the selected string.

Tag Value

If you enter a tag value object on a page window and double-click on the tag value object, the information about the tag value object will be shown in the items of the object configuration.


Tag Value
Tagname
...
Ok
Preview
12345.12345
Cancel
Display Format
????

Tag Value This is used to change a currently selected tag or revise how to display it.

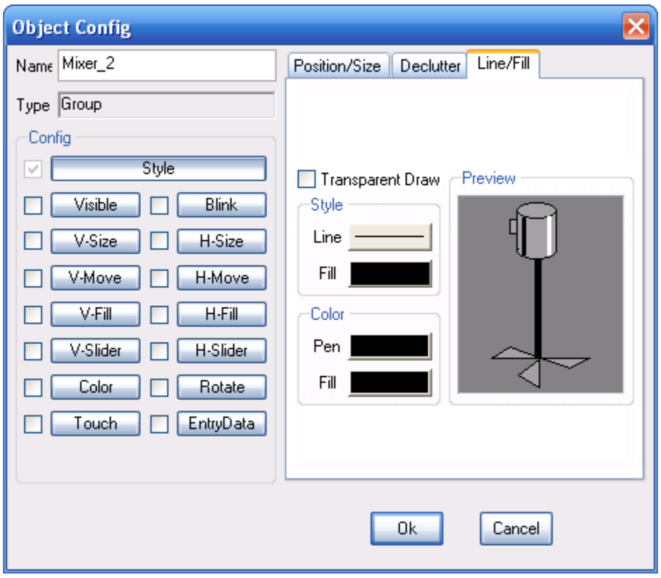

Object Config
Name
Object108
Type
Tag Value
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Tag Value
Dynamic Tag
Tagname
TAG_1
...
Preview
12345.12345
Display Format
????
Ok
Cancel

Tagname This is used to enter the tag name or the operation expression to display a value. If you press the **'Find Tag (…)'** button beside, a **'Select Tag'** dialog box will appear. You can select a tag.

Display Format This is used to select how to display a tag on a currently active page.

Group

If you enter a group object on a page window and double-click on the group object, the information about the group object will be shown in the items of the object configuration. (The group is the configuration of several objects. There are group objects among the library pictures.)



Name: Mixer_2
Type: Group
☐ Transparent Draw

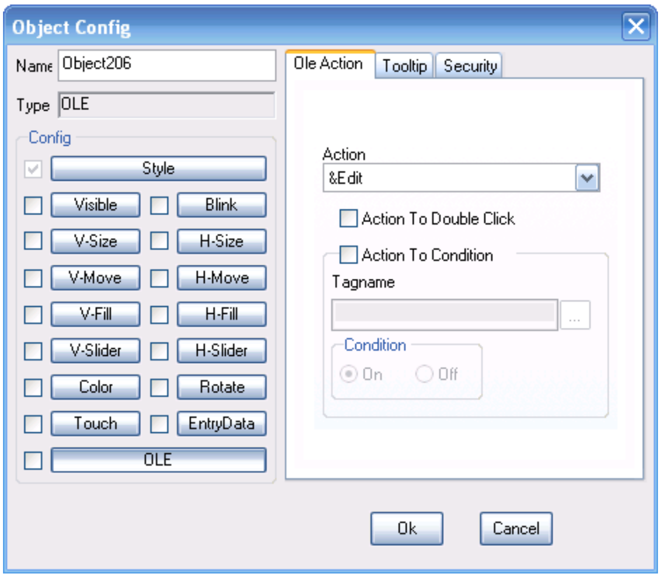
Object Config
Config
☑ Style
☐ Visible
☐ Blink
☐ V-Size
☐ H-Size
☐ V-Move
☐ H-Move
☐ V-Fill
☐ H-Fill
☐ V-Slider
☐ H-Slider
☐ Color
☐ Rotate
☐ Touch
☐ EntryData
Position/Size
Declutter
Line/Fill
Preview
Style
Line
Fill
Color
Pen
Fill
Ok
Cancel

OLE

If you enter an OLE object on a page window and double-click on the OLE object, the information about the OLE object will be shown in the items of the object configuration. (The object by the Insert Object is the OLE object.)

Position/Size This is used to display the position and the size of an OLE object on a currently active page

OLE Action


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
OLE
Ole Action
Tooltip
Security
Tagname
...
Ok
Cancel

Name: Object206
Type: OLE
Action: &Edit
☐ Action To Double Click
☐ Action To Condition
Condition: ● On ○ Off

Action This is used to set up the action to operate an OLE object while the CimonX is run. The menu for the action is provided differently according to the type of the object inserted on a window. There are general menu such as edit, open, run and etc. For example, in case an image file is inserted as an object and you double-click the OLE object in the CimonX, the object configuration will be run for editing. In case an audio file is inserted as an object, the audio will be outputted according to the variation of the digital value.

If you double-click the OLE object in the CimonX, the assigned action will be run.

Action To

Double Click This is used to run an OLE object by double-clicking.

Condition This is used to run an OLE object by a condition. In case a tag name or an operation expression is entered and the tag value or the operation expression is On (TRUE)/Off (FALSE), the OLE object can be run.

Tool Tip

Displayed String This is used to enter the string displayed on a tool tip window when the mouse is on a corresponding object.

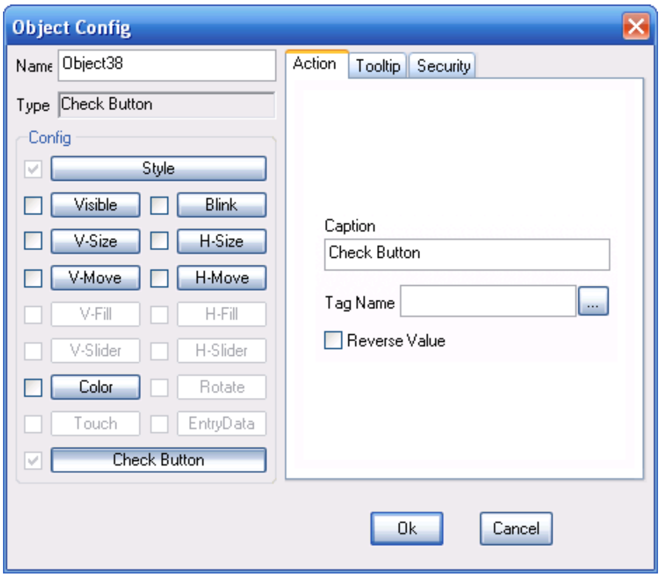
Security

Security Level This is used to limit the authority to use control function by users. You can enter a security level from 1 to 100 and the less number is, the higher authority is.

Check Button

This is used to select an option. If the Check button is selected, 1 will be set up as a linked tag value. Otherwise, 0 will be set up as it. (If you select the Reverse, the value will be reversed each other.)

The object configuration window for the Check button among the window control objects in a Library is as follows.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Check Button
Action
Tooltip
Security
...
Ok
Cancel

Name: Object38
Type: Check Button
Caption: Check Button
Tag Name:
☐ Reverse Value

Action

Caption	This is used to enter the string displayed on a button.
Tag Name	This is used to enter the name of the tag linked to a Check button. It is not necessary to enter certainly. If you do not enter a tag name, you will be able to read the status of the button by using the CIMON Function **wcGetIndex**.
Reverse Value	This is used to reverse the status of the Check button and the status of a linked tag. If this button is selected, 0 will be set as the tag value. Otherwise, 1 will be set as the tag value.

Tooltip

Security

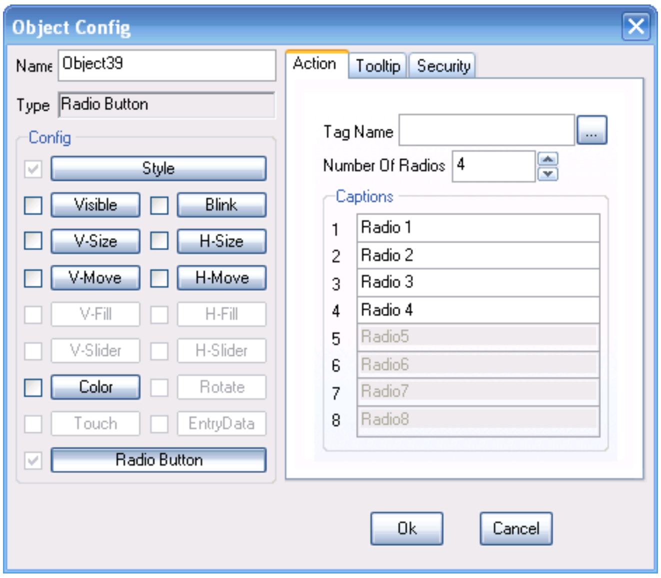
Refer to the previously explained OLE object.

Radio Button

This is the button to select one among some items. This Radio button is set up as the value of the tag to which the value of a currently selected item is linked. (The buttons are set up as the value from 0 to 7 from the first button.)

If the third button is selected, 2 will be set up as the value of the corresponding tag.

The object configuration window for the Radio button among the window control objects in the Library is as follows.


Object Config
Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
☑ Radio Button
Action
Tooltip
Security
...
Ok
Cancel

Name Object39
Type Radio Button
Tag Name
Number Of Radios 4

Captions
1 Radio 1
2 Radio 2
3 Radio 3
4 Radio 4
5 Radio5
6 Radio6
7 Radio7
8 Radio8

Action

Tag Name	This is used to enter the name of the tag to which the value of a Radio button is set up. It is not necessary to enter certainly. If you do not enter a tag name, you will be able to read the selected value of the button by using CIMON Function **wcGetIndex**.
No. of Buttons	This is used to enter the number of radio buttons. (Min. 1 ~ Max. 8)
Caption	This is used to enter the captions displayed on each radio button.

Tooltip

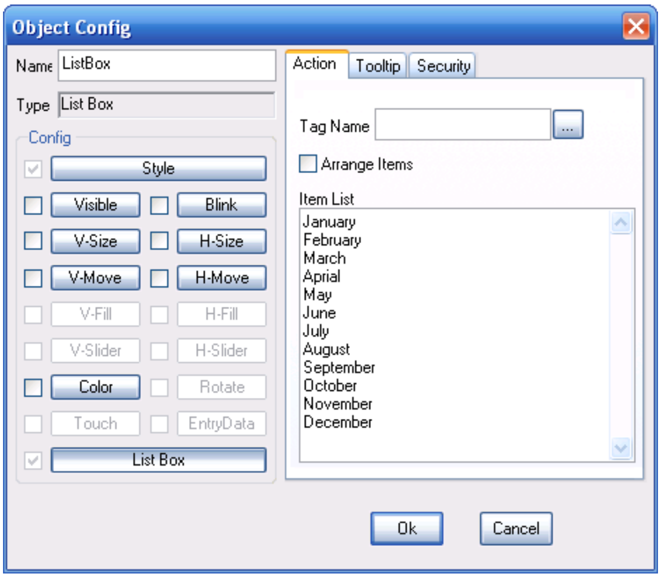
Security

Refer to the previously explained OLE object.

ListBox

This is used to select among several items. If a tag is set up, selected contents will be entered as the tag value.

The object configuration window for a ListBox among window control objects in a Library is as follows.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Box
Action
Tooltip
Security
...
Ok
Cancel

Name ListBox

Type List Box

Tag Name

☐ Arrange Items

Item List

January
February
March
Aprial
May
June
July
August
September
October
November
December

Action

Tag Name	This is used to enter the name of the tag to which the selected contents of a ListBox is set up. If you do not enter a tag name, you will be able to read the selected value of the button by using CIMON Function **wcGetData**.
Arrange Items	This is used to arrange the contents of items.
Item List	This is used to enter the initial items of a ListBox. Each item is distinguished as other line by the Return. The contents of an active item can be added or deleted by using the following CIMON Functions. **wcInsertItem, wcDeleteItem, wcDeleteAll**

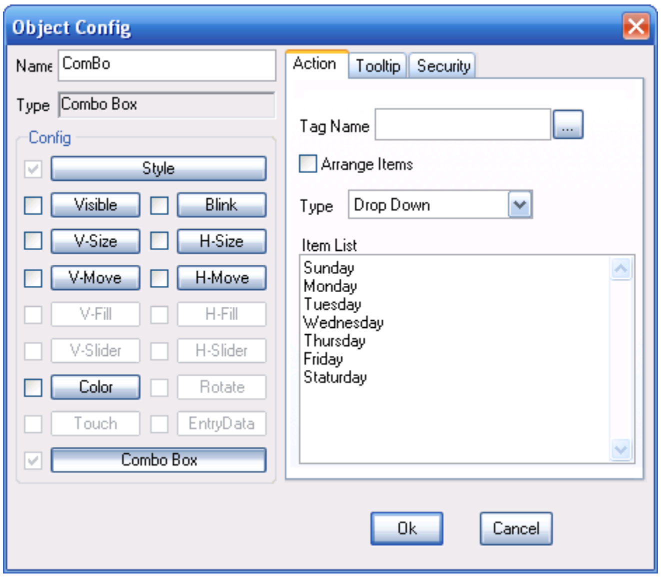
Tooltip

Security

Refer to the previously explained OLE object.

ComboBox

This is used to select among several items. ComboBox is similar to ListBox but the format is different. If a tag is set up, selected contents will be entered as the tag value. The object configuration window for a ComboBox among window control objects in a Library is as follows.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Combo Box
Action
Tooltip
Security
...
Ok
Cancel

Name: ComBo
Type: Combo Box
Tag Name:
☐ Arrange Items
Type: Drop Down
Item List:
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Staturday

Action

Tag Name This is used to enter the name of a tag to which the selected contents of a ComboBox is set up. It is not necessary to enter certainly. If you do not enter a tag name, the selected value of the button can be read by using CIMON Function **wcGetData**.

Arrange Items This is used to arrange the contents of a item in alphabet order.

Type This is used to select the format of a ComboBox.

Simple Type : The item is displayed on the below.
Drop Down : It is available to select only among input items.
Drop List : It available to select among input items or input directly.

Item List This is used to enter the initial items of a ComboBox. Each item is distinguished as other line by the Return. The contents of an active item can be added or deleted by the following CIMON Functions.

wcInsertItem, wcDeleteItem, wcDeleteAll

Tooltip

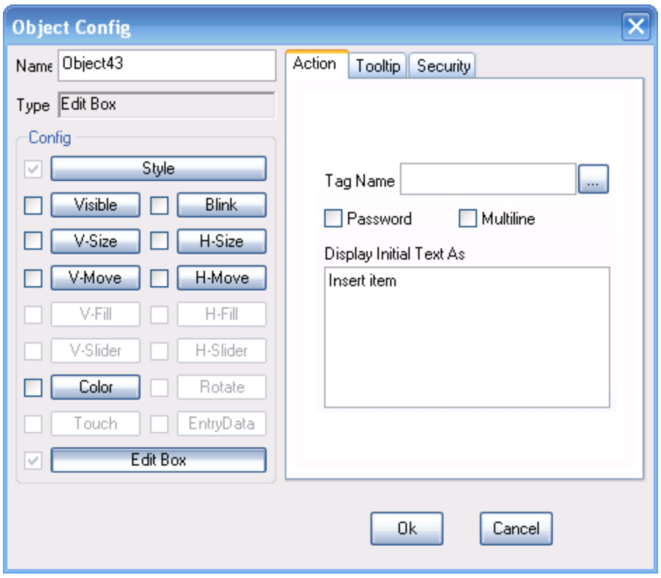
Security

Refer to the previously explained OLE object.

Edit Box

This is used to enter data.

The object configuration window for the Edit Box among the window control objects in a Library is as follows.



Name: Object43

Type: Edit Box

Display Initial Text As: Insert item

Object Config
Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
☑ Edit Box
Action
Tooltip
Security
Tag Name
...
☐ Password
☐ Multiline
Ok
Cancel

Action

Tag Name	This is used to enter the name of the tag to which an entered content is set up. It is not necessary to enter certainly. If you do not enter a tag name, the selected value of the button can be read by using CIMON Function **wcGetData**.
Password	This is used not to display the contents of an entered password on a window. If this item is selected, it will be displayed as “****” type on the window.
Multi-Line	This is used to select whether the text on a window is entered in multi-line.
Display Initial Text As	This is used to enter the contents displayed on a Text Input Window initially.

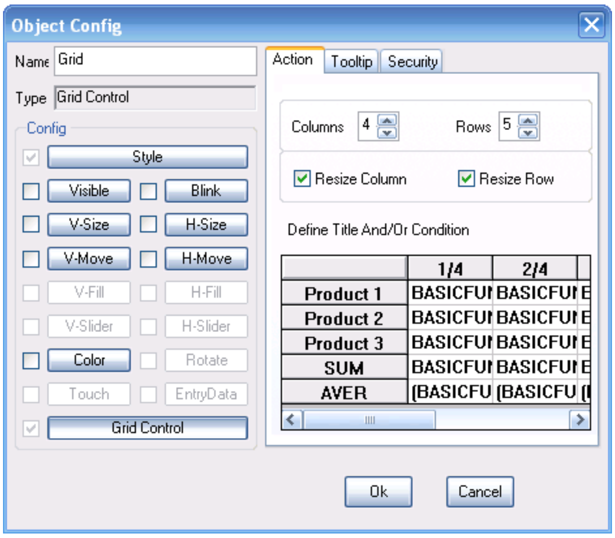
Tooltip

Security

Refer to the previously explained OLE object.

Grid Control

This is used to display the data form as same as Excel. The object configuration window for the Grid Control among the window control objects in a Library is as follows.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Grid Control
Action
Tooltip
Security
Ok
Cancel

Name Grid
Type Grid Control

☑ Style
☑ Grid Control

Columns 4
Rows 5

☑ Resize Column
☑ Resize Row

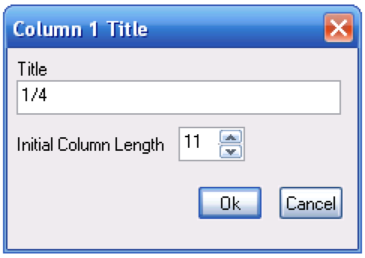
Define Title And/Or Condition

	1/4	2/4	
Product 1	BASICFUI	BASICFUI	E
Product 2	BASICFUI	BASICFUI	E
Product 3	BASICFUI	BASICFUI	E
SUM	BASICFUI	BASICFUI	E
AVER	(BASICFU	(BASICFU	(

Columns This is used to enter the number of the columns displayed. (1~999)

Rows This is used to input the number of the rows displayed. (1~999)

Resize Column This is used to enable the title of a column. If this item is selected, the title and the initial size of a column can be edited. If you double-click the title of the column edited, the following dialog box will appear.


Column 1 Title
Ok
Cancel

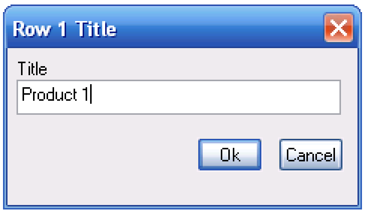
Title
1/4

Initial Column Length 11

Title This is used to enter the title of a column button.

Initial Column This is used to enter the width of a column in the number Length of characters.

Resize Row This is used to enable the title of a row. If this item is selected, the caption of a row can be edited. If you double-click the title of the row edited, the following dialog box will appear.


Row 1 Title
Ok
Cancel

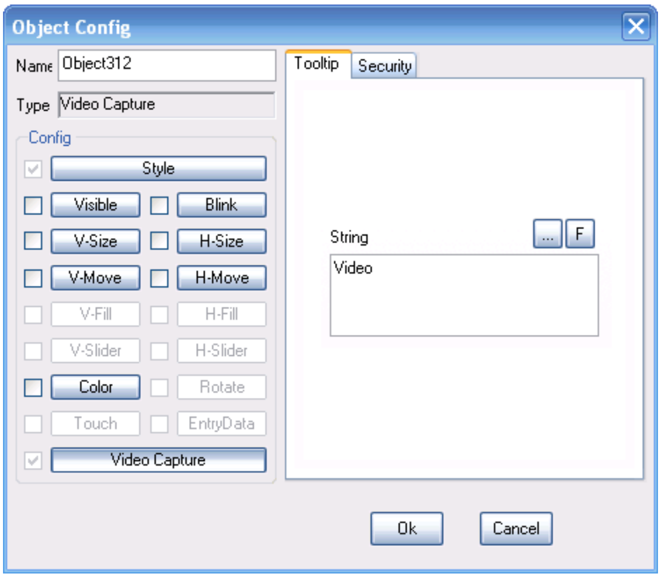
Title: Product 1

Title This is used to enter the title of a row button.

Input Tag If you enter the name of the tag displayed on a cell position, the value of the corresponding tag will be displayed. In the above picture example, the value of Tag a1 is displayed at Row 1 Column 1 and the value of Tag a2 is displayed at Row 2 Column 1.

Video Capture

This is used to monitor the situation of the field remotely. The object configuration window for the Video Capture among the window control objects in a Library is as follows.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Video Capture
Tooltip
Security
...
F
Ok
Cancel

Name: Object312

Type: Video Capture

String: Video

Tooltip

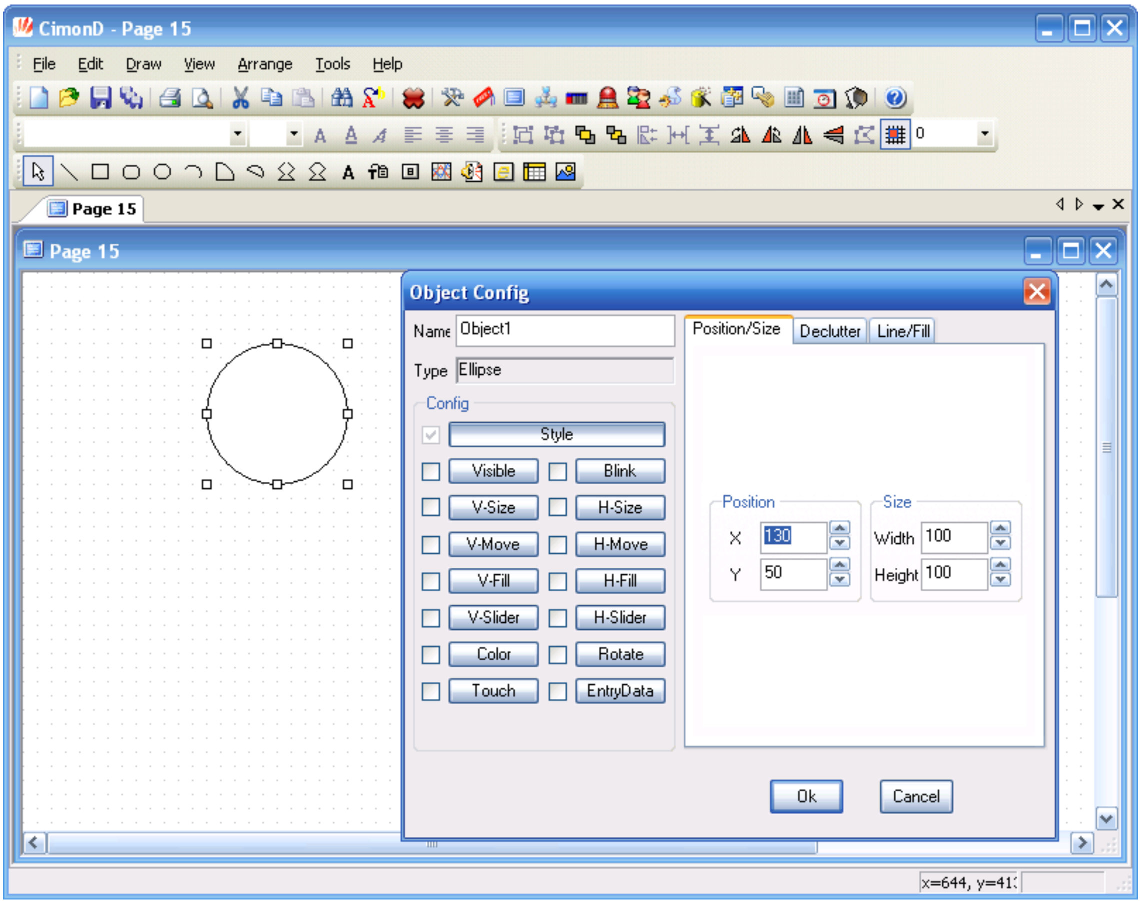
Security

Refer to the previously explained OLE object.

☞ Video capture must be installed Microsoft DirectX.

4.6 Setting up Control Functions

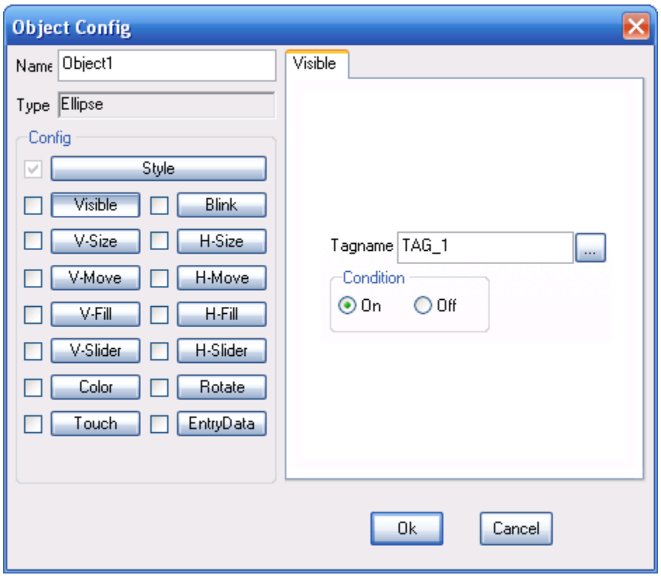
You can apply control functions to the object by using object config dialog.


CimonD - Page 15
File Edit Draw View Arrange Tools Help
Page 15
Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Position/Size
Declutter
Line/Fill
Position
Size
Ok
Cancel
x=644, y=41:

Name: Object1
Type: Ellipse
X: 130
Y: 50
Width: 100
Height: 100

Visibility

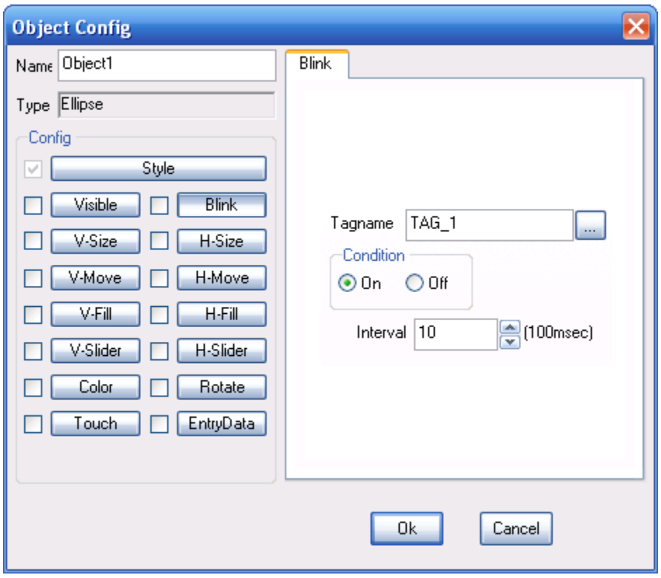
This is used to show or hide an object according to entered tag value.


Object Config
Name Object1
Type Ellipse
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Visible
Tagname TAG_1
...
Condition
On
Off
Ok
Cancel

Tag Name	This is used to enter the tag name or the operation expression for Visibility. You may assign a tag name by using the **'Find Tag(…)'** button.
Condition	On: If an assigned tag value is ON (1) or an operation expression is True, the object will be displayed. Off: If an assigned tag value is OFF (0) or an operation expression is False, the object will be displayed.

Blink

This is used to blink an object according to the status of a tag at assigned intervals.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
...
Ok
Cancel

Name: Object1
Type: Ellipse
Blink
Tagname: TAG_1
Condition: ● On ○ Off
Interval: 10 (100msec)

Tag Name This is used to enter the tag name or the operation expression for Blink. You may assign a tag name by using the **'Find Tag(…)'** button.

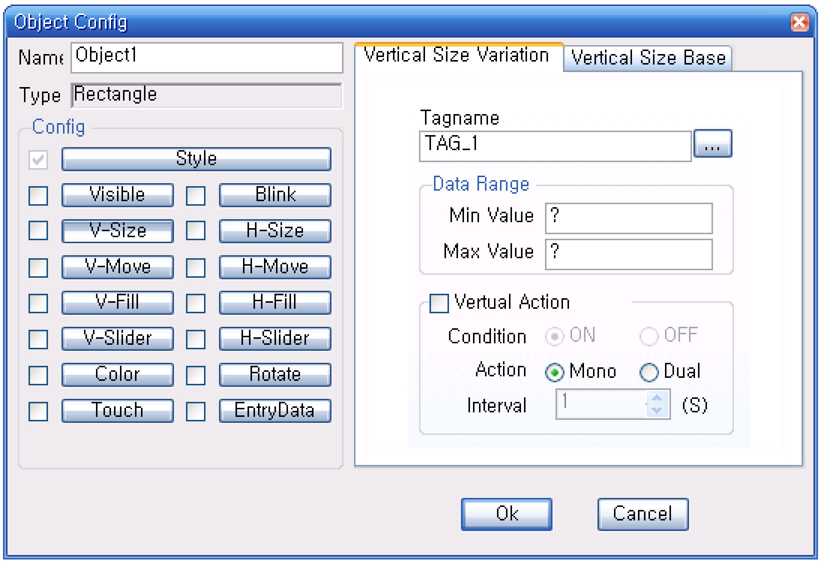
Condition On: If an assigned tag value is ON (1) or an operation expression is True, the object will be blinked.

Off: If an assigned tag value is OFF (0) or an operation expression is False, the object will be blinked.

Interval This is used to set up a blink interval. Unit is 100sec. That is, if you enter 1, it will blink at intervals of 100sec. If you enter 10, it will blink at intervals of 1sec. It is available to enter the value from1 to 999.

V-Size

This is used to vary the size of an object vertically according to tag value.


Object Config
Config
☑ Style
☐ Visible
☐ Blink
☐ V-Size
☐ H-Size
☐ V-Move
☐ H-Move
☐ V-Fill
☐ H-Fill
☐ V-Slider
☐ H-Slider
☐ Color
☐ Rotate
☐ Touch
☐ EntryData
Vertical Size Variation
Vertical Size Base
...
Data Range
Ok
Cancel

Name: Object1
Type: Rectangle
Tagname: TAG_1
Min Value: ?
Max Value: ?
☐ Vertual Action
Condition: ● ON ○ OFF
Action: ● Mono ○ Dual
Interval: 1 (S)

Vertical Size Variation

Tag Name This is used to enter the tag name or the operation expression for the V-Size. In case that an operation expression is entered, minimum value and maximum value should be assigned.

Data Range This is used to set up the range referred when an object is varied. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.

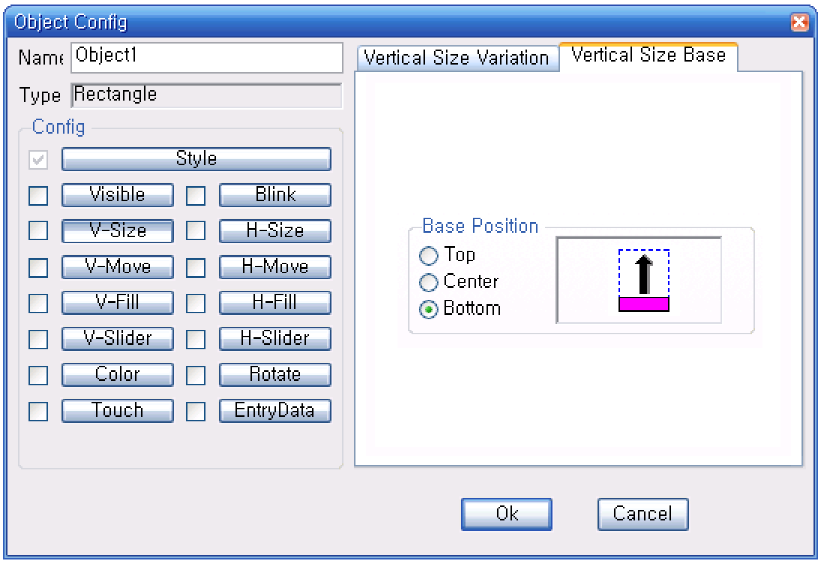
Virtual Action This is used to vary an object vertically not by tag value but by assigned condition. For example, select this item to vary the size of an object continuously to the vertical direction when a digital tag is ON.

Condition If V-Size is active when the value entered to a tag name is ON or TRUE, select ON and if the V-Size is active when the value entered to a tag name is OFF or FALSE, select OFF.

Action Mono : A virtual value is increased only from minimum to maximum.
Dual: A virtual value is increased from minimum to maximum and then is decreased from maximum to minimum again.

Interval This is used to enter the working time of a loop in second. The speed of V-Size can be set up by using this value.

Vertical Size Base


Object Config
Vertical Size Variation
Vertical Size Base
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Ok
Cancel

Name: Object1
Type: Rectangle

Base Position
○ Top
○ Center
● Bottom

Base Position The variation directions according to the base are as follows.

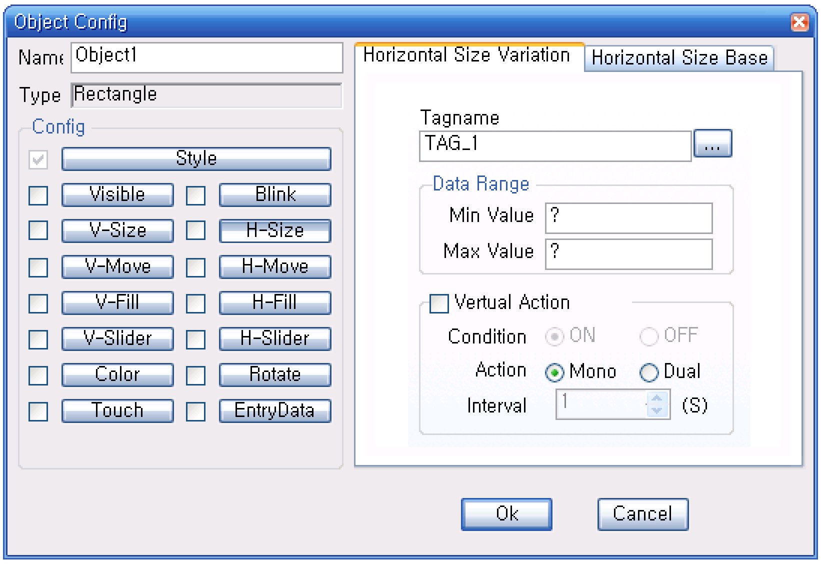
Top: The size is varied from top to bottom.

Center: The size is varied from center to the both side.

Bottom: The size is varied from bottom to top.

H-Size

This is used to vary the size of an object horizontally according to tag value.


Object Config
Horizontal Size Variation
Horizontal Size Base
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
...
Ok
Cancel

Name: Object1
Type: Rectangle

Tagname: TAG_1

Data Range
Min Value: ?
Max Value: ?

☐ Vertual Action
Condition ● ON ○ OFF
Action ● Mono ○ Dual
Interval 1 (S)

Horizontal Size Variation

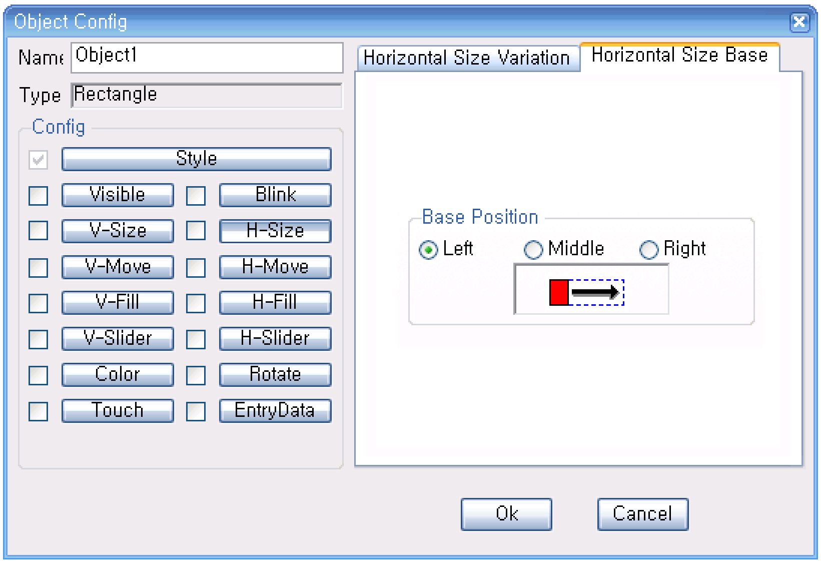
Tag Name This is used to input the tag name or the operation expression for H-Size.

In case an operation expression is inputted, the Min. value and Max. value should be assigned.

Data Range This is used to set up the range referred when the object is varied. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.

Virtual Action This is used to vary an object horizontally not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Horizontal Size Base


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Horizontal Size Variation
Horizontal Size Base
Base Position
Ok
Cancel

Name Object1
Type Rectangle
● Left ○ Middle ○ Right

Base Position The variation directions according to the base are as follows.

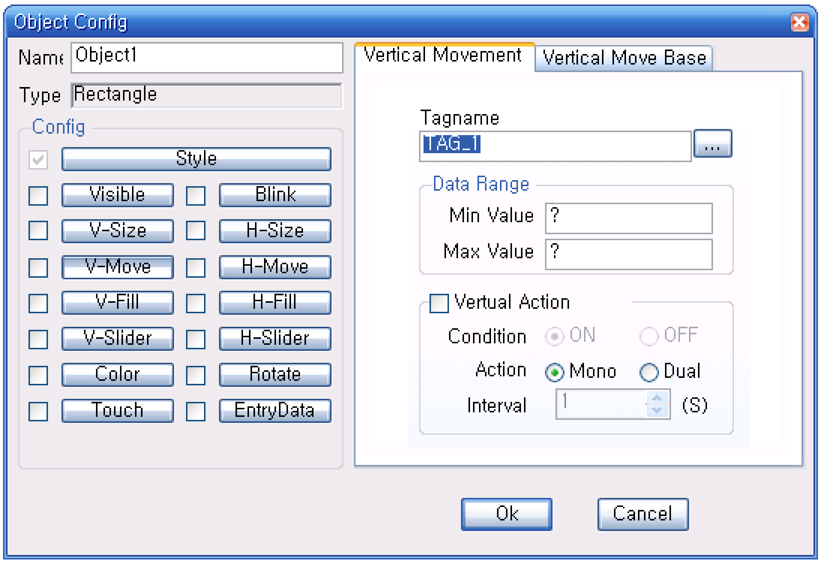
Left: The size is varied from left to right.

Middle: The size is varied from the center to the both side.

Right: The size is varied from right to left.

V-Move

This is used to move an object vertically according to tag value.


Object Config
Vertical Movement
Vertical Move Base
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Ok
Cancel

Name Object1

Type Rectangle

Tagname TAG_1

Data Range

Min Value ?

Max Value ?

☐ Vertual Action

Condition ● ON ○ OFF

Action ● Mono ○ Dual

Interval 1 (S)

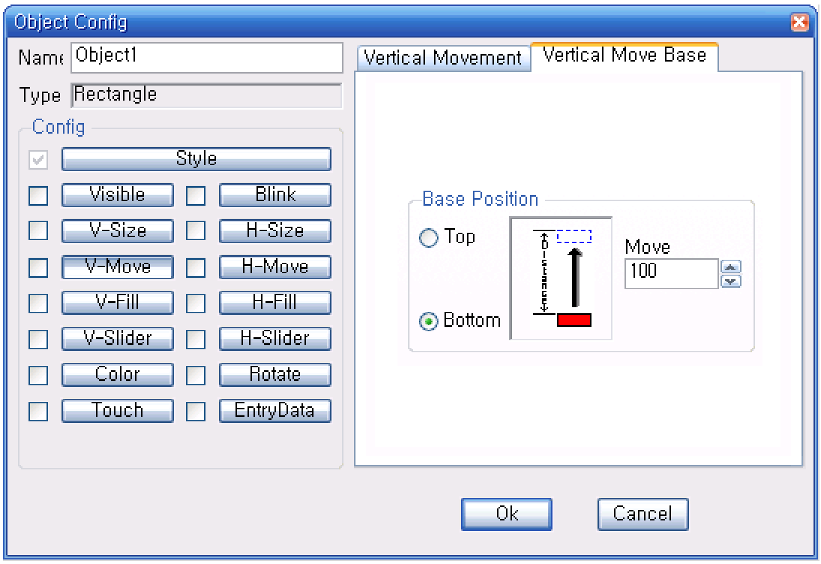
Vertical Movement

Tag Name This is used to enter the tag name or the operation expression for V-Move. In case that an operation expression is entered, minimum value and maximum value should be assigned.

Data Range This is used to set up the range referred when an object is moved. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.

Virtual Action This is used to move an object vertically not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Vertical Move Base

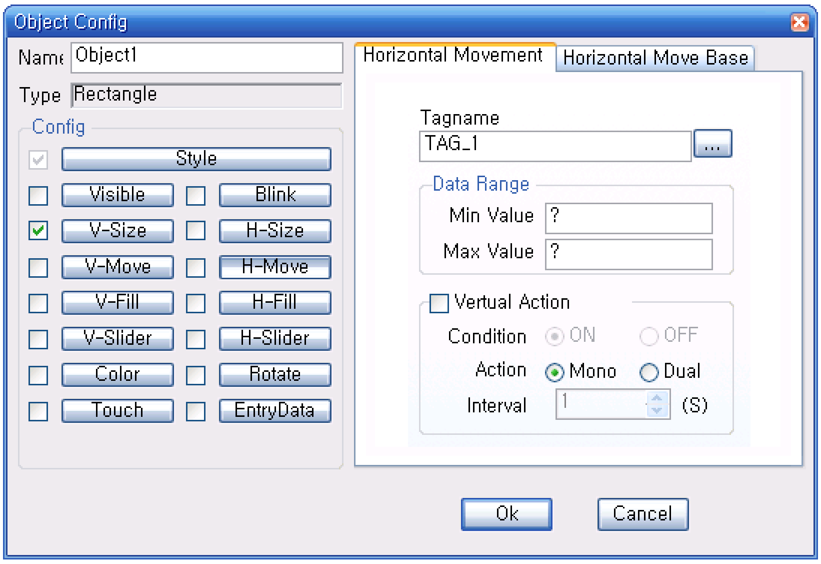

Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Vertical Movement
Vertical Move Base
Base Position
Ok
Cancel

Name: Object1
Type: Rectangle
○ Top
● Bottom
Move: 100

Base Position	Bottom: An object is moved from bottom to top. Top: An object is moved from top to bottom.
Move	This is the maximum distance to move an object. Enter in pixel.

H-Move

This is used to move an object horizontally according to tag value.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Horizontal Movement
Horizontal Move Base
Data Range
...
Ok
Cancel

Name: Object1
Type: Rectangle
☑ V-Size
Tagname: TAG_1
Min Value: ?
Max Value: ?
☐ Vertual Action
Condition: ● ON ○ OFF
Action: ● Mono ○ Dual
Interval: 1 (S)

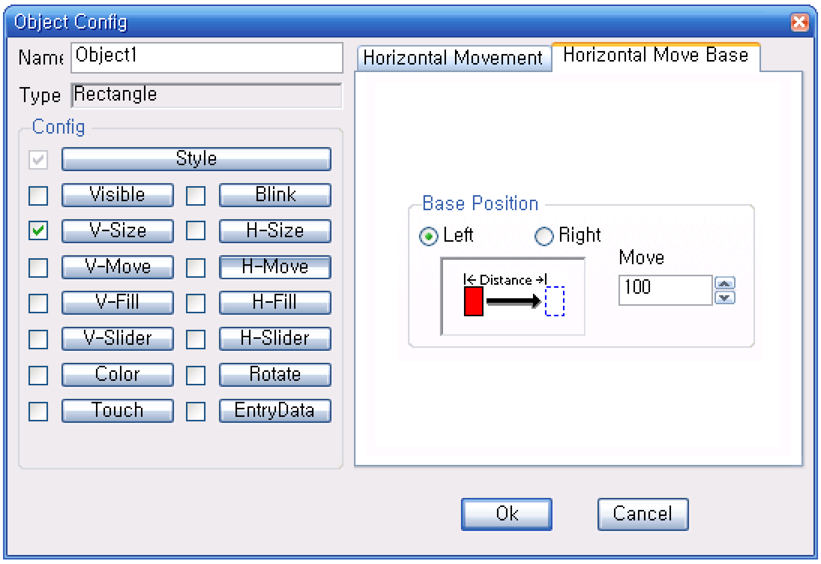
Horizontal Movement

Tag Name This is used to enter the tag name or the operation expression for H-Move. In case that an operation expression is entered, the minimum value and maximum value should be assigned.

Data Range This is used to set up the range referred when an object is moved. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.

Virtual Action This is used to move an object horizontally not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Horizontal Move Base


Object Config
Config
☑ Style
☐ Visible
☐ Blink
☐ H-Size
☐ V-Move
☐ H-Move
☐ V-Fill
☐ H-Fill
☐ V-Slider
☐ H-Slider
☐ Color
☐ Rotate
☐ Touch
☐ EntryData
Horizontal Movement
Horizontal Move Base
Base Position
Distance
Ok
Cancel

Name Object1

Type Rectangle

☑ V-Size

● Left ○ Right

Move 100

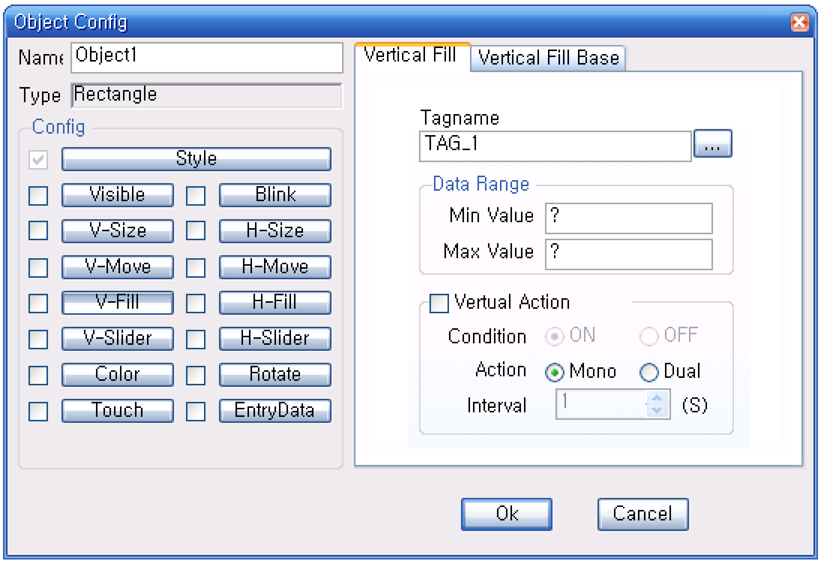
Base Position Left: An object is moved from left to right.

Right: An object is moved from right to left

Move This is the maximum distance to move an object. Enter in pixel.

V-Fill

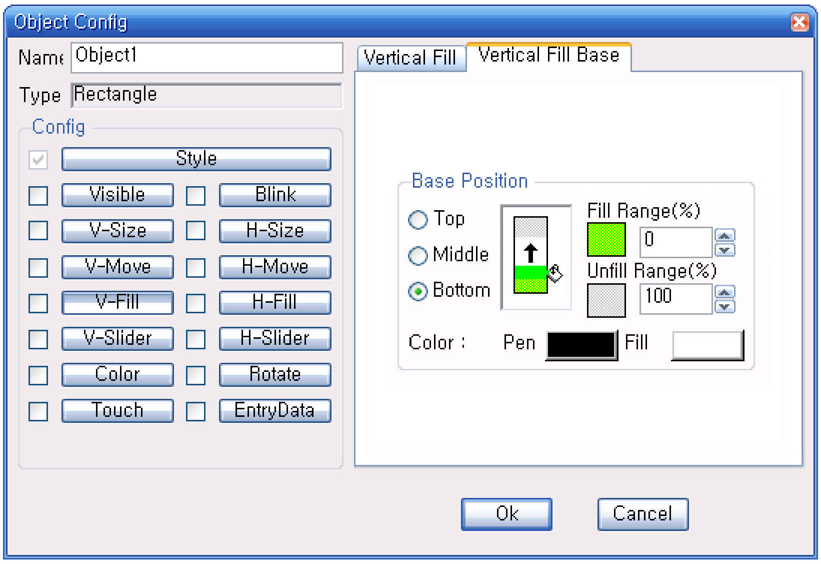
This is used to fill the inside of an object from top to bottom or from bottom to top.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Vertical Fill
Vertical Fill Base
...
Data Range
Condition
ON
OFF
Ok
Cancel

Name: Object1
Type: Rectangle
Tagname: TAG_1
Min Value: ?
Max Value: ?
☐ Vertual Action
Action: ● Mono ○ Dual
Interval: 1 (S)

Tag Name	This is used to enter the tag name or the operation expression for V-Fill. In case that an operation expression is entered, the minimum value and maximum value should be assigned.
Data Range	This is used to set up the range referred when an object is filled. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.
Virtual Action	This is used to fill an object with a virtual value vertically not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Vertical Fill Base


Object Config
Config
☑ Style
☐ Visible
☐ Blink
☐ V-Size
☐ H-Size
☐ V-Move
☐ H-Move
☐ V-Fill
☐ H-Fill
☐ V-Slider
☐ H-Slider
☐ Color
☐ Rotate
☐ Touch
☐ EntryData
Vertical Fill
Vertical Fill Base
Ok
Cancel

Name Object1
Type Rectangle

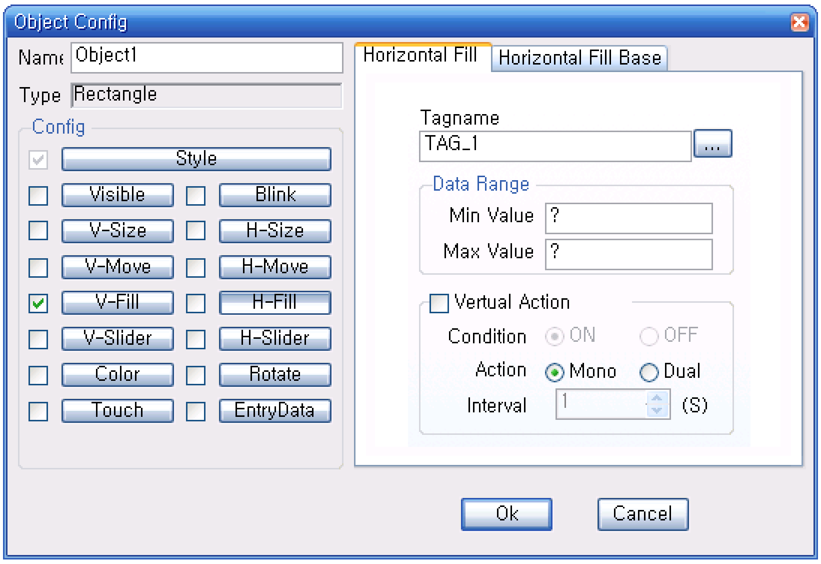
Base Position
○ Top
○ Middle
● Bottom

Fill Range(%) 0
Unfill Range(%) 100
Color : Pen Fill

Base Position	Bottom: An object is filled from bottom to top. Middle: An object is filled from center to both directions. Top: An object is filled from top to bottom.
Fill Range	This is used to assign the range displayed as filled in an object. The Minimum value is 0, the maximum value is 99 (%).
UnFill Range	This is used to assign the range displayed as blank in an object. The Minimum value is 1, the maximum value is 100 (%).
Color	This is used to assign the color of the Line and the Fill.

H-Fill

This is used to fill an object from left to right or from right to left.


Object Config
Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☑ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Horizontal Fill
Horizontal Fill Base
...
Data Range
Ok
Cancel

Name: Object1

Type: Rectangle

Tagname: TAG_1

Min Value: ?

Max Value: ?

☐ Vertual Action

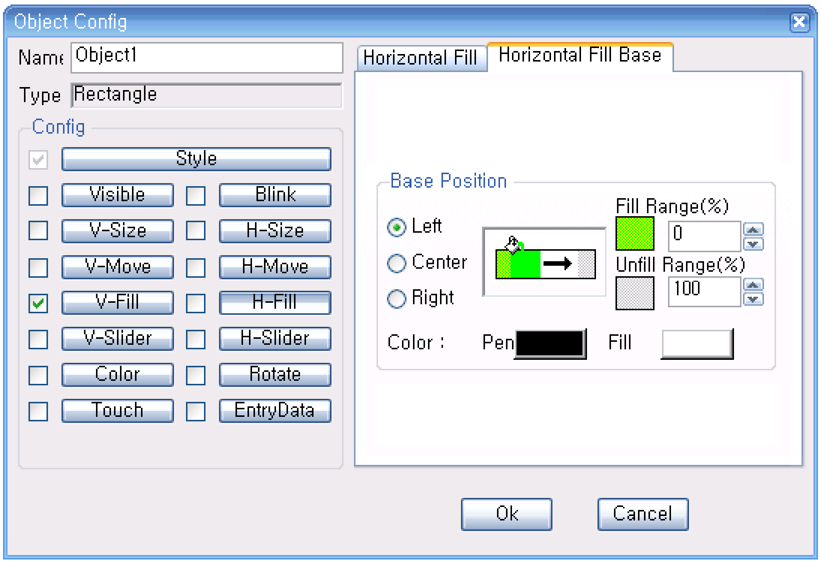
Condition ● ON ○ OFF

Action ● Mono ○ Dual

Interval 1 (S)

Tag Name	This is used to enter the tag name or the operation expression for H-Fill. In case that an operation expression is entered, the minimum value and maximum value should be assigned.
Data Range	This is used to set up the range referred when an object is filled. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.
Virtual Action	This is used to fill an object with a virtual value horizontally not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Horizontal Fill Base



Object Config

Name: Object1

Type: Rectangle

Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☑ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Horizontal Fill
Horizontal Fill Base
Base Position
● Left
○ Center
○ Right
Pen
Fill
Ok
Cancel

Fill Range(%): 0

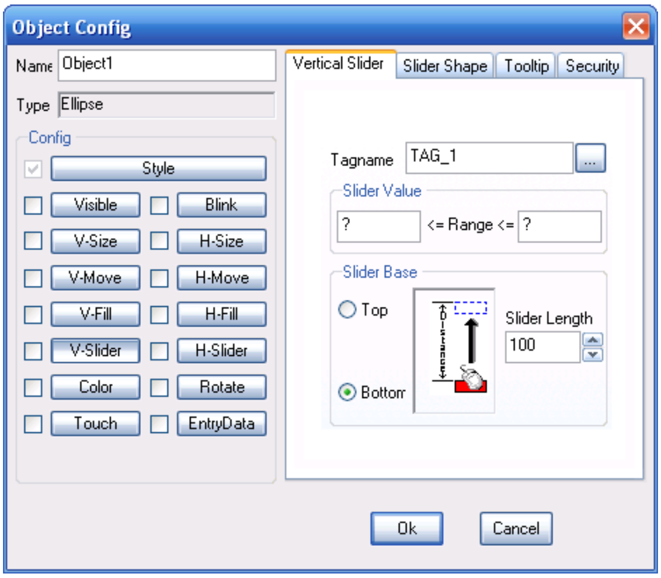
Unfill Range(%): 100

Color :

Fill Base	Left: An object is filled from left to right. Center: An object is filled from center to both directions Right: An object is filled from right to left.
Fill Range	This is used to assign the range displayed as filled in an object. The Minimum value is 0, the maximum value is 99 (%).
UnFill Range	This is used to assign the range displayed as blank in an object. The Minimum value is 1, the maximum value is 100 (%).
Color	This is used to assign the color of the Line and the Fill.

V-Slider

This function is used to change the coordinates value of an object into a tag value, if you drag vertically an object with the mouse.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Vertical Slider
Slider Shape
Tooltip
Security
...
Ok
Cancel

Name Object1
Type Ellipse
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Tagname TAG_1
Slider Value
? <= Range <= ?
Slider Base
○ Top
● Bottom
Slider Length 100

Vertical Slider

Tag Name	This is used to enter the tag name or the operation expression for V-Slider. In case that an operation expression is entered, the minimum value and maximum value should be assigned.
Slider Value	This is used to set up the range referred when an object is slid. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.
Slider Base	Bottom: If you drag upward from bottom, a tag value will be increased. Top: If you drag downward from top, a tag value will be increased.
Slider Length	This is used to set up the maximum distance to move. An object can not moved over a set distance.

Slider Shape

Slider Color This is used to set up whether the color of an object is varied or not while dragging a corresponding object.

To assign the Color Variation, the colors of the line and the fill should be assigned.

Pen: This is used to assign the color of the Line in the color palette.

Fill: This is used to assign the color of the Fill in the color palette.

Tool Tip

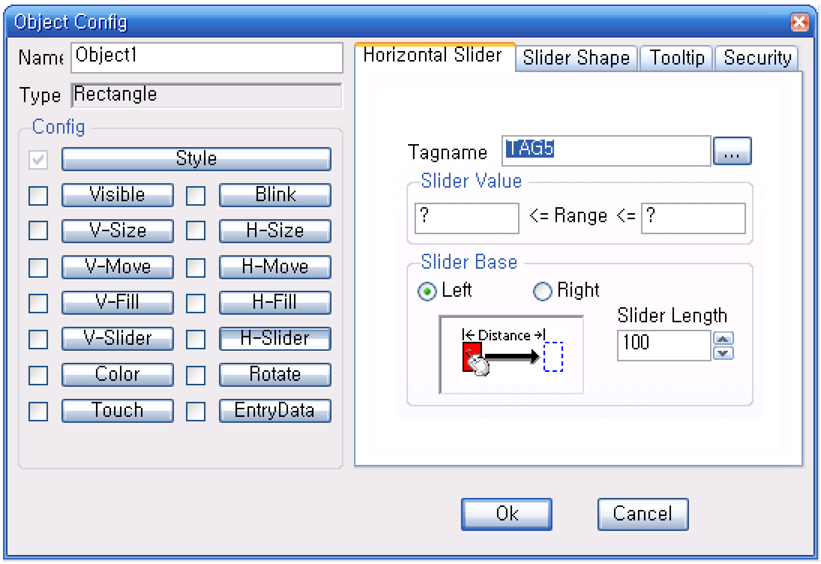
String This is used to enter the string displayed when the mouse is on a corresponding object.

Security

Security Level This is used to limit the authority to use the control function by users. The security level can be set up from 1 to 100. The less number is, the higher authority is.

H-Slider

This function is used to change the coordinates value of an object into a tag value if you drag horizontally the object with the mouse.


Object Config
Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Horizontal Slider
Slider Shape
Tooltip
Security
...
Slider Value
Slider Base
|← Distance →|
Ok
Cancel

Name: Object1
Type: Rectangle
Tagname: TAG5
Slider Value: ? <= Range <= ?
Slider Base: ● Left ○ Right
Slider Length: 100

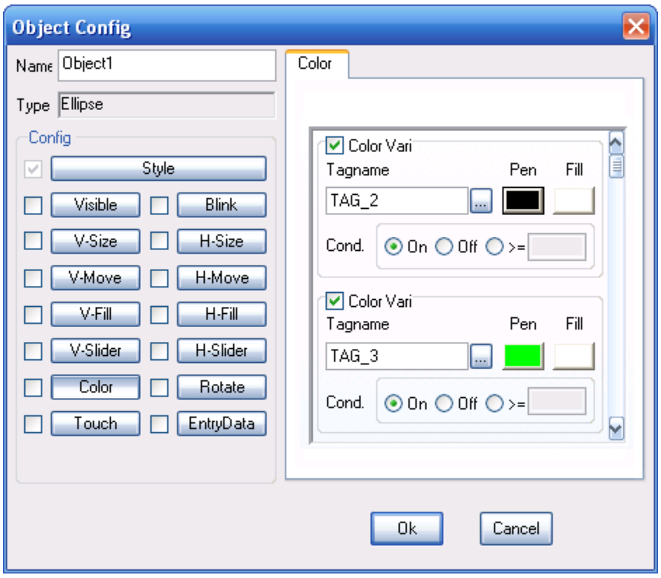
Horizontal Slider

Tag Name This is used to enter the tag name or the operation expression for H-Slider. In case that an operation expression is entered, the minimum value and maximum value should be assigned.

Slider Value	This is used to set up the range referred when an object is slid. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum value.
Slider Base	Left: This is used to move from left to right. Right: This is used to move from right to left.
Slider Length	This is used to set up the maximum distance moved. An object cannot be moved over a set distance.
Slider Shape	
Slider Color	This is used to set up whether the color of an object is varied or not while dragging the object. To assign the Color Variation, the colors of the line and the fill should be assigned. Pen: This is used to assign the color of the Line in the color palette. Fill: This is used to assign the color of the Fill in the color palette.
Tool Tip	
String	This is used to enter the string displayed when the mouse is on a corresponding object.
Security	
Security Level	This is used to limit the authority to use the control function by users. The security level can be set up from 1 to 100. The less number is, the higher authority is.

Color

This is used to change an object as an assigned color according to entered tag value.



Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Color
Pen
Fill
Off
>=
Ok
Cancel

Name Object1

Type Ellipse

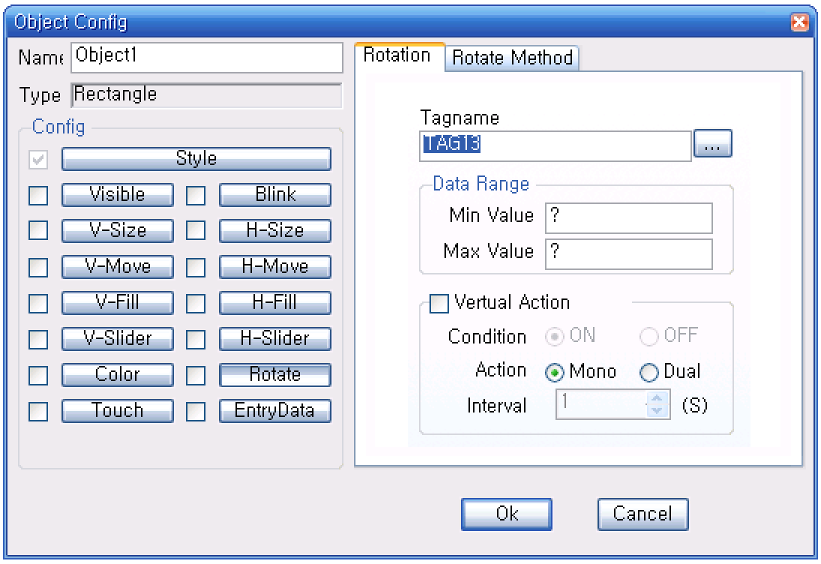
☑ Color Vari
Tagname TAG_2
Cond. ● On ○ Off ○ >=

☑ Color Vari
Tagname TAG_3
Cond. ● On ○ Off ○ >=

Color Vari 1 ~ 8	This is used to apply the condition of color variation. The condition can be entered up to 8.
Tag Name	This is used to the tag name or the operation expression for color variation.
Pen	This is used to set up the color of a line in color variation.
Fill	This is used to set up the color of a Fill in color variation.
Cond	On: If an entered tag is ON or an operation expression is TRUE, color variation is activated. Off: If an entered tag is OFF or an operation expression is FALSE, color variation is activated. >=: If the value of an entered tag or an operation expression is as same as an assigned value or bigger, color variation is activated.

Rotation

This is used to rotate an object as an assigned angle according to entered tag value.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Rotation
Rotate Method
Data Range
...
Ok
Cancel

Name: Object1
Type: Rectangle
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Tagname: TAG13
Min Value: ?
Max Value: ?
☐ Vertual Action
Condition: ● ON ○ OFF
Action: ● Mono ○ Dual
Interval: 1 (S)

Tag Name This is used to enter the tag name or the operation expression for Rotation. In case that an operation expression is entered, the minimum value and maximum value should be assigned.

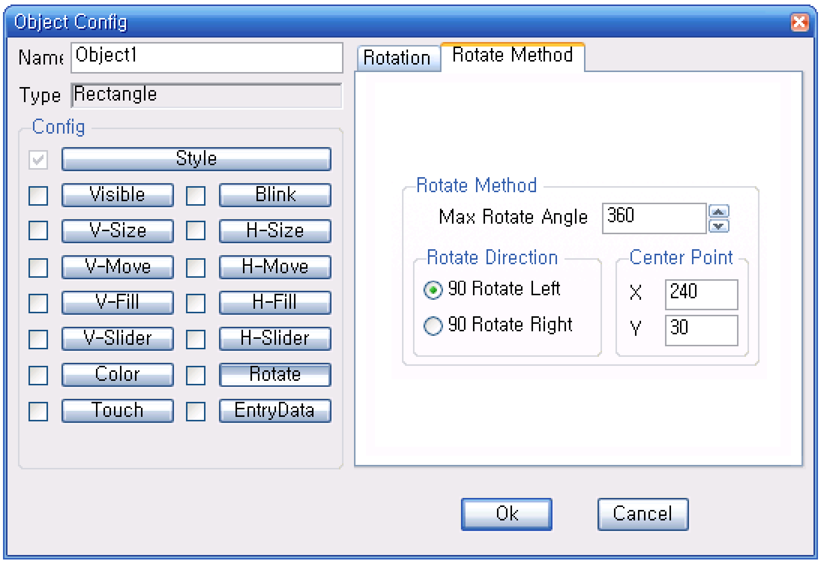
Data Range This is used to set up the range referred when an object is rotated.

'?' means that the minimum and maximum value of a corresponding tag is a default value.

The minimum value cannot bigger than the maximum value.

Virtual Action This is used to rotate an object not by tag value but by assigned condition. Refer to the contents for V-Size for the setup.

Rotate Method


Object Config
Config
☑ Style
☐ Visible ☐ Blink
☐ V-Size ☐ H-Size
☐ V-Move ☐ H-Move
☐ V-Fill ☐ H-Fill
☐ V-Slider ☐ H-Slider
☐ Color ☐ Rotate
☐ Touch ☐ EntryData
Rotation
Rotate Method
Ok
Cancel

Name: Object1
Type: Rectangle

Rotate Method
Max Rotate Angle: 360

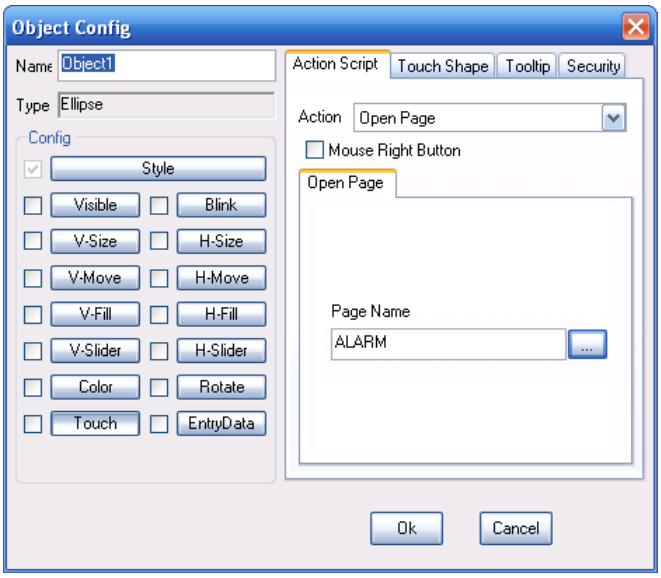
Rotate Direction
● 90 Rotate Left
○ 90 Rotate Right

Center Point
X: 240
Y: 30

Max. Rotation Angle	This means the maximum rotation angle of an object.
Rotate Direction	This is used to select a rotation direction. If you select the **‘90°Rotate Left’**, an object will be rotated counterclockwise and if you select the **‘90°Rotate Right’**, an object will be rotated clockwise.
Center Point	This is used to enter an ordinate value and an abscissa value as the center of rotation. Enter coordinates values by absolute coordinates in pixel.

Touch

This function is used to run a pre-defined action when you press or release an object with the keyboard or the mouse.


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Action Script
Touch Shape
Tooltip
Security
Open Page
...
Ok
Cancel

Name: Object1
Type: Ellipse
Action: Open Page
☐ Mouse Right Button
Page Name: ALARM

Action Script

Action This is used to define the action of an object. Refer to Chapter 13 Hot key for the items to set up each action.

Ex) Open Page: This is used to open a page.
Close Page: This is used to close a page.
Replace Page: This is to replace a page.
Write Tag Value: This is used to write a tag value.
Write Digital Value: This is used to write a digital tag value.
Command Expression: This is used to run a command expression.
Set up Hot key: This is used to set up a global Hot key.

Touch Shape

Beep Sound When you select an object, this is used to set up whether beep sounds or not.

Touch Color When you select an object, this is used to set up whether the color is varied or not.

Tool Tip

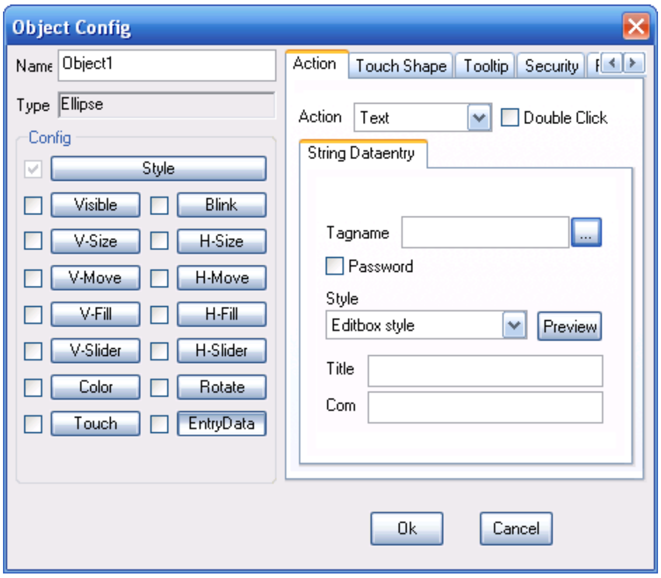
String This is used to enter the string displayed when the mouse is on a corresponding object.

Security

Security Level This is used to limit the authority to use control function by users. The security level can be set up from 1 to 100. The less number is, the higher authority is.

Entry Data

This function is used to select an object by using the mouse and the keyboard, and to enter data through a pre-defined dialog box.



Name: Object1
Type: Ellipse
Action: Text ☐ Double Click
☐ Password
Style: Editbox style

Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Action
Touch Shape
Tooltip
Security
String Dataentry
Tagname
...
Preview
Title
Com
Ok
Cancel

Action

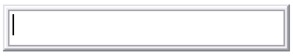
Action	Text	This is used to enter a string style data.
	Numeric	This is used to enter a numeric style data.
	Button	This is used to enter a button style data.

Double click This is used to activate the Data-In when double-clicking.

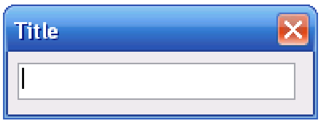
- **In Case of Text Style:** Refer to the following picture.

Tag Name	This is used to enter the name of the tag to which an entered value is set up. You may assign a corresponding tag through the **'Find Tag(…)'**.
Password	If this item is set up, an entered text will be displayed as the **"******"** on a window.
Style	This is used to assign the style of the window displayed. 5 styles can be assigned. (Refer to the following pictures.)

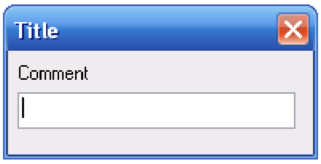
Edit Box Style: The window style to enter only



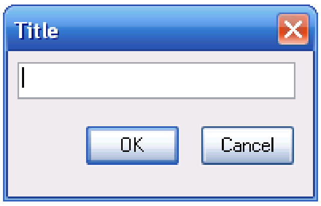
Window Style 1: The style to provide the title of a window



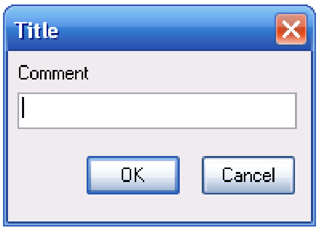
Window Style 2: The style to provide the title and comment of a window.



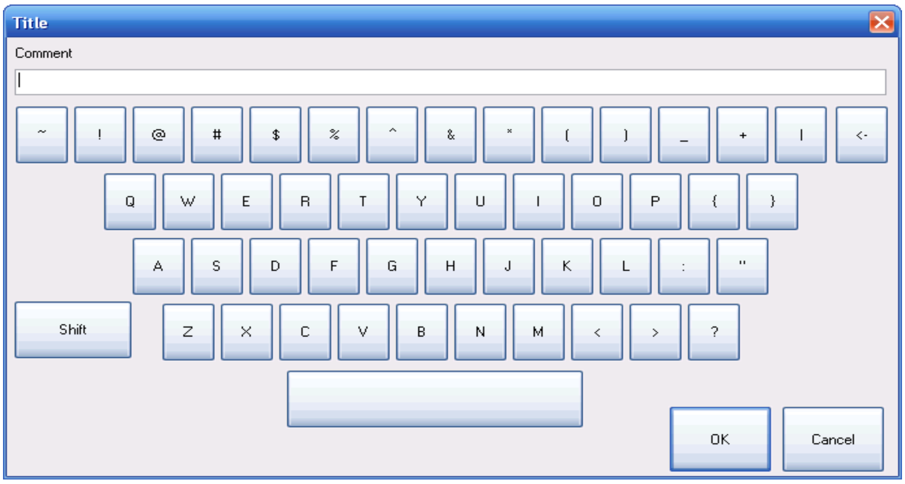
Window Style 3: The style to provide the title, OK button and Cancel button of a window.



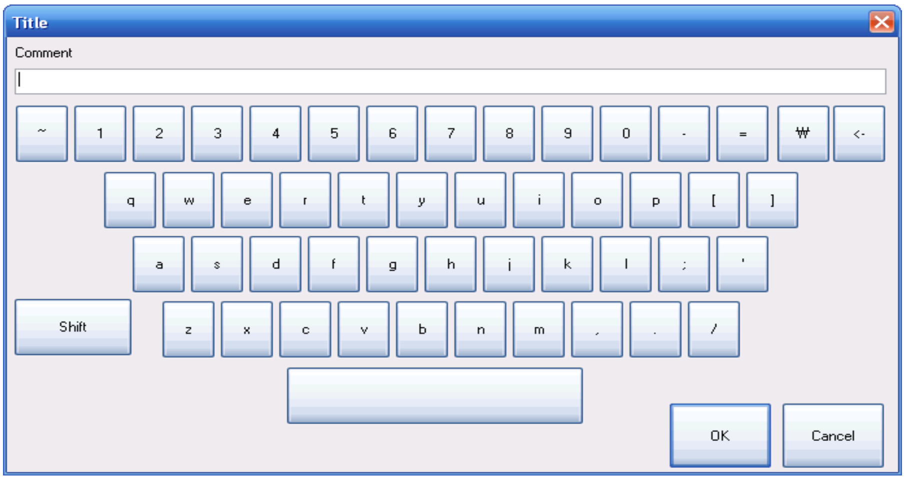
Window Style 4: The style to provide the title, comment, OK button and Cancel button of a window.



Window Style 5: Keyboard Style

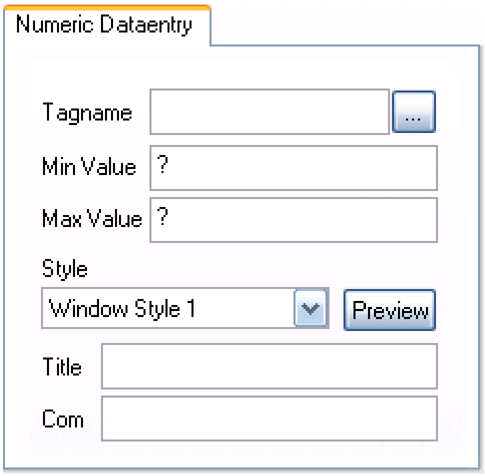

Title
Comment
~ ! @ # $ % ^ & * ( ) _ + | <-
Q W E R T Y U I O P { }
A S D F G H J K L : "
Shift Z X C V B N M < > ?
OK
Cancel

Window Style 6: Keyboard Style


Title
Comment
~ 1 2 3 4 5 6 7 8 9 0 - = ₩ <-
q w e r t y u i o p [ ]
a s d f g h j k l ; '
Shift z x c v b n m , . /
OK
Cancel

Title	This is used to enter the title of a text input window.
Comment	This is used to enter the description of a window.

- **In Case of Numeric Value Style**

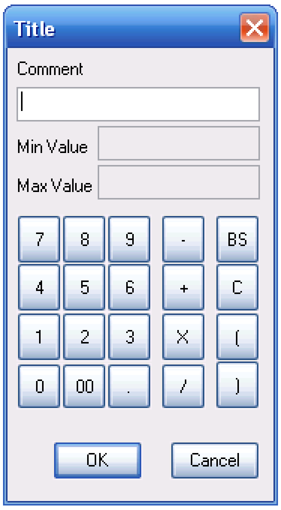

Numeric Dataentry
Tagname
...
Preview
Title
Com

Min Value ?

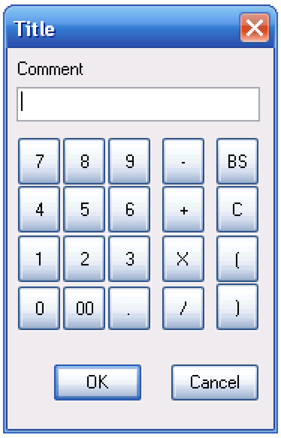
Max Value ?

Style: Window Style 1

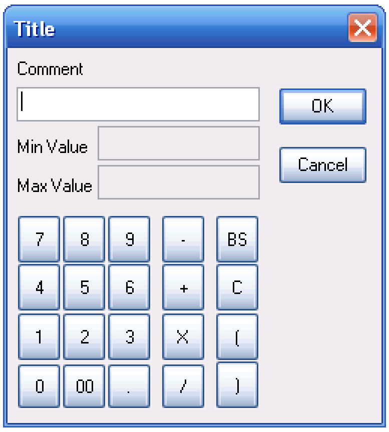
Tag Name	This is used to enter the name of the tag to which an entered value is set up. You may assign a corresponding tag through the **'Find Tag (…)'**.
Min. Value	This is used to assign the minimum value entered. **'?'** means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot bigger than the maximum Value.
Max. Value	This is used to assign the maximum value entered. **'?'** Means that the min. and max value of a corresponding tag is a default value.
Style	This is used to assign the styles of the window displayed. 11 styles can be assigned. (Refer to the following pictures.)


Title
Comment
Min Value
Max Value
7 8 9 - BS
4 5 6 + C
1 2 3 × (
0 00 . /)
OK
Cancel

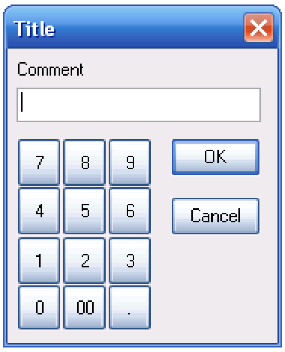
Window Style 1


Title
Comment
7 8 9 - BS
4 5 6 + C
1 2 3 × (
0 00 . /)
OK
Cancel

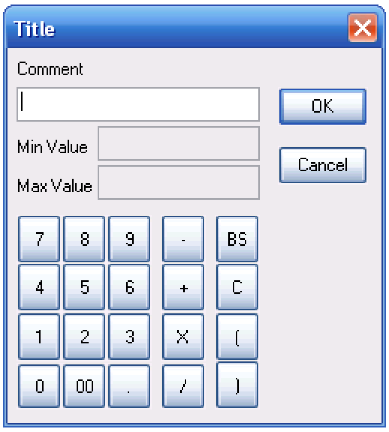
Window Style 2


Title
Comment
OK
Cancel
Min Value
Max Value
7 8 9 - BS
4 5 6 + C
1 2 3 × (
0 00 . /)

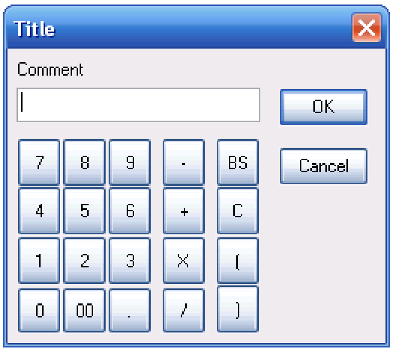
Window Style 3


Title
Comment
7 8 9
OK
4 5 6
Cancel
1 2 3
0 00 .

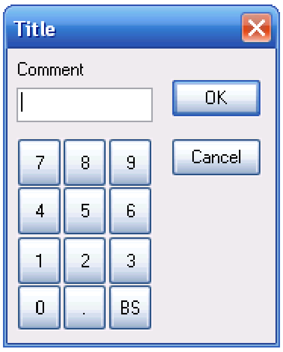
Window Style4


Title
Comment
OK
Min Value
Cancel
Max Value
7 8 9 - BS
4 5 6 + C
1 2 3 × (
0 00 . /)

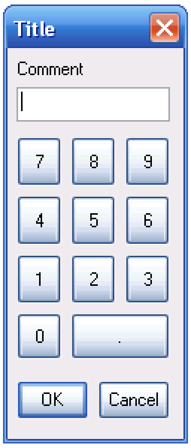
Window Style 5


Title
Comment
OK
Cancel
7 8 9 - BS
4 5 6 + C
1 2 3 × (
0 00 . /)

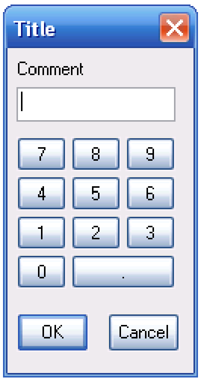
Window Style 6


Title
Comment
OK
Cancel
7 8 9
4 5 6
1 2 3
0 . BS

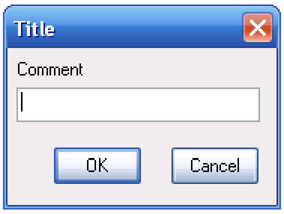
Window Style 7


Title
Comment
7 8 9
4 5 6
1 2 3
0 .
OK Cancel

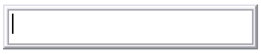
Window Style 8


Title
Comment
7 8 9
4 5 6
1 2 3
0 .
OK Cancel

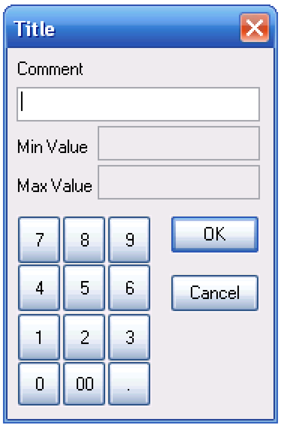
Window Style 9


Title
Comment
OK Cancel

Window Style 10



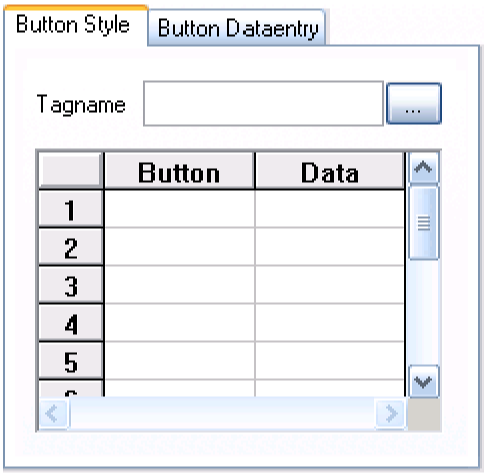
Window Style 11


Title
Comment
Min Value
Max Value
7 8 9
4 5 6
1 2 3
0 00 .
OK
Cancel

Window Style 12

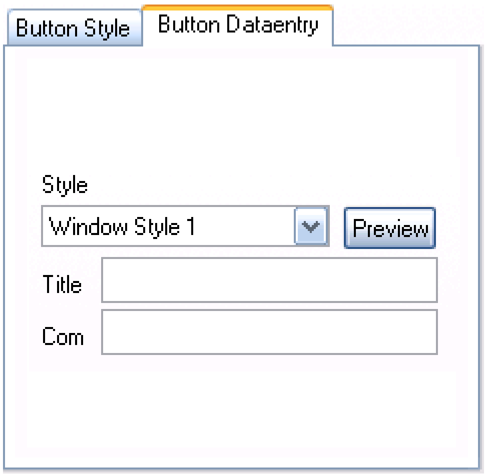
Window Style 13 ~ 19 are just bigger than Window Style 1 ~ 7.

- **In Case of Button Style**

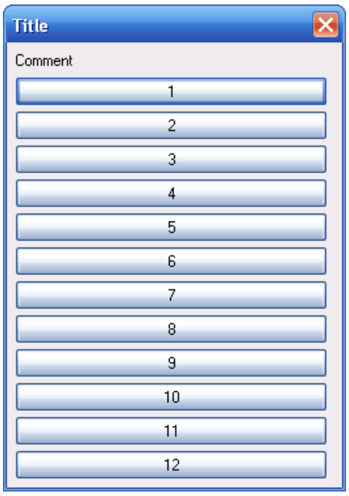

Button Style
Button Dataentry
Tagname
...
Button
Data
1
2
3
4
5

Button Style	Only entered buttons here are displayed and max 12 buttons are provided.
Tag Name	This is used to enter the name of the tag to which an entered value is set up. You may assign a corresponding tag through the **'Find Tag (…)'**.
Button	This is used to assign the string displayed on a button.
Data Value	This is used to enter the data value set up when clicking a corresponding button.

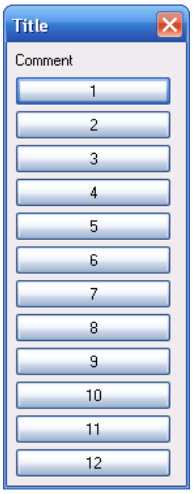
Button Data entry This is used to assign the button window displayed on an active window. 8 window types are provided.


Button Style
Button Dataentry
Preview
Title
Com

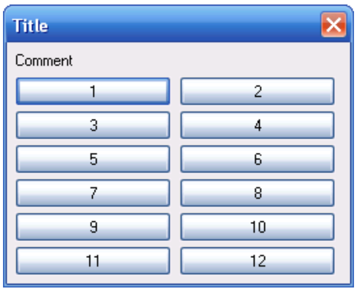
Style
Window Style 1


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

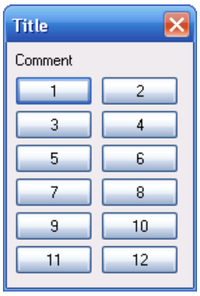
Window Style 1


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

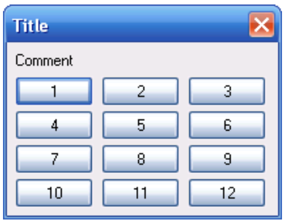
Window Style 2


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

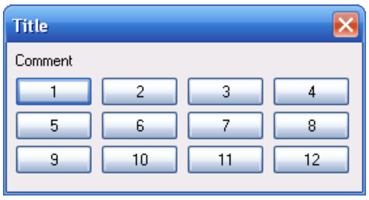
Window Style 3


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

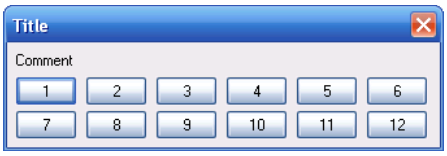
Window Style 4


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

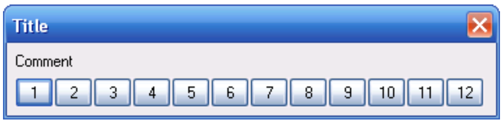
Window Style 5


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

Window Style 6

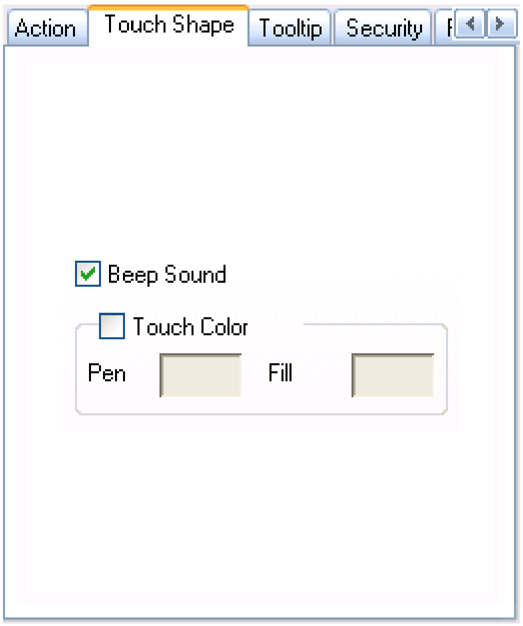

Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

Window Style 7


Title
Comment
1
2
3
4
5
6
7
8
9
10
11
12

Window Style 8

Touch Shape


Action
Touch Shape
Tooltip
Security
F

☑ Beep Sound

☐ Touch Color

Pen

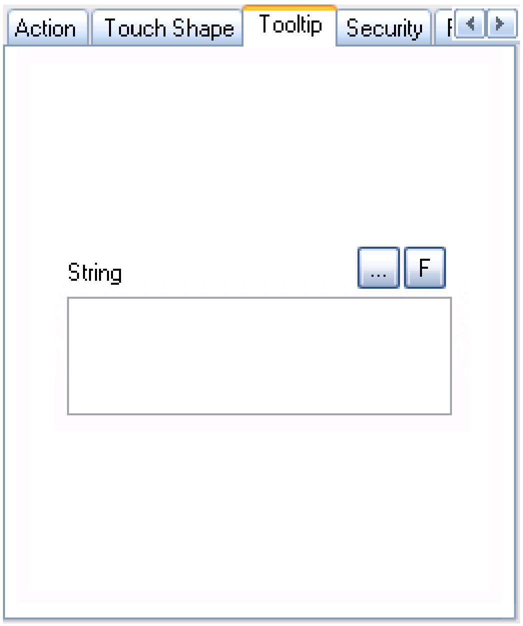
Fill

Beep Sound When you select a corresponding button, this is used to set up whether beep sounds or not.

Touch Color When you select a corresponding button, this is used to set up whether the color is varied or not.

Assign the color of the Fill and the Pen.

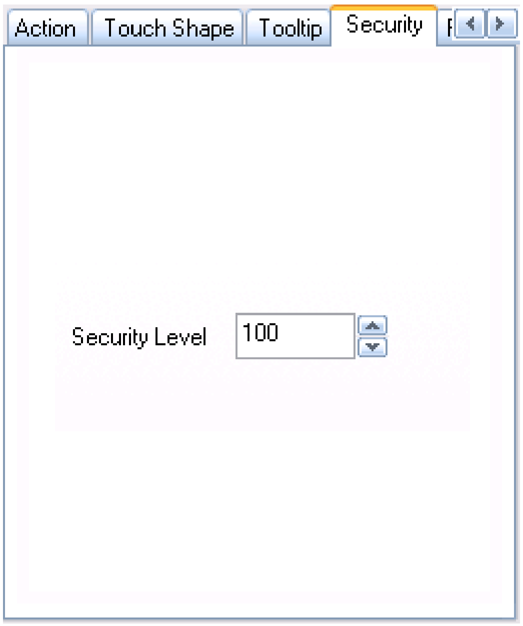
Tool Tip


Action
Touch Shape
Tooltip
Security
F
...
F

String

String This is used to enter the string displayed when the mouse is on a corresponding object.

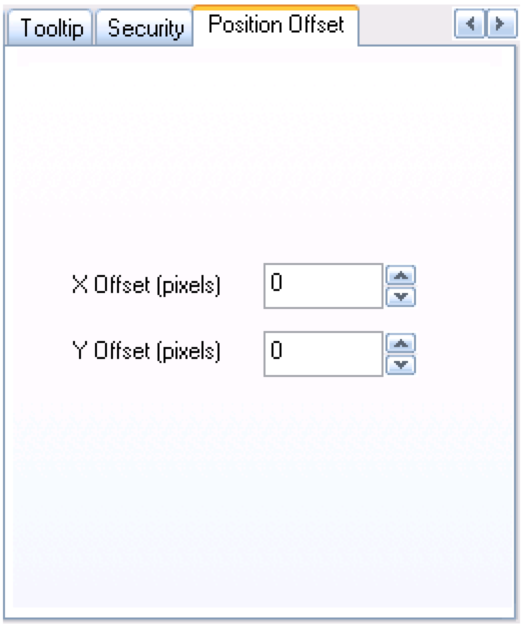
Security


Action
Touch Shape
Tooltip
Security

Security Level 100

Security Level	This is used to limit the authority to use the control function by users. The security level can be set up from 1 to 100. The less number is, the higher authority is.

Position Offset


Tooltip
Security
Position Offset

X Offset (pixels) 0

Y Offset (pixels) 0

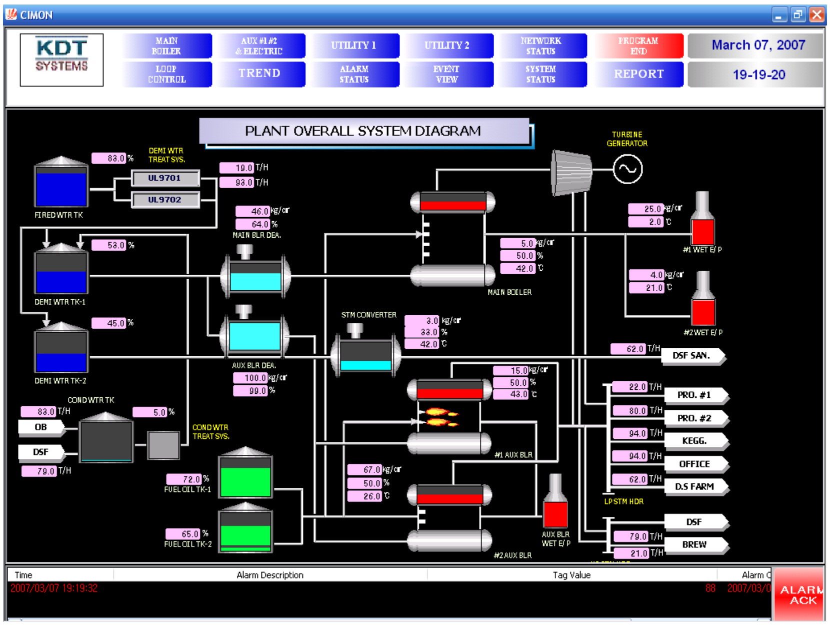
X Offset	Input X position of Data Entry Object
Y Offset	Input Y position of Data Entry Object

4.7 Displaying Static Page

A static page is the one that is always displayed when a system is operated. By using the static page, the system menu or the recent alarm window that is always displayed can appear.

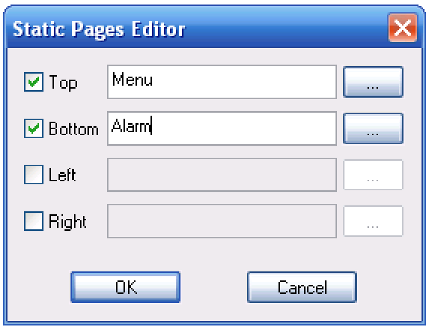
The static page can be positioned on the top, bottom, left and right of the full window, and several static pages can be used at the same time.

The following window is an example to display the system menu on the top of a window and the recent alarm on the bottom. Let’s assume the page name is Menu.pgx and the alarm page is Alarm.pgx.


CIMON
KDT SYSTEMS
MAIN BOILER
AUX #1 #2 & ELECTRIC
UTILITY 1
UTILITY 2
NETWORK STATUS
PROGRAM END
March 07, 2007
LOOP CONTROL
TREND
ALARM STATUS
EVENT VIEW
SYSTEM STATUS
REPORT
19-19-20
PLANT OVERALL SYSTEM DIAGRAM
TURBINE GENERATOR
DEMI WTR TREAT SYS.
UL9701
UL9702
FIRED WTR TK
DEMI WTR TK-1
DEMI WTR TK-2
MAIN BLR DEA.
AUX BLR DEA.
STM CONVERTER
MAIN BOILER
#1 WET E/P
#2 WET E/P
DSF SAN.
PRO. #1
PRO. #2
KEGG.
OFFICE
D.S FARM
DSF
BREW
COND WTR TK
COND WTR TREAT SYS.
OB
DSF
FUEL OIL TK-1
FUEL OIL TK-2
#1 AUX BLR
#2 AUX BLR
AUX BLR WET E/P
LP STM HDR
Time
Alarm Description
Tag Value
ALARM ACK

1. Select ‘Static Page’ in the File Menu.

2. Enter the top page and bottom page as follow


Static Pages Editor

☑ Top Menu ...

☑ Bottom Alarm ...

☐ Left ...

☐ Right ...

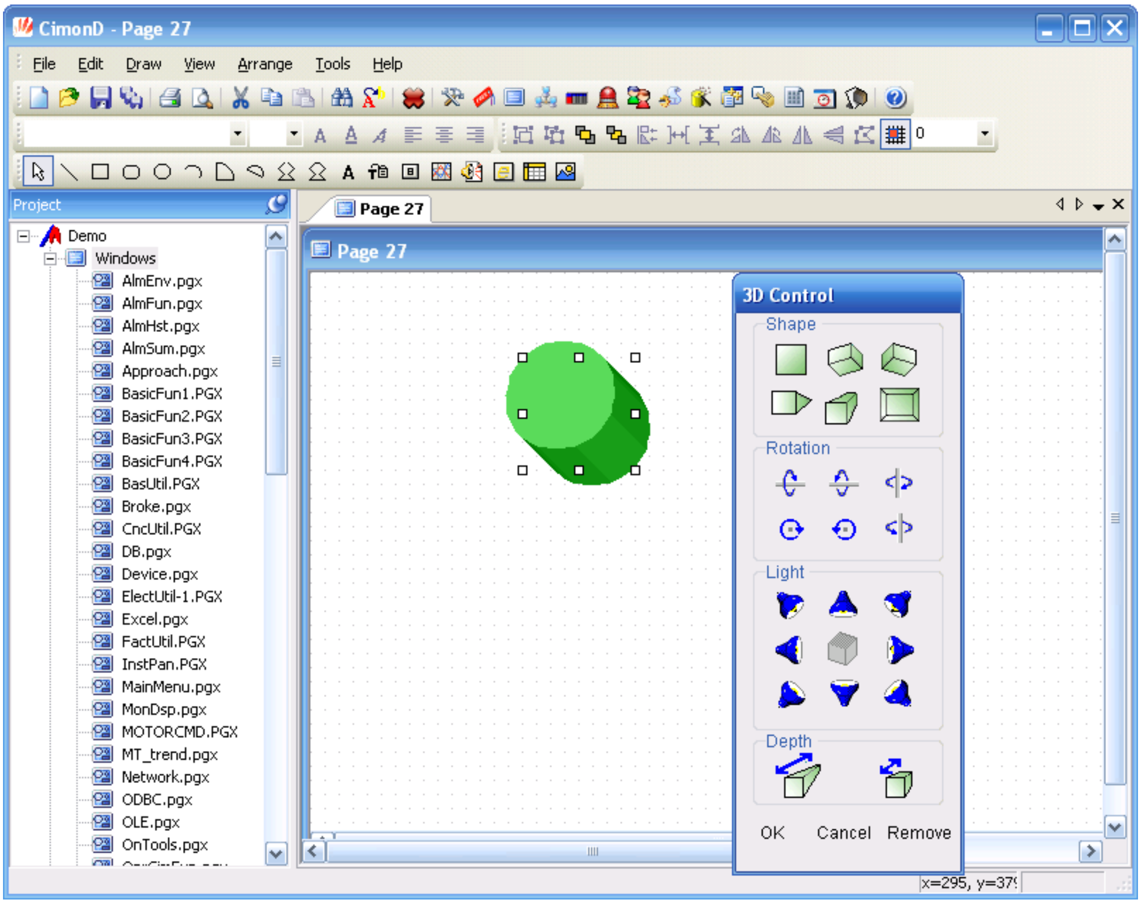
OK Cancel

4.8 3D Style

This convers used objects (rectangle, round box, ellipse, sector…) in CimonD into 3D Style.

If you select object in the page and select '3D Style' in Edit Menu, '3D Control' Dialog will appear.

You can make a 3D Style object using Shape, Rotate, Light and Depth button.


CimonD - Page 27
File
Edit
Draw
View
Arrange
Tools
Help
Project
Demo
Windows
AlmEnv.pgx
AlmFun.pgx
AlmHst.pgx
AlmSum.pgx
Approach.pgx
BasicFun1.PGX
BasicFun2.PGX
BasicFun3.PGX
BasicFun4.PGX
BasUtil.PGX
Broke.pgx
CncUtil.PGX
DB.pgx
Device.pgx
ElectUtil-1.PGX
Excel.pgx
FactUtil.PGX
InstPan.PGX
MainMenu.pgx
MonDsp.pgx
MOTORCMD.PGX
MT_trend.pgx
Network.pgx
ODBC.pgx
OLE.pgx
OnTools.pgx
Page 27
3D Control
Shape
Rotation
Light
Depth
OK
Cancel
Remove
x=295, y=37

1. Shape : It decide a 3D Style Shape.
2. Rotation : It rotate a 3D Style object.
3. Light : It change the position of the light.
4. Depth : It decide depth of 3D Style Object.
5. Remove : It remove 3D Style.

Chapter 5 Database

Database, as the basis of a system, promotes convenience and rationality in using a system by linking physical address of the devices controlling processes and devices each other.

All the functions provided by a system are operated on the basis of registered tags.

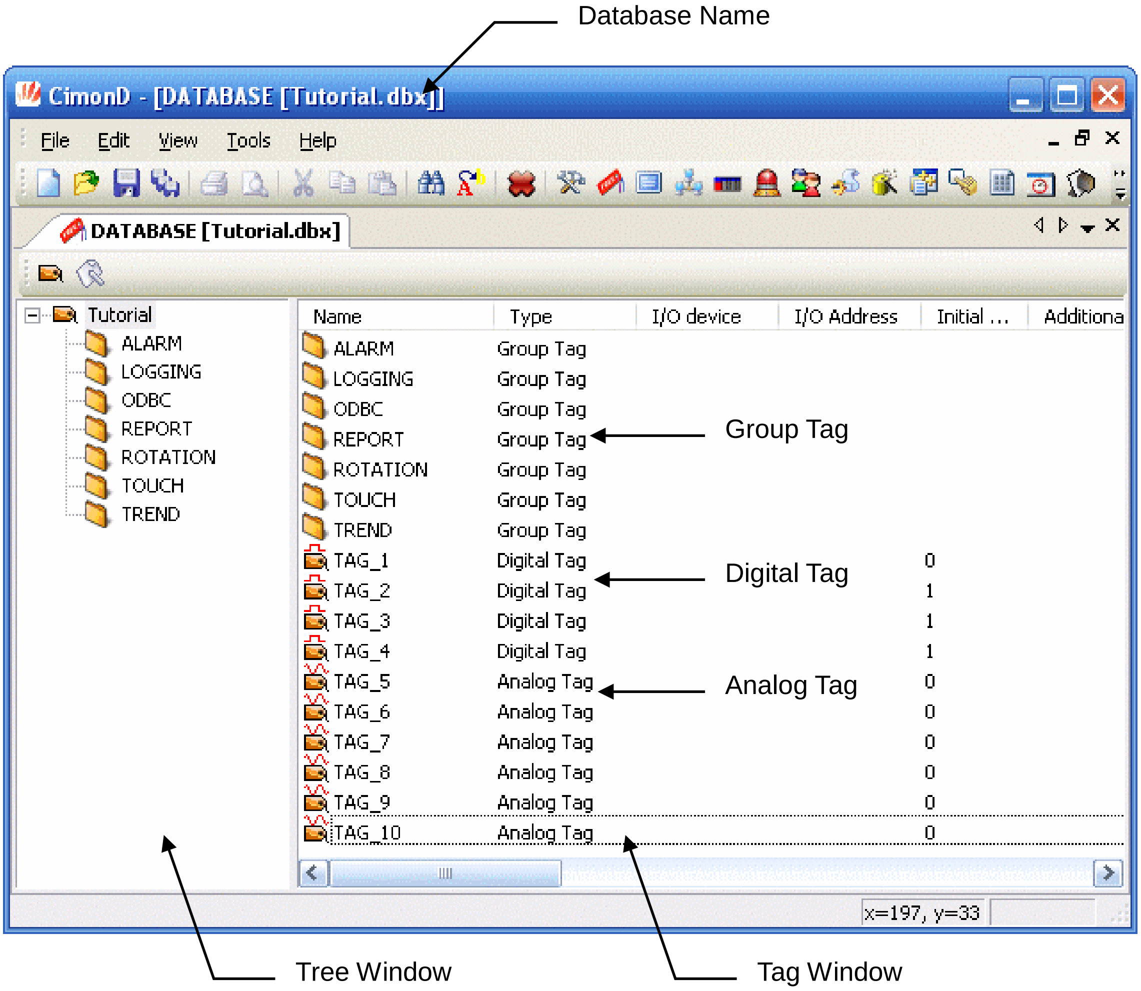
Database manager is a program to input, revise and edit all the tags provided from a system more conveniently.

Features

- There is no limitation on the number of the tags registered. (In case of Full points)
- The real tags linked with lower-ranked devices and internally used virtual tags are supported.
- Group, digital, analog and string tag are supported.
- It is available to on-line-edit a database.
- Previous status is kept when a system starts .
- It is available to on-line-revise or on-line-monitor the contents of the tag registered to a database.
- The manager is similar to the Windows Explorer for users' convenient use.
- Drag & Drop, Cut & Paste and the function to find/replace tags including special stings are supported for users' easy editing.
- Edited data can be delivered to MS Excel. On the contrary, as the data edited in Excel can be delivered to a database, the data can be outputted and managed easily.

5.1 Configuration of Database Window

A tree window and a tag window are similar to Windows Explorer to have the structure convenient to edit.


Database Name
CimonD - [DATABASE [Tutorial.dbx]]
File
Edit
View
Tools
Help
DATABASE [Tutorial.dbx]
Tutorial
ALARM
LOGGING
ODBC
REPORT
ROTATION
TOUCH
TREND
Group Tag
Digital Tag
Analog Tag
x=197, y=33
Tree Window
Tag Window

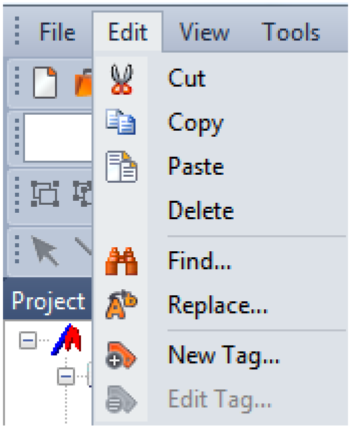
Name	Type	I/O device	I/O Address	Initial ...	Additiona
ALARM	Group Tag				
LOGGING	Group Tag				
ODBC	Group Tag				
REPORT	Group Tag				
ROTATION	Group Tag				
TOUCH	Group Tag				
TREND	Group Tag				
TAG_1	Digital Tag			0	
TAG_2	Digital Tag			1	
TAG_3	Digital Tag			1	
TAG_4	Digital Tag			1	
TAG_5	Analog Tag			0	
TAG_6	Analog Tag			0	
TAG_7	Analog Tag			0	
TAG_8	Analog Tag			0	
TAG_9	Analog Tag			0	
TAG_10	Analog Tag			0	

Tree Window A tree window shows the form structure of a group tag for users' easy management. Double-click each tag to extend or reduce a lower-ranked group (Opening or closing function). The tags belonging to a selected group will appear on the window.

Tag Window This shows a selected database or the tags belonging to a group tag. Each tag is imaged in icons and can be distinguished easily.

Select tags while pressing the Ctrl key to select several non-continuous tags. If you a tag while pressing the Shift key, all the tags from the first selected tag to the last selected tag will be selected at a time.

When you open the Database and click Edit, the below picture will appear.



This menu is used to edit the database.

Cut This is used to copy the tags selected as a block from a tag window to a clipboard and to delete them.

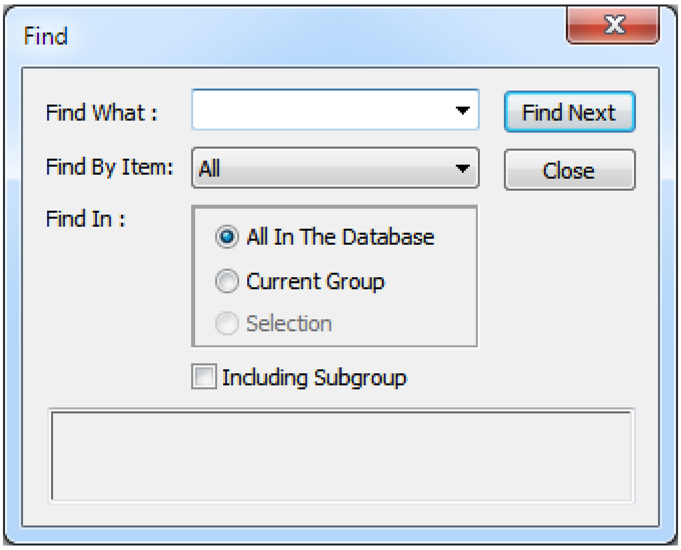
Copy This is used to copy the tags selected from a tag window to other group or other tag in them. Select the tag copied with the mouse. Click **'Copy'** to copy the selected tag to a clipboard.

Paste This is used to paste the tags copied to a clipboard as a block on a tag window. The tags pasted will be located under a selected tag and the dialog box that they have been copied will appear.

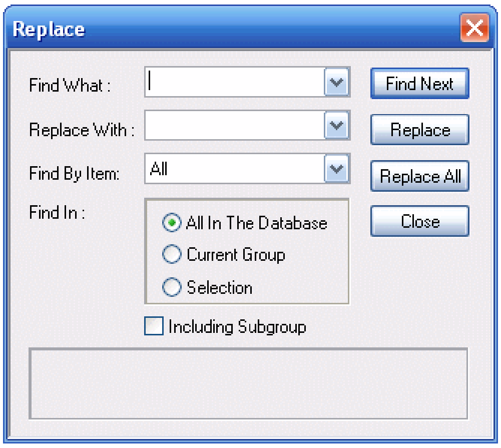
Delete This is used to delete the tags selected from a tag window.

Find This is used to find a corresponding string. Assign the Find What, the Find In and the Fine By Item to find the tag name and the description of a string. Enter the string found in the Find What and assign the Find In and the Find by Item. Press the 'Find Next' or the Enter.

In case that you continue to find a string in several locations, enter the Find What and press the '**Find Next'** button continuously to find the string.


Find
Find What :
Find By Item:
All
Find In :
● All In The Database
○ Current Group
○ Selection
☐ Including Subgroup
Find Next
Close

Replace This is used to replace a found string with other string. A string can be found and replaced by assigning the Find In and the Find by Item. Enter the string found in the Find What and the string replaced in the Replace With. Assign the Find In and the Find by Item and press the **'Replace'** button. The Replace All is used to replace the string entered in the Find What in the range of the Find In and the Find by Item. If you select the 'Including Subgroup', a corresponding string will be replaced in the Subgroup.


Replace
Find What :
Replace With :
Find By Item:
All
Find In :
● All In The Database
○ Current Group
○ Selection
☐ Including Subgroup
Find Next
Replace
Replace All
Close

(Example) How to replace all the real tags belonging to a group with virtual tags are as follows.

1. Select a group replaced in a database manager.
2. Select the Replace in the Edit menu.
3. Enter "-1" as the Find What.
4. Enter "0" as the Replace With.
5. Select "Real/Virtual Tag" as the Find In.

6. Select “Currently selected group” as the Find by Item.
7. Assign the Including Subgroup.
8. Select the Replace All.

New Tag This is used to add a new tag. (Refer to the Editing a tag.)

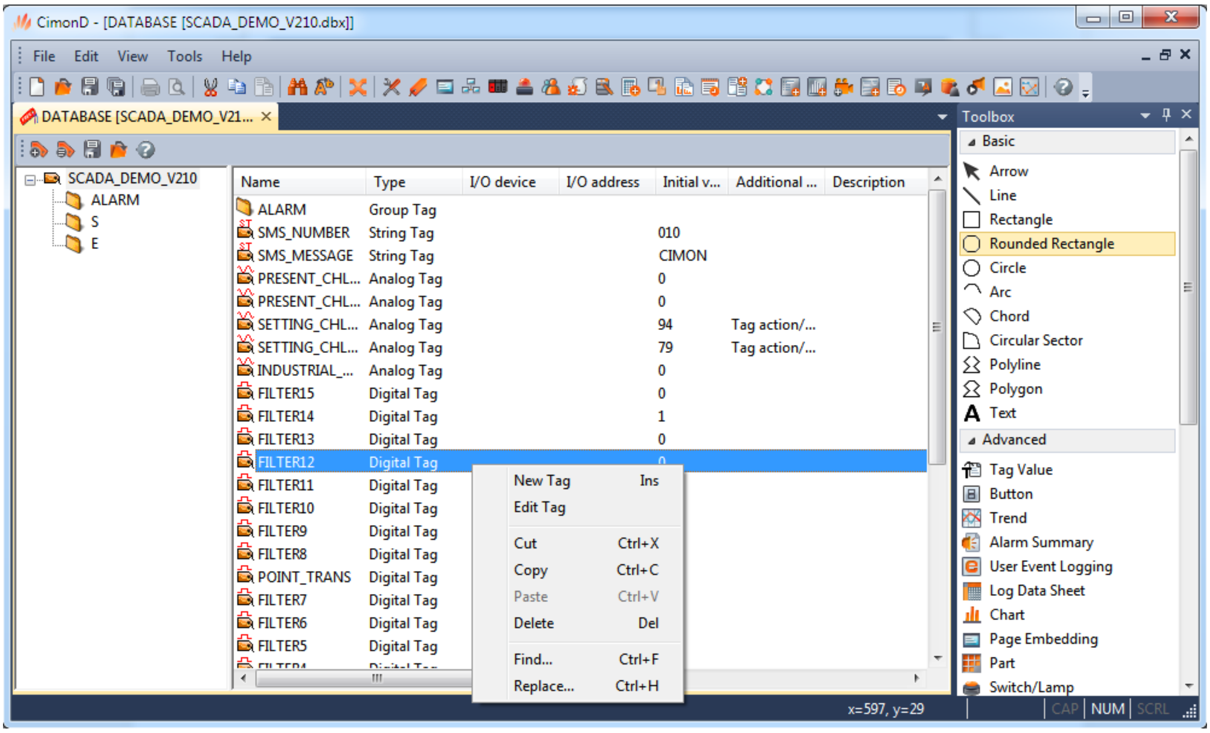
Edit Tag This is used to edit a selected tag. (Refer to the Editing a tag.)

5.2 Edit a Tag

1) How to Add a Tag

There are 6 ways as follows in order that the Edit Tag dialog box to add a tag appears.

- Select the **‘New Tag’** in the Edit menu.
- Click the **‘New Tag’** icon in the Toolbar.
- Press the Insert key.
- While the Edit dialog box for a tag at the bottom among the tags displayed on a tag window appears, press the **‘Next Tag’** button to make a new tag.
- Double-click the blank space of a tag window with the mouse.
- If you press the right button of your mouse on a Tag Window, a Floating Menu will appear. Select the **‘New Tag’** in this Floating Menu.


CimonD - [DATABASE [SCADA_DEMO_V210.dbx]]
File
Edit
View
Tools
Help
DATABASE [SCADA_DEMO_V21...
SCADA_DEMO_V210
ALARM
S
E
New Tag Ins
Edit Tag
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Del
Find... Ctrl+F
Replace... Ctrl+H
Toolbox
Basic
Arrow
Line
Rectangle
Rounded Rectangle
Circle
Arc
Chord
Circular Sector
Polyline
Polygon
Text
Advanced
Tag Value
Button
Trend
Alarm Summary
User Event Logging
Log Data Sheet
Chart
Page Embedding
Part
Switch/Lamp
x=597, y=29
CAP
NUM
SCRL

Name	Type	I/O device	I/O address	Initial v...	Additional ...	Description
ALARM	Group Tag					
SMS_NUMBER	String Tag			010		
SMS_MESSAGE	String Tag			CIMON		
PRESENT_CHL...	Analog Tag			0		
PRESENT_CHL...	Analog Tag			0		
SETTING_CHL...	Analog Tag			94	Tag action/...	
SETTING_CHL...	Analog Tag			79	Tag action/...	
INDUSTRIAL_...	Analog Tag			0		
FILTER15	Digital Tag			0		
FILTER14	Digital Tag			1		
FILTER13	Digital Tag			0		
FILTER12	Digital Tag			0		
FILTER11	Digital Tag					
FILTER10	Digital Tag					
FILTER9	Digital Tag					
FILTER8	Digital Tag					
POINT_TRANS	Digital Tag					
FILTER7	Digital Tag					
FILTER6	Digital Tag					
FILTER5	Digital Tag					

2) How to Revise a Tag

To revise an existing tag, use four ways as follows in order that the Edit Tag dialog box for a corresponding tag appears.

- Double-click the tag edited on a Tag window.
- Select the tag edited from a Tag window. And select the **‘Edit Tag’** in the menu.
- Click **‘Edit Tag’** icon in the toolbar.
- If you click the tag edited on a Tag Window, a Floating Menu will appear. Select the **‘Edit Tag’** in the Floating Menu.

3) How to Delete a Tag

Use four ways as follows to delete a tag.

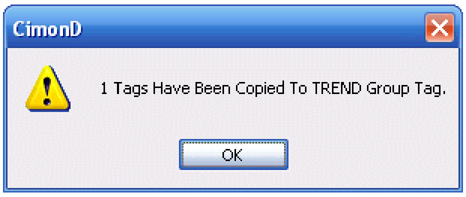
- Select the tag deleted from a Tag Window. And then press the **Del key**.
- Select the tag deleted from a Tag Window. And then click the **‘Cut’** icon the toolbar.
- Select the tag deleted from a Tag Window. And then select the **‘Delete’** or the **‘Cut’** in the ‘Edit’ menu.
- Select the tag deleted from a Tag Window. If you press the right button of your mouse on the selected tag, a Floating Menu will appear. Select the **‘Delete’** or the **‘Cut’** in the Floating Menu.

4) How to Copy a Tag

1. Select the tag copied from a Tag Window.
2. Select the ‘Cut’ or ‘Copy’. There are 4 ways as follows to cut or copy.
    - Select the **‘Cut’** or the **‘Copy’** in the ‘Edit’ menu.
    - Press the **‘Ctrl + X (Cut)’** or the **‘Ctrl + C (Copy)’** key.
    - It is available to copy by Drag & Drop. Refer to the below explanation for the Drag & Drop.
    - If you press the right button of your mouse on a selected tag, a Floating Menu will appear. Select the **‘Cut’** or **‘Copy’** from this Floating Menu.
3. Move to the location copied. And then select the **‘Paste’** or press the **‘Ctrl + V (Paste)’**.

5) How to Use Drag & Drop

1. The tags selected from a tree Window and a Tag Window can be copied to other Tree Window or Tag Window by using Drag & Drop action with the mouse.
2. In case that a tag is dropped on a Tag Window, it is copied to the location lower than a selected tag in order. In case that the window of a selected tag is as same as the window of a dropped tag, it won't be copied but moved. In case that a group tag is selected and be dragged & dropped, all the tags belonging to a group tag will be copied.
3. In case that the tags selected from a Tag Window are dropped on a Tree Window, they will be copied to the inside of a corresponding group tag.
4. In case that the group tags selected from a Tree Window are dropped on the Tree Window, they will be copied to a new group in a corresponding group tag.
5. After they are copied, the dialog box informing the number of copied tags and the completion appears.



1 Tags Have Been Copied To TREND Group Tag.

▶ Note on entering tag name

- Special symbols cannot be used as a tag name.

(Example) Space, Tab, @, *, / +. –

- Numeric can be used as a tag name, but it cannot be put on the first of a tag name.

(Example) 1DIGITAL: 1DIGITAL cannot be used as a tag name.
GRP1: GRP1can be used as a tag name.

- There is no difference between capital and small characters.
- Only one tag name can be used in a group.

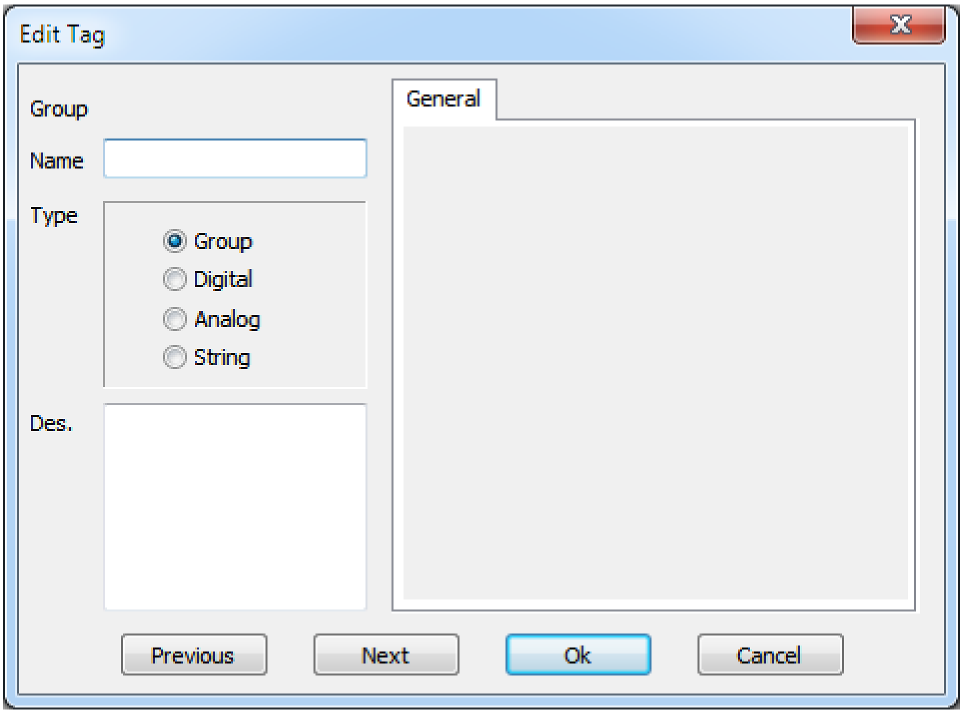
5.3 Types of Tag

1) Group Tag

It is inefficient in view of operation that users input a lot of tags on a window to construct a database. Accordingly, a group tag is used to put together and manage related tags each other as tree form (Similar to concept of directory) differently from a tag with real contact such as digital, analog, string and etc.

Group Tag Use the previous way to open a Edit tag dialog box. Assign a Group as the Type and the Name, and Enter the Description. And then assign the General and press the Ok button.

- **General**



Name This is used to enter the name of the group created. Refer to the previously explained note about entering a tag name.

Tag Variable:

NAME (Whole tag name including names of high-ranked groups)

NAME2 (Tag name except names of high-ranked groups)

Description This is used to enter the help or the detailed explanation for a group.

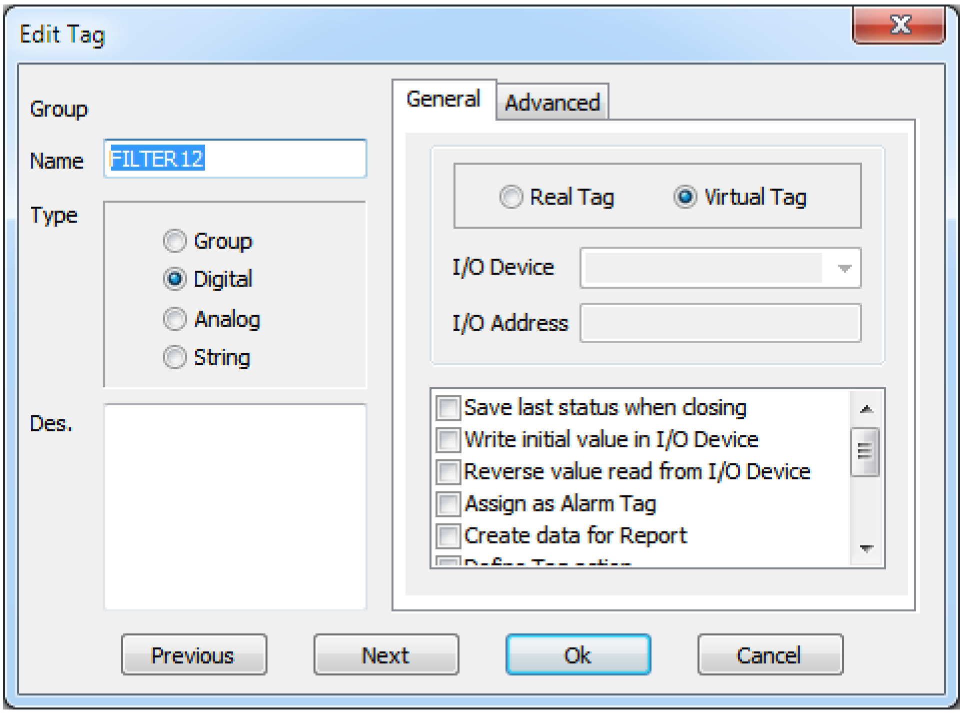
Previous This is used to register a currently edited tag and to load a previous tag.

Next This is used to register a currently edited tag and to load a next tag. If a currently edited tag is the last, an Edit Tag dialog box will be the tag-inserting mode.

2) Digital Tag

This, as one of system tags, is used to display the On/Off status of a contact point as 1 and 0. The status of On-Label & Off-Label or the status with the value distinguishing True & False can be set up as a digital tag.

- General


Edit Tag
Group
Name
Type
○ Group
● Digital
○ Analog
○ String
Des.
General
Advanced
I/O Device
I/O Address
Previous
Next
Ok
Cancel

Name: FILTER12

○ Real Tag ● Virtual Tag

☐ Save last status when closing
☐ Write initial value in I/O Device
☐ Reverse value read from I/O Device
☐ Assign as Alarm Tag
☐ Create data for Report

Name	This is used to enter the name of a digital tag. Refer to the previously explained note about entering a tag name.
Description	This is used to enter the description for a corresponding digital tag. This can be entered in the combination of English, Korean, numeric and special character.
Tag Setup	This is used to set up one between virtual tag and real tag. Tag Variable: REALTAG (If 1, real tag. If 0, virtual tag)

Real Tag	This is the tag of which value is varied according to the status of the outer device linked directly to the CIMON.
Virtual Tag	This is the tag of which value is varied in the CIMON.

I/O Device This is used to enter the name of the outer device to which a digital tag belongs. The name of the outer device is the one that has been assigned in “Set up I/O Device”. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

Tag Variable: DEVICE

I/O Address This is used to set up the address to assign a tag in the outer device to which a digital tag belongs. Enter an address according to the peculiar address assignment type of each outer device. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

Tag Variable: ADDRESS

Save the last status when closing

This is use to save all items of a currently set tag to a database file when the CimonX is exited. If you assign this item, the last revised data will be kept in case of loading the database.

Write initial value in I/O Device

This is effective in case of a real tag and this is used to set up in case that the initial value assigned in the Advanced is written to the device (PLC) when the CIMON runs.

Reverse value read from I/O Device

This is effective in case of a real tag and is used to process 0 as eng. Value in the CIMON in case that a device value is 1 and 1 in case that it is 0. This is used to reverse ON/OFF in a device.

Assign as Alarm Tag

This is used to make an alarm according to tag value variation. If this is selected, the Alarm Setup tap control will be added.

Tag Variable: ALARMTYPE (If 0, alarm is not assigned. Otherwise, the type of an assigned alarm.)

Create data for Report

This is used to use the tag for a report. Select this item to log and save the diverse data necessary to output a report.

Define Tag action

This is used to assign the tag action for a tag. If this item is selected, the Tag Action tap control will be added. Enter the Tag Action in tab control.

Run tag action for Tag value change

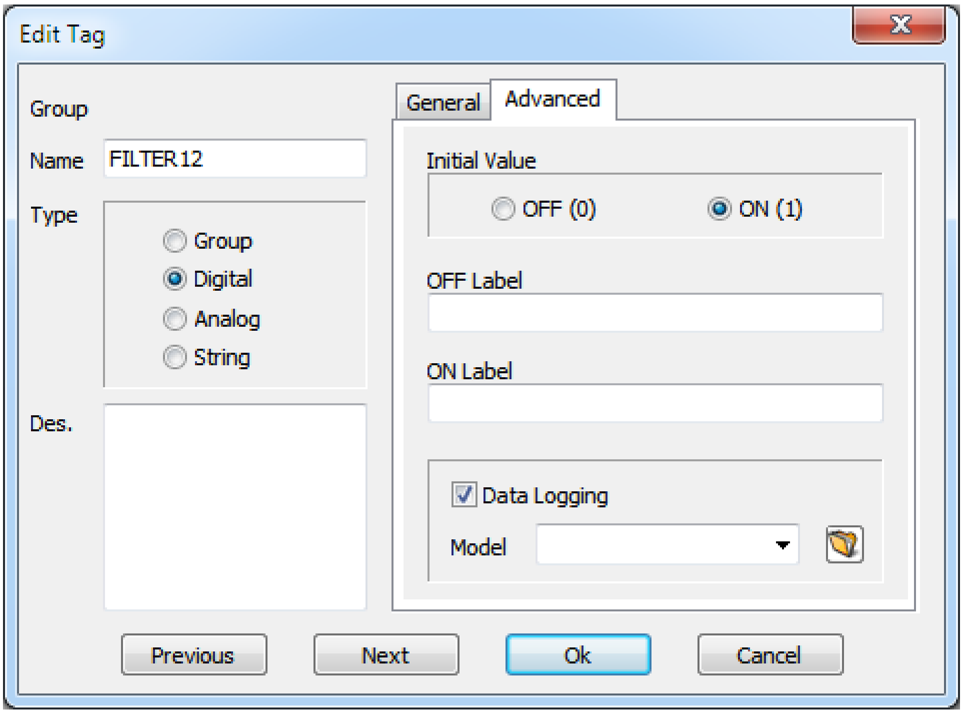
This is used to run an assigned tag action when a tag value is changed. This item can be assigned only in the case “Assign tag action” is selected.

Local operation Tag

Tag Alarm acknowledge action

Real Tag init no Tag action

- **Advanced**



Edit Tag

Group

Name FILTER12

Type
○ Group
● Digital
○ Analog
○ String

Des.

Initial Value: ○ OFF (0) ● ON (1)

OFF Label

ON Label

☑ Data Logging

Model

Initial Value Select the initial value of a tag between OFF (0) and ON (1) when the CIMON starts.

OFF Label This is the string displayed in case that a corresponding digital tag is OFF (0).

Tag Variable: OFFLABEL

ON Label This is the string displayed in case that a corresponding digital tag is ON (1).

Tag Variable: ONLABEL

(Reference) Use tag variable Label to display a string according to digital tag status.

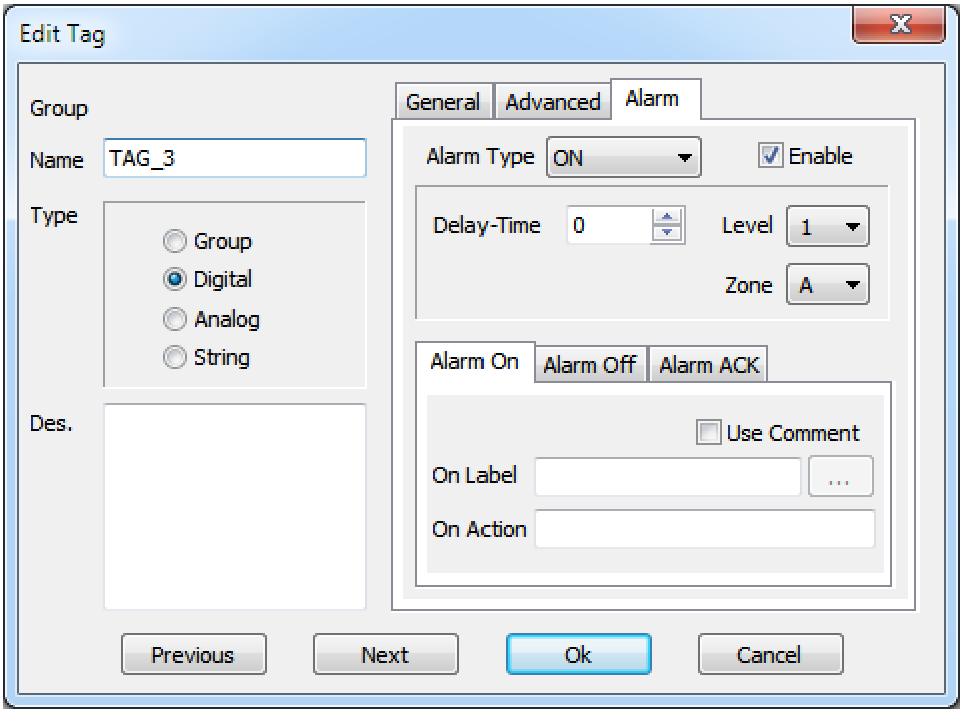
The tag variable Label will output OFF Label if a tag value is 0 and ON Label if 1.

Data Logging This is used to register as the tag for a historical trend. If this item is selected, a Model should be assigned. And a tag value is saved in the logging type of an assigned logging model. You may select … button at the right to revise the model. The details are explained in the Data Logging.

Tag Variable: DATALOG (If 1, data logging registered. If 0, not registered.)

- **Alarm**

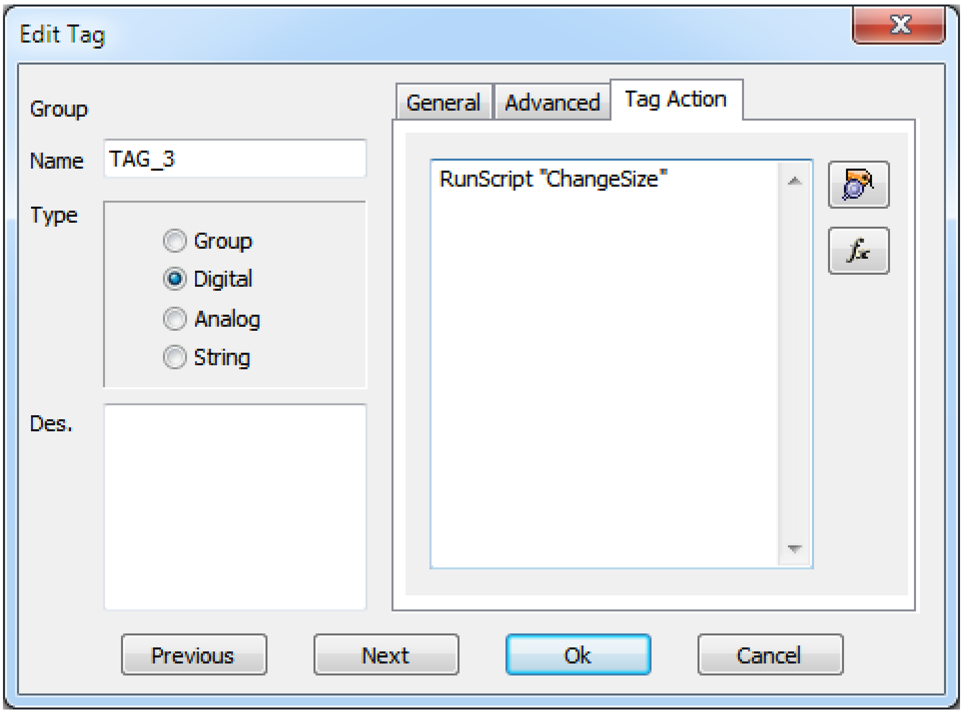
Refer to the Alarm Setup Window for a Digital Tag in the Chapter 7.


Edit Tag
Group
Name
Type
○ Group
● Digital
○ Analog
○ String
Des.
General
Advanced
Alarm
Delay-Time
Level
Zone
Alarm On
Alarm Off
Alarm ACK
On Label
On Action
...
Previous
Next
Ok
Cancel

Name: TAG_3
Alarm Type: ON
☑ Enable
Delay-Time: 0
Level: 1
Zone: A
☐ Use Comment

- **Tag Action**

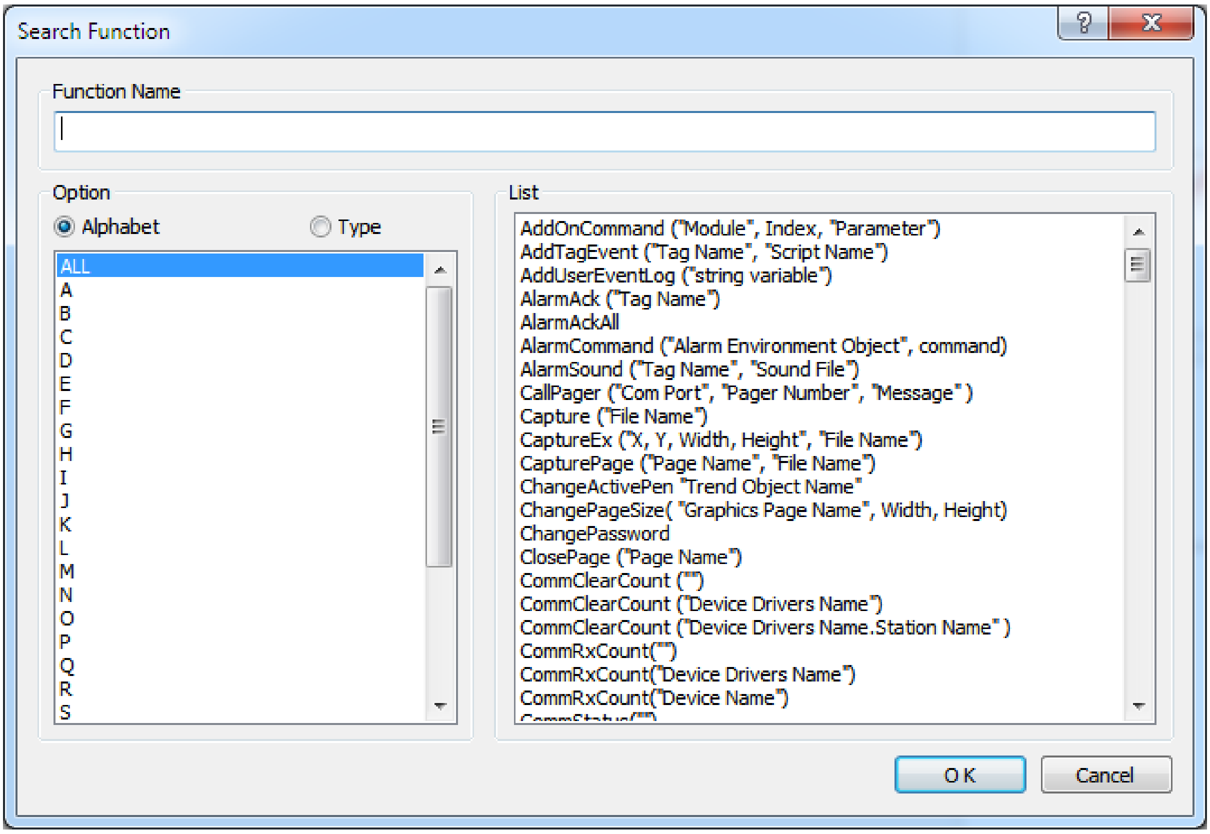
Enter a specific action for this tag. A defined tag action automatically will be run in case that a tag value is changed if the “Run tag action for Tag value change” is selected in General Tab. **Define Tag action** in General Tab must be selected.


Edit Tag
Group
Name
Type
○ Group
● Digital
○ Analog
○ String
Des.
General
Advanced
Tag Action
Previous
Next
Ok
Cancel

Name: TAG_3

RunScript "ChangeSize"

Select Tag	This is used to show a Select Tag dialog box. Select and enter a tag name.
Fx	This is used to show a Select Function dialog box. Select and enter a CIMON Function.

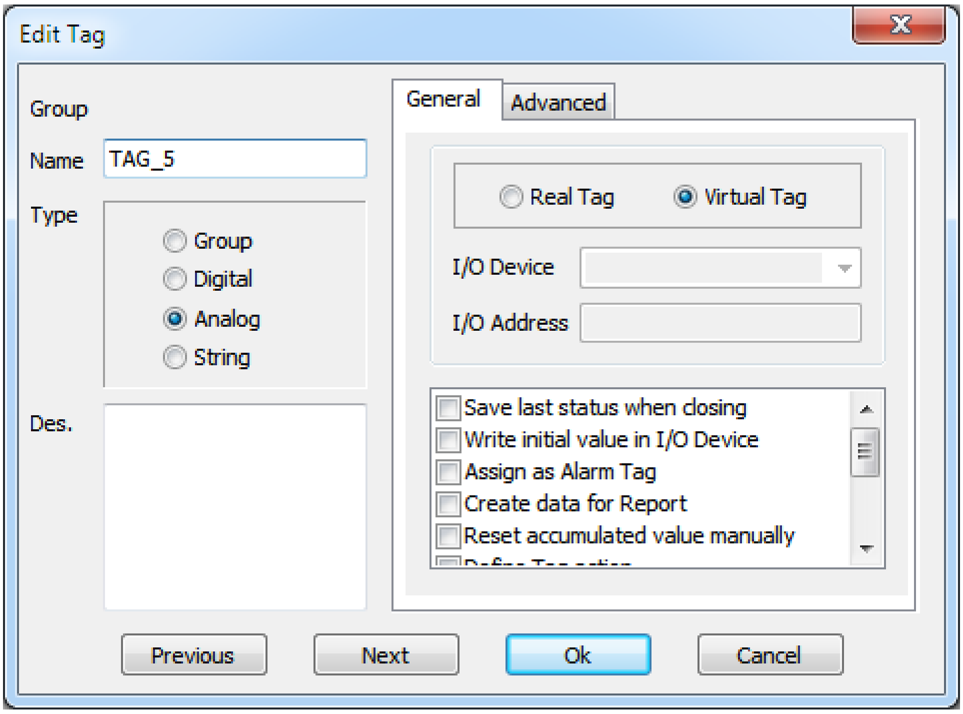

Search Function
Function Name
Option
● Alphabet
○ Type
ALL
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
List
O K
Cancel

```
AddOnCommand ("Module", Index, "Parameter")
AddTagEvent ("Tag Name", "Script Name")
AddUserEventLog ("string variable")
AlarmAck ("Tag Name")
AlarmAckAll
AlarmCommand ("Alarm Environment Object", command)
AlarmSound ("Tag Name", "Sound File")
CallPager ("Com Port", "Pager Number", "Message" )
Capture ("File Name")
CaptureEx ("X, Y, Width, Height", "File Name")
CapturePage ("Page Name", "File Name")
ChangeActivePen "Trend Object Name"
ChangePageSize( "Graphics Page Name", Width, Height)
ChangePassword
ClosePage ("Page Name")
CommClearCount ("")
CommClearCount ("Device Drivers Name")
CommClearCount ("Device Drivers Name.Station Name" )
CommRxCount("")
CommRxCount("Device Drivers Name")
CommRxCount("Device Name")
```

3) Analog Tag

This, as one of system tags, is the tag to process physical values such as the temperature and pressure of a contact point. In this case, the range of an analog value can be set up to display input/output value as numeric value.

- **General**



Name: TAG_5

Type: ○ Group ○ Digital ● Analog ○ String

○ Real Tag ● Virtual Tag

☐ Save last status when closing
☐ Write initial value in I/O Device
☐ Assign as Alarm Tag
☐ Create data for Report
☐ Reset accumulated value manually

Name	This is used to enter the name of an analog tag. Refer to the previously explained note about entering a tag name.
Description	This is used to enter the description on a corresponding analog tag.
Tag Setup	This is used to set up one between virtual tag and real tag. Tag Variable: REALTAG (If 1, real tag. If 0, virtual tag)

Real Tag	This is the tag of which value is varied according to the status of the outer device linked directly to the CIMON.
Virtual Tag	This is the tag of which value is varied in the CIMON.

I/O Device	This is used to enter the name of the outer device to which an analog tag belongs. The name of the outer device is the one that has been assigned in “Set up I/O

Device”. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

I/O Address This is used to set up the address that assigns a tag in the outer device to which an analog tag belongs. Enter an address according to the peculiar address assignment type of each outer device. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

Save the last status when closing

This is use to save all items of a currently set tag to a database file when the CimonX is exited. If you assign this item, the last revised data will be kept in case of loading the database.

Write initial value in I/O Device

This is effective in case of a real tag and this is used to set up in case that the initial value assigned in the Advanced is written to the device (PLC) when the CIMON runs.

Assign as Alarm Tag

This is used to make an alarm according to tag value variation. If this is selected, the Alarm Setup tap control will be added.

Tag Variable: ALARMTYPE (If 0, alarm is not assigned. Otherwise, the type of an assigned alarm.)

Create data for Report

This is used to use the tag for a report. Select this item to log and save the diverse data necessary to output a report.

Reset accumulated value manually

This is used to reset an accumulated value tag manually. This item is effective in only case that a tag is an accumulated value tag and is selected for a report. In case of being selected, though the value is reset when the accumulated value is calculated, it is not considered that it is reset over a maximum value. Unless it is not selected, it is considered that the value is reset over a maximum value.

Define Tag action

This is used to assign the tag action for a tag. If this item is selected, the Tag Action tap control will be added. Enter the Tag Action in tab control.

Run tag action for Tag value change

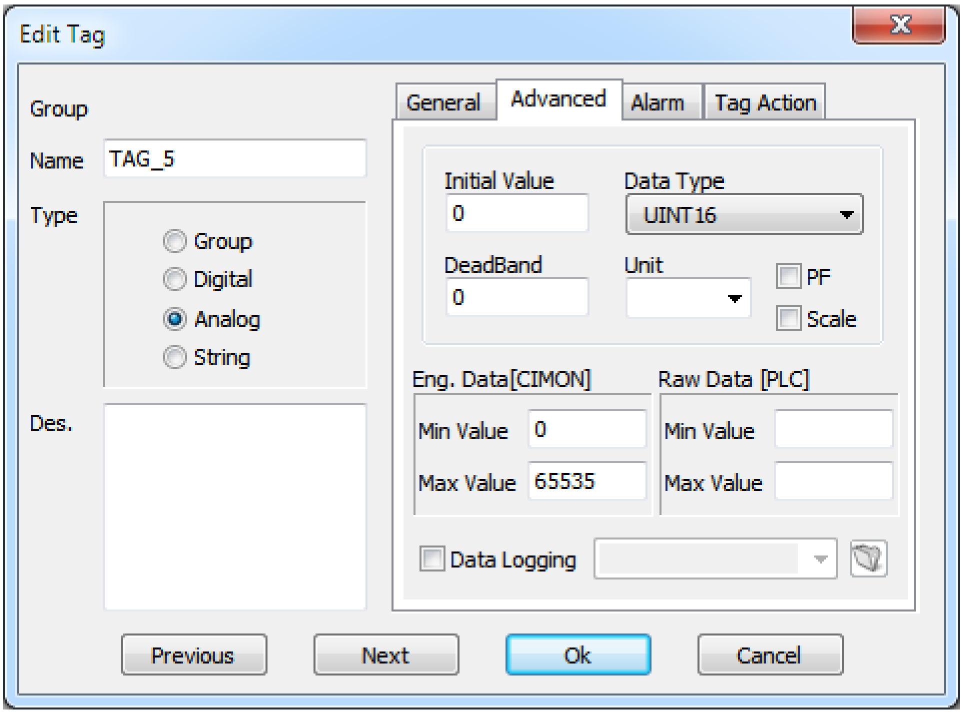
This is used to run an assigned tag action when a tag value is changed. This item can be assigned only in the case “Assign tag action” is selected.

Local operation Tag

Tag Alarm acknowledge action

Real Tag init no Tag action

- **Advanced**



Name: TAG_5

Type: ○ Group ○ Digital ● Analog ○ String

Initial Value: 0

Data Type: UINT16

DeadBand: 0

Unit:

☐ PF

☐ Scale

Eng. Data[CIMON] Min Value: 0

Eng. Data[CIMON] Max Value: 65535

Raw Data [PLC] Min Value:

Raw Data [PLC] Max Value:

☐ Data Logging

Initial Value	This is used to enter the initial value of a tag when the CIMON starts.
Data Type	In case a tag value is saved as site tag type, this is assigned to convert the saved value in a PLC to the value in the CIMON. A site data value is set up as follows according to the saving type of it.

TYPE	DESCRIPTION	Range of Expression value
INT8	Integer value expressed in 8 bit	–128 ↔ 127
INT16	Integer value expressed in 16 bit	–32768 ↔ 32767
INT32	Integer value expressed in 32 bit	-2147483648 ↔ 2147483647
UINT8	Positive integer value expressed in 8 bit	0 ↔ 255
UINT16	Positive integer value expressed in 16 bit	0 ↔ 65535
UINT32	Positive integer value expressed in 32 bit	0 ↔ 4294967295
BCD8	Value expressed in 8 bit of BCD type	–79 ↔ 79
BCD16	Value expressed in 16 bit of BCD type	–7999 ↔ 7999
BCD32	Value expressed in 32 bit of BCD type	–79999999 ↔ 79999999
UBCD8	Positive value expressed in 8 bit of BCD type	0 ↔ 99
UBCD16	Positive value expressed in 16 bit of BCD type	0 ↔ 9999
UBCD32	Positive value expressed in 32 bit of BCD type	0↔ 99999999
Float	Decimal point	-3.40282e+038 ↔ 3.40282e+038

DeadBand This is the minimum variation value to show whether a tag value is varied. In case a real value is varied less than DeadBand, it is considered that the value is not varied

Unit This is used to assign the unit of the value that a tag displays.

PF This used to assign a tag as power factor tag. If a tag is selected as power factor tag, the trend will be drawn to fit to PF value. The value is processed to fit in the PF value.

Scale The raw data from a site device can be converted to eng. values by Scale/Offset method and Max./Min. method. If you select this item, it will be converted by Scale/Offset method. Enter the Scale value and the Offset value here. If you do not select this item, raw data will be calculated by Max./Min. method. In this case, enter the max. value and min. value.

- Scale/Offset Method

  The raw data from a site device is calculated as follows.

  Eng. Data = (Raw Data X Scale) + Offset

  (Ex.) In case Scale is 0.1 and Offset is 10, if a raw data is 2000, the eng. Data will be as follows.

  (2000 X 0.1) + 10 = 210

- Max./Min. Method

  By entering the min. value & max. value of the raw data from a site device and the eng. data for it, the real value is calculated in the ratio.

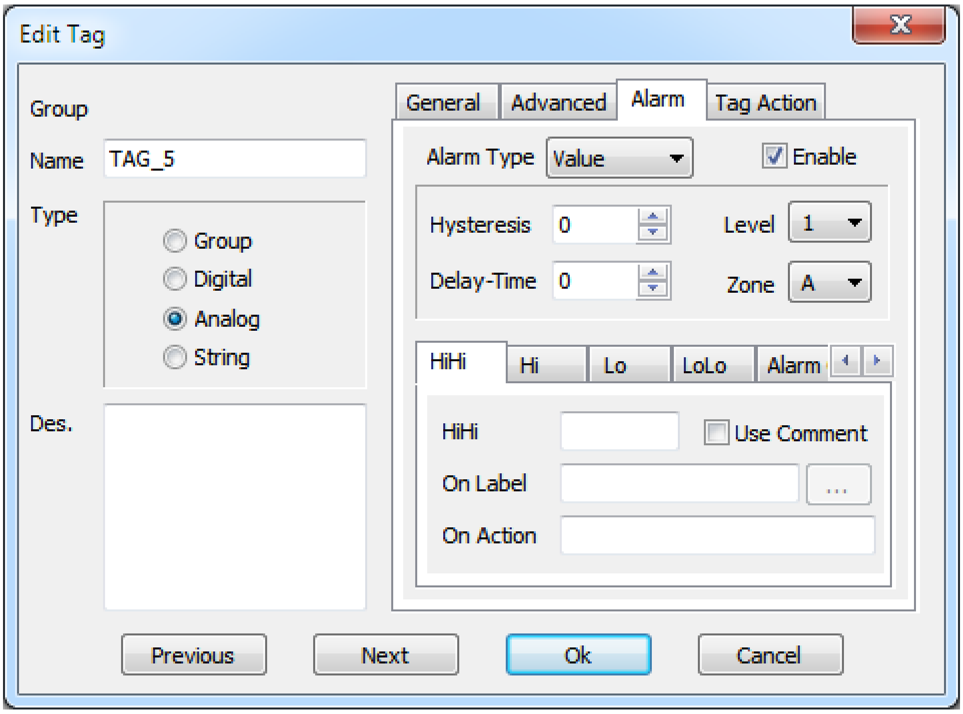
  (Ex.) In case the min./max. value of a raw data are 0/4000 and the eng. data are 0/100, if a raw data is 2000, the eng. data will be 50.

Data Logging This is used to register a tag as the tag for a historical trend. If this item is selected, a Model should be assigned. And the tag value is saved in an assigned type to log the model. You may select … button at the right to revise the model. The details are explained in the Data Logging.

Tag Variable: DATALOG (If 1, data logging registered. If 0, not registered.)

- **Alarm**

  Refer to the Alarm Setup Window for a Digital Tag in the Chapter 7.



Group

Name: TAG_5

Type: ○ Group ○ Digital ● Analog ○ String

Des.

Alarm Type: Value ☑ Enable

Hysteresis: 0 Level: 1

Delay-Time: 0 Zone: A

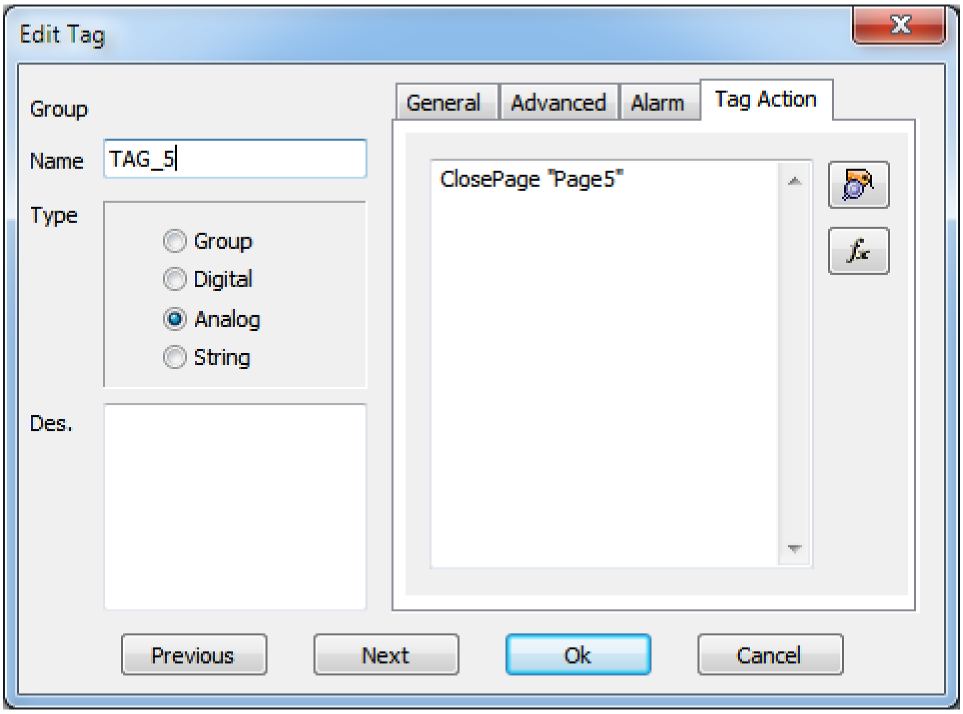
HiHi ☐ Use Comment

On Label …

On Action

- **Tag Action**

Enter a specific action for this tag. A defined tag action automatically will be run in case that a tag value is changed if the “Run tag action for Tag value change” is selected in General Tab. **Define Tag action** in General Tab must be selected.

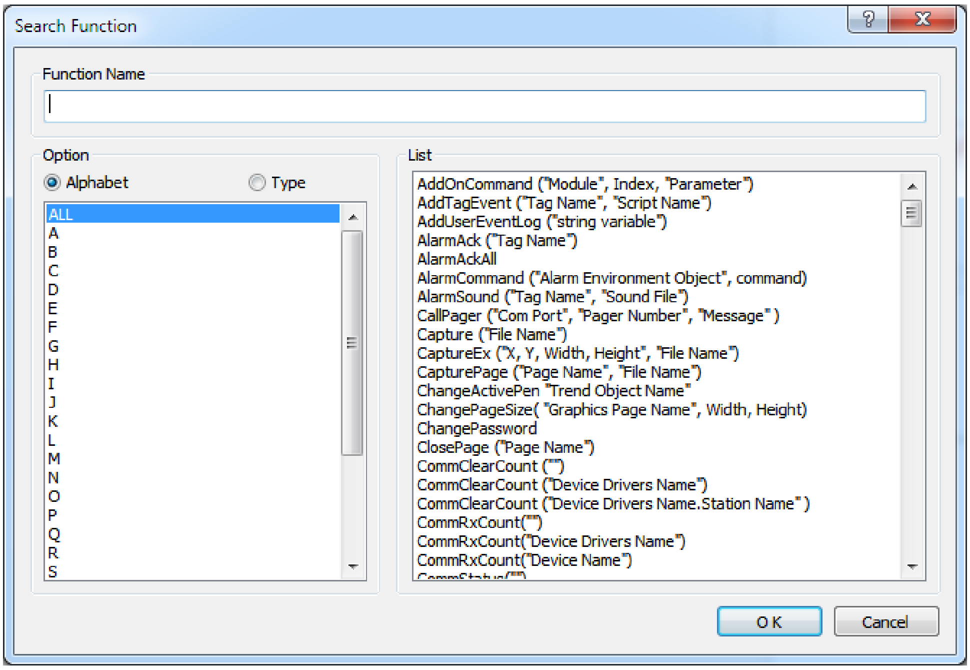

Edit Tag
Group
General
Advanced
Alarm
Tag Action
Type
○ Group
○ Digital
○ String
Des.
Previous
Next
Ok
Cancel

Name: TAG_5

● Analog

ClosePage "Page5"

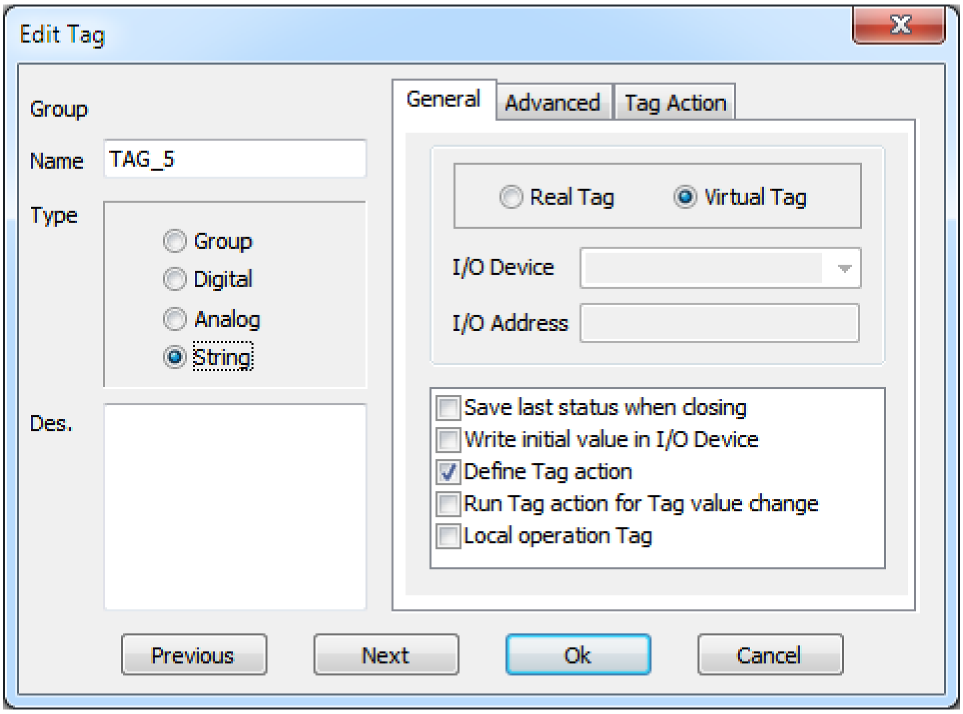
Select Tag	This is used to show a Select Tag dialog box. Select and enter a tag name.
Fx	This is used to show a Select Function dialog box. Select and enter a CIMON Function.


Search Function
Function Name
Option
● Alphabet
○ Type
ALL
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
List
AddOnCommand ("Module", Index, "Parameter")
AddTagEvent ("Tag Name", "Script Name")
AddUserEventLog ("string variable")
AlarmAck ("Tag Name")
AlarmAckAll
AlarmCommand ("Alarm Environment Object", command)
AlarmSound ("Tag Name", "Sound File")
CallPager ("Com Port", "Pager Number", "Message")
Capture ("File Name")
CaptureEx ("X, Y, Width, Height", "File Name")
CapturePage ("Page Name", "File Name")
ChangeActivePen "Trend Object Name"
ChangePageSize("Graphics Page Name", Width, Height)
ChangePassword
ClosePage ("Page Name")
CommClearCount ("")
CommClearCount ("Device Drivers Name")
CommClearCount ("Device Drivers Name.Station Name")
CommRxCount("")
CommRxCount("Device Drivers Name")
CommRxCount("Device Name")
OK
Cancel

4) String Tag

This is the tag to save the value of a string.

- **General**
-



Name: TAG_5

Type: ○ Group ○ Digital ○ Analog ● String

○ Real Tag ● Virtual Tag

☐ Save last status when closing
☐ Write initial value in I/O Device
☑ Define Tag action
☐ Run Tag action for Tag value change
☐ Local operation Tag

Name	This is used to enter the name of an analog tag. Refer to the previously explained note about entering a tag name.
Description	This is used to enter the description on a corresponding analog tag.
Tag Setup	This is used to set up one between virtual tag and real tag. Tag Variable: REALTAG (If 1, real tag. If 0, virtual tag)
Real Tag	This is the tag of which value is varied according to the status of the outer device linked directly to the CIMON.
Virtual Tag	This is the tag of which value is varied in the CIMON.
I/O Device	This is used to enter the name of the outer device to which an analog tag belongs. The name of the outer device is the one that has been assigned in “Set up I/O Device”. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

I/O Address	This is used to set up the address that assigns a tag in the outer device to which an analog tag belongs. Enter an address according to the peculiar address assignment type of each outer device. This item should be set up in case of a real tag and is not necessary in case of a virtual tag.

Save the last status when closing

This is use to save all items of a currently set tag to a database file when the CimonX is exited. If you assign this item, the last revised data will be kept in case of loading the database.

Write initial value in I/O Device

This is effective in case of a real tag and this is used to set up in case that the initial value assigned in the Advanced is written to the device (PLC) when the CIMON runs.

Define Tag action

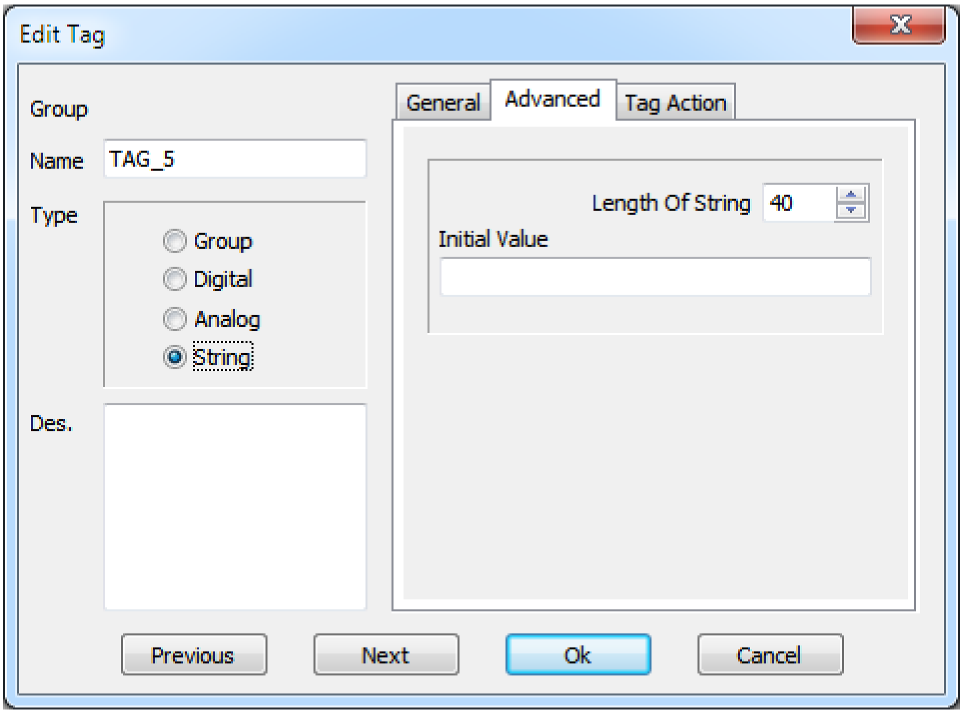
This is used to assign the tag action for a tag. If this item is selected, the Tag Action tap control will be added. Enter the Tag Action in tab control.

Run tag action for Tag value change

This is used to run an assigned tag action when a tag value is changed. This item can be assigned only in the case “Assign tag action” is selected.

Local operation Tag

- **Advanced**


Edit Tag
Group
General
Advanced
Tag Action
Previous
Next
Ok
Cancel

Name: TAG_5

Type:
○ Group
○ Digital
○ Analog
● String

Des.:

Length Of String: 40

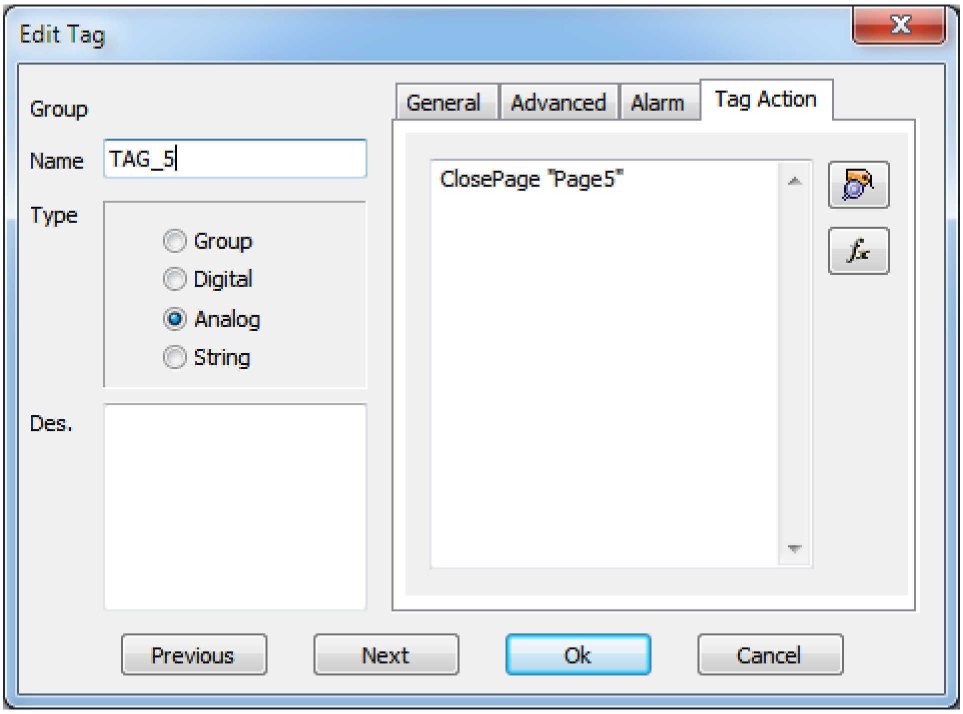
Initial Value:

Length Of String This is used to assign the length of a string tag. The minimum value is 1 and the maximum value is 80.

Initial Value This is used to assign the initial value of a string tag.

- **Tag Action**

  Enter a specific action for this tag. A defined tag action automatically will be run in case that a tag value is changed if the "Run tag action for Tag value change" is selected in General Tab. **Define Tag action** in General Tab must be selected.


Edit Tag
Group
General
Advanced
Alarm
Tag Action
Group
Digital
String
Des.
Previous
Next
Ok
Cancel

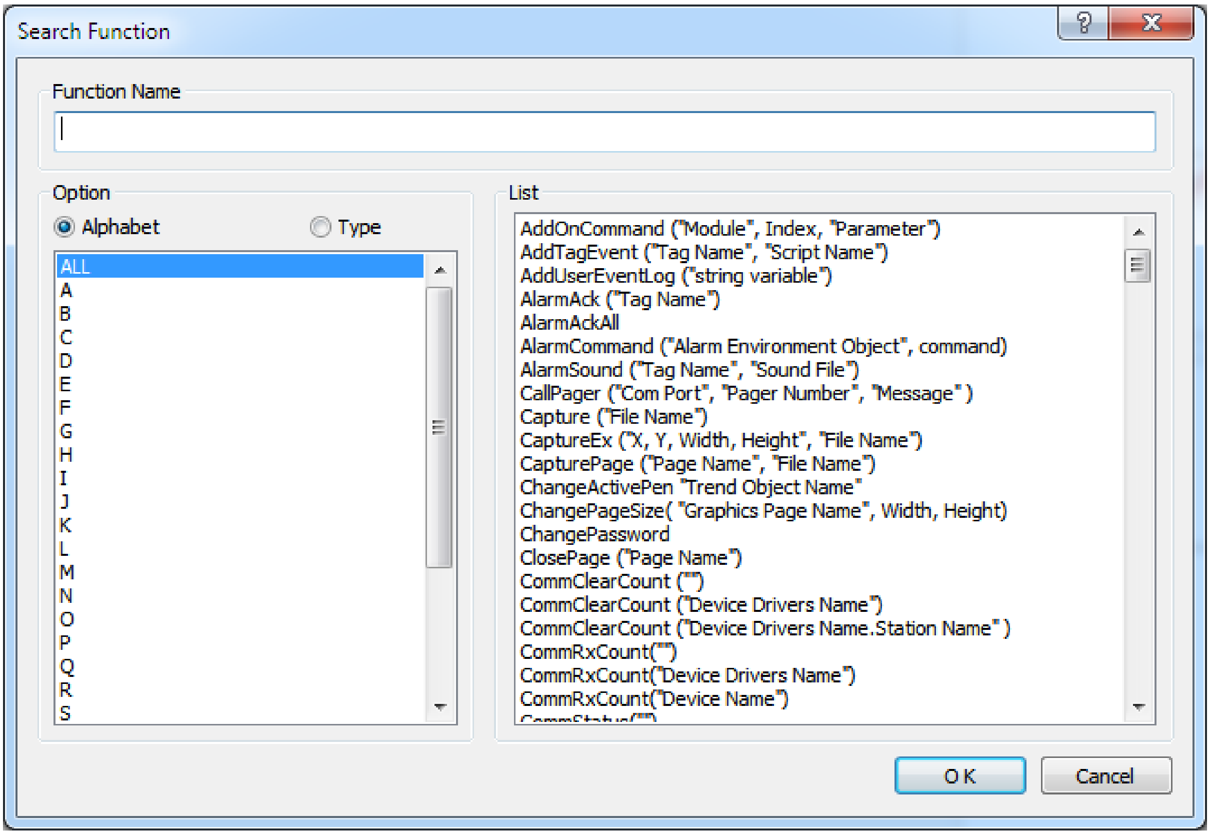
Name: TAG_5

Type: ● Analog

ClosePage "Page5"

Select Tag This is used to show a Select Tag dialog box. Select and enter a tag name.

Fx This is used to show a Select Function dialog box. Select and enter a CIMON Function.


Search Function
Function Name
Option
Alphabet
Type
ALL
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
List
O K
Cancel

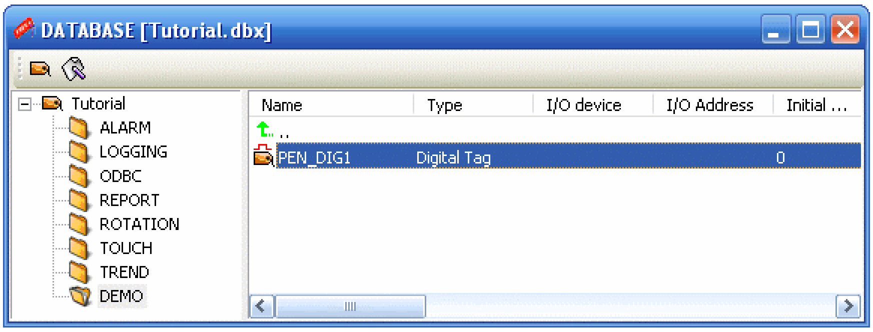
Option: ● Alphabet ○ Type

AddOnCommand ("Module", Index, "Parameter")
AddTagEvent ("Tag Name", "Script Name")
AddUserEventLog ("string variable")
AlarmAck ("Tag Name")
AlarmAckAll
AlarmCommand ("Alarm Environment Object", command)
AlarmSound ("Tag Name", "Sound File")
CallPager ("Com Port", "Pager Number", "Message")
Capture ("File Name")
CaptureEx ("X, Y, Width, Height", "File Name")
CapturePage ("Page Name", "File Name")
ChangeActivePen "Trend Object Name"
ChangePageSize("Graphics Page Name", Width, Height)
ChangePassword
ClosePage ("Page Name")
CommClearCount ("")
CommClearCount ("Device Drivers Name")
CommClearCount ("Device Drivers Name.Station Name")
CommRxCount("")
CommRxCount("Device Drivers Name")
CommRxCount("Device Name")

5.4 Editing a Database by Using Excel

As the contents of a database are interchanged with Excel, you are able to work with big-volume database conveniently by using Excel.

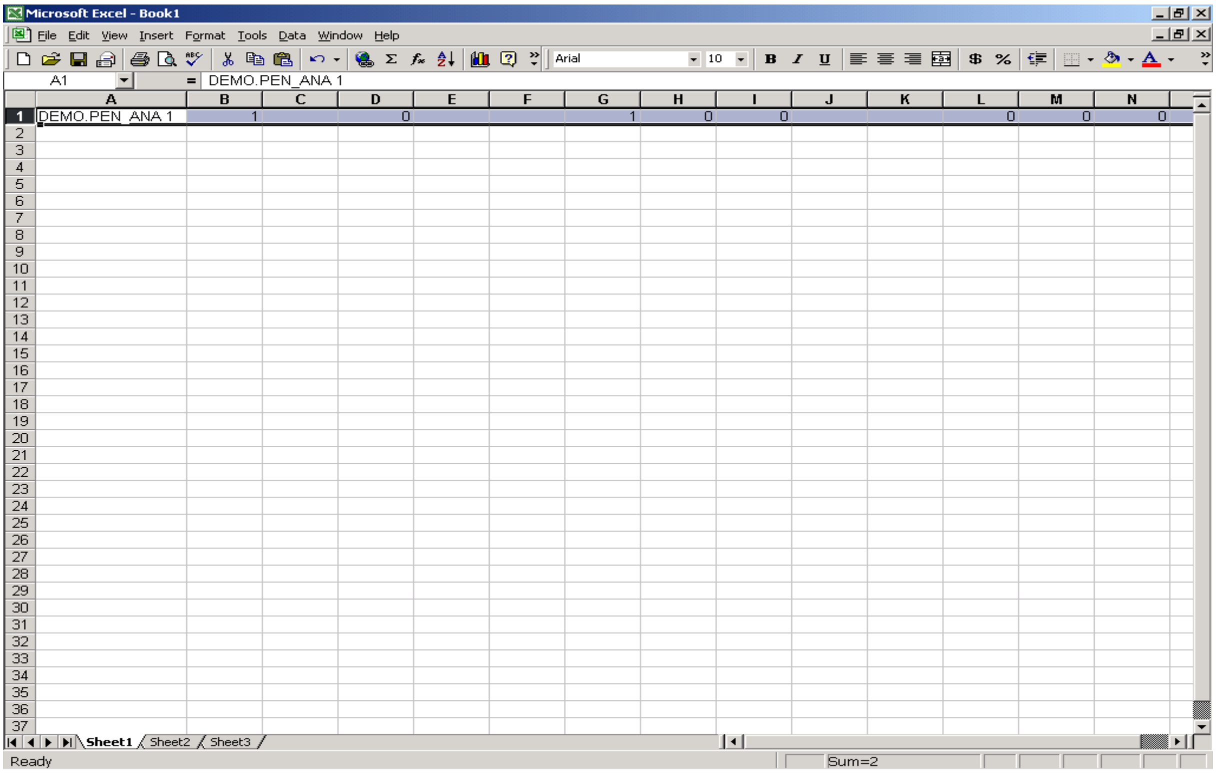
1. Select the tag copied to Excel in a Database Manager. At this time, you are able to select a part or all of the tag. If you select a group tag, all tags under the group tag will be selected.


DATABASE [Tutorial.dbx]
Tutorial
ALARM
LOGGING
ODBC
REPORT
ROTATION
TOUCH
TREND
DEMO
..

Name	Type	I/O device	I/O Address	Initial ...
PEN_DIG1	Digital Tag			0

2. Use Copy command. And it will be copied to a clipboard. (Select Ctrl + C key or Copy Icon).

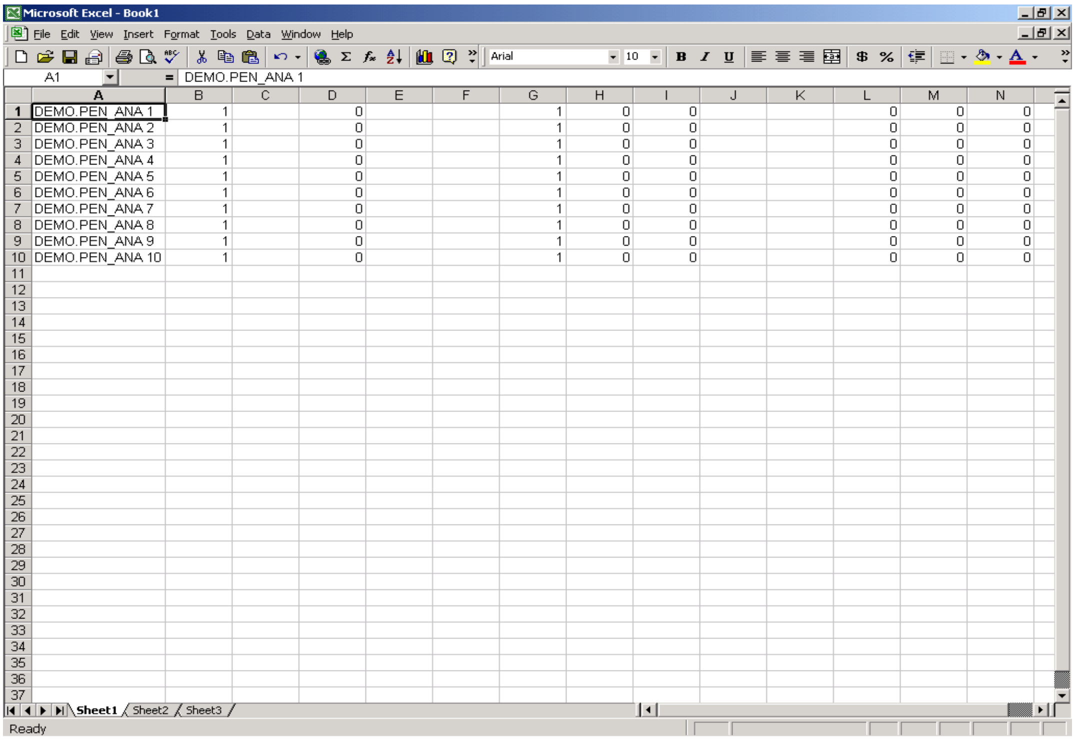
3. Use Paste command. And it will be pasted to an Excel worksheet. (Select Ctrl + V key or Paste Icon) According to tag type, the contents of each row are different. (Refer to Excel data form by tag types)


Microsoft Excel - Book1
File
Edit
View
Insert
Format
Tools
Data
Window
Help
Arial
10
Sheet1
Sheet2
Sheet3
Ready
Sum=2

A1 = DEMO.PEN_ANA 1

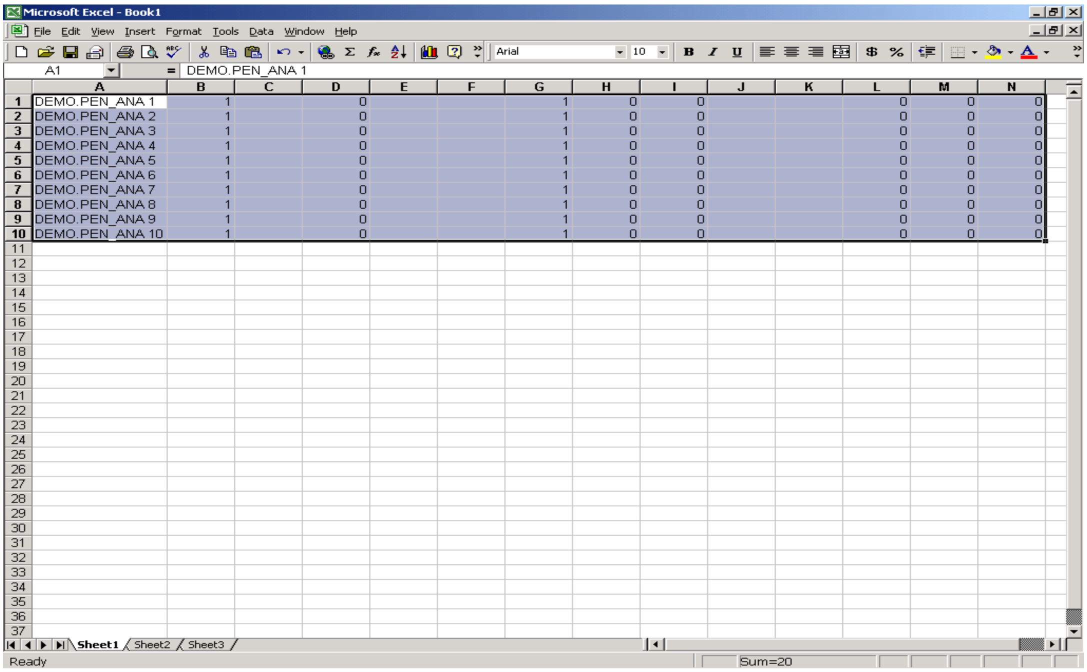
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DEMO.PEN_ANA 1	1		0			1	0	0			0	0	0

4. Edit the Database in Excel. Each tag will be copied or each item will be modified if you use the functions of Excel.


Microsoft Excel - Book1
File Edit View Insert Format Tools Data Window Help
Arial 10
A1
= DEMO.PEN_ANA 1
Sheet1 Sheet2 Sheet3
Ready

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DEMO.PEN_ANA 1	1		0			1	0	0			0	0	0
2	DEMO.PEN_ANA 2	1		0			1	0	0			0	0	0
3	DEMO.PEN_ANA 3	1		0			1	0	0			0	0	0
4	DEMO.PEN_ANA 4	1		0			1	0	0			0	0	0
5	DEMO.PEN_ANA 5	1		0			1	0	0			0	0	0
6	DEMO.PEN_ANA 6	1		0			1	0	0			0	0	0
7	DEMO.PEN_ANA 7	1		0			1	0	0			0	0	0
8	DEMO.PEN_ANA 8	1		0			1	0	0			0	0	0
9	DEMO.PEN_ANA 9	1		0			1	0	0			0	0	0
10	DEMO.PEN_ANA 10	1		0			1	0	0			0	0	0

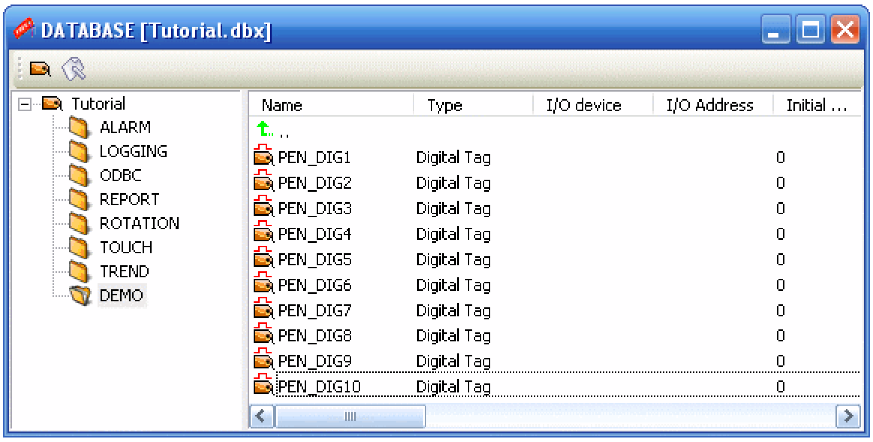
5. Select the contents copied to the Database in Excel worksheet. You may select a part of columns. And at this time, select from the first column to a desired column.


Microsoft Excel - Book1
File Edit View Insert Format Tools Data Window Help
Arial 10
A1
= DEMO.PEN_ANA 1
Sheet1 Sheet2 Sheet3
Ready
Sum=20

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DEMO.PEN_ANA 1	1		0			1	0	0			0	0	0
2	DEMO.PEN_ANA 2	1		0			1	0	0			0	0	0
3	DEMO.PEN_ANA 3	1		0			1	0	0			0	0	0
4	DEMO.PEN_ANA 4	1		0			1	0	0			0	0	0
5	DEMO.PEN_ANA 5	1		0			1	0	0			0	0	0
6	DEMO.PEN_ANA 6	1		0			1	0	0			0	0	0
7	DEMO.PEN_ANA 7	1		0			1	0	0			0	0	0
8	DEMO.PEN_ANA 8	1		0			1	0	0			0	0	0
9	DEMO.PEN_ANA 9	1		0			1	0	0			0	0	0
10	DEMO.PEN_ANA 10	1		0			1	0	0			0	0	0

6. Use Copy command. And it will be copied to a clipboard.

7. Use Paste command. And it will be pasted to a Database Manager. If a tag with the same name exists, the contents of the tag will be updated. If a tag with the same name does not exist, the tag will be added.


DATABASE [Tutorial.dbx]

- Tutorial
  - ALARM
  - LOGGING
  - ODBC
  - REPORT
  - ROTATION
  - TOUCH
  - TREND
  - DEMO

Name	Type	I/O device	I/O Address	Initial ...
..				
PEN_DIG1	Digital Tag			0
PEN_DIG2	Digital Tag			0
PEN_DIG3	Digital Tag			0
PEN_DIG4	Digital Tag			0
PEN_DIG5	Digital Tag			0
PEN_DIG6	Digital Tag			0
PEN_DIG7	Digital Tag			0
PEN_DIG8	Digital Tag			0
PEN_DIG9	Digital Tag			0
PEN_DIG10	Digital Tag			0

- **Excel Data Form by Tag Types**

Tag Type	C	Item	Contents of Value
Group	A	Tag Name	Tag name including group name
	B	Tag Type	0
	C	Description	Tag explanation
	R	Save the last status when closing	In case of setup, 1. Otherwise, 0.
	S	Use as PID group	In case of setup, 1. Otherwise, 0.
Digital	A	Tag Name	Tag name including group name
	B	Tag Type	1
	C	Description	Tag explanation
	D	Real/Virtual Tag	In case of real tag, 1
			In case of virtual tag, 0
	E	I/O Device	Name of I/O Device
	F	I/O Address	I/O Address of tag
	G	Initial Value	Initial value of tag (1 or 0)
	H	Data Logging Model	Name of Data logging model
	I	String to display alarm OFF	Displayed string in case of alarm OFF
	J	String to display alarm ON	Displayed string in case of alarm ON
	R	Save the last status when closing	In case of setup, 1. Otherwise, 0.
	S	Use as PID group	In case of setup, 1. Otherwise, 0.

	T	Run tag action for tag value change	In case of setup, 1. Otherwise, 0.
	U	Assign as alarm tag	In case of setup, 1. Otherwise, 0.
	V	Create data for report	In case of setup, 1. Otherwise, 0.
	W	Reverse the value from I/O device	In case of setup, 1. Otherwise, 0.
	X	Tag Action	String
	Y	Alarm Enable	In case of setup as alarm tag
	Z	Alarm Type	0: No alarm setup
			1: OFF alarm
			2: ON alarm
			3: OFF->ON alarm
			4: ON->OFF alarm
			5: OFF<->ON alarm
	AA	Alarm Level	1 ~ 8
	AB	Alarm Zone	A ~ P
	AD	String to display Alarm Ack	String displayed in case of alarm Ack
	AE	String to display Alarm OFF	String displayed in case of alarm OFF
	AF	Alarm OFF Action	Action in case of alarm OFF
	AG	String to display Alarm ON	String displayed in case of alarm ON
	AH	Alarm ON Action	Action in case of alarm ON
Analog	A	Tag Name	Tag name including group name
	B	Tag Type	2
	C	Description	Tag explanation
	D	Real/Virtual Tag	In case of real tag, 1
			In case of virtual tag, 0
	E	I/O Device	Name of I/O Device
	F	I/O Address	I/O Address of tag
	G	Initial Value	Initial value of tag
	H	Data Logging Model	Name of Data logging model
	I	Data Type	0: INT8
			1: INT16
			2: INT32
			3: UINT8
			4: UINT16

Analog			5: UINT32
			6: BCD8
			7: BCD16
			8: BCD32
			9: UBCD8
			10: UBCD16
			11: UBCD32
			12: Float
	J	Deadband	Deadband value
	K	Unit	String to display unit
	L	Power Factor	In case of setup, 1. Otherwise, 0
	M	Scale	
	N	Min. Value of Initial Data	
	O	Max. Value of Initial Data	
	P	Min. value of real data	In case to apply Scale, scale value.
	Q	Max. value of real data	In case to apply Scale, OFFSET value.
	R	Save the last status when closing	In case of setup, 1. Otherwise, 0
	S	Write initial value in I/O device	In case of setup, 1. Otherwise, 0
	T	Run tag action for tag value change	In case of setup, 1. Otherwise, 0.
	U	Assign as alarm tag	In case of setup, 1. Otherwise, 0.
	V	Create data for report	In case of setup, 1. Otherwise, 0.
	W	Accumulated value manual reset	In case of setup, 1. Otherwise, 0.
	X	Tag Action	String
	Y	Alarm Enable	In case of setup as alarm tag
	Z	Alarm Type	0: No alarm setup
			1: Boundary value alarm
			2: Deviation value alarm
			3: Variation value alarm
	AA	Alarm Level	1 ~ 8
	AB	Alarm Zone	A ~ P
	AC	Hysteresis	
	AD	String to Alarm Ack	String displayed in case of alarm Ack
	AE	String to display Alarm OFF	String displayed in case of alarm OFF

	AF	Alarm OFF Action	Action in case of alarm OFF
	AG	String #1 to display Alarm ON	HIHI alarm,
			Major deviation value alarm,
			ROC alarm
	AH	Alarm ON Action #1	Action in case of alarm ON
	AI	Alarm setup value #1	
	AJ	String #2 to display Alarm ON	HI alarm,
			Minor deviation value alarm
	AK	Alarm ON Action #2	Action in case of alarm ON
Analog	AL	Alarm setup value #2	
	AM	String #3 to display Alarm ON	LO alarm
	AN	Alarm ON Action #3	Action in case of alarm ON
	AO	Alarm setup value #3	LO setup value
			Deviation base value
	AP	String #4 to display Alarm ON	LOLO alarm
	AQ	Alarm ON Action #4	Action in case of alarm ON
	AR	Alarm setup value #4	
	D	Real/Virtual Tag	In case of real tag, 1
			In case of virtual tag, 0
	E	I/O Device	Name of I/O Device
	F	I/O Address	I/O Address of tag
	G	Initial Value	Initial value of tag
	H	Saving the last status when closing	In case of setup, 1. Otherwise, 0
	I	Writing initial value in I/O device	In case of setup, 1. Otherwise, 0
	J	Data Type	0: INT8
			1: INT16
			2: INT32
			3: UINT8
			4: UINT16
			5: UINT32
			6: BCD8
			7: BCD16
			8: BCD32

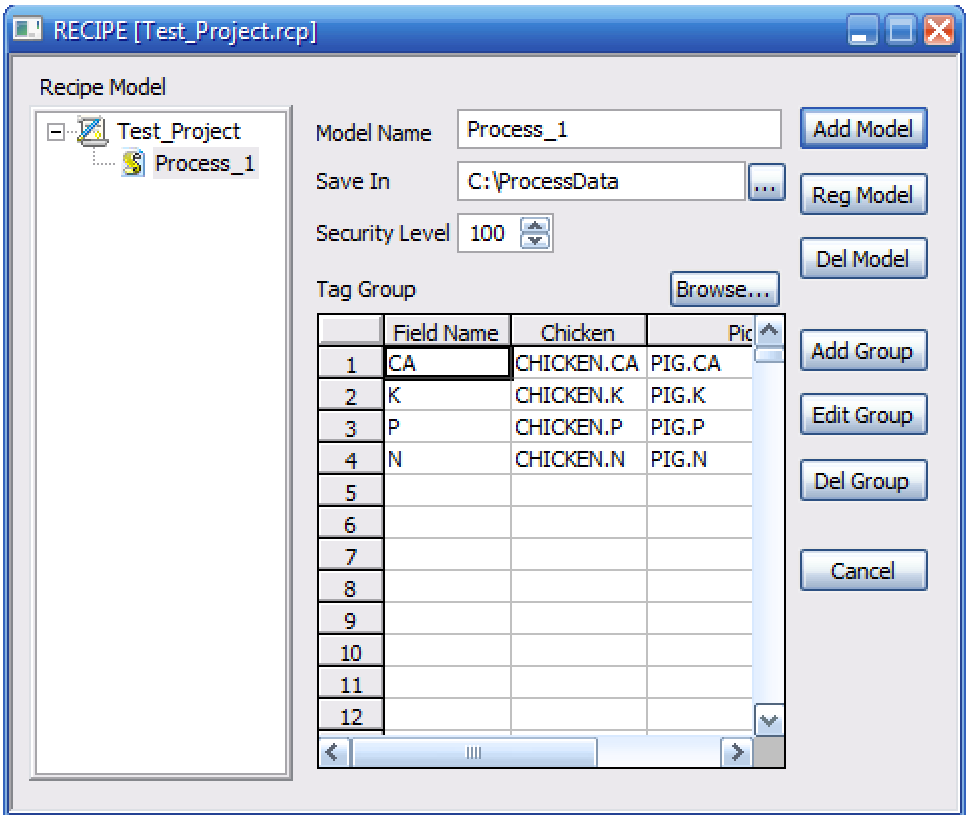
			9: UBCD8
			10: UBCD16
			11: UBCD32
			12: Float
	K	Unit	String to display unit
	L	Deadband	Deadband value
	M	Min. value of Internal data	Min. value of Internal data
	N	Max. value of Internal data	Max. value of Internal data
	O	Min. value of real data	Min. value of real data
String	A	Tag Name	Tag name including group name
	B	Tag Type	3
	C	Description	Tag explanation
	D	Real/Virtual Tag	In case of real tag, 1
			In case of virtual tag, 0
	E	I/O Device	Name of I/O Device
	F	I/O Address	I/O Address of tag
	G	Initial Value	Initial value of tag
	I	Length of string	
	R	Save the last status when closing	In case of setup, 1. Otherwise, 0
	S	Write initial value in I/O device	In case of setup, 1. Otherwise, 0
	T	Run tag action for tag value change	In case of setup, 1. Otherwise, 0.
	X	Tag Action	String

Chapter6 RECIPE

6-1. Function

The Recipe function is usually used for production line when a lot of types of products have to be produced according to different setting value. Recipe brings the setting value which was already saved in file and downloads it to PLC. For example, there is company which makes many kinds of animal foods such as dog, chicken, pig, cat and etc. In this case, each setting values for each animal foods have different. Then it will be easy for production if all different setting values, according to types of animal, are saved in file and you bring that data to set another production after each production is finished.

Here is the Recipe Editor at the below.



Model Name: Process_1

Save In: C:\ProcessData

Security Level: 100

Tag Group

	Field Name	Chicken	Pic
1	CA	CHICKEN.CA	PIG.CA
2	K	CHICKEN.K	PIG.K
3	P	CHICKEN.P	PIG.P
4	N	CHICKEN.N	PIG.N
5			
6			
7			
8			
9			
10			
11			
12			

Model Name : Write the model name of Recipe

Save In : Select path where Recipe data will be saved. Click the [...] to select path or write the path directly.

Security Level : This function is used to give authority to use recipe function by security level. Security level is classified from 1 to 100. Level 1 is the highest level.

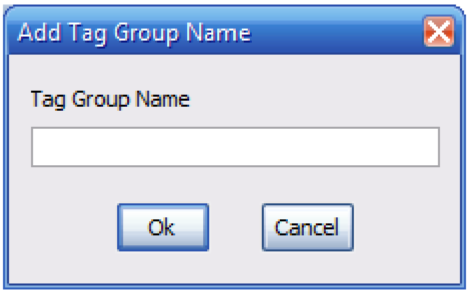
Tag Group : You can add types of setting values as Field Name. For example, in case of Animal Food Company you can add types of food materials. In case of Paper making company, you can add types of paper color materials.

Add Model : You can add Recipe model.

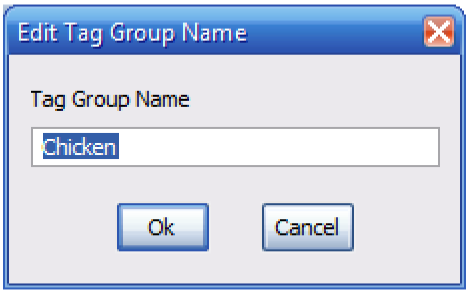
Reg. Model : It is used to edit existing Recipe model. If you open existing Recipe model and add or delete Tag Group, amended data will be saved.

Del. Model : It deletes selected Recipe model.

Add Group : It is used to add product name that you want to produce. (Ex. Food of Cat, Dog and etc. in case of animal food company) Write Group name and register real tag.

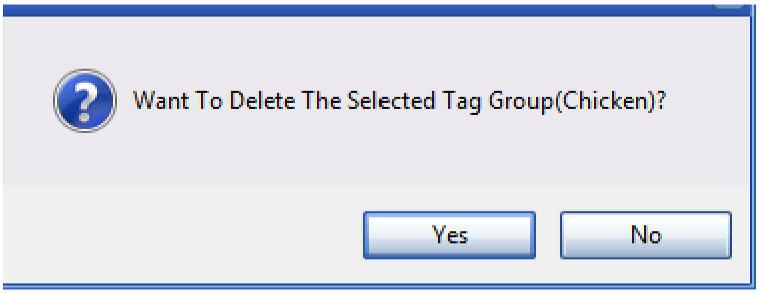


Edit Group : It is used to edit Group name.



Tag Group Name: Chicken

Del. Group : It is used to delete selected Group.



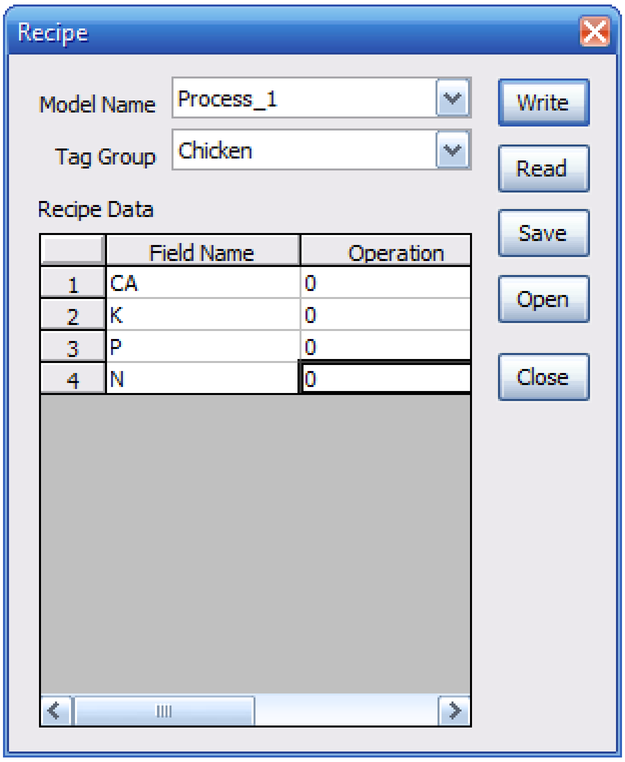
Want To Delete The Selected Tag Group(Chicken)?

6-2. Description of Recipe script

After setting up Recipe model in CimonD, you can use Recipe model through CimonX. You can read and write Recipe data with PLC and change the recipe value as well.

1. RecipeDialog()

It is used to define object command. You can operate Recipe through the below Recipe control window.



Model Name: Process_1

Tag Group: Chicken

Recipe Data

	Field Name	Operation
1	CA	0
2	K	0
3	P	0
4	N	0

Model Name : It is used to select model name that you already saved in CimonD.

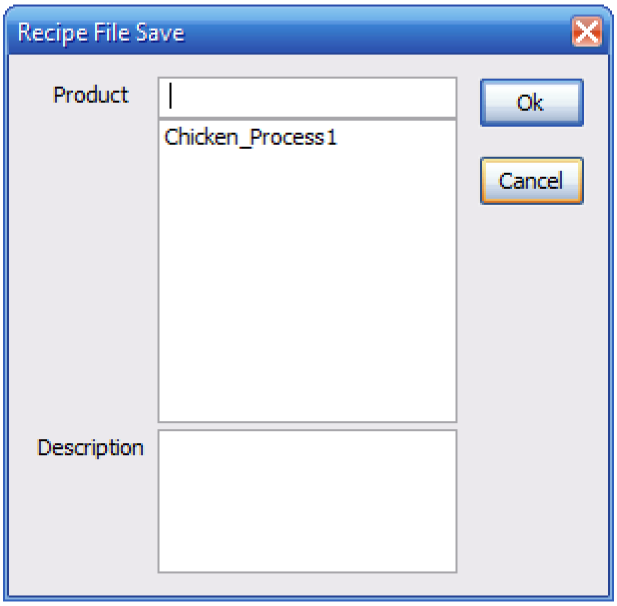
Tag Group : It is used to select tag group that you already saved in CimonD.

Recipe Data : It shows memory value of tag group in selected Recipe model.

Write : It is used to write Recipe data to real tag.

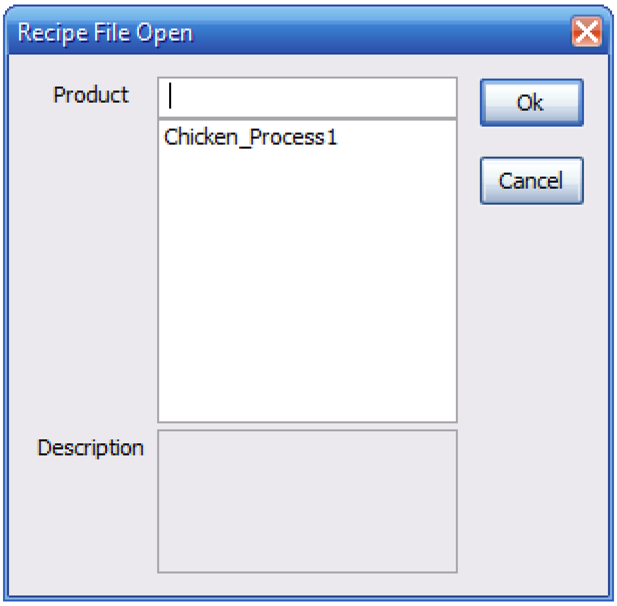
Read : It is used to bring real value of tag group to Recipe memory.

Save : It is used to save current Recipe data to other Product name.


Recipe File Save
Product
Ok
Cancel
Description

Chicken_Process1

Open : It is used to open existing Recipe data.


Recipe File Open
Product
Ok
Cancel
Description

Chicken_Process1

Close : It close Recipe control window.

2. RecipeDownLoad(“Model name”,”Tag Group name”)

This script is the same as “Write” on the Recipe Control Window. It is used to download Recipe data of Tag Group to PLC if Tag Group is real tag.

3. RecipeGetData(“Model name”, “Field name”)

It brings Field value of Recipe model from Recipe memory. For example, A1 = RecipeGetData(“Process_1”, “CA”). The tag name(A1) must be match with Recipe data.

4. RecipeLoad(“Model Name”, “File name”)

This script is the same as “Open” on the Recipe Control Window. It is used to upload Recipe data to Recipe memory.

5. RecipeSetData(“Model name”, “Field name”, Operation value)

It is used to write operation value to selected Field of Recipe model.

6. RecipeUpLoad(“Model name”, “Tag Group name”)

This script is the same as “Read” on the Recipe Control Window. It is used to upload real tag of Tag Group from PLC to Recipe memory.

Chapter 7 Alarms

In case the value of a specific tag is over a set value, an alarm is used to inform the event. To use this function, a tag should be set up as an alarm tag among optional functions when it is registered to a database. The tags to which an alarm can be assigned are 'Analog tag' and 'Digital tag'. Alarms are divided into 'Analog alarm' and 'Digital alarm' according to a corresponding tag. There are boundary value, ROC and deviation value in analog alarm, and there are ON alarm, OFF alarm, OFF→ON, ON→OFF and OFF←→ON alarm in digital alarm.

In the CIMON-SCADA, alarm processing is prior to other system works, and the alarm having occurred is displayed on an alarm summary window or printed out by zones, types and priority or occurring time order. Even you do not see the window, the CIMON-SCADA applies alarm sound for informing alarm status fast.

7-1. Types of Alarm

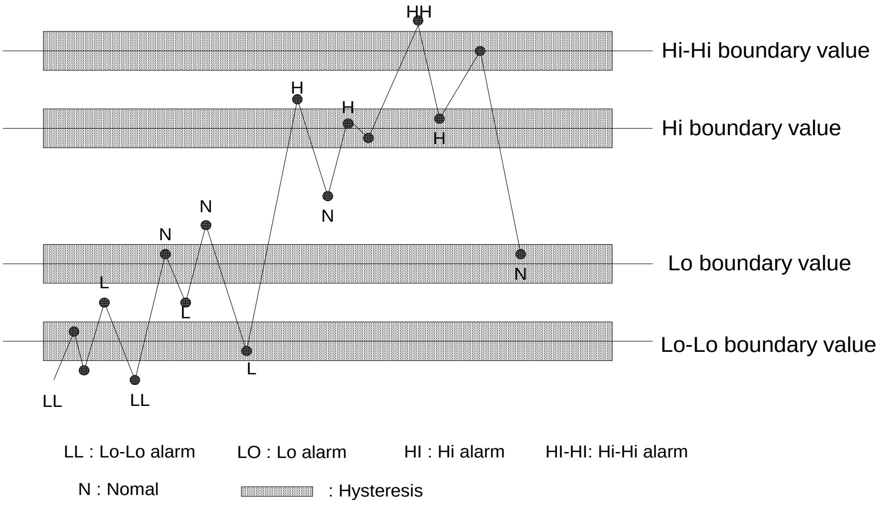
Analog Alarm

The following alarm types can be used as analog alarms, and hysteresis can be applied to all alarms. The Hysteresis is used to prevent the output of alarm ON/OFF whenever the value measured around a boundary value varies small.

Boundary Value Alarm

4 types of this alarm occur by comparing the current value of an analog tag to the previous alarm status on the basis of a boundary value. The types are HiHi, Hi, Lo and LoLo alarm. The alarms occur by a set boundary value for each alarm. The occurring examples are as follows.

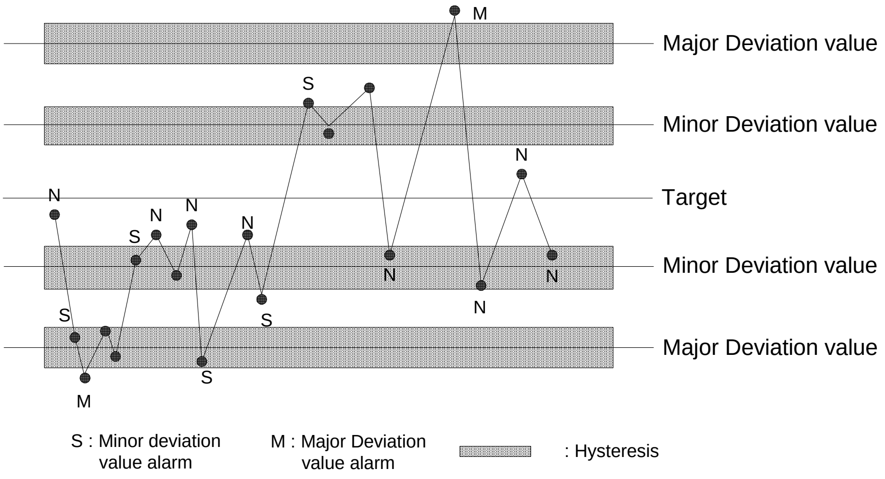
- Hi-Hi : This is the alarm occurring in case a measured value is more than a Hi-Hi set value.
- Hi : This is the alarm occurring in case a measured value is more than a Hi set value.
- Lo : This is the alarm occurring in case a measured value is less than a Lo set value.
- Lo-Lo : This is the alarm occurring in case a measured value is less than a Lo-Lo set value.


HH
Hi-Hi boundary value
H
H
H
Hi boundary value
N
N
N
Lo boundary value
N
L
L
Lo-Lo boundary value
L
LL
LL
LL : Lo-Lo alarm
LO : Lo alarm
HI : Hi alarm
HI-HI: Hi-Hi alarm
N : Nomal
▨ : Hysteresis

Deviation Value Alarm

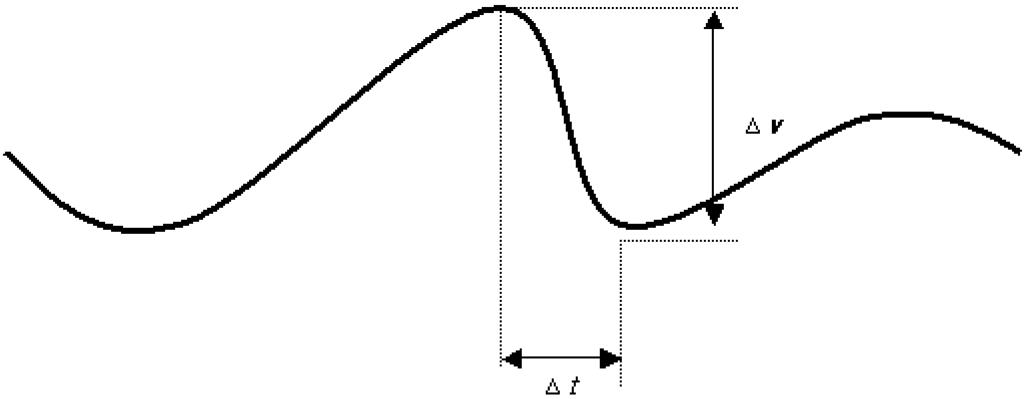
This alarm occurs by deciding whether a current tag is within an assigned range. According to the variation of a value, a minor deviation alarm or a major deviation alarm occurs. Release from an occurring alarm and variation to other alarm is decided by applying a set hysteresis value.

- Minor Deviation Alarm: This is the alarm occurring in case a measured value is slightly outside the range of a set value.
- Major Deviation Alarm: This is the alarm occurring in case a measured value is much outside the range of a set value.


M
Major Deviation value
S
Minor Deviation value
N
Target
N
N
S
N
N
N
Minor Deviation value
N
N
S
S
Major Deviation value
S
M
S : Minor deviation value alarm
M : Major Deviation value alarm
▨ : Hysteresis

ROC Alarm

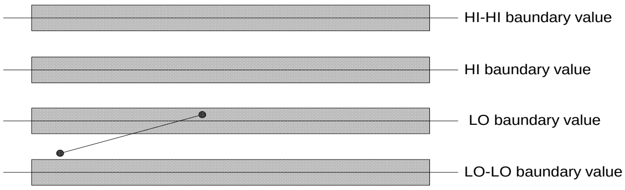
This is the alarm occurring in case that the varying range of a measured value is bigger than a set variation value. An occurring alarm is displayed as one between acknowledged status and non-acknowledged status. The non-acknowledged status is to display that an alarm occurs but a user does not acknowledge it. The acknowledged status is to display that a user acknowledge an occurring event through the mouse/touch or the keyboard. These statuses can be distinguished easily by color.



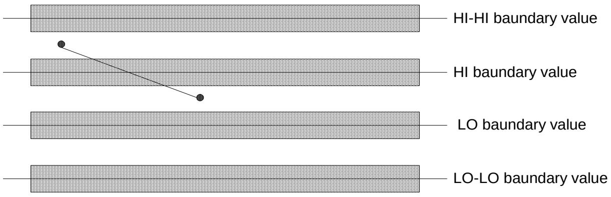
[NOTICE]

Hysteresis is used to prevent the output of alarm ON/OFF whenever the value measured around a boundary value varies small. An alarm occurs in case that a measured value is bigger than the value, which is to add a hysteresis value to a boundary value. An alarm is released in case that a measured value is less than the value, which is to subtract a hysteresis value from a boundary value

Example of Hysteresis Application)



In the above picture, the tag value is varied from the range of the Lo alarm to the range of the normal status. But, as the status is varied within the range of the hysteresis, the Lo alarm is kept.

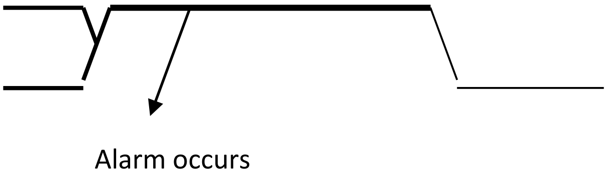


In the above picture, the tag value is varied from the range of the Hi alarm to the range of the normal status. But, as the status is varied outside the range of the hysteresis, the Hi alarm is released.

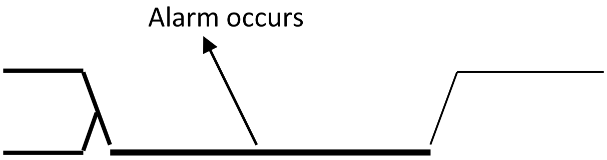
Digital Alarm

A digital alarm occurs according to previous status and current status. There are 5 types of digital tag such as ON alarm, OFF alarm, OFF→ON, ON→OFF, ON↔OFF.

ON Alarm In case that a corresponding contact point is detected as ON status without relation to the previous status, an alarm occurs. In case that the current value of a tag is 1, an alarm will occur. If the value is varied to 0 again, the alarm will be released.

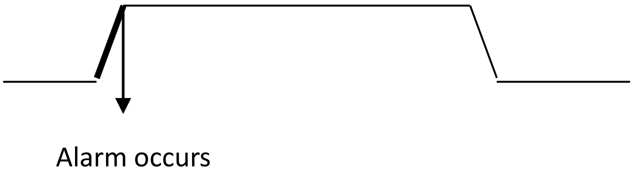


OFF Alarm In case a corresponding contact point is detected as OFF status without relation to the previous status, an alarm occurs. In case that the current value of a tag is 0, an alarm will occur. If the value is varied to 1 again, the alarm will be released.

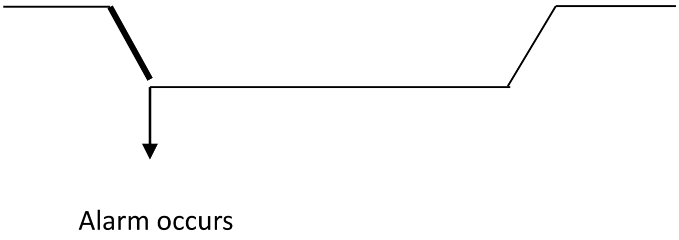


OFF→ON As soon as the status of a corresponding contact point is transferred from OFF to

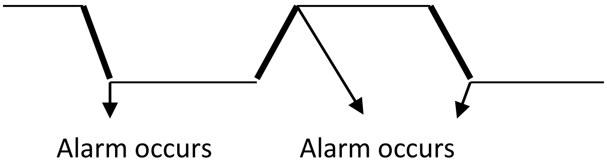
ON, an alarm occurs and is released. This function is used to prevent from outputting repeatedly a detected alarm in maintenance process.



ON→OFF As soon as the status of a corresponding contact point is transferred from ON to OFF, an alarm occurs and is released. This function is used to prevent from outputting repeatedly of a detected alarm in maintenance process.

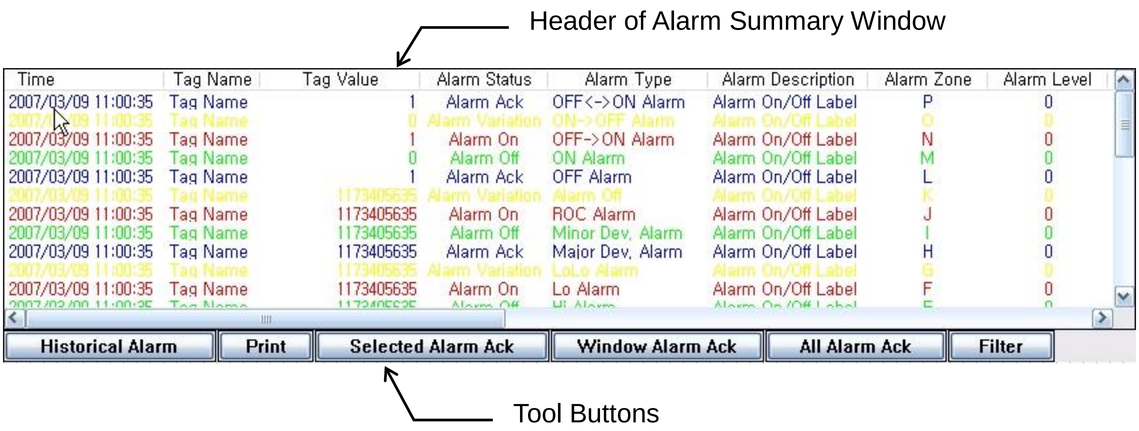


ON↔OFF As soon as the status of a corresponding contact point is transferred from ON to OFF, or from OFF to ON, an alarm occurs and is released. This function is that an alarm always occurs in case that the status of a contact point is changed.



7-2. Alarm Summary Object

The below picture is the **'Alarm Summary Object"** of the CIMON-SCADA. An Alarm Summary Object is composed of an object to monitor the desired alarm in a whole monitoring page. If you select the **'Alarm Summary'** icon or select the **"Draw" –** the **"Alarm Summary"** in the main menu to draw it on a page, the following window will appear.



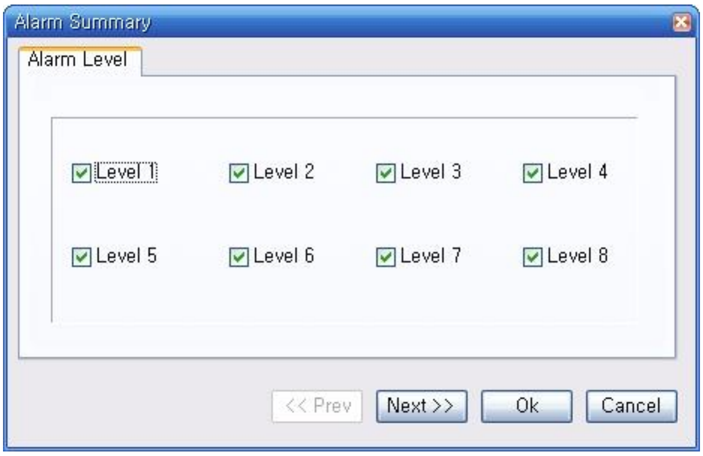
Time	Tag Name	Tag Value	Alarm Status	Alarm Type	Alarm Description	Alarm Zone	Alarm Level
2007/03/09 11:00:35	Tag Name	1	Alarm Ack	OFF<->ON Alarm	Alarm On/Off Label	P	0
2007/[illegible]/09 11:00:35	Tag Name	0	Alarm Variation	ON->OFF Alarm	Alarm On/Off Label	O	0
2007/03/09 11:00:35	Tag Name	1	Alarm On	OFF->ON Alarm	Alarm On/Off Label	N	0
2007/03/09 11:00:35	Tag Name	0	Alarm Off	ON Alarm	Alarm On/Off Label	M	0
2007/03/09 11:00:35	Tag Name	1	Alarm Ack	OFF Alarm	Alarm On/Off Label	L	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm Variation	Alarm Off	Alarm On/Off Label	K	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm On	ROC Alarm	Alarm On/Off Label	J	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm Off	Minor Dev. Alarm	Alarm On/Off Label	I	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm Ack	Major Dev. Alarm	Alarm On/Off Label	H	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm Variation	LoLo Alarm	Alarm On/Off Label	G	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm On	Lo Alarm	Alarm On/Off Label	F	0
2007/03/09 11:00:35	Tag Name	1173405635	Alarm Off	Hi Alarm	Alarm On/Off Label	E	0

The functions of the tool button when the CIMON-SCADA is run are as follows.

Historical Alarm/ Alarm Summary	This is use to change alarm mode(historical/real-time).
Print	This is used to output a currently displayed Alarm Summary Window with a printer.
Selected Alarm Ack	This is used to select and acknowledge an alarm among the alarms displayed on a current window.
Window Alarm Ack	This is used to acknowledge occurring alarms by pages.
All Alarm Ack	This is used to acknowledge all alarms.
Filter	This is used to set up several optional items and see the alarms that a user wants to monitor. There are alarm zone, alarm level and alarm type on the types of filter.

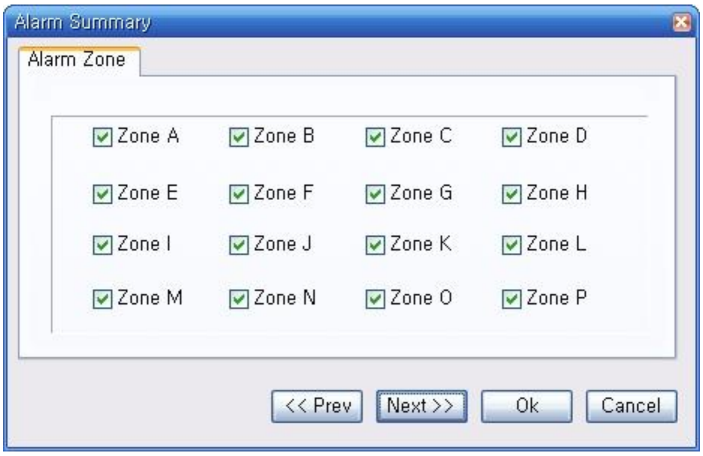
If you click the desired part in a page while you are selecting the Alarm Summary, an ‘Alarm Summary’ dialog box will appear to define the contents displayed on the alarm summary object. Each item defined is as follows.

- **Alarm Level** This is used to assign the alarm level of the tags monitored.



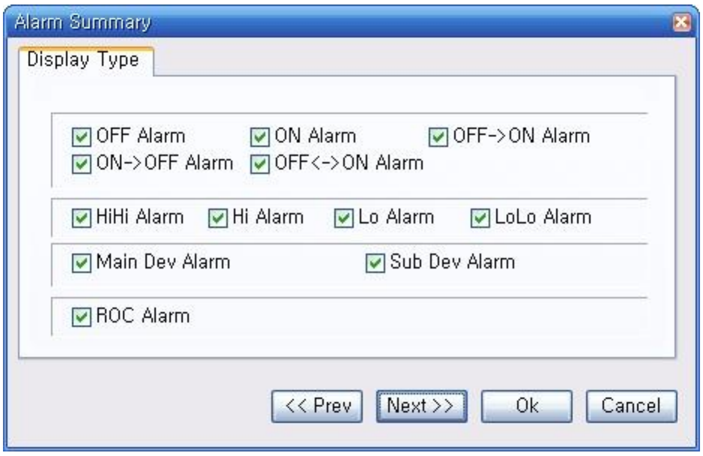
☑ Level 1	☑ Level 2	☑ Level 3	☑ Level 4
☑ Level 5	☑ Level 6	☑ Level 7	☑ Level 8

- **Alarm Zone** This is used to assign the alarm zone of the tags monitored.



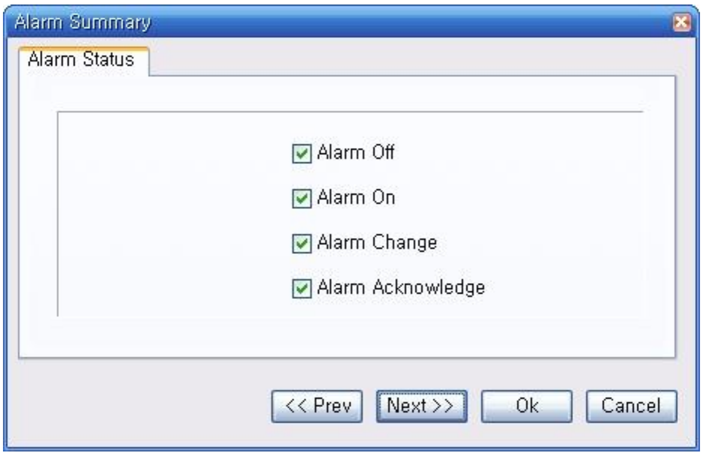
☑ Zone A	☑ Zone B	☑ Zone C	☑ Zone D
☑ Zone E	☑ Zone F	☑ Zone G	☑ Zone H
☑ Zone I	☑ Zone J	☑ Zone K	☑ Zone L
☑ Zone M	☑ Zone N	☑ Zone O	☑ Zone P

- **Alarm Type** This is used to assign the alarm type monitored. In case of digital tag, there are OFF alarm, ON alarm, OFF->ON alarm, ON->OFF alarm and OFF<->ON alarm. In case of analog tag, there are HiHi alarm, Hi alarm, Lo alarm, LoLo alarm as boundary value alarm, major, minor as deviation value alarm and ROC alarm.


Alarm Summary
Display Type
<< Prev
Next >>
Ok
Cancel

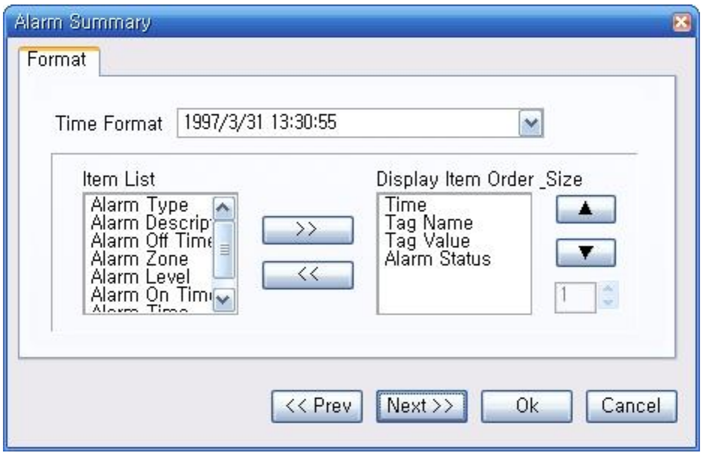
☑ OFF Alarm ☑ ON Alarm ☑ OFF->ON Alarm
☑ ON->OFF Alarm ☑ OFF<->ON Alarm
☑ HiHi Alarm ☑ Hi Alarm ☑ Lo Alarm ☑ LoLo Alarm
☑ Main Dev Alarm ☑ Sub Dev Alarm
☑ ROC Alarm

- **Alarm Status** This is used to assign the alarm status type monitored among occurring alarm statuses.


Alarm Summary
Alarm Status
<< Prev
Next >>
Ok
Cancel

☑ Alarm Off
☑ Alarm On
☑ Alarm Change
☑ Alarm Acknowledge

- **Format** This is used to set up the items of the message displayed on an alarm summary object.


Alarm Summary
Format
Item List
Display Item Order _Size
>>
<<
▲
▼
<< Prev
Next >>
Ok
Cancel

Time Format 1997/3/31 13:30:55

Alarm Type
Alarm Descrip
Alarm Off Time
Alarm Zone
Alarm Level
Alarm On Time

Time
Tag Name
Tag Value
Alarm Status

1

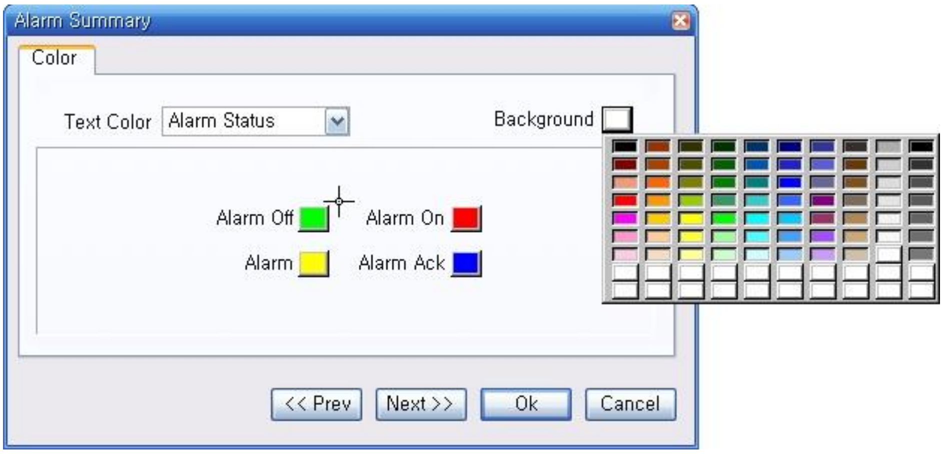
Time Format This is used to assign the time format displayed on the object.

Item List This is used to assign the diverse information outputted in the list of alarms. The items are as follows.

Time	The recent time when alarm status is changed
Tag Nmae	The tag name of corresponding alarm
Tag Value	The tag value for which an alarm has occurred or been released; an analog tag is displayed as a value and a digital tag as a string to display status.
Alarm Status	This is used to output the status of alarm. (Ex. Alarm ON, Alarm OFF, Alarm Variation)
Alarm Type	This is used to output the type of occurring alarms. (Ex. Hi Alarm, LOLO Alarm, OFF Alarm, ON->OFF Alarm)
Alarm Description	This is used to output the string displaying each status. (Ex. String to display HiHi alarm, alarm ON, alarm OFF and alarm Ack)
OFF Time	This is used to output the time when an alarm is released.
Alarm Zone	This is used to output alarm zones (A ~ P).
Alarm Level	This is used to output alarm levels (1 ~ 8).
ON Time	This is used to output the times when an alarm occurs.
Alarm Time	This is used to output the hours for that an alarm is kept. (Ex. 00:03:25)

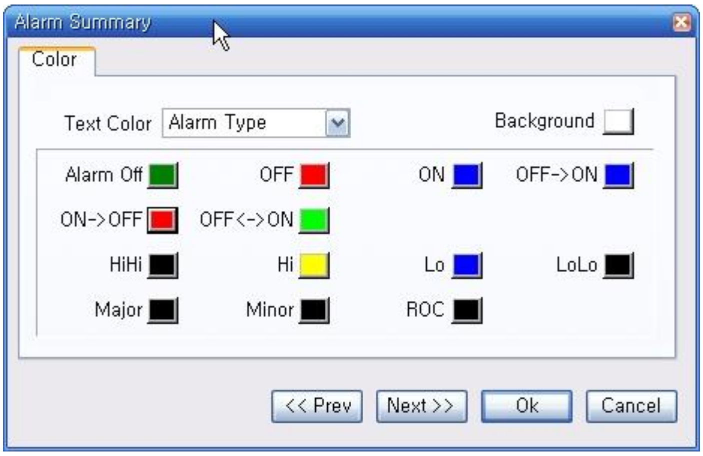
Assign the item displayed and select it with <<, >> button. (Using Shift, Ctrl key, you can select several items.)
To assign the order of a selected item, assign one of selected items and press ▲, ▼ button. And the order of the assigned item will be changed.

- **Color** This is used to assign the background color of a string and the color of the character displayed according to alarm zone, alarm type and alarm status. If you press each color button, the palette with ninety-eight colors will appear. And assign a desired color in the palette.


Alarm Summary
Color
<< Prev
Next >>
Ok
Cancel

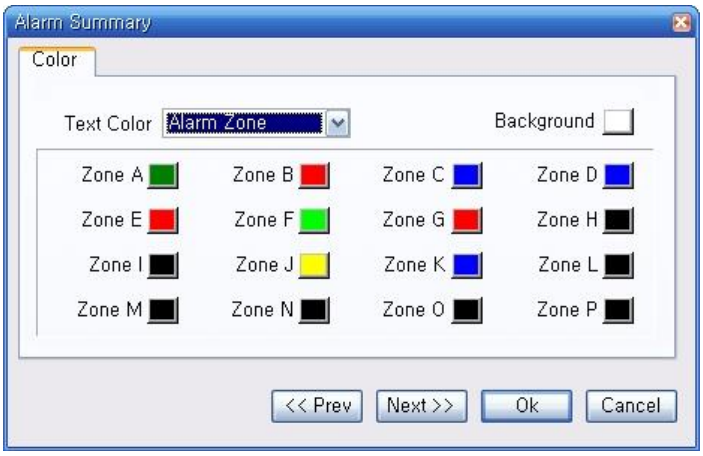
Text Color: Alarm Status
Background ⬜

Alarm Off 🟩
Alarm On 🟥
Alarm 🟨
Alarm Ack 🟦


Alarm Summary
Color
<< Prev
Next >>
Ok
Cancel

Text Color: Alarm Type
Background ⬜

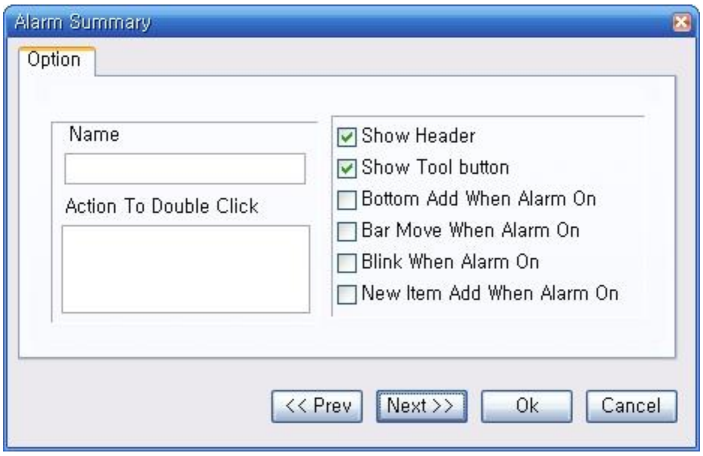
Alarm Off 🟩
OFF 🟥
ON 🟦
OFF->ON 🟦
ON->OFF 🟥
OFF<->ON 🟩
HiHi ⬛
Hi 🟨
Lo 🟦
LoLo ⬛
Major ⬛
Minor ⬛
ROC ⬛


Alarm Summary
Color
<< Prev
Next >>
Ok
Cancel

Text Color: Alarm Zone
Background ⬜

Zone A 🟩
Zone B 🟥
Zone C 🟦
Zone D 🟦
Zone E 🟥
Zone F 🟩
Zone G 🟥
Zone H ⬛
Zone I ⬛
Zone J 🟨
Zone K 🟦
Zone L ⬛
Zone M ⬛
Zone N ⬛
Zone O ⬛
Zone P ⬛

- **Option** This is used to assign a desired item selectively when an alarm summary window is configured.



Name

Action To Double Click

☑ Show Header
☑ Show Tool button
☐ Bottom Add When Alarm On
☐ Bar Move When Alarm On
☐ Blink When Alarm On
☐ New Item Add When Alarm On

Name

This is used to assign the name of an alarm summary object. This item is used to change the alarm summary object set up with a specific ID from the outside. For example, in the case that an alarm summary object is printed in a script program, the window will be distinguished by alarm summary name.

Action To Double Click

This is used to enter the contents of the action when you double- click an alarm summary object. For example, define as follows to acknowledge an alarm when you double-click a corresponding tag.

Show Header

This is used to assign whether the header window at the top of an alarm summary object is outputted.

Show Tool button

This is used to assign whether the tool buttons at the bottom of an alarm summary object are outputted; Print, Selected alarm Ack, Window Alarm Ack, All Alarm Ack, Filter.

Bottom Add When Alarm On

This is used to set up whether an occurring alarm is added at the bottom of a object when the alarm occurs. If you select this item, the recent alarm will be displayed at the bottom. Otherwise, it will be at the top.

Bar Move When Alarm On

If it is not selected, an alarm summary object will be maintained even an alarm occurs. If selected, the window will be scrolled automatically to display an occurring alarm.

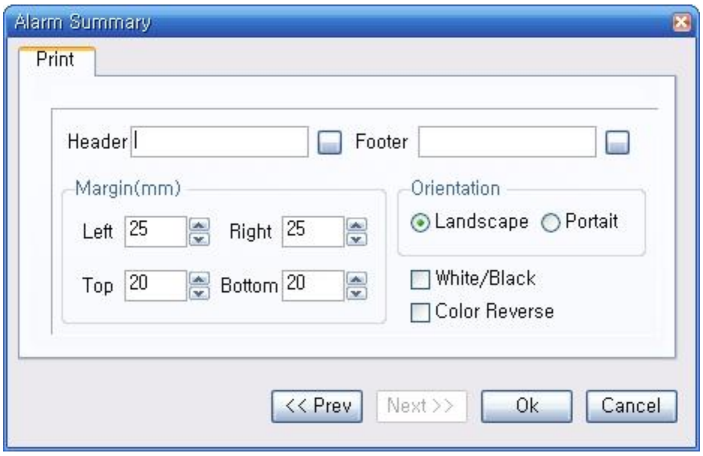
Blink When Alarm On

This is used to blink if an alarm is not acknowledged.

New Item Add When Alarm ON

In case that the alarm for a tag continue to occur or to be released, if you select this item, the recent alarm status for a tag will be displayed and the contents for a previous alarm will disappear. If you select this item, the content of a new alarm will be added and the contents of a previous alarm be displayed.

- **Print** This is used to set up the diverse items to print an alarm summary window.



Left 25
Right 25
Top 20
Bottom 20
● Landscape ○ Portait
☐ White/Black
☐ Color Reverse

Header	This is used to set up the header of the document printed.
Footer	This is used to set up the footer of the document printed.
Margins	This is used to set up the margins of an output paper.
Orientation	This is used to set up the orientation of an output paper.
White/Black	This is used to print reverse white and black color
Color Reverse	This is used to print reverse all color.

Exapmple) Setting up the decimal place of the tag value displayed

1. Open the file designEi.Dat under a corresponding project folder with Notepad.
2. Add [ALARM OBJECT] as follows.

n means decimal place. Enter 2 to express it as 2 decimal places.

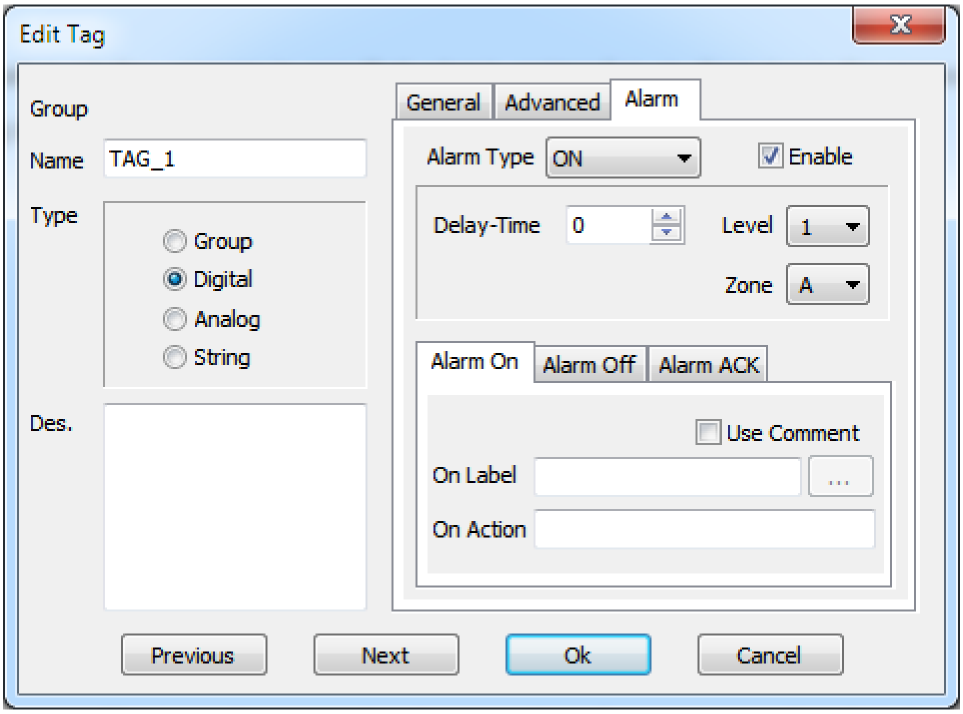
[ALARM OBJECT]

precision = n

3. Save the file designEi.Dat.

7-3. Alarm Setup for Digital Tag

An alarm setup window appears in case that a tag is assigned as an alarm tag in the general setup of an Edit Tag dialog box.



Group

Name TAG_1

Type
○ Group
● Digital
○ Analog
○ String

Des.

Alarm Type ON ☑ Enable

Delay-Time 0 Level 1

Zone A

☐ Use Comment

On Label

On Action

Alarm Type This is used to assign the alarm condition for a corresponding digital tag. There are five alarm types as follows.

- ON: An alarm occurs in case that the status of a contact point is ON irrespective of previous status.
- OFF: An alarm occurs in case the status of a contact point is OFF irrespective of previous status.
- OFF->ON: An alarm occurs in case of OFF->ON.
- ON->OFF: An alarm occurs in case of ON->OFF.
- ON<->OFF: An alarm occurs in case of ON->OFF or OFF->ON.

Tag Variable: ALARMTYPE (1:OFF Alarm, 2:ON Alarm, 3:OFF->ON Alarm, 4:ON->OFF Alarm, 5:OFF<->ON Alarm)

Enable This is used to enable and disable to process alarms. To process the alarm for a tag, the Enable should be assigned. This can be Enabled (1) or Disabled (0) by using a tag variable (ALARMENABLE) when the CIMON-SCADA is run.

[Example for disabling TAG1's alarm]

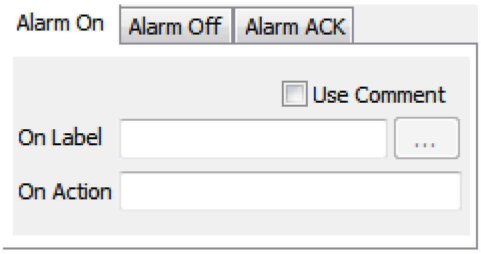
TAG1: ALARMENABLE = 0

Delay-Time This is used to set up a delay-time in order that an alarm is not considered if the alarm is released within an assigned time after the alarm occurs.

Alarm Level This is used to assign the alarm level for a corresponding digital tag. If the level for an alarm tag is selected in alarm setup, an alarm will be outputted to the level. There are eight alarm levels from 1 to 8.

Alarm Zone This is used to assign the alarm zone for a corresponding digital tag. If the zone for an alarm tag is selected in alarm setup, an alarm will be outputted to the zone There are sixteen alarm zones from A to P.

Alarm On



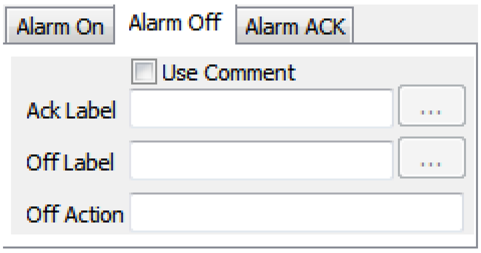
On Label This is used to write the string displayed when the alarm for a corresponding digital tag occurs.

Tag Variable: INALARM1

On Action This is used to set up the action when the alarm for a digital tag occurs. For example, enter the operation expression or script command for it.

RunScript("AlarmTag1")

Alarm Off


Alarm On
Alarm Off
Alarm ACK
☐ Use Comment
Ack Label
...
Off Label
...
Off Action

Ack Label This is used to write the string displayed when the alarm for a corresponding digital tag is acknowledged.

Tag Variable: ACKLABEL

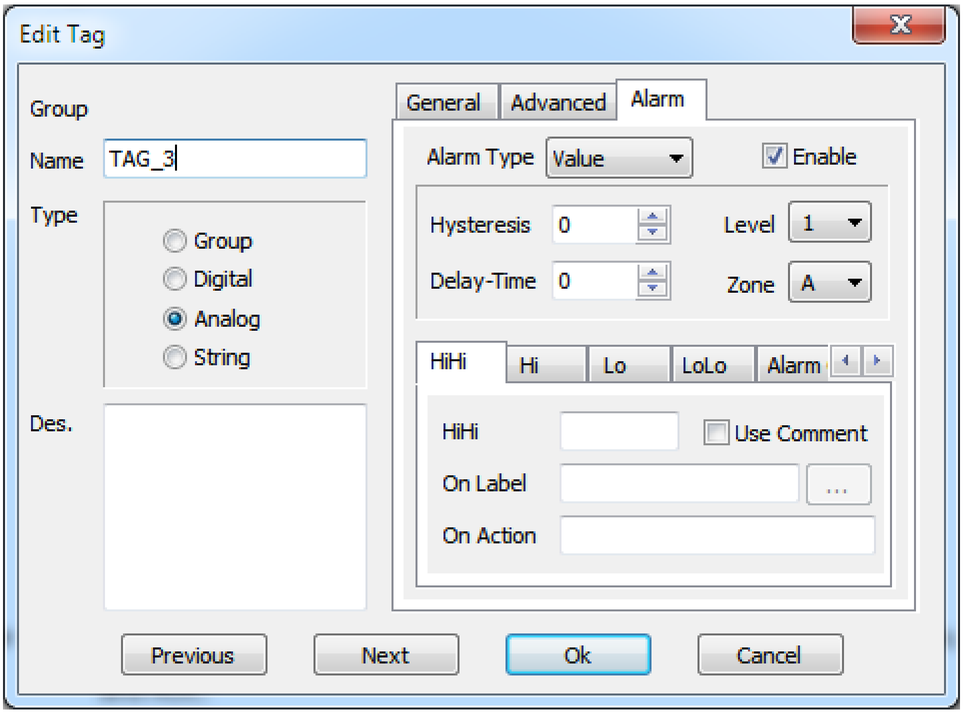
Off Label This is used to write the string displayed when the alarm for a corresponding digital tag is released.

Tag Variable: OUTALARM

Off Action This is used to set up the action when the alarm for a digital tag is released. For example, enter the operation expression or script command for it.

7-4. Alarm Setup for Analog Tag

An alarm setup window appears in case that a tag is assigned as an alarm tag in the general setup of an Edit Tag dialog box.


Edit Tag
Group
Type
○ Group
○ Digital
○ String
Des.
General
Advanced
Alarm
HiHi
Hi
Lo
LoLo
Alarm
HiHi
☐ Use Comment
On Label
...
On Action
Previous
Next
Ok
Cancel

Name: TAG_3

● Analog

Alarm Type: Value

☑ Enable

Hysteresis: 0

Level: 1

Delay-Time: 0

Zone: A

Alarm Type The analog alarm setup is divided into 3 types. Select one among value, deviation and ROC.

- Value: The value is the condition that the alarm for a corresponding tag occurs.
- Deviation: An alarm occurs on the basis of the difference between a target value and a deviation value.
- ROC: The variation value of a tag is the condition that an alarm occurs.

Tag Variable: ALARMTYPE (1: Value, 2: Deviation, 3: ROC)

Enable Same as digital tag's.

Hysteresis Hysteresis is used to prevent from alarm chattering whenever the value measured around a boundary value varies small. An alarm occurs in case a measured value is bigger than the value, which is to add a hysteresis value to a boundary value. An alarm is released in case that a measured value is less than the value, which is to subtract a hysteresis value from a boundary value.

Tag Variable: HYSTERESIS

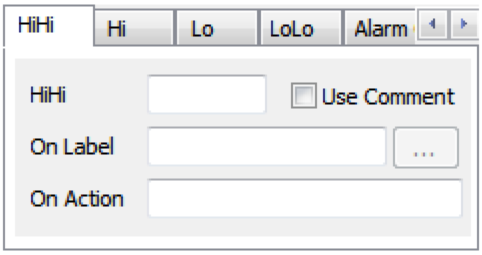
Delay-Time Same as digital tag's.

Alarm Level Same as digital tag's.

Alarm Zone Same as digital tag's.

1) Value Alarm Type

- HiHi



HiHi This is the set value for the occurrence of HiHi alarm. If a tag value is bigger than a set value, a HiHi alarm will occur.

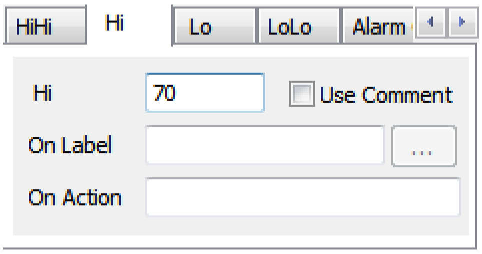
Tag Variable: ALARMHIHI

On Label This is used to write the string displayed when a HiHi alarm occurs.

Tag Variable: INALARM1

On Action This is used to set up the action when a HiHi alarm occurs.

- Hi



Hi: 70 ☐ Use Comment

On Label

On Action

Hi This is the set value for the occurrence of Hi alarm. If a tag value is bigger than a set value, a Hi alarm will occur.

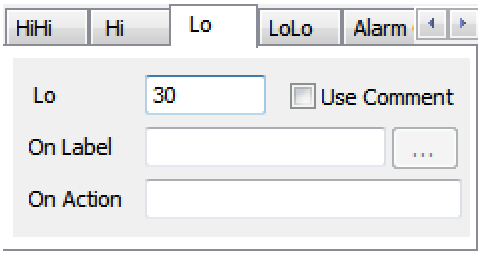
Tag Variable: ALARMHI

On Label This is used to write the string displayed when a Hi alarm occurs.

Tag Variable: INALARM2

On Action This is used to set up the action when a Hi alarm occurs.

- Lo



Lo: 30 ☐ Use Comment

On Label

On Action

Lo This is the set value for the occurrence of Lo alarm. If a tag value is less than a set value, a Lo alarm will occur.

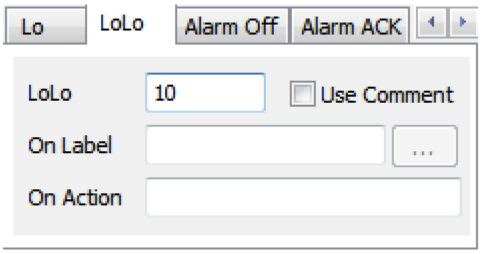
Tag Variable: ALARMLO

On Label This is used to write the string displayed when a Lo alarm occurs.

Tag Variable: INALARM3

On Action This is used to set up the action when a Lo alarm occurs.

- LoLo

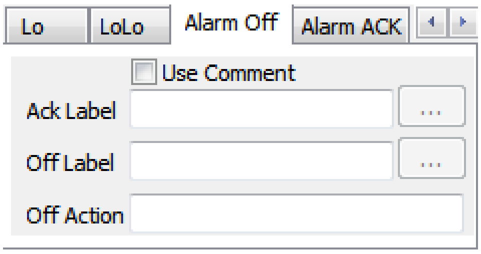

Lo
LoLo
Alarm Off
Alarm ACK
On Label
...
On Action

LoLo 10

☐ Use Comment

LoLo	This is the set value for the occurrence of LoLo alarm. If a tag value is less than a set value, a LoLo alarm will occur. **Tag Variable: ALARMLOLO**
On Label	This is used to write the string displayed when a LoLo alarm occurs. **Tag Variable: INALARM4**
On Action	This is used to set up the action when a LoLo alarm occurs.

- Alarm Off

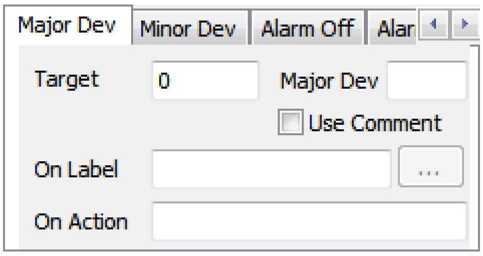

Lo
LoLo
Alarm Off
Alarm ACK
Ack Label
...
Off Label
...
Off Action

☐ Use Comment

Ack Label	This is used to write the string displayed when an alarm is acknowledged. **Tag Variable: ACKLABEL**
Off Label	This is used to write the string displayed when an alarm is released. **Tag Variable: OUTALARM**
Off Action	This is used to set up the action when the alarm for a tag is released.

2) Deviation Alarm Type

- Major Dev

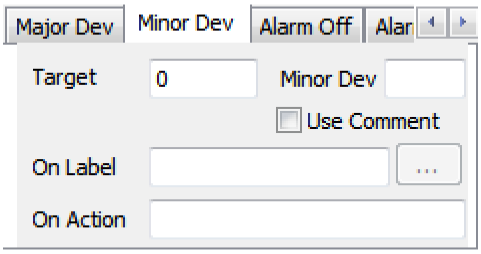

Major Dev
Minor Dev
Alarm Off
Alar
Major Dev
On Label
...
On Action

Target 0

☐ Use Comment

Target	This is used to enter the value to be the standard of deviation value alarm. This is used as the common standard value of a major and a minor deviation value alarm. **Tag Variable: ALARMTARGET**
Major Dev	This is used to enter the value for a major deviation value alarm. If the difference between a tag value and a target is bigger than a major deviation value, a major deviation value alarm will occur. The major deviation value for a tag must bigger than the minor deviation value for it. **Tag Variable: ALARMMAJOR**
On Label	This is used to write the string displayed when a major deviation value alarm occurs. **Tag Variable: INALARM1**
On Action	This is used to set up the action when a major deviation value alarm occurs.

- Minor Dev

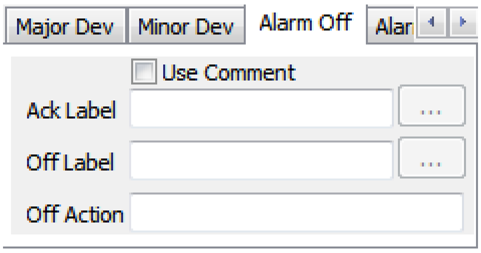


Target 0

☐ Use Comment

Target	Same as major dev's.
Minor Dev	This is used to enter the value for a minor deviation value alarm. If the difference between a tag value and a target is bigger than a minor deviation value, a minor deviation value alarm will occur. The minor deviation value for a tag must less than the major deviation value for it. **Tag Variable: ALARMMINOR**
On Label	This is used to write the string displayed when a minor deviation value alarm occurs. **Tag Variable: INALARM2**
On Action	This is used to set up the action when a minor deviation value alarm occurs.

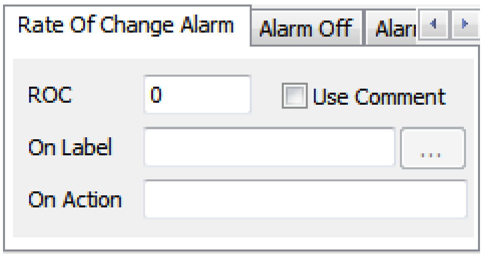
- Alarm Off


Major Dev
Minor Dev
Alarm Off
Alar
☐ Use Comment
Ack Label
...
Off Label
...
Off Action

Ack Label	This is used to write the string displayed when an alarm is acknowledged. **Tag Variable: ACKLABEL**
Off Label	This is used to write the string displayed when an alarm is released. **Tag Variable: OUTALARM**
Off Action	This is used to set up the action when the alarm for a tag is released.

3) ROC Alarm Type

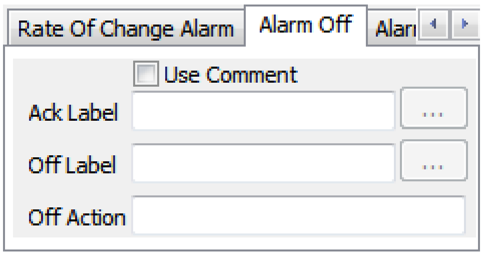
- Rate Of Change Alarm


Rate Of Change Alarm
Alarm Off
Alar
☐ Use Comment
On Label
...
On Action

ROC 0

ROC	This is used to enter the value for ROC alarm. If a newly acquired value is bigger than an assigned value by comparing to a previous value, a ROC alarm will occur. **Tag Variable: ALARMROC**
On Label	This is used to write the string displayed when this alarm occurs. **Tag Variable: INALARM1**
On Action	This is used to set up the action when a ROC alarm occurs.

- Alarm Off


Rate Of Change Alarm
Alarm Off
Alar
☐ Use Comment
Ack Label
...
Off Label
...
Off Action

Ack Label	This is used to write the string displayed when an alarm is acknowledged. **Tag Variable: ACKLABEL**

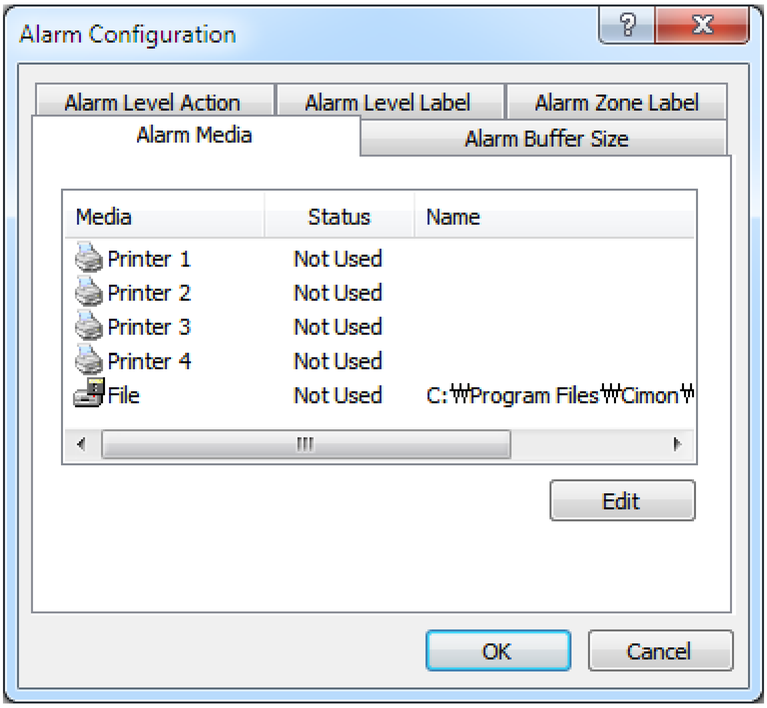
Off Label This is used to write the string displayed when a ROC alarm is released.

Tag Variable: OUTALARM

Off Action This is used to set up the action when a ROC alarm is released.

7-5. Alarm Configuration

If you select the Alarms in the 'Tools' menu of the CimonD, the following dialog box to set up how to process the tag in which an alarm occurs. The dialog box is used to decide whether an alarm is outputted with a printer or saved in a text file.

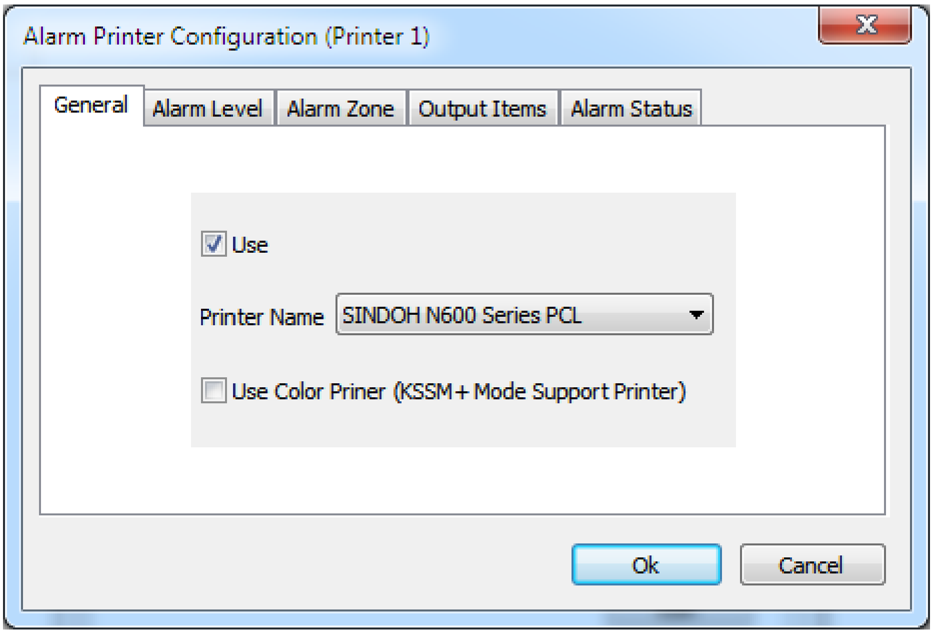

Alarm Configuration
Alarm Level Action
Alarm Level Label
Alarm Zone Label
Alarm Media
Alarm Buffer Size
Edit
OK
Cancel

Media	Status	Name
Printer 1	Not Used	
Printer 2	Not Used	
Printer 3	Not Used	
Printer 4	Not Used	
File	Not Used	C:₩Program Files₩Cimon₩

1) **Alarm Media**

This is the list to show the media that an alarm message will be outputted through. In the CIMON-SCADA, an alarm can be outputted with four printers and in file type.

Edit This function is used to edit each item of an Alarm Media. To edit, if you assign the media edited and press the Edit button, an Alarm Printer Configuration dialog box will appear. The following picture is the dialog box in case that you select the Printer 1.



☑ Use

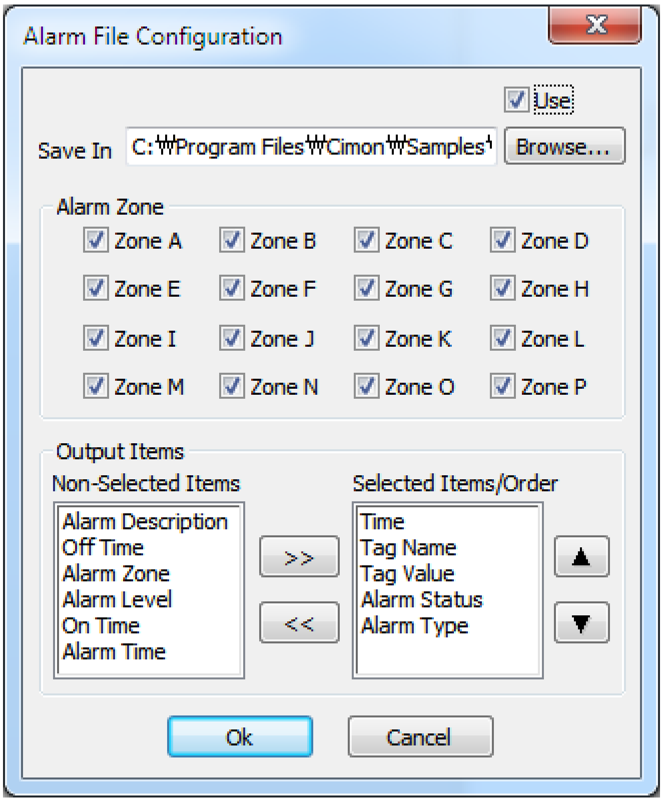
Printer Name: SINDOH N600 Series PCL

☐ Use Color Priner (KSSM+ Mode Support Printer)

Use	This is used to select a currently assigned printer as an alarm media. If you select the 'Use', an alarm will be outputted with an assigned printer.
Printer Name	This is used to select a printer. Registered printers are displayed. And select one among them. The printer to print line by line is available for an alarm printer.
Use Color Printer	This is used to print the contents of an alarm by classifying as color. To print the contents of an alarm in color, the printer should be color one to support KSSM+ mode.

Note: Refer to the previously explained alarm summary for Alarm Level, Alarm Zone, Format and Alarm Status.

Alarm File Configuration In case that a media is file, if you double-click the File in the '**Alarm Configuration**' dialog box, the following dialog box will appear. Assign the Save In to save an alarm message. You may enter in the Save In or assign by using **'Browse'**. A file is used to save the contents of an alarm in text type. Alarm file name format is AlmYYYY.txt. YYYY means year. (Example) Alm2007.txt



☑ Use

Save In: C:₩Program Files₩Cimon₩Samples₩

Alarm Zone

☑ Zone A ☑ Zone B ☑ Zone C ☑ Zone D
☑ Zone E ☑ Zone F ☑ Zone G ☑ Zone H
☑ Zone I ☑ Zone J ☑ Zone K ☑ Zone L
☑ Zone M ☑ Zone N ☑ Zone O ☑ Zone P

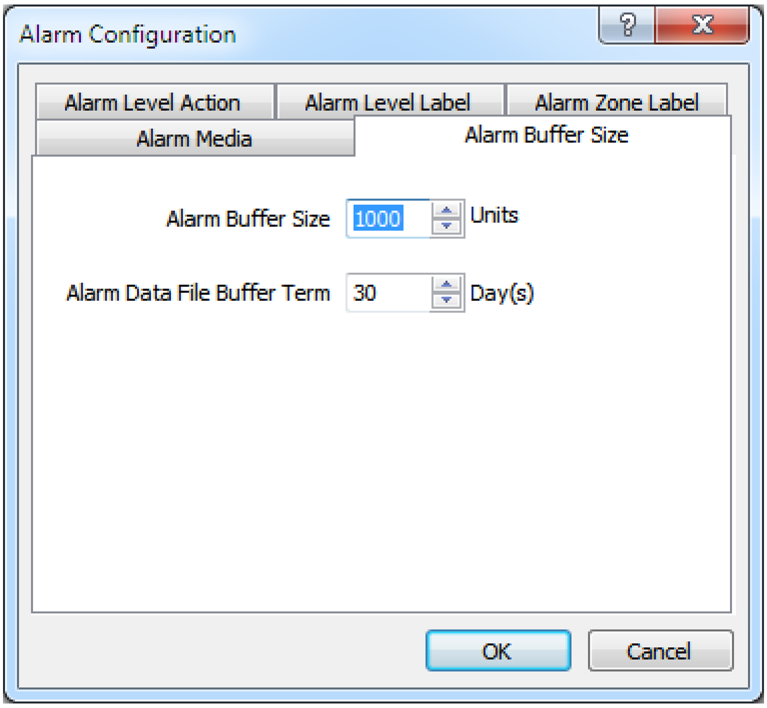
Output Items

Non-Selected Items	Selected Items/Order
Alarm Description	Time
Off Time	Tag Name
Alarm Zone	Tag Value
Alarm Level	Alarm Status
On Time	Alarm Type
Alarm Time	

Use	This is used to select alarm text file saved. If you select the 'Use', an alarm file will be saved in an assigned folder.
Alarm Zone	This is used to select the alarm zone saved in a file.
Output Items	This is used to assign the information outputted. The assigned items are Description, Off Time, Alarm Zone, Alarm Level, On Time, Alarm Time, Time, Tag Value, Alarm Status, Alarm Type and Tag Name. Assign the item displayed and select it with the <<, >> button. (You can select several items by using the Shift, Ctrl.) And if you assign one of the Selected items and press the ▲, ▼ button, the order of the assigned item will be changed.

2) Alarm Buffer Size

This is used to assign the size of an alarm buffer and the term of an alarm data file buffer.


Alarm Configuration
Alarm Level Action
Alarm Level Label
Alarm Zone Label
Alarm Media
Alarm Buffer Size
OK
Cancel

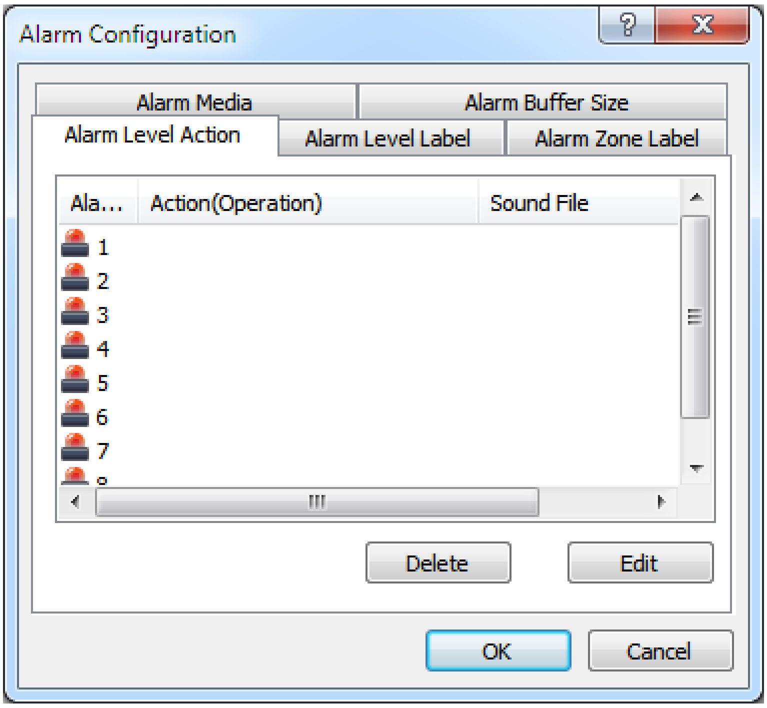
Alarm Buffer Size: 1000 Units

Alarm Data File Buffer Term: 30 Day(s)

Alarm Buffer Size	This is used to assign the number of the on-line alarms preserved. Minimum is 100 and Maximum is 32767.
Alarm Data File Buffer Term	This is used to assign the term for which a historical alarm will be preserved. Minimum is 0 day and maximum 365 days. An alarm is saved in a Binary file to manage the history of the alarm. This has nothing with the Alarm File Configuration of the Alarm Media

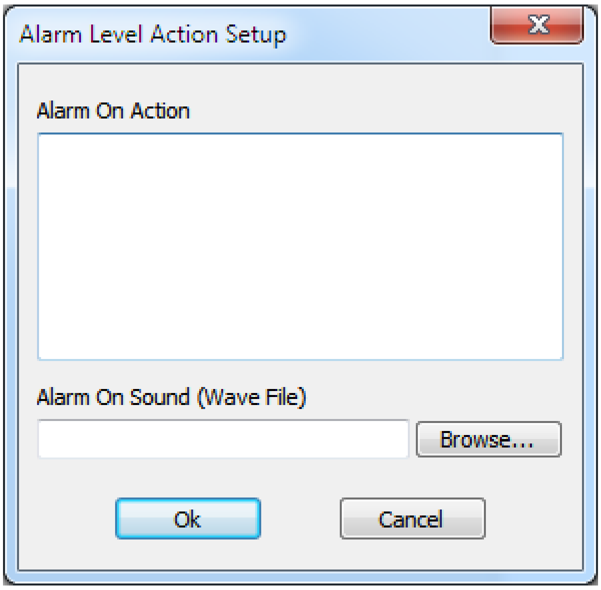
3) Alarm Level Action

This is used to register an action and a sound file in case that alarms occur by levels. Registered actions and the list of sound files by levels are displayed.


Alarm Configuration
Alarm Media
Alarm Buffer Size
Alarm Level Action
Alarm Level Label
Alarm Zone Label
Ala...
Action(Operation)
Sound File
1
2
3
4
5
6
7
Delete
Edit
OK
Cancel

Delete This is used to delete the action and the sound file of a selected alarm level.

Edit If you select a desired level and click the Edit, the following dialog box will appear.


Alarm Level Action Setup
Alarm On Action
Alarm On Sound (Wave File)
Browse...
Ok
Cancel

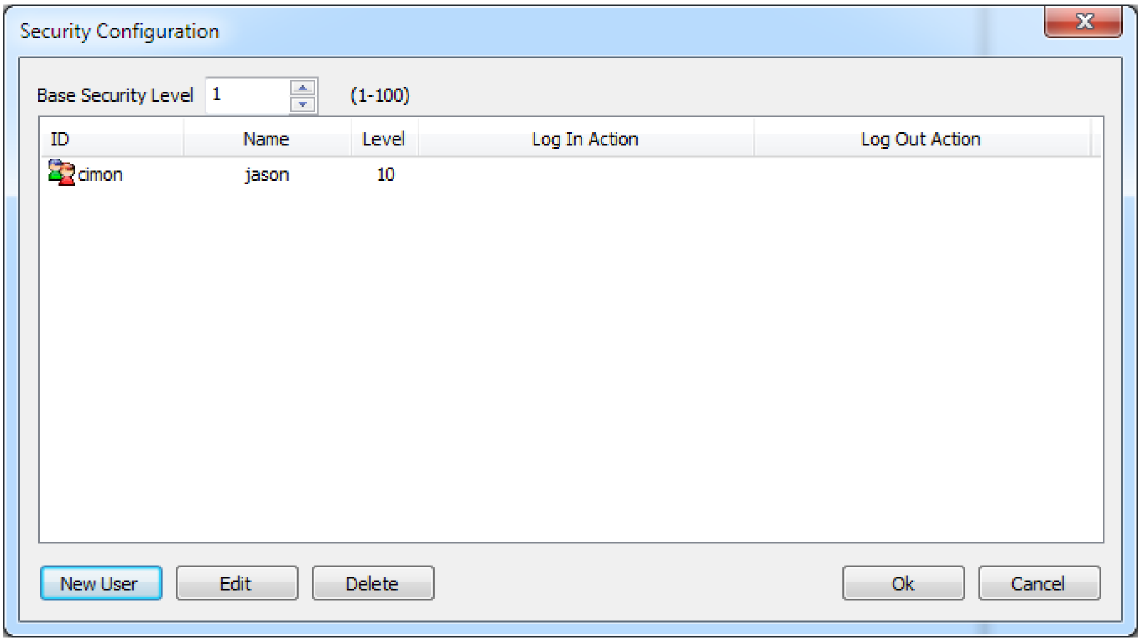
Alarm On Action	This is used to enter the action when the alarm of a corresponding level occurs.
Alarm On Sound (Wave File)	This is used to assign the sound file outputted when the alarm of a corresponding level occurs. If an alarm occurs, a registered sound file will be continuously outputted. If the alarm is acknowledged or released, the output will be stopped. And to stop the output of a sound file, you may use the CIMON-SCADA Function **StopSound**. Only Wave format file can be assigned as a sound file.

Chapter 8. Security

It is used to restrict operating authorization for each user. The range of security level is from 1 to 10 and Level 1 is the highest authorization.

8.1 Security Configuration

Click [Tools] → [Security] to set up security options.

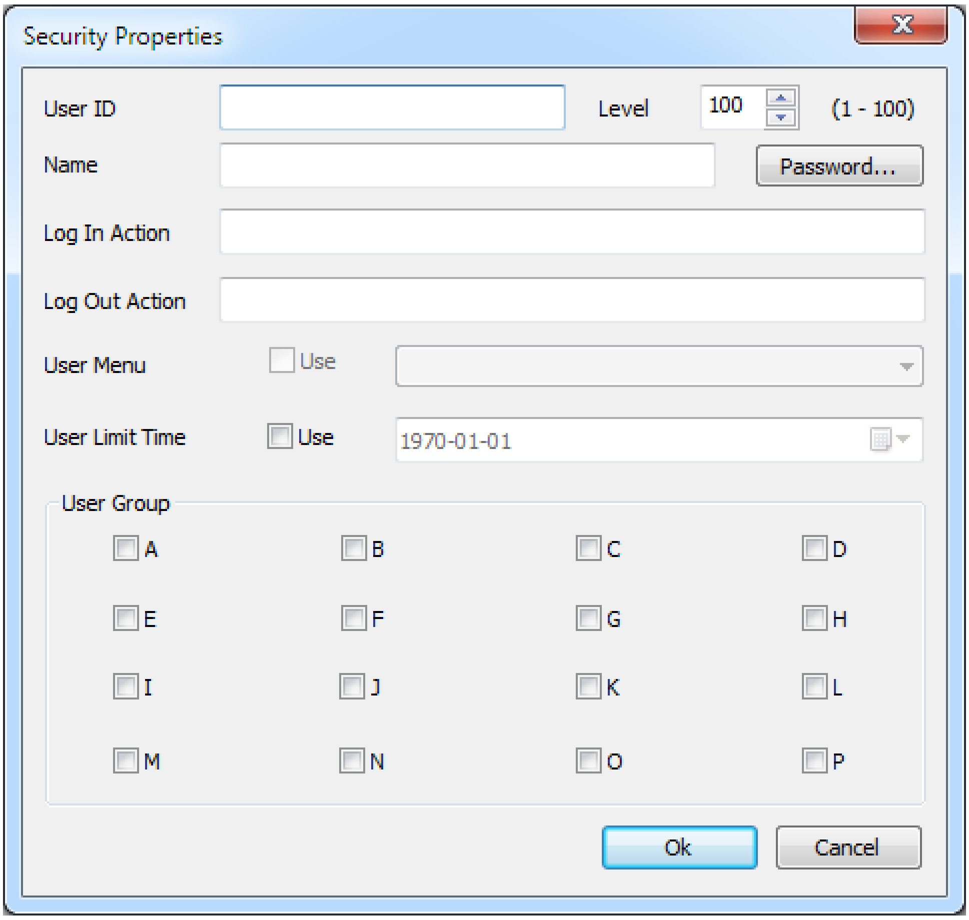

Security Configuration
Base Security Level
(1-100)
New User
Edit
Delete
Ok
Cancel

Base Security Level: 1

ID	Name	Level	Log In Action	Log Out Action
cimon	jason	10		

CimonX operating level: Select the level of CimonX operating level. CimonX will run with this level when no one logs in system.

1) **New User**: Register new user.


Security Properties
User ID
Name
Log In Action
Log Out Action
User Menu
User Limit Time
User Group
Password...
Ok
Cancel

Level: 100 (1 - 100)

User Menu: ☐ Use

User Limit Time: ☐ Use 1970-01-01

User Group: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P

User ID: Write user ID. English, number and special letter can be used.

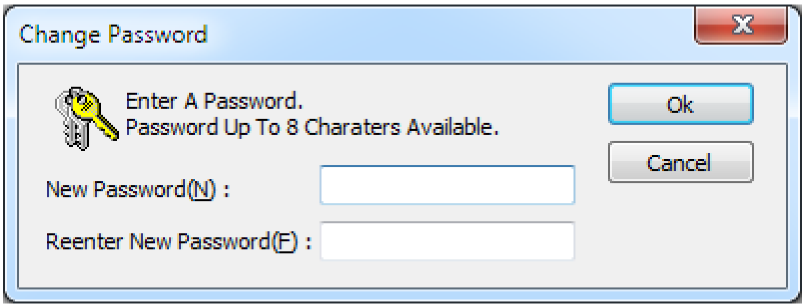
Level: Select one of security level from 1 to 100. Level 1 is the highest and level 100 is the lowest. For example, if your security level is 10, you are authorized to operate from 100 to 10 levels. Security level is applied to function such as user button, touch, Entrydata, shortkey and etc.

Name : Write the name of user. English, Korean, number and special characters are available.

Password : Write the password of User ID.

Limitation

1. The combination of English and number are available.
2. Special characters and space cannot be used.
3. Maximum 8 letters are available.
4. Password is shown as “********”. If user does not write the password, it is concerned there is no password with its ID.


Change Password
Ok
Cancel

Enter A Password.
Password Up To 8 Charaters Available.

New Password(N) :

Reenter New Password(F) :

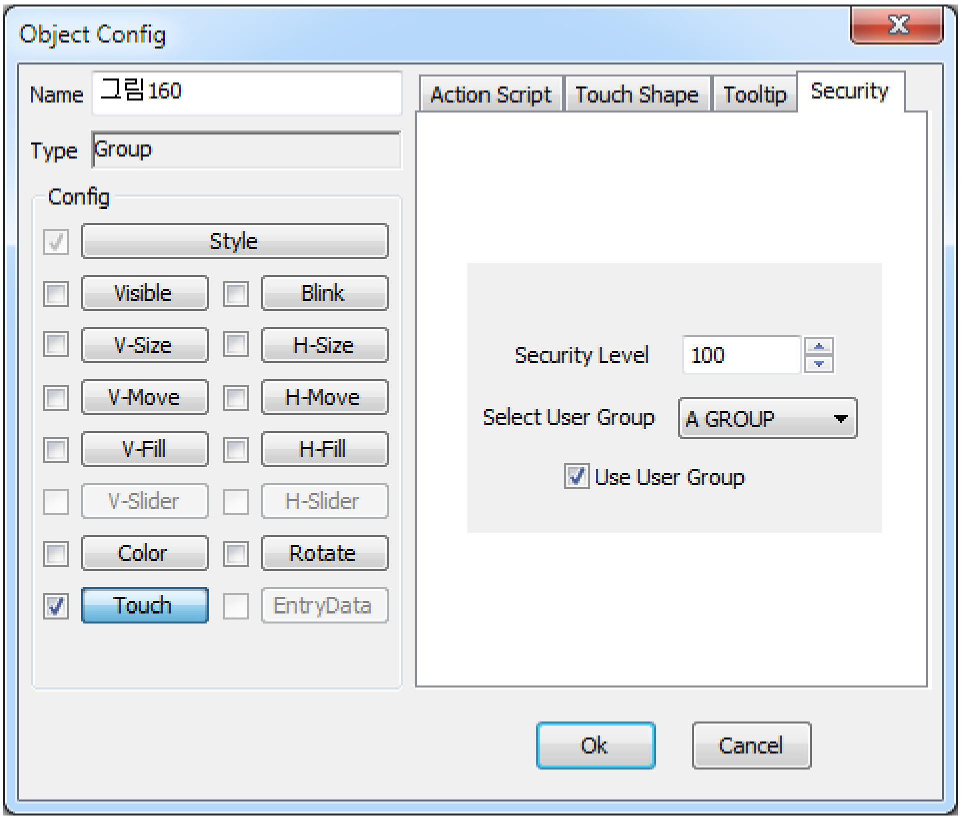
Log In Action: Write a script that will be activated as user logs in the system. For example, if tag value needs to increase continually at the time of log in, write a command to run that script. (RunScript("script name"))

Log Out Action: Write a script that will be activated as user logs off the system. For example, if script needs to stop at the time of log off, write a command to run that script. (StopScript("script name"))

User Menu: Select one of user menu that will be used at the time of log in.

User Limit Time: It is used to make expiration date for User ID. After expiration date, Log-in is not possible with its ID.

User Group: There are 16 groups (A to P) that user can choose (Multiple selection is available). In order to use User Group, click "Use User Group" and select a Group at the [Object Config] with Button, Touch, EntryData or Shortkey.


Object Config
Action Script
Touch Shape
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Ok
Cancel

Name 그림160

Type Group

☑ Style

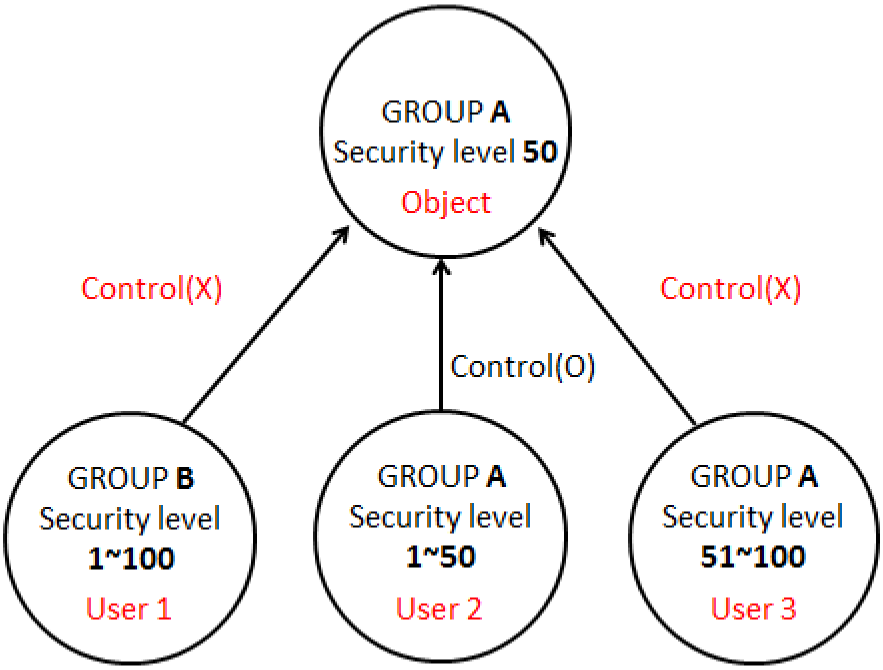
☑ Touch

Security Level 100

Select User Group A GROUP

☑ Use User Group

For example, if object is set up by Touch function with GROUP A and Security level 50, user who is not belong to Group A or is under Security level 50 cannot use Touch function with its object.


GROUP **A**
Security level **50**
Object
Control(X)
Control(O)
Control(X)
GROUP **B**
Security level
1~100
User 1
GROUP **A**
Security level
1~50
User 2
GROUP **A**
Security level
51~100
User 3

2) Edit: Click this to edit ID configuration.

3) Delete: It is used to remove registered ID from the list.

Chapter 9 Scripts

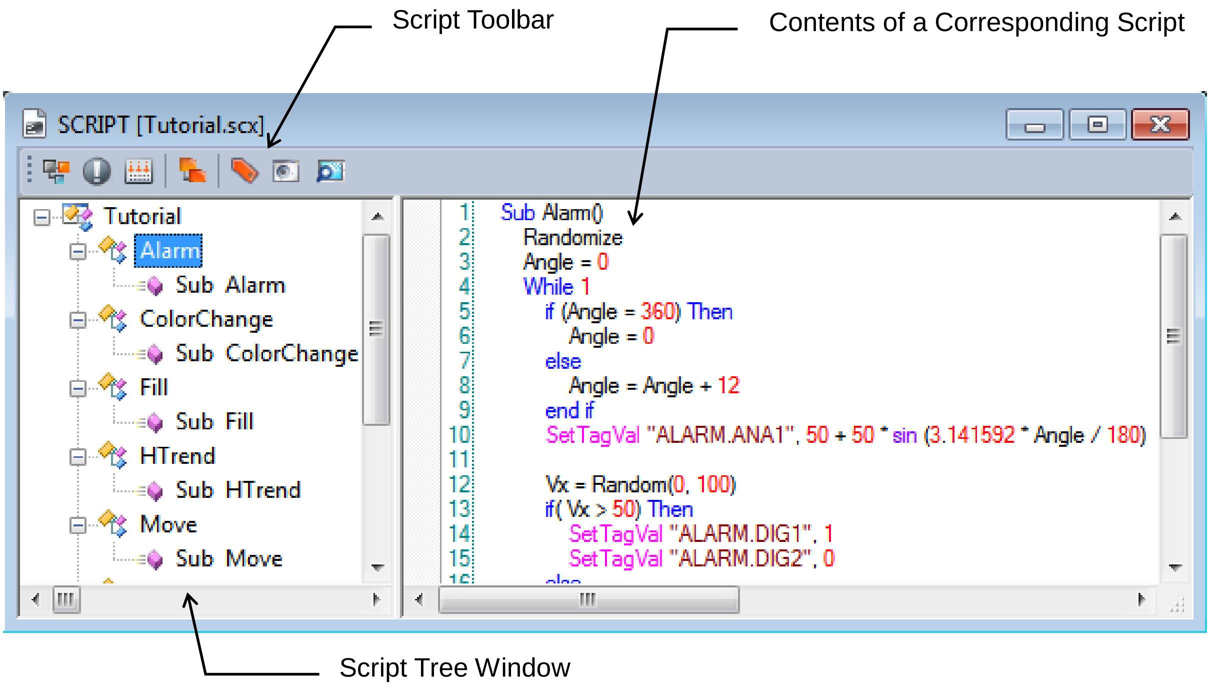
By using the OLE Automation provided from the CIMON, the user program run inside of the CIMON can be made as well as an exclusive program can be made and run outside of the CIMON. As this program is Visual Basic script type, a special programming training is not necessary. As the CIMON Functions as well as the general functions provided from Visual Basic script are used, diverse functions can be performed. The CIMON Functions provides many functions including the functions for tag information input/output, the functions for system, the functions for SQL.

9-1. Features of Script

- As the language similar to Visual Basic is supported, it is available to control data or objects in the CIMON and to link with other application programs.
- It is available to write the script language operated when each monitoring widow is opened and closed.
- It is available to write the script language operated when each user logs in and logs out.
- It is available to write the script language defining the action to the button or the touch of a monitoring window.
- As the functions for SQL are provided, it is available to inquire or search data or search from general DB.
- More than 500 functions including file input/output and link with a OLE object are provided.

9-2. Configuration of Script Window

If you select the **“Tools” – “Scripts”** in the menu of the CimonD, the window of a **‘Script Manager’** will appear.


Script Toolbar
Contents of a Corresponding Script
SCRIPT [Tutorial.scx]
Tutorial
Alarm
Sub Alarm
ColorChange
Sub ColorChange
Fill
Sub Fill
HTrend
Sub HTrend
Move
Sub Move
Script Tree Window

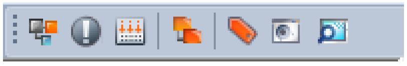
```
Sub Alarm()
    Randomize
    Angle = 0
    While 1
        if (Angle = 360) Then
            Angle = 0
        else
            Angle = Angle + 12
        end if
        SetTagVal "ALARM.ANA1", 50 + 50 * sin (3.141592 * Angle / 180)

        Vx = Random(0, 100)
        if( Vx > 50) Then
            SetTagVal "ALARM.DIG1", 1
            SetTagVal "ALARM.DIG2", 0
```

The contents of the script in the above example are as follows.

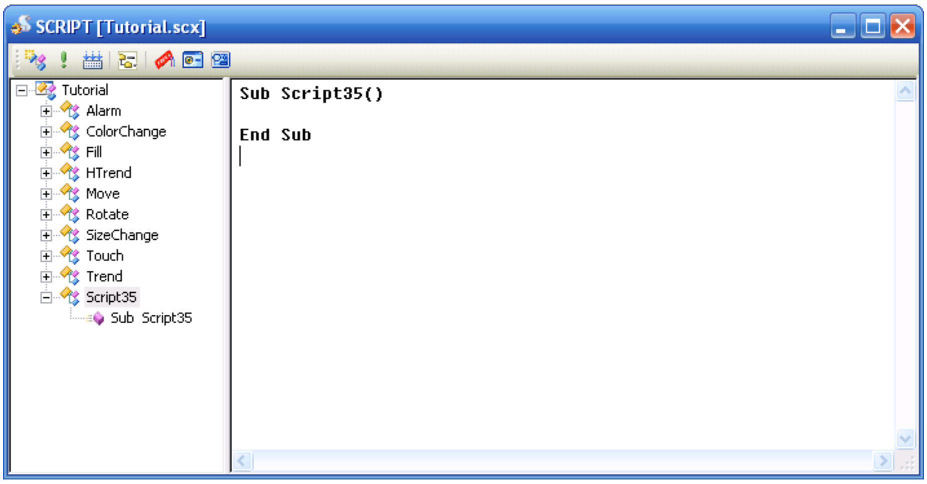
This script is used to increase or decrease the value of the “Tag_5” by 10 continuously in the range from 0 to 100. First, the value is increased by 10. If it is 100, it will be decreased by 10. Again if it is 0, it will be increased by 10. In this algorithm, it is sleeping as 20msec to repeat continuously.

9-3. Menu

The following is the menu used in a script manager.



Add Script This is used to write a new script. If you press this icon, a window will be replaced as follows. A new script function (Example, Script35) is created on the left and a new function (Script35) is displayed on the right. Write a desired program in this function.


SCRIPT [Tutorial.scx]
Tutorial
Alarm
ColorChange
Fill
HTrend
Move
Rotate
SizeChange
Touch
Trend
Script35
Sub Script35

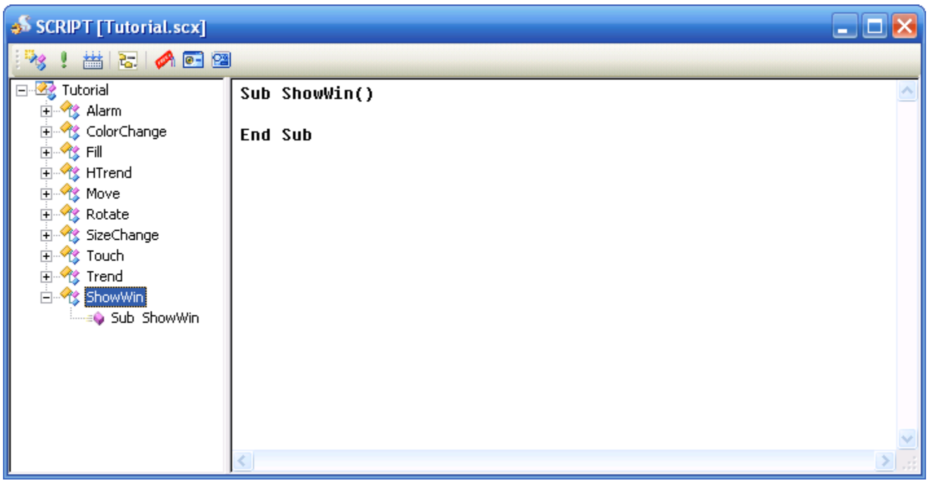
```
Sub Script35()

End Sub
```

If you change the Script35 in the Sub Script35() to the ShowWin and click the icon to compile a script, for example, the script called ShowWin will be added to the Script Tree only in normal case.

Reference) The script called **“Main”** is run automatically when a system starts.

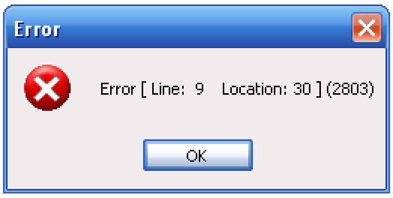
Accordingly, you make the **“Main”** script for the initialized action of a system and register it to this script.

The changed window is as follows.


SCRIPT [Tutorial.scx]
Tutorial
Alarm
ColorChange
Fill
HTrend
Move
Rotate
SizeChange
Touch
Trend
ShowWin
Sub ShowWin

```
Sub ShowWin()

End Sub
```

Compile Script This is used to inspect and compile a selected script. If there is not an error, the script name and the global variable will be registered to the script tree without any message. If there is an error, an Error dialog box will appear as follows and the line where an error occurs will be selected.



Error [Line: 9 Location: 30] (2803)

And press the **'Ok'** button to close the dialog box and revise the error. Select the Compile Script menu again to compile the script.

Register Script This is used to inspect and register all the scripts that were not inspected. If an error occurs, the script with an error will be selected and the Error dialog box of the type like the one for the Compile Script will appear.

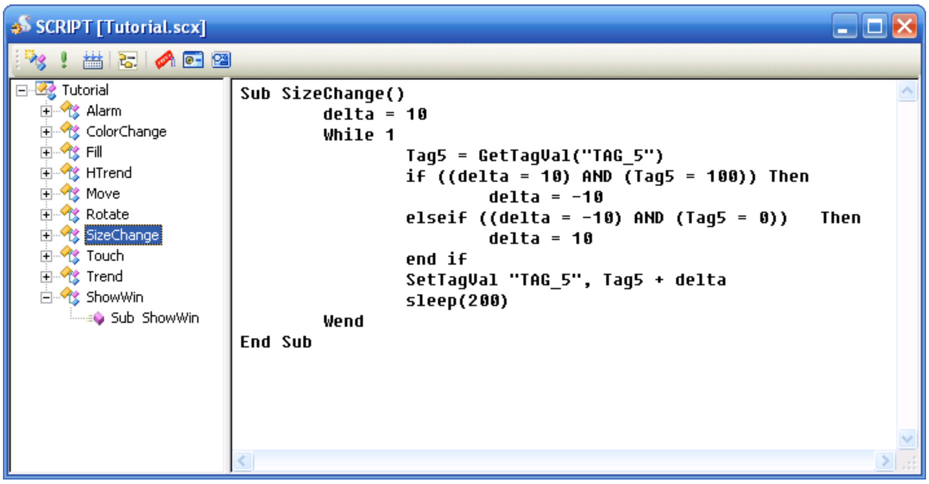
[Note 1] The script with X mark in red color on a script tree window is the one that is not inspected after editing.

[Note 2] The script without inspection will not be run in the CimonX.

9-4. Writing a Script

Let’s write the simple script to change the value of a tag.

- Click **Tools → Scripts**, a Script Editor will appear as below.


SCRIPT [Tutorial.scx]
Tutorial
Alarm
ColorChange
Fill
HTrend
Move
Rotate
SizeChange
Touch
Trend
ShowWin
Sub ShowWin

```
Sub SizeChange()
        delta = 10
        While 1
                Tag5 = GetTagVal("TAG_5")
                if ((delta = 10) AND (Tag5 = 100)) Then
                        delta = -10
                elseif ((delta = -10) AND (Tag5 = 0))   Then
                        delta = 10
                end if
                SetTagVal "TAG_5", Tag5 + delta
                sleep(200)
        Wend
End Sub
```

- Click the Add Script icon.

  Let’s change the value of the “Tag_9” by a script.

  The algorithm of the script written is as follows.

  [The value of the “Tag_9” is increased by 1 from 1 to 5. In case the value becomes 5, it will be changed to 1. The value is changed at the intervals of 2 sec. The name of the script is defined as ColorChange.]

- Write the contents of the script as follows.

```
Sub ColorChange()
          While 1
                    Tag9 = GetTagVal(“Tag_9”)
                    If (Tag9 = 5) Then
                              SetTagVal “Tag_9”, 1
                    Else
                              SetTagVal “Tag_9”, Tag9 + 1
                    End If
                    Sleep(2000)
          Wend
End Sub
```

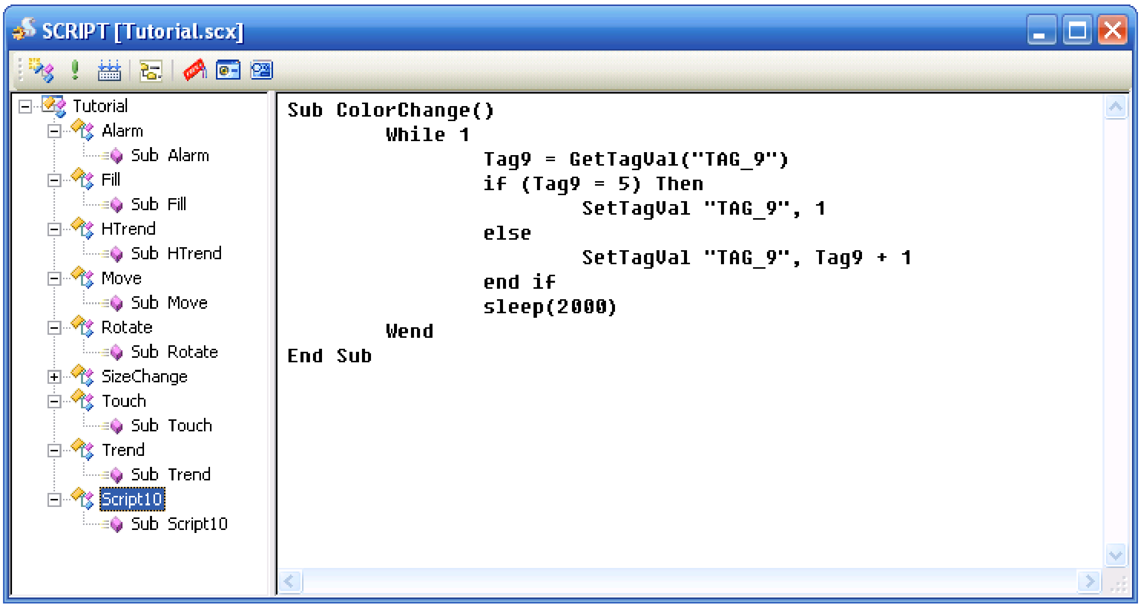
[Note]

1. If a script is called, the action in the function will be run and be exited automatically.

2. If the unlimited roof is run by a While sentence as above, the script will be run continuously. Use Function StopScript to exit this script.

3. Use Function Sleep in a While sentence to sleep each roof for a constant time (Min. 100msec). Otherwise, as the script will be run continuously, other tasks are run very slowly.

The window that the script is written is as follows.

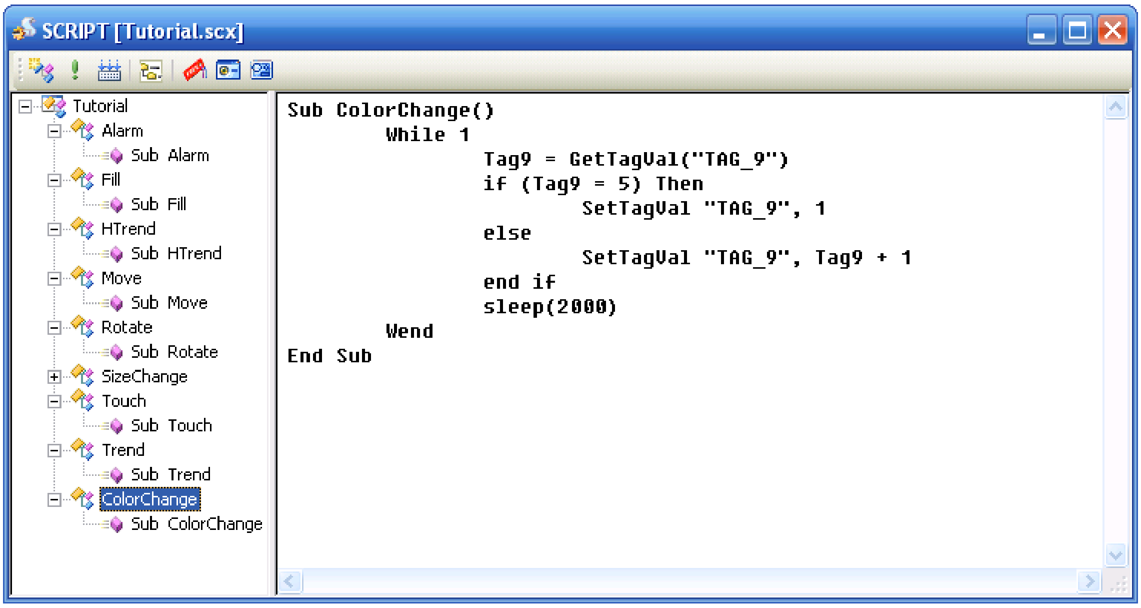


SCRIPT [Tutorial.scx]
Tutorial
Alarm
Sub Alarm
Fill
Sub Fill
HTrend
Sub HTrend
Move
Sub Move
Rotate
Sub Rotate
SizeChange
Touch
Sub Touch
Trend
Sub Trend
Script10
Sub Script10

```
Sub ColorChange()
        While 1
                Tag9 = GetTagVal("TAG_9")
                if (Tag9 = 5) Then
                        SetTagVal "TAG_9", 1
                else
                        SetTagVal "TAG_9", Tag9 + 1
                end if
                sleep(2000)
        Wend
End Sub
```

- Click the **'Compile Script'** icon in the Toolbar of the Script Editor to inspect the script.

  As the arrow indicates on the following window, Script ColorChange is registered to the tree.


SCRIPT [Tutorial.scx]
Tutorial
Alarm
Sub Alarm
Fill
Sub Fill
HTrend
Sub HTrend
Move
Sub Move
Rotate
Sub Rotate
SizeChange
Touch
Sub Touch
Trend
Sub Trend
ColorChange
Sub ColorChange

```
Sub ColorChange()
        While 1
                Tag9 = GetTagVal("TAG_9")
                if (Tag9 = 5) Then
                        SetTagVal "TAG_9", 1
                else
                        SetTagVal "TAG_9", Tag9 + 1
                end if
                sleep(2000)
        Wend
End Sub
```

- Click the **'Save'** icon in the standard toolbar of the CimonD to save the script.

- Click the **'Close'** icon of the control bar to exit the script editor.

9-5. Running/Stopping a Script

It is available to run and stop a written script by using the CIMON Functions.

The CIMON Function to run a script is as follows.

```
RunScript("Script Name")
Example) RunScript(“ColorChange”)
```

The CIMON Function to stop a script is as follows.

```
StopScript("Script Name")
Example) StopScript(“ColorChange”)
```

9-6. SCRIPT EXAMPLE

1) Read / Write Tag value

In order to Read “TAG_1” value and Write it to TAG_2, you can use script sample as following.

```
Sub ValueChange()
        A1 = GetTagVal(“TAG_1")
        SetTagVal "TAG_2", A1
End Sub
```

▶ Description

GetTagVal() reads “TAG_1” value and save it to variable “A1”.

SetTagVal() writes “A1” value to “TAG_2”.

2) Bring current time of System

This is a script sample to bring current time and write it to string tag.

```
Sub GetCurrTime()
            ' Get current time
            CurTime# = Now()

            YYYY = Year(CurTime#)
            MM = Month(CurTime#)
            DD = Day(CurTime#)
            HH = Hour(CurTime#)
            Min = Minute(CurTime#)
            Sec = Second(CurTime#)

            SetTagVal "Year", YYYY
            SetTagVal "Month", MM
            SetTagVal "Date", DD
            SetTagVal "Hour", HH
            SetTagVal "Minute", Min
            SetTagVal "Second", Sec

            SetTagVal "Current time", YYYY & "Year" & MM & "Month" & DD & "Date"_
                                        & HH & "Hour" & Min & "Min" & Sec & "Sec"
End Sub
```

▶ Description

Through “Now()” script, it brings current time and save it to “CutTime#” variable.

In order to bring the value of year, month, date, hour, minute and second and save it to each variable YYYY, MM, DD, HH, Min, and Sec, you can use script Year, Month, Day, Hour, Minute and Second.

Write string tag Year, Month, Date, Hour, Minute and Second by “SetTagVal()” script.

“Current time” string tag is written as “○○○○Year○○Month○○Date○○Hour○○Min○○Sec”

The above script is Basic Script. You can also use Cimon script as below and it is more easy way to use.

```
Sub GetCurrTime()
        SetTagVal "Current time", TimeStr(44)
End Sub
```

▶ Description

Through Cimon script TimeStr(), it writes "○○○○Year○○Month○○Date○○Hour○○Min○○Sec" format to "Current time" string tag.

[Notice] TimeStr() is shown at [CimonD HELP] → [Operation Expressions and Command Expressions] → [Functions for Operation & Command Expressions]

i. . Run other program

The below script sample is used to run other program such as Internet Explorer.

```
Sub RunExProgram()
id = Shell("C:\Program Files\Internet Explorer\iexplore.exe ""http://www.kdtsys.com/""",3)
End Sub
```

▶ Description

It runs Internet Explorer and opens (http://www.kdtsys.com/) directly through "Shell()" script.

It is also possible to open Excel file directly in CIMON SCADA with below script.

```
Sub OpenExcelFile()
id = Shell("C:\Program Files\Microsoft Office\Office\EXCEL.EXE ""C:\Sample.xls""",3)
End Sub
```

▶ Description

It runs Excel program and opens ("C:\Sample.xls") directly through "Shell()" script.

ii. . Read data from Excel file

The below script sample is used to read data from Excel file and write it to Tag value.

```
Sub ReadExcel()

Dim ExcelApp As Object
Dim DayRpt As Object
Dim SheetForm As Object

' Read file name
fName$ = "C:\Sample.xls"

Set ExcelApp = CreateObject("Excel.Application")
Set DayRpt = ExcelApp.Workbooks.Open (fName$)
Set Sheet1 = DayRpt.Worksheets(1)

' Read the value from specified cell.
A1# = Sheet1.Range("A1").Value
SetTagVal "ANA1", A1#

DayRpt.Save
DayRpt.Close
ExcelApp.Quit
Set ExcelApp = Empty

End Sub
```

▶ Description

This script makes Excel Object and opens Excel file ("C:\Sample.xls") and reads data from Cell A1 and saves it to variable A1# and then writes it to tag value “ANA1”.

iii. . Write data to Excel file

The below script sample is used to write tag value to specified Cell in Excel file.

```
Sub WriteExcel()

Dim ExcelApp As Object
Dim DayRpt As Object
Dim Sheet1 As Object

' Write file name
fName$ = "C:\Sample.xls"

Set ExcelApp = CreateObject("Excel.Application")
Set DayRpt = ExcelApp.Workbooks.Open (fName$)
Set Sheet1 = DayRpt.Worksheets(1)

' Write tag value to specified Cell
A1# = GetTagVal("ANA1")
Sheet1.Range("A1").Value = A1#

DayRpt.Save
DayRpt.Close
ExcelApp.Quit
Set ExcelApp = Empty

End Sub
```

▶ Description

This script makes Excel Object and opens Excel file ("C:\Sample.xls") and writes tag value “ANA1” to specified Cell A1.

[Notice] For more detailed Basic Script, please refer to the Summit BasicScript Reference in CIMON CD.

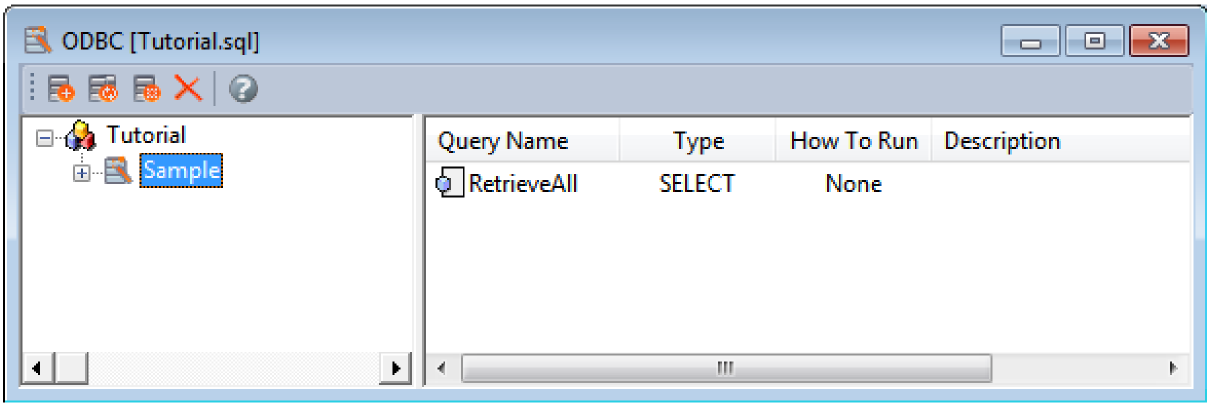
Chapter 10 ODBC

The CIMON-SCADA system can be linked to relational database systems such as Access and Oracle by using this function. That is, diverse data of the CIMON-SCADA can be registered to relational database and acquired. To revise, register, delete and read the data in a database, the standard SQL is used and transaction is done through ODBC mechanism.

SQL query statement is classified into SELECT Statement and Others. The SELECT Statement is processed to read records as a result. The Others is adequate for one time transaction such as registering, deleting a record and etc.

10-1. Configuration of ODBC Window

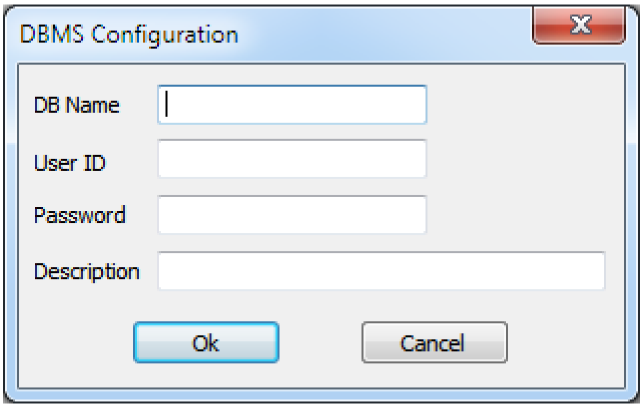
If you select the **'ODBC'** in the Tools menu of the CimonD, the following window will appear. This window is used to link the CIMON-SCADA to relational database systems. On the left of window, DSN of the general database system linked and the queries for each DSN are displayed in tree type. On the right, the queries, which are included in the DSN selected from the left tree window, is displayed in the list type.



Query Name	Type	How To Run	Description
RetrieveAll	SELECT	None	

- **New DBMS**

This is used to set up the DSN of the new DBMS linked to the CIMON-SCADA System. If you select this icon, a DBMS Configuration dialog box will appear as follows

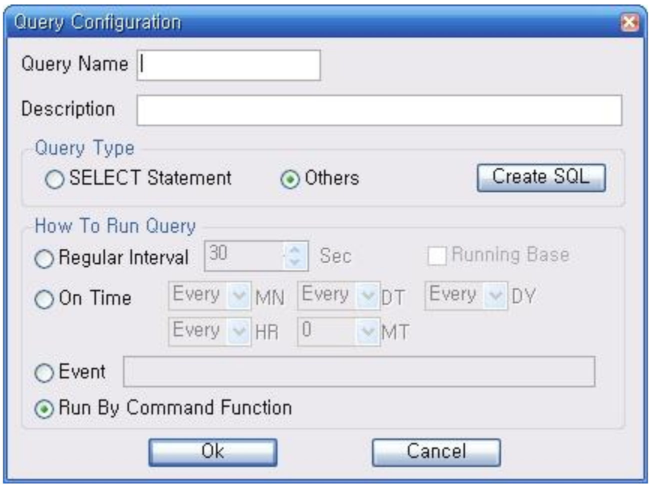


Enter the information related to the DBMS linked in this dialog box.

DB Name	Enter ODBC DSN. This name should be as same as the DSN name registered by “ODBC” program in the “Setup”-“Control panel” of Windows. It should be entered. (In case it is not entered, an Error dialog box will pop up.)
User ID	Enter a User ID necessary for linking with the database registered in the above. This ID has the authority to manage the queries prepared in the below. In case that a User ID is not necessary, leave it blank.
Password	In case that you assigned a User ID, this is used to assign a password about the User ID. If you do not assign a User ID or a password is not entered, leave it blank.
Description	Enter a short description about a currently set database. But it is not necessary to enter this item certainly.

- **New SQL**

After a DBMS is registered to the "DBMS Configuration", this is used to set up a query about DBMS. The dialog box to set up a query is as follows.



Query Name
Description
Query Type: ○ SELECT Statement ● Others
How To Run Query
○ Regular Interval 30 Sec ☐ Running Base
○ On Time Every MN Every DT Every DY Every HR 0 MT
○ Event
● Run By Command Function

Query Name	This is used to enter a query name. This name should be distinguished from other queries.
Description	This is used to enter the short description about a set query.
Query Type	This is used to assign one between "SELECT Statement" and "Others". The SELECT Statement is used to read several records. The Others is used to read a single record, to renew, to add and to delete a record.
Create SQL	If you press this button, the dialog box to edit SQL according to selected type in the above 'Query Type' will pop up.

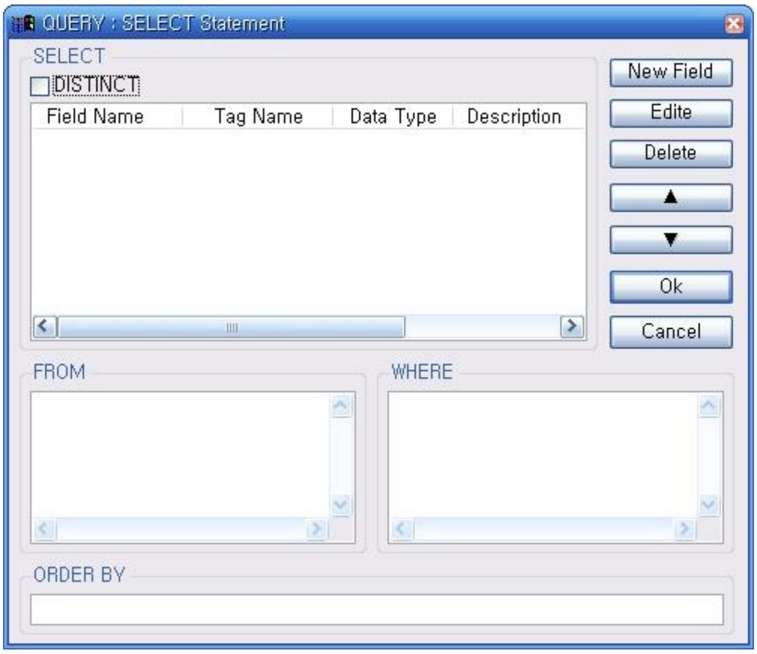
How To Run Query

Regular Interval	This is used to run the edited query statement in the above 'Create SQL' at regular intervals automatically.
On Time	This is used to run a query on a specific time.
Event	This is used to run a query if specific conditions are satisfied. Assign the condition to run a query by using a conditional expression.

Run By Command Function This is used not to run a query automatically. It is run by the function in a script or a command expression.

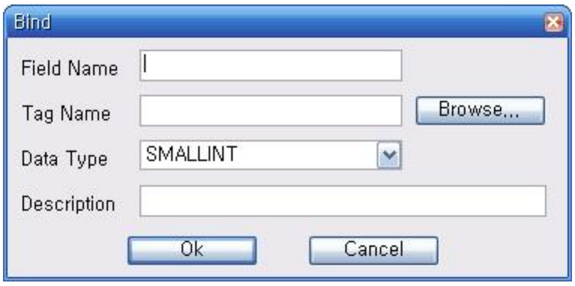
- Writing a SELECT Statement

If a query type is assigned as SELECT in a **'Query Configuration'** dialog box, a query can be written through the following dialog box. A SELECT Statement is written in the four divided parts of this dialog box.


QUERY : SELECT Statement
SELECT
☐ DISTINCT
Field Name
Tag Name
Data Type
Description
New Field
Edite
Delete
▲
▼
Ok
Cancel
FROM
WHERE
ORDER BY

SELECT (DISTINCT) This is used not to create the record with the same data among the records created as the result of a query in duplicate.

New Field This is used to define the field of the record created by running a query. If you press this button, a **'Bind'** dialog box will appear. The field of a record is bound to a tag of the CIMON-SCADA in this box.


Bind
Field Name
Tag Name
Browse...
Description
Ok
Cancel

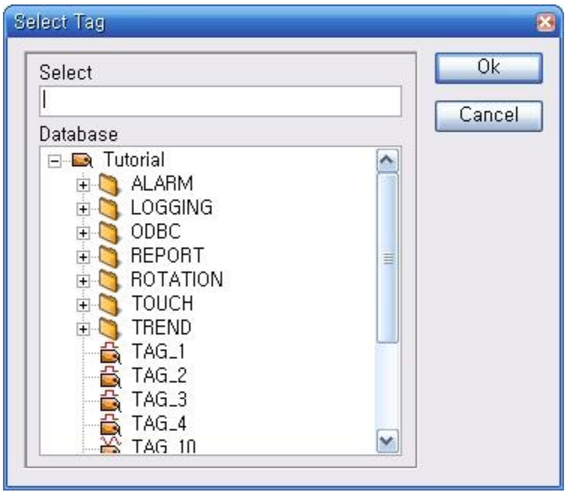
Data Type: SMALLINT

This is used to set up the tag linked with the run result of the SQL or the contents of a statement.

Field Name In case that a SELECT Statement is written, this item should be entered. Assign the field name defined in the table of a database.

Tag Name This is used to assign a tag name. Use virtual tag for correct operation.

Browse If you press this button, the following dialog box to read currently registered tags in the database of the CIMON-SCADA will appear. Select one among the displayed tags to assign as a tag name.



Data Type This is used to assign the data type of an assigned field when you define the table of a database. The available data types are CHAR, DECIMAL, SMALLINT, REAL, INTERGER, FLOAT, DOUBLE, NUBERIC, VARCHAR, LONGVARCHAR, BIT, TINYINT, BIGINT, DATE, TIME, TIMESTAMP.
Consult with the designer of a corresponding database for the details.

Description This is used to describe the short explanation about this field.

Edit This is used to modify the contents of a set field. Select one among the arranged fields on the left side of the button to edit.

Delete This is used to delete the selected fields among the arranged fields on the left side of the button.

▲ Button This is used to move the order of a selected field into the front step by step.

▼ Button This is used to move the order of a selected field into the back step by step.

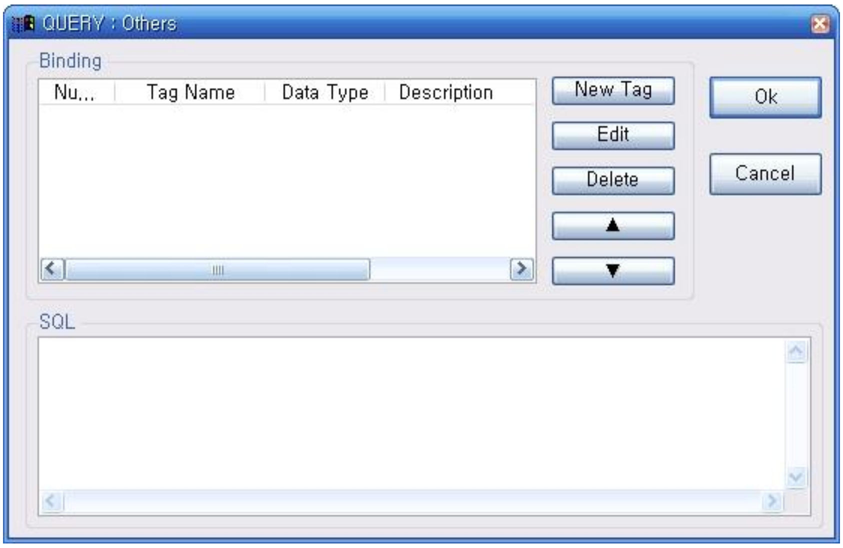
FROM This is used to assign the name of the table to which the assigned fields in a SELECT item belong. This table name should be as same as the one used in an actual database.

WHERE This is used to assign the SQL statement that can search a desired data. Use the standard SQL.

ORDER BY This is used to assign how to arrange the records created by running a query.

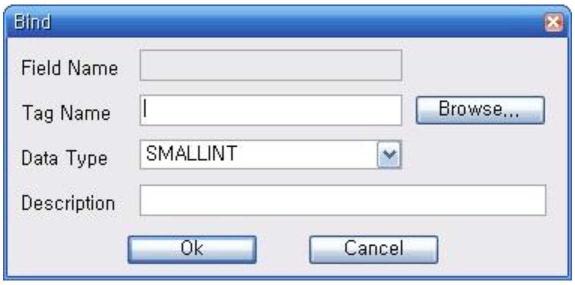
- **Writing a Other Statement**

If a query type is assigned as the Others in a **'Query Configuration'**, a query can be written through this dialog box.



Binding This is used to assign the tag substituted for the contents of the below SQL. When you edit a SQL, write the part corresponding to a value as the form **"[n]"**(n is the decimal integer). When it is actually run, this part is replaced with the tag value corresponding to n value.

New Tag This is used to register the tag linked with the contents of a SQL statement. If you select this button, a **'Bind'** dialog box will pop up. Select a tag in this dialog box.


Bind
Field Name
Tag Name
Browse...
Data Type: SMALLINT
Description
Ok
Cancel

This is used to set up the tag linked with the run result of a SQL or the contents of a statement.

Tag Name	This is used to assign a tag name. The value of an assigned tag value is replaced with the part displayed as "[n]" in a SQL statement here.
Browse	Same as select statement's.
Data Type	Same as select statement's.
Description	Same as select statement's.

Edit This is used to edit the selected tag among the arranged tags on the left side of the button.

Delete This is used to delete the selected tags among existing tags.

▲ Button This is used to move the order of a selected tag into the front step by step.

▼ Button This is used to move the order of a selected tag into the back step by step.

SQL This is used to write out a standard SQL. At this time, you are able to assign the part corresponding to value as **"[n]"**. This part is replaced with the tag value with the same number as n among the tags registered to the above **'Binding'**.

- **Edit**

  This is used to edit a selected DBMS or query.

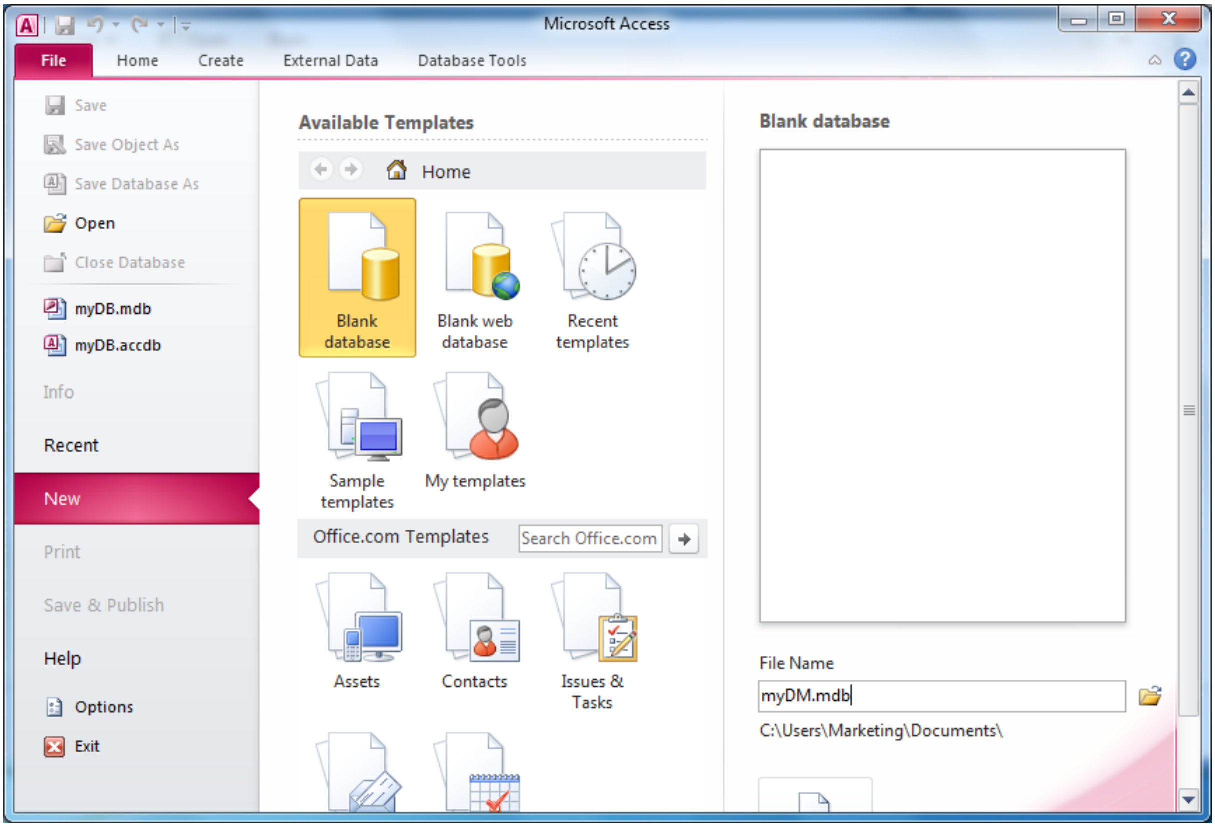
- **Delete**

  This is used to delete a selected DBMS or query.

10-2. EXAMPLE

In order to use ODBC function, click [Microsoft Office] → [Microsoft Access 2010] as following.

- Write ‘myDM.mdb’ at File Name


Microsoft Access
File
Home
Create
External Data
Database Tools
Save
Save Object As
Save Database As
Open
Close Database
myDB.mdb
myDB.accdb
Info
Recent
New
Print
Save & Publish
Help
Options
Exit
Available Templates
Home
Blank database
Blank web database
Recent templates
Sample templates
My templates
Office.com Templates
Search Office.com
Assets
Contacts
Issues & Tasks
Blank database

File Name
myDM.mdb
C:\Users\Marketing\Documents\

- Click [Table1] → [Design View] and write ‘Table1’ at Table Name.

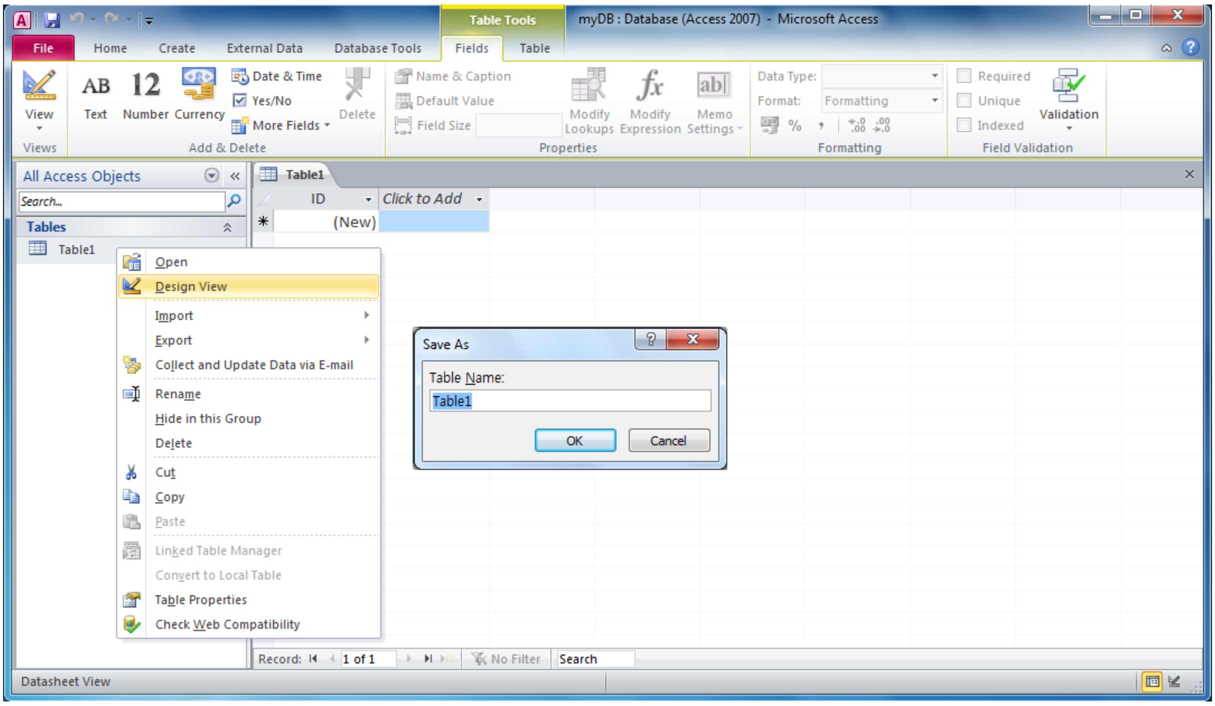


Table Tools
myDB : Database (Access 2007) - Microsoft Access
File
Home
Create
External Data
Database Tools
Fields
Table
View
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type:
Format:
Formatting
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Objects
Search...
Tables
Table1
ID
Click to Add
(New)
Open
Design View
Import
Export
Collect and Update Data via E-mail
Rename
Hide in this Group
Delete
Cut
Copy
Paste
Linked Table Manager
Convert to Local Table
Table Properties
Check Web Compatibility
Save As
OK
Cancel
Record: 1 of 1
No Filter
Search
Datasheet View

Table Name:
Table1

- Then write the Field Name and Data Type as below picture.
- Field Name : im_ID, im_name, im_major
- Data Type : Text
- Change the Field Properties only with im_ID as following:

  Required : No → Yes

  Allow Zero Length : Yes → No
- Field Properties of im_name and im_major are default (You do not need to change them)

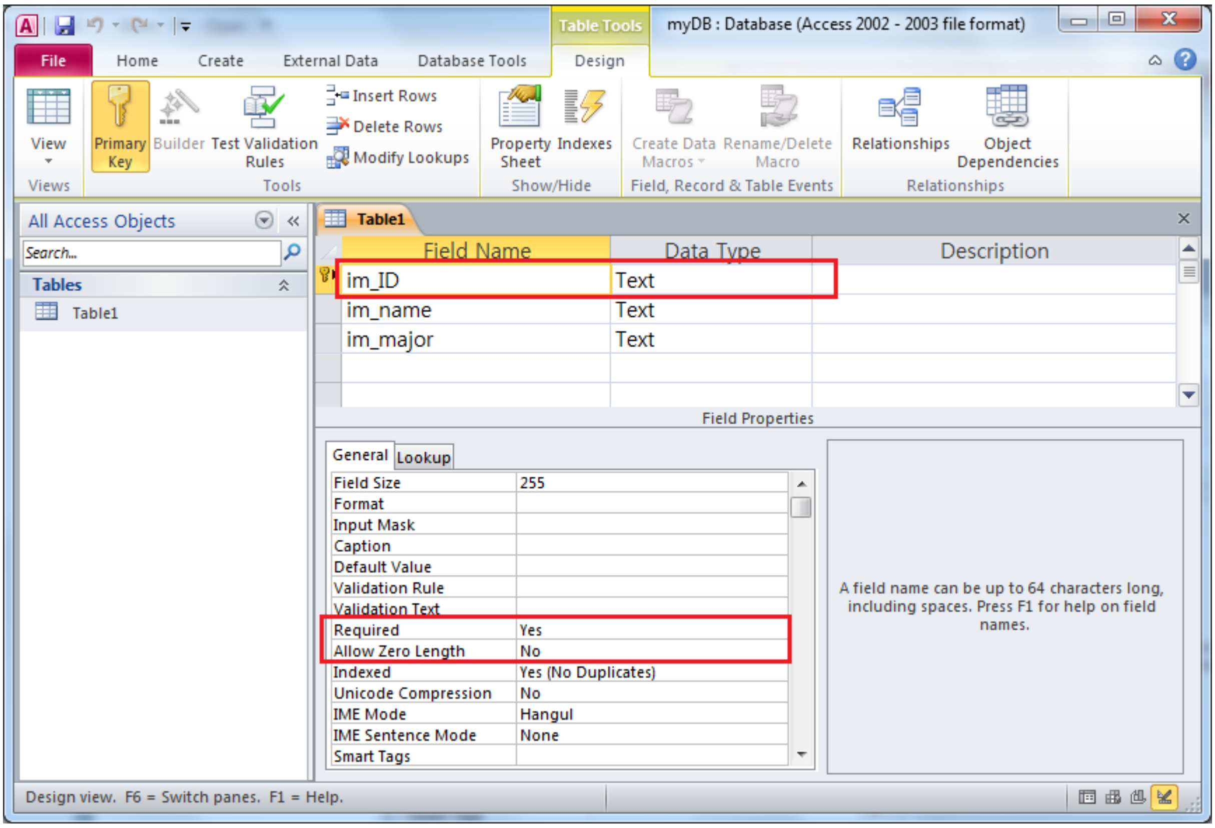


Table Tools
myDB : Database (Access 2002 - 2003 file format)
File
Home
Create
External Data
Database Tools
Design
View
Primary Key
Builder
Test Validation Rules
Insert Rows
Delete Rows
Modify Lookups
Property Sheet
Indexes
Create Data Macros
Rename/Delete Macro
Relationships
Object Dependencies
Views
Tools
Show/Hide
Field, Record & Table Events
Relationships
All Access Objects
Search...
Tables
Table1
Table1
Field Properties
General
Lookup

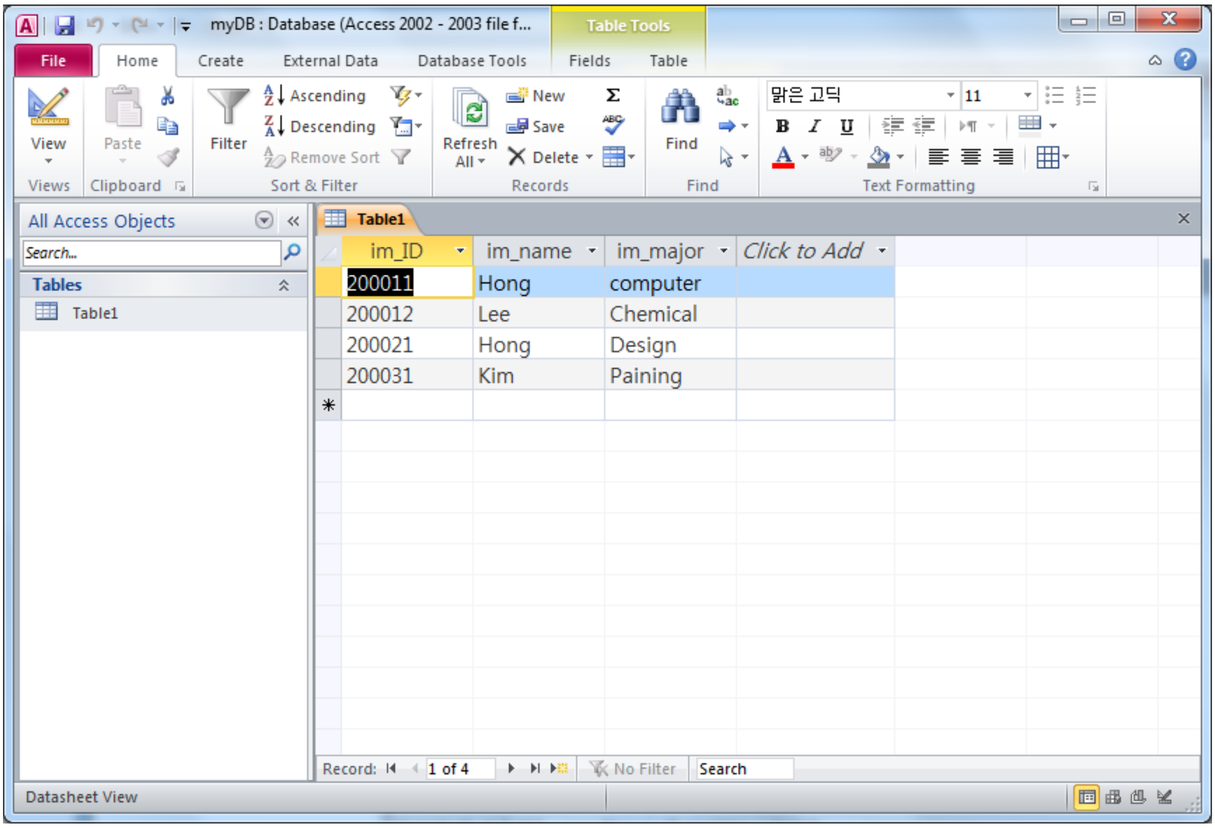
Field Name	Data Type	Description
im_ID	Text	
im_name	Text	
im_major	Text	

Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	Yes
Allow Zero Length	No
Indexed	Yes (No Duplicates)
Unicode Compression	No
IME Mode	Hangul
IME Sentence Mode	None
Smart Tags	

A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Design view. F6 = Switch panes. F1 = Help.

- Double click ‘Table1’ and then write the ID, name and major as below picture.

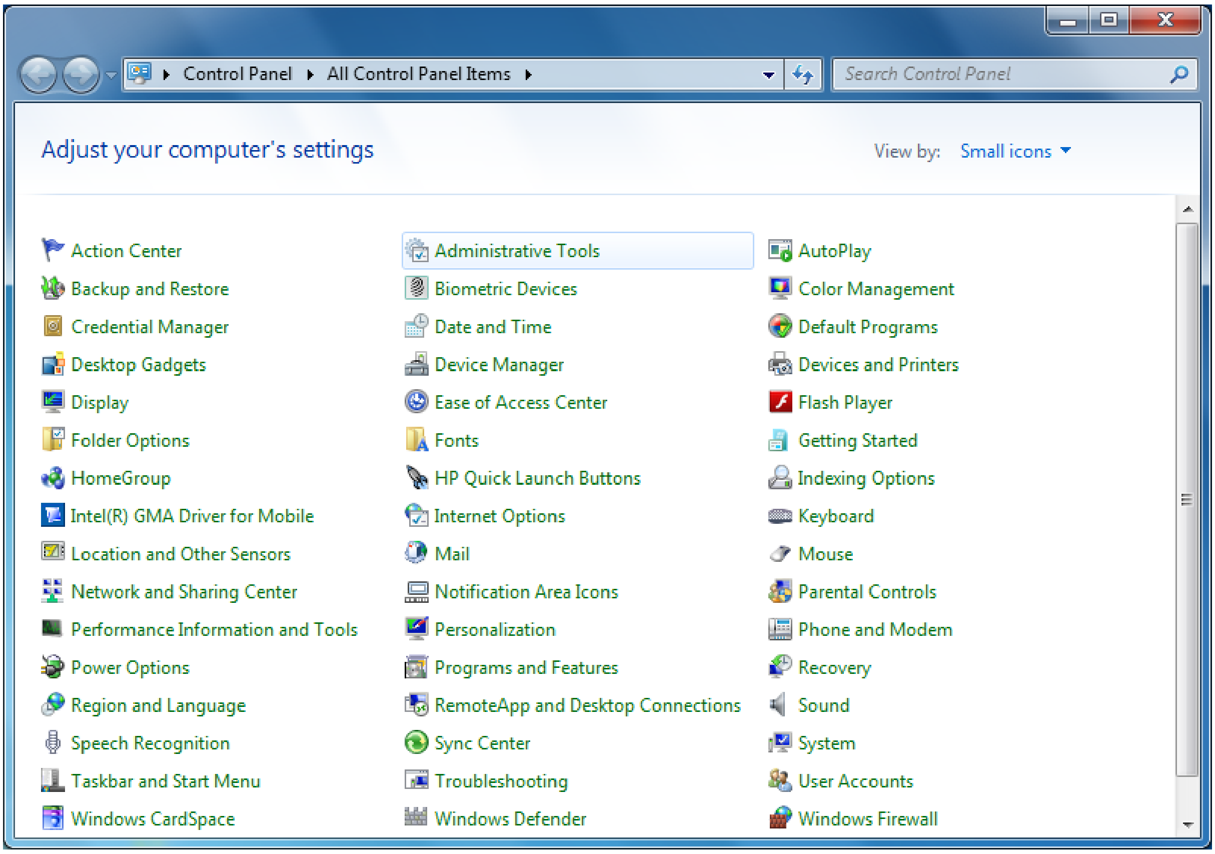

myDB : Database (Access 2002 - 2003 file f...
Table Tools
File
Home
Create
External Data
Database Tools
Fields
Table
View
Paste
Filter
Ascending
Descending
Remove Sort
Refresh All
New
Save
Delete
Find
맑은 고딕
11
Views
Clipboard
Sort & Filter
Records
Find
Text Formatting
All Access Objects
Search...
Tables
Table1
Record: 1 of 4
No Filter
Search
Datasheet View

im_ID	im_name	im_major	Click to Add
200011	Hong	computer	
200012	Lee	Chemical	
200021	Hong	Design	
200031	Kim	Paining	

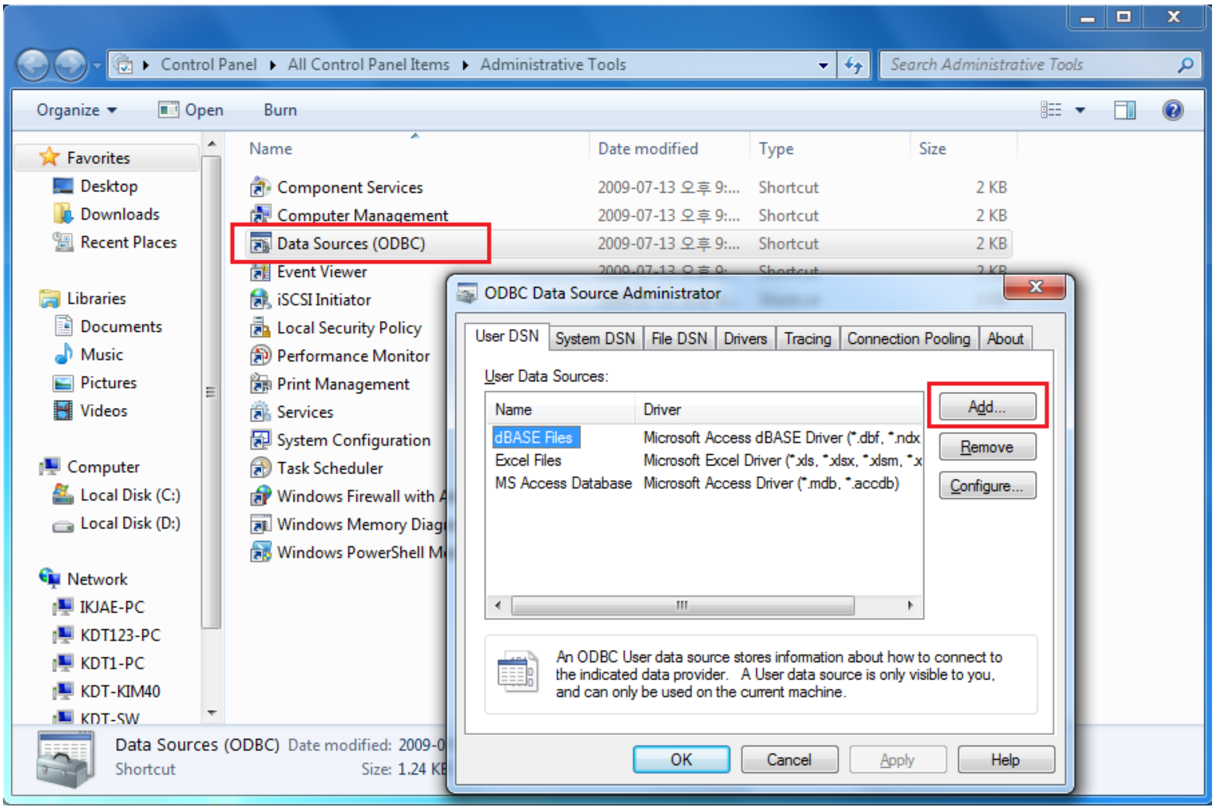
- Click ‘Save’ and close Access 2010

Since you already made Database with Access 2010, it is time to set up ODBC at Windows.

- Click [Start] → [Control Panel] and then click [Administrative Tools]


Control Panel
All Control Panel Items
Search Control Panel
Adjust your computer's settings
View by: Small icons
Action Center
Administrative Tools
AutoPlay
Backup and Restore
Biometric Devices
Color Management
Credential Manager
Date and Time
Default Programs
Desktop Gadgets
Device Manager
Devices and Printers
Display
Ease of Access Center
Flash Player
Folder Options
Fonts
Getting Started
HomeGroup
HP Quick Launch Buttons
Indexing Options
Intel(R) GMA Driver for Mobile
Internet Options
Keyboard
Location and Other Sensors
Mail
Mouse
Network and Sharing Center
Notification Area Icons
Parental Controls
Performance Information and Tools
Personalization
Phone and Modem
Power Options
Programs and Features
Recovery
Region and Language
RemoteApp and Desktop Connections
Sound
Speech Recognition
Sync Center
System
Taskbar and Start Menu
Troubleshooting
User Accounts
Windows CardSpace
Windows Defender
Windows Firewall

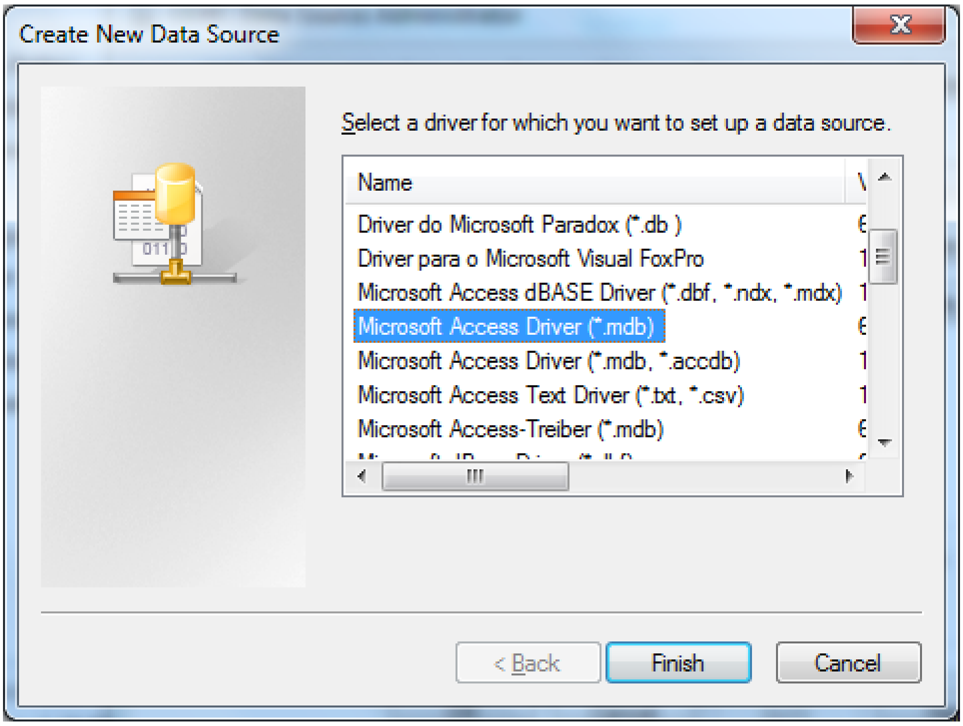
- Click [Data Sources (ODBC)] and then click [Add] to register Database you made.


Control Panel ▸ All Control Panel Items ▸ Administrative Tools
Search Administrative Tools
Organize
Open
Burn
Favorites
Desktop
Downloads
Recent Places
Libraries
Documents
Music
Pictures
Videos
Computer
Local Disk (C:)
Local Disk (D:)
Network
IKJAE-PC
KDT123-PC
KDT1-PC
KDT-KIM40
KDT-SW
Name
Date modified
Type
Size
Component Services
Computer Management
Data Sources (ODBC)
Event Viewer
iSCSI Initiator
Local Security Policy
Performance Monitor
Print Management
Services
System Configuration
Task Scheduler
Windows Firewall with A
Windows Memory Diag
Windows PowerShell M
2009-07-13 오후 9:...
Shortcut
2 KB
Data Sources (ODBC) Date modified: 2009-0
Shortcut
Size: 1.24 KB
ODBC Data Source Administrator
User DSN
System DSN
File DSN
Drivers
Tracing
Connection Pooling
About
User Data Sources:
Add...
Remove
Configure...
OK
Cancel
Apply
Help

Name	Driver
dBASE Files	Microsoft Access dBASE Driver (*.dbf, *.ndx
Excel Files	Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.x
MS Access Database	Microsoft Access Driver (*.mdb, *.accdb)

An ODBC User data source stores information about how to connect to the indicated data provider. A User data source is only visible to you, and can only be used on the current machine.

- Since Database is made by Access 2010, select Microsoft Access Driver(*.mdb) and then click [Finish]


Create New Data Source
< Back
Finish
Cancel

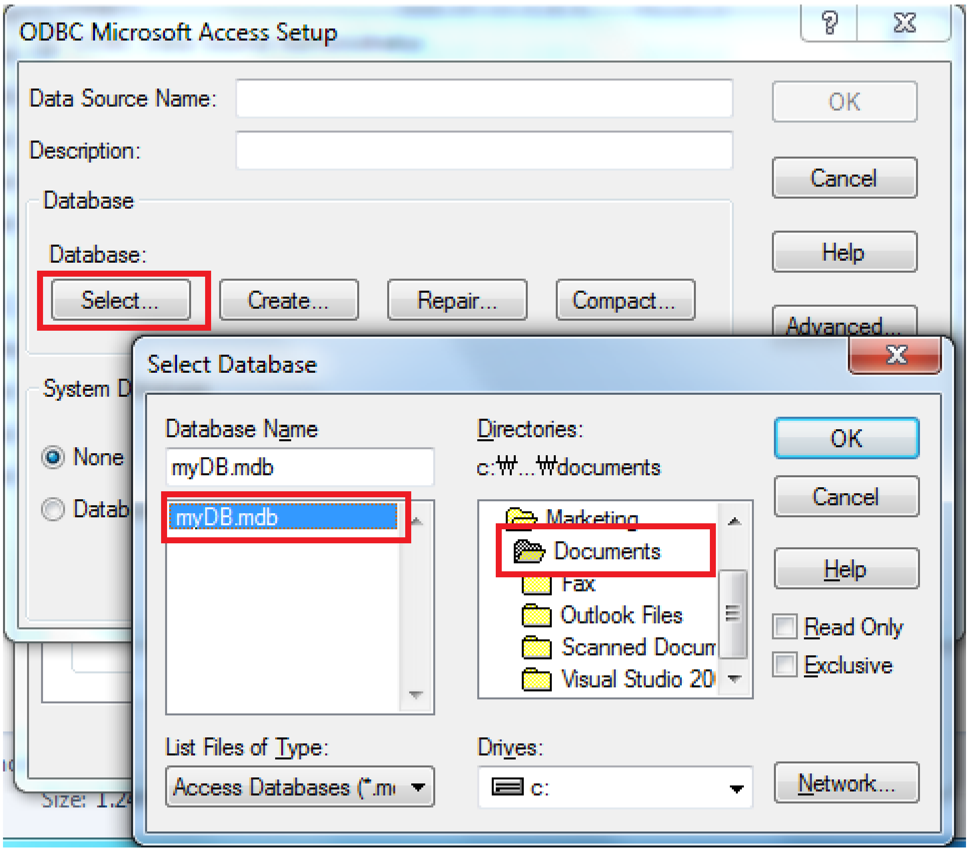
Select a driver for which you want to set up a data source.

Name
Driver do Microsoft Paradox (*.db)
Driver para o Microsoft Visual FoxPro
Microsoft Access dBASE Driver (*.dbf, *.ndx, *.mdx)
Microsoft Access Driver (*.mdb)
Microsoft Access Driver (*.mdb, *.accdb)
Microsoft Access Text Driver (*.txt, *.csv)
Microsoft Access-Treiber (*.mdb)

- Click [Select] and find out the Directories you saved myDB.mdb.
- If you see the first picture, there is Directories

  C: \ Users \ Marketing \ Documents \

- Write ‘myDB’ at [Data Source Name] and then click ‘OK’


ODBC Microsoft Access Setup

Select Database

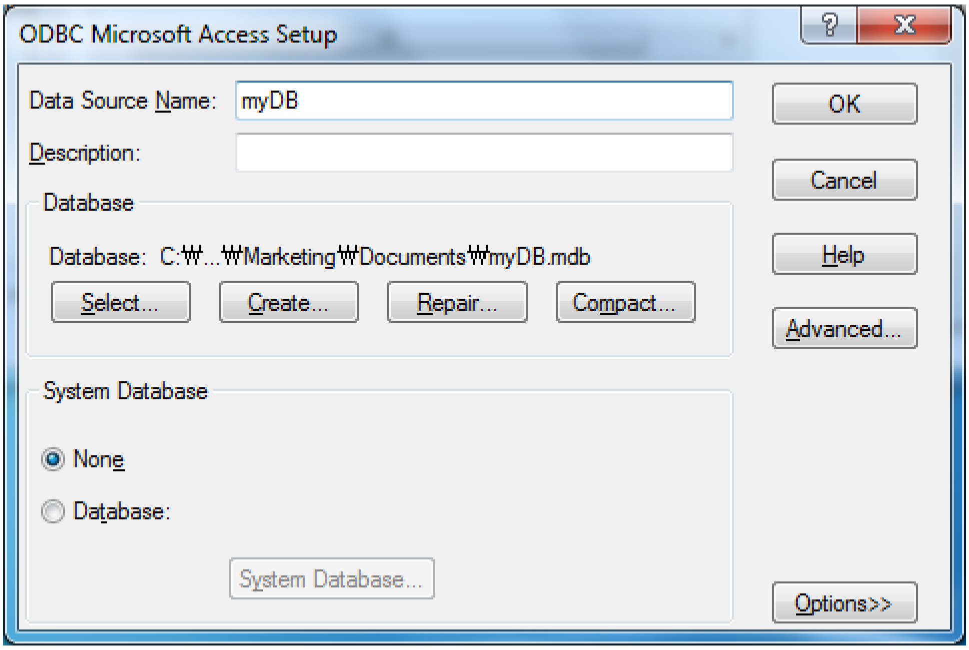
Database Name: myDB.mdb

Directories: c:₩...₩documents

List Files of Type: Access Databases (*.m

Drives: c:

Data Source Name:
Description:
Database
Database:
Select...
Create...
Repair...
Compact...
OK
Cancel
Help
Advanced...
System D
None
Datab
Size: 1.2
myDB.mdb
Marketing
Documents
Fax
Outlook Files
Scanned Docum
Visual Studio 20
Read Only
Exclusive
Network...


ODBC Microsoft Access Setup

Data Source Name: myDB

Description:

Database: C:₩...₩Marketing₩Documents₩myDB.mdb

System Database

● None

○ Database:

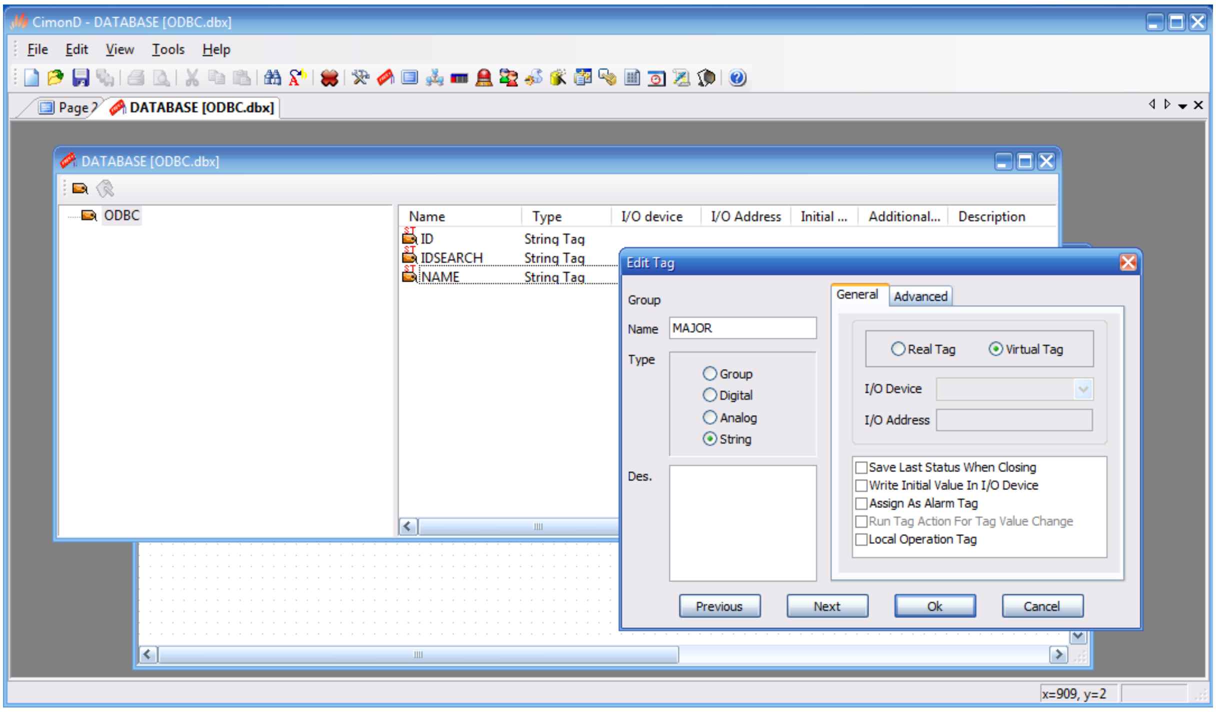
Database
Select...
Create...
Repair...
Compact...
System Database...
OK
Cancel
Help
Advanced...
Options>>

Open CimonD and register tags and set up ODBC

- Register 4tags as below

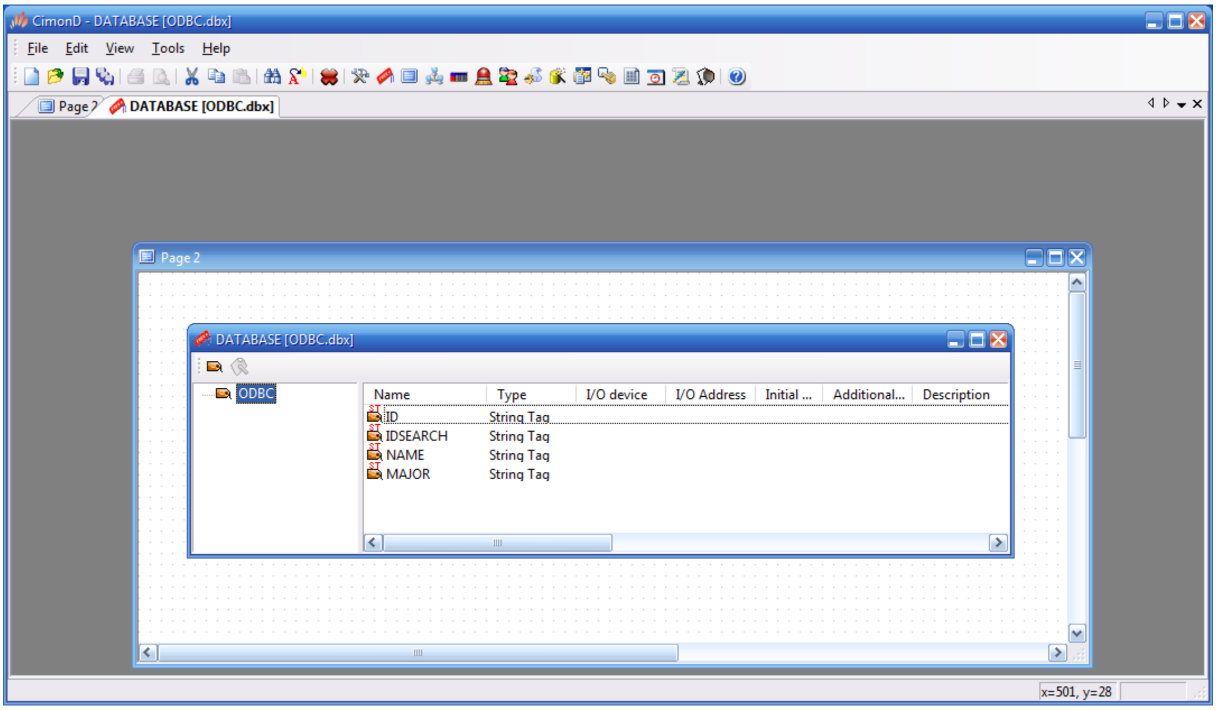
  Name : ID, IDSEARCH, NAME and MAJOR

  Type : String


CimonD - DATABASE [ODBC.dbx]
File Edit View Tools Help
Page 2
DATABASE [ODBC.dbx]
ODBC
Edit Tag
General
Advanced
Previous
Next
Ok
Cancel
x=909, y=2

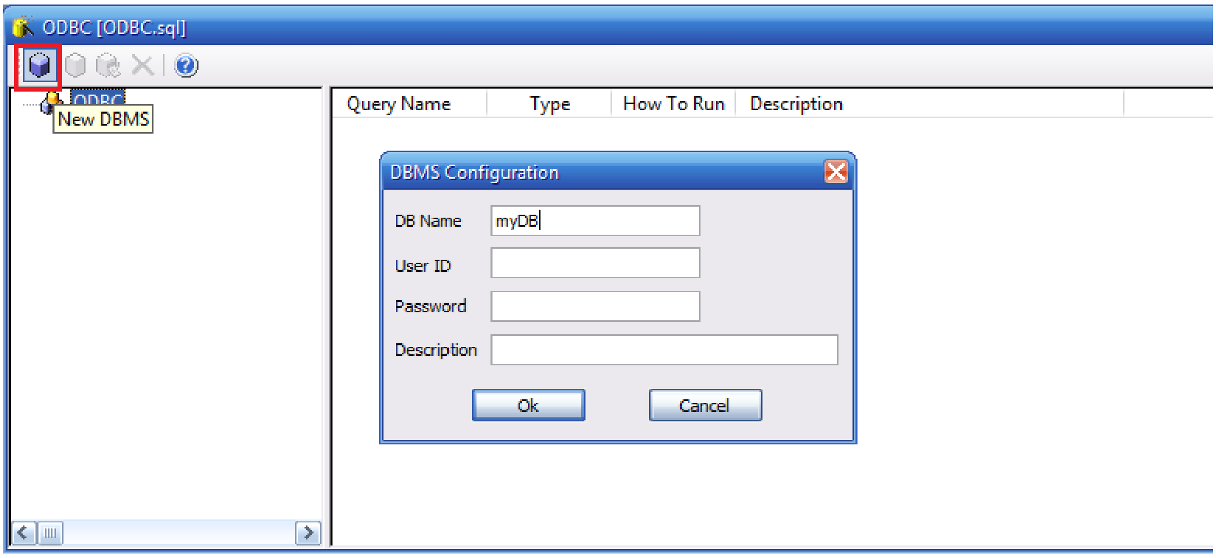
Name	Type	I/O device	I/O Address	Initial ...	Additional...	Description
ID	String Tag					
IDSEARCH	String Tag					
NAME	String Tag					

Group
Name: MAJOR
Type: ○ Group ○ Digital ○ Analog ● String
Des.
○ Real Tag ● Virtual Tag
I/O Device
I/O Address
☐ Save Last Status When Closing
☐ Write Initial Value In I/O Device
☐ Assign As Alarm Tag
☐ Run Tag Action For Tag Value Change
☐ Local Operation Tag


CimonD - DATABASE [ODBC.dbx]
File Edit View Tools Help
Page 2
DATABASE [ODBC.dbx]
Page 2
DATABASE [ODBC.dbx]
ODBC
x=501, y=28

Name	Type	I/O device	I/O Address	Initial ...	Additional...	Description
ID	String Tag					
IDSEARCH	String Tag					
NAME	String Tag					
MAJOR	String Tag					

- Click [Tools] → [ODBC]
- Click [New DBMS] icon and write ‘myDB’ at [DB Name] and click ‘OK’


ODBC [ODBC.sql]
ODBC
New DBMS
Query Name
Type
How To Run
Description
DBMS Configuration
Ok
Cancel

DB Name: myDB

User ID:

Password:

Description:

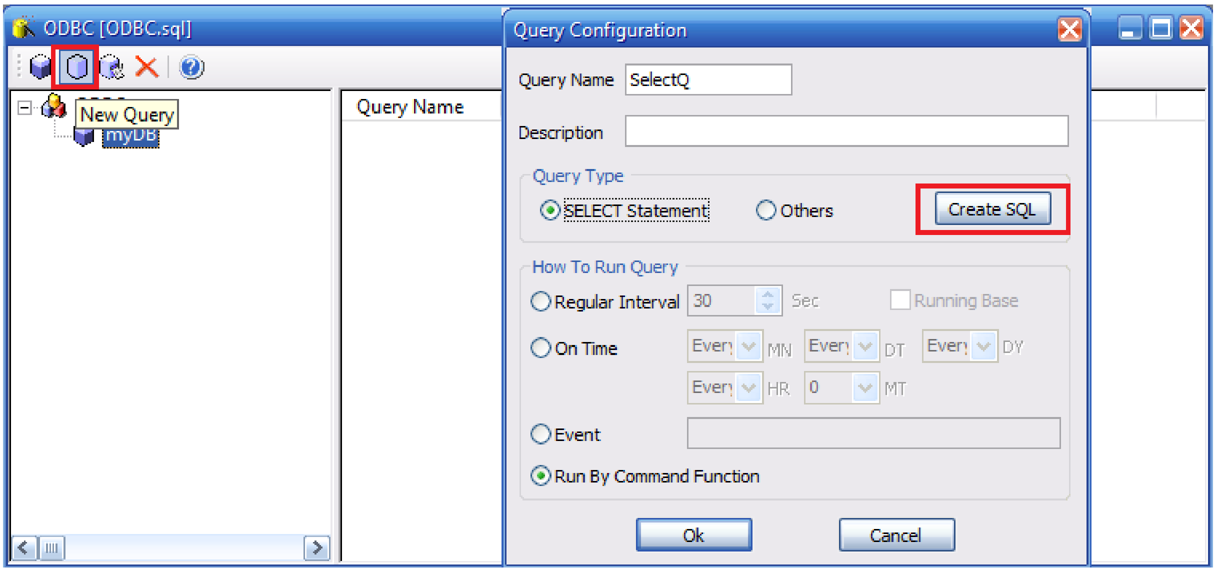
- Click [New Query] icon and set up as below:

  Query Name : SelectQ

  Query Type : SELECT Statement

  How to Run Query : Run By Command Function

- Click “Create SQL”


ODBC [ODBC.sql]
New Query
myDB
Query Name
Query Configuration
Create SQL
Ok
Cancel

Query Name: SelectQ

Description:

Query Type

● SELECT Statement ○ Others

How To Run Query

○ Regular Interval 30 Sec ☐ Running Base

○ On Time Every MN Every DT Every DY Every HR 0 MT

○ Event

● Run By Command Function

- Click [New Field] and register 3 Field Name and following:

  Field Name: im_ID

  Tag Name: ID

  Data Type: VARCHAR

  Field Name: im_name

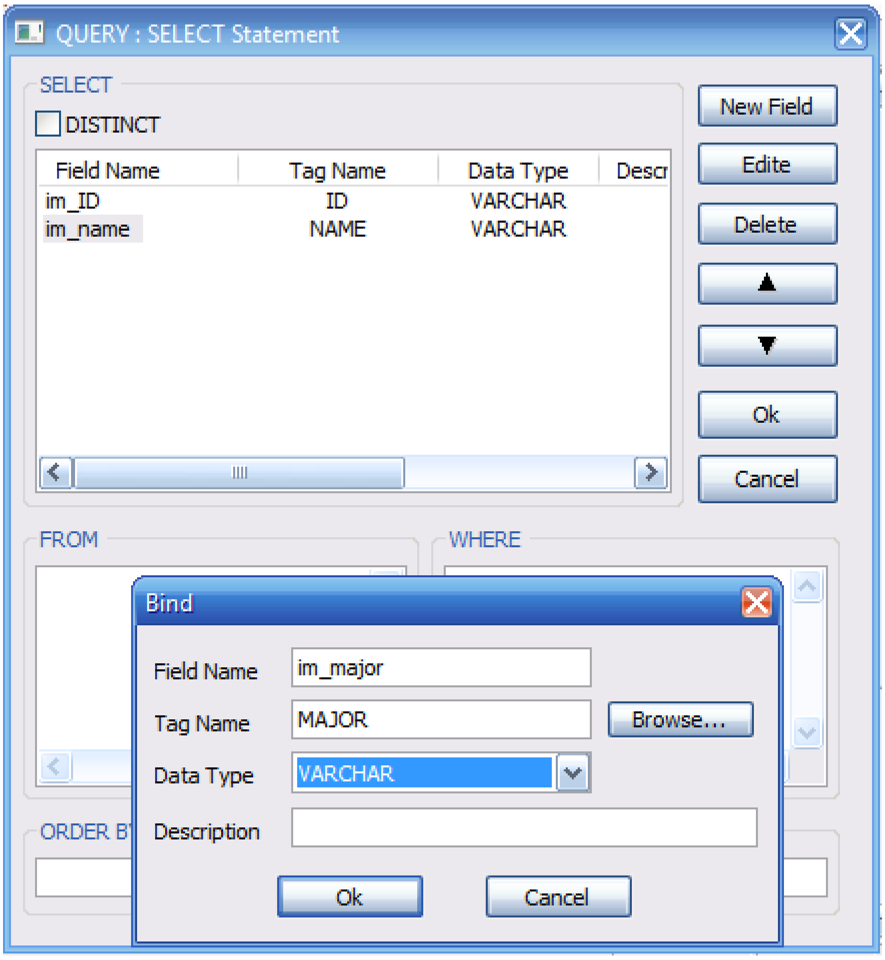
  Tag Name: NAME

  Data Type: VARCHAR

  Field Name: im_major

  Tag Name: MAJOR

  Data Type: VARCHAR


QUERY : SELECT Statement
SELECT
☐ DISTINCT
New Field
Edite
Delete
▲
▼
Ok
Cancel
FROM
WHERE
ORDER B
Bind
Browse...
Ok
Cancel

Field Name	Tag Name	Data Type	Descr
im_ID	ID	VARCHAR	
im_name	NAME	VARCHAR	

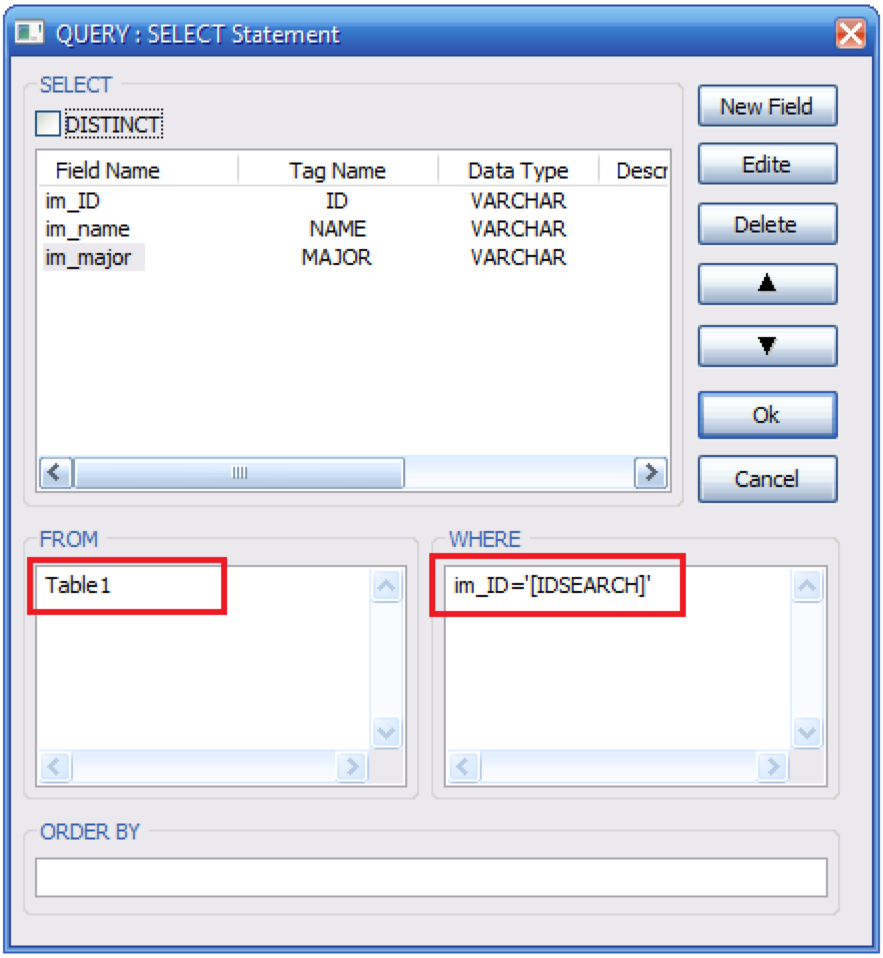
Field Name: im_major

Tag Name: MAJOR

Data Type: VARCHAR

Description:

- Write “Table1” at [FROM] and “im_ID=’[IDSEARCH]’” at [WHERE]


QUERY : SELECT Statement
SELECT
DISTINCT
New Field
Edite
Delete
Ok
Cancel
FROM
WHERE
ORDER BY

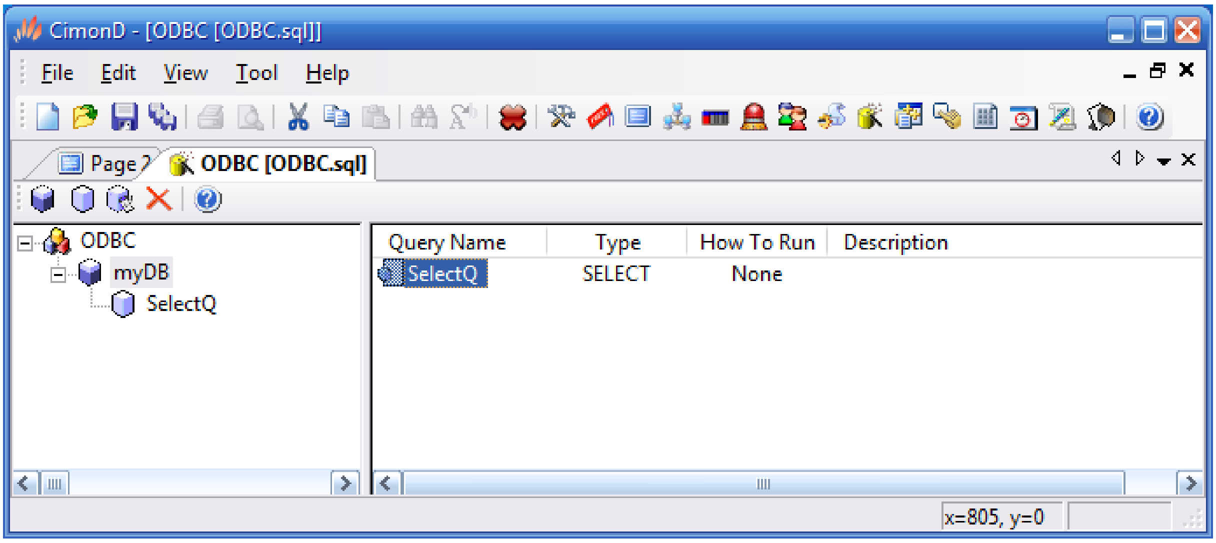
☐ DISTINCT

Field Name	Tag Name	Data Type	Descr
im_ID	ID	VARCHAR	
im_name	NAME	VARCHAR	
im_major	MAJOR	VARCHAR	

FROM: Table1

WHERE: im_ID='[IDSEARCH]'

- If you click “OK”, you can see the “SelectQ” at [Query Name]


CimonD - [ODBC [ODBC.sql]]
File
Edit
View
Tool
Help
Page 2
ODBC [ODBC.sql]
ODBC
myDB
SelectQ
x=805, y=0

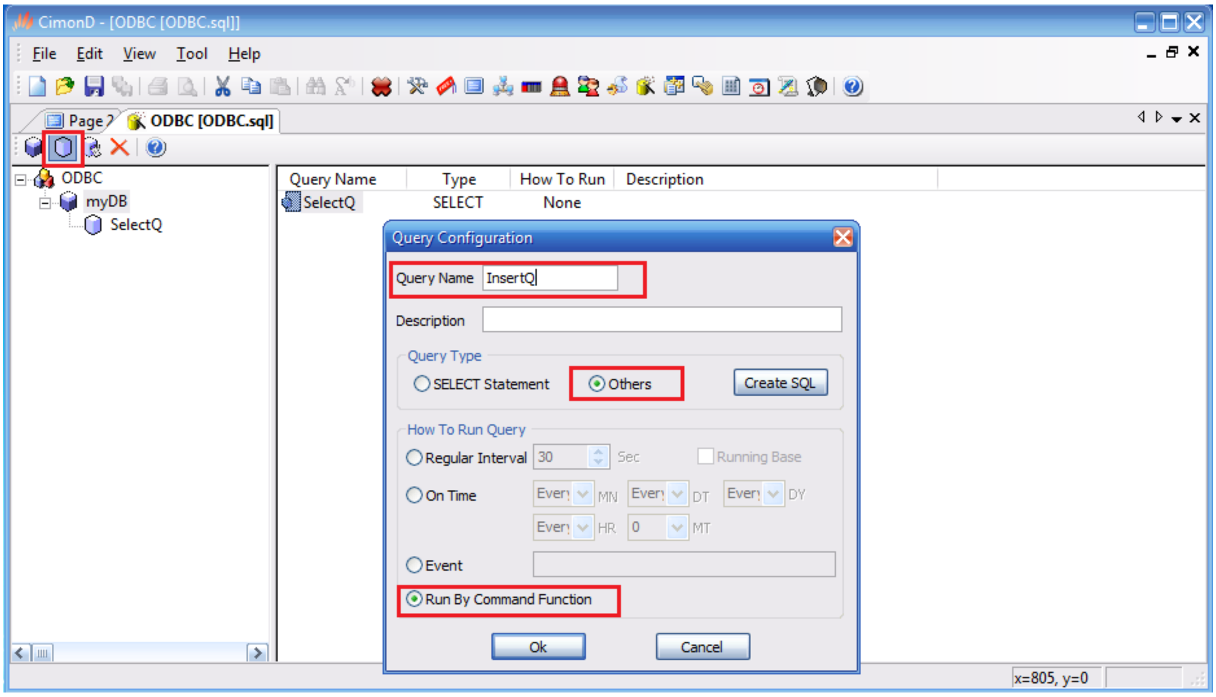
Query Name	Type	How To Run	Description
SelectQ	SELECT	None	

- Click [New Query] icon and set up as below:

  Query Name : **InsertQ**

  Query Type : Others

  How to Run Query : Run By Command Function
- Click “Create SQL”



CimonD - [ODBC [ODBC.sql]]

Query Name	Type	How To Run	Description
SelectQ	SELECT	None	

Query Configuration

Query Name: InsertQ

Description:

Query Type: ○ SELECT Statement ● Others

How To Run Query: ○ Regular Interval 30 Sec ☐ Running Base ○ On Time ○ Event ● Run By Command Function

File
Edit
View
Tool
Help
Page 7
ODBC [ODBC.sql]
ODBC
myDB
SelectQ
Create SQL
Every MN
Every DT
Every DY
Every HR
0 MT
Ok
Cancel
x=805, y=0

- Click [New Field] and register 3 Field Name and following:

  Tag Name: ID

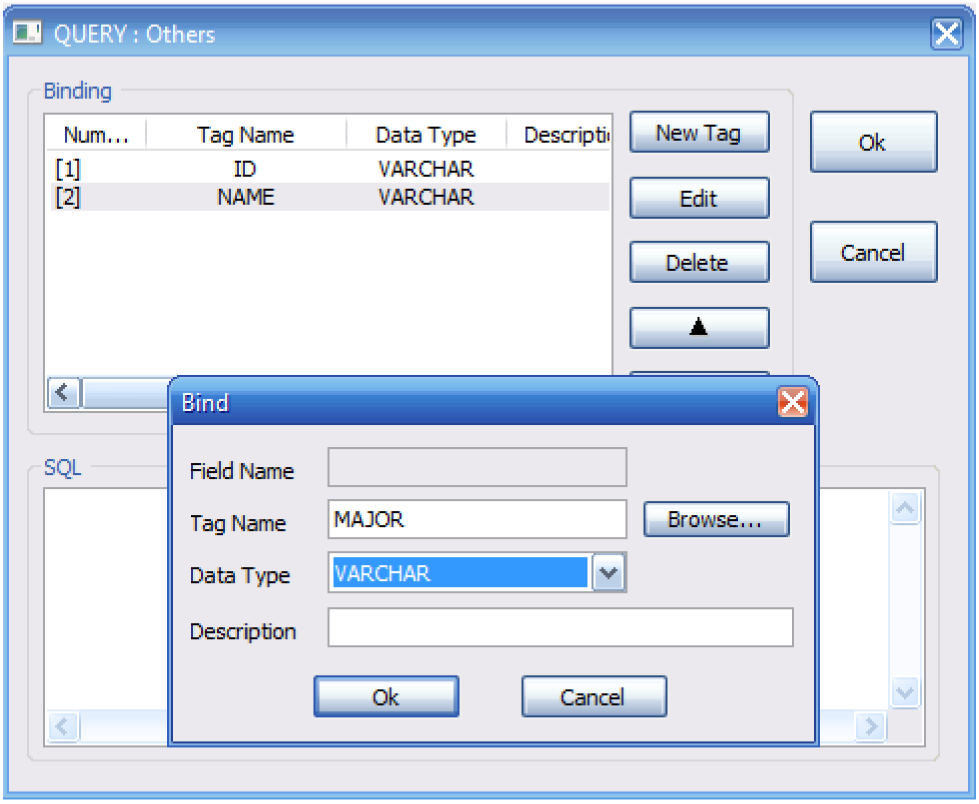
  Data Type: VARCHAR

  Tag Name: NAME

  Data Type: VARCHAR

  Tag Name: MAJOR

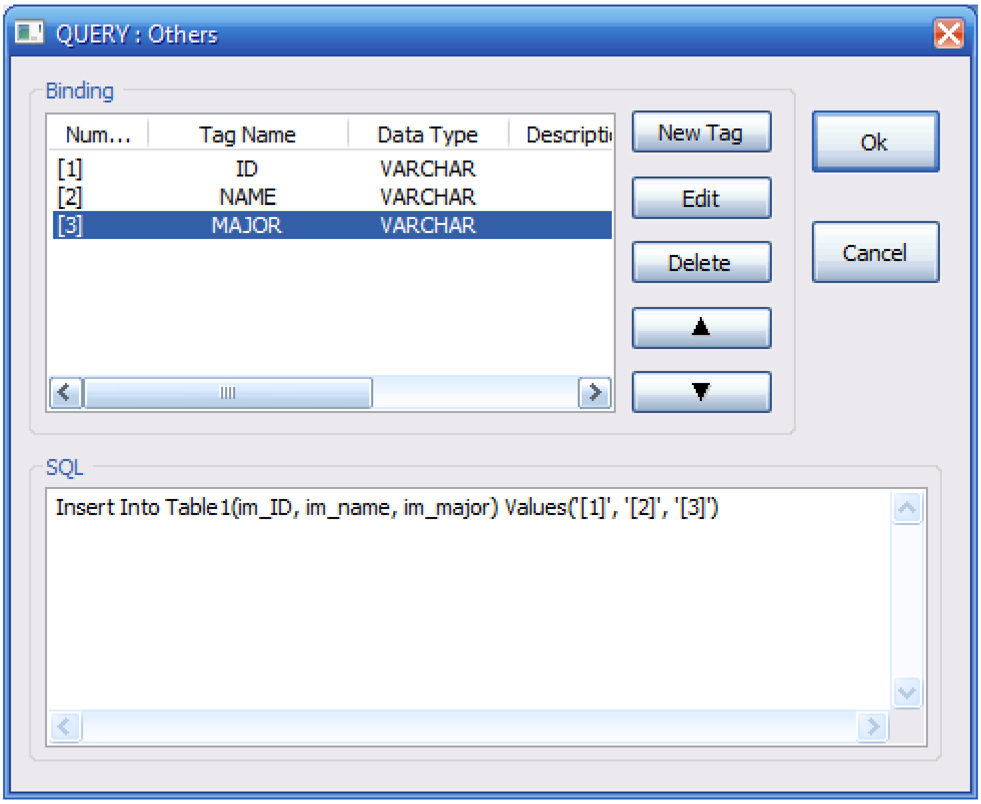
  Data Type: VARCHAR


QUERY : Others
Binding
New Tag
Edit
Delete
▲
Ok
Cancel
SQL
Bind
Browse…
Ok
Cancel

Num…	Tag Name	Data Type	Descripti
[1]	ID	VARCHAR	
[2]	NAME	VARCHAR	

Field Name:
Tag Name: MAJOR
Data Type: VARCHAR
Description:

- Write “Insert Into Table1(im_ID, im_name, im_major) Values(‘[1]’, ‘[2]’, ‘[3]’)” and then click “OK”


QUERY : Others
Binding
New Tag
Edit
Delete
▲
▼
Ok
Cancel
SQL

Num...	Tag Name	Data Type	Descripti
[1]	ID	VARCHAR	
[2]	NAME	VARCHAR	
[3]	MAJOR	VARCHAR	

```
Insert Into Table1(im_ID, im_name, im_major) Values('[1]', '[2]', '[3]')
```

- Click [New Query] icon and set up as below:

  Query Name : **UpdateQ**

  Query Type : Others

  How to Run Query : Run By Command Function

- Click “Create SQL”
- Click [New Field] and register 3 Field Name and following:

  Tag Name: ID

  Data Type: VARCHAR

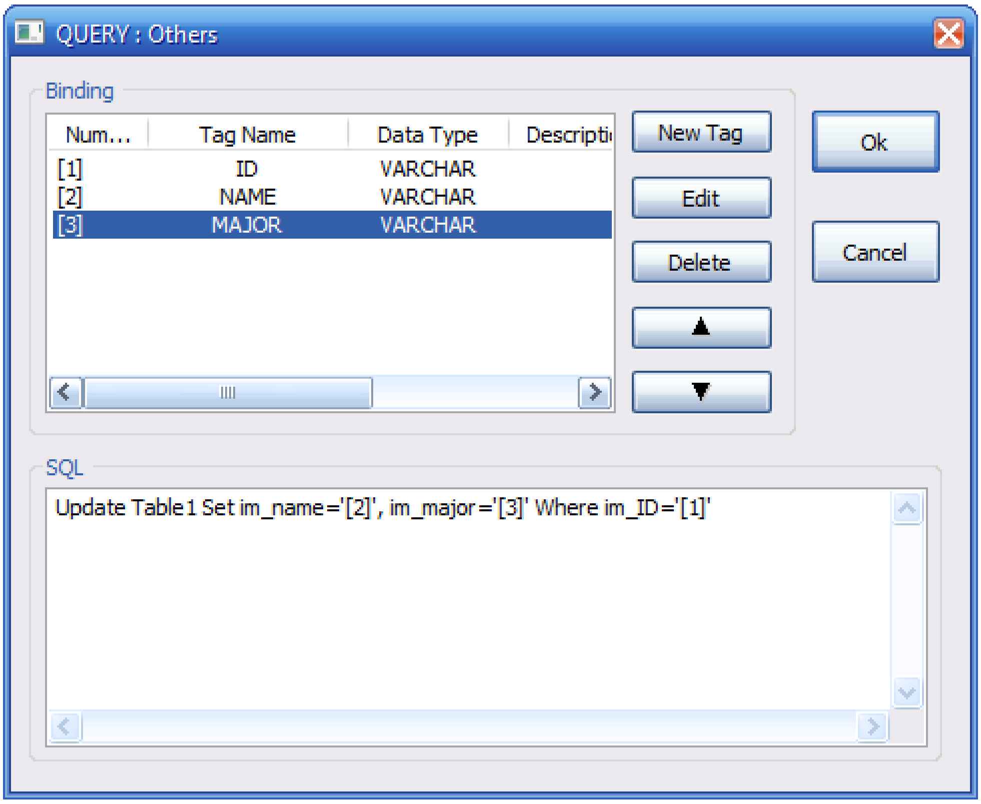
  Tag Name: NAME

  Data Type: VARCHAR

  Tag Name: MAJOR

  Data Type: VARCHAR

- Write “Update Table1 Set im_name=’[2]’, im_major=’[3]’, Where im_ID=’[1]’” at SQL and then click “OK”



Num…	Tag Name	Data Type	Descripti
[1]	ID	VARCHAR	
[2]	NAME	VARCHAR	
[3]	MAJOR	VARCHAR	

```
Update Table1 Set im_name='[2]', im_major='[3]' Where im_ID='[1]'
```

- Click [New Query] icon and set up as below:

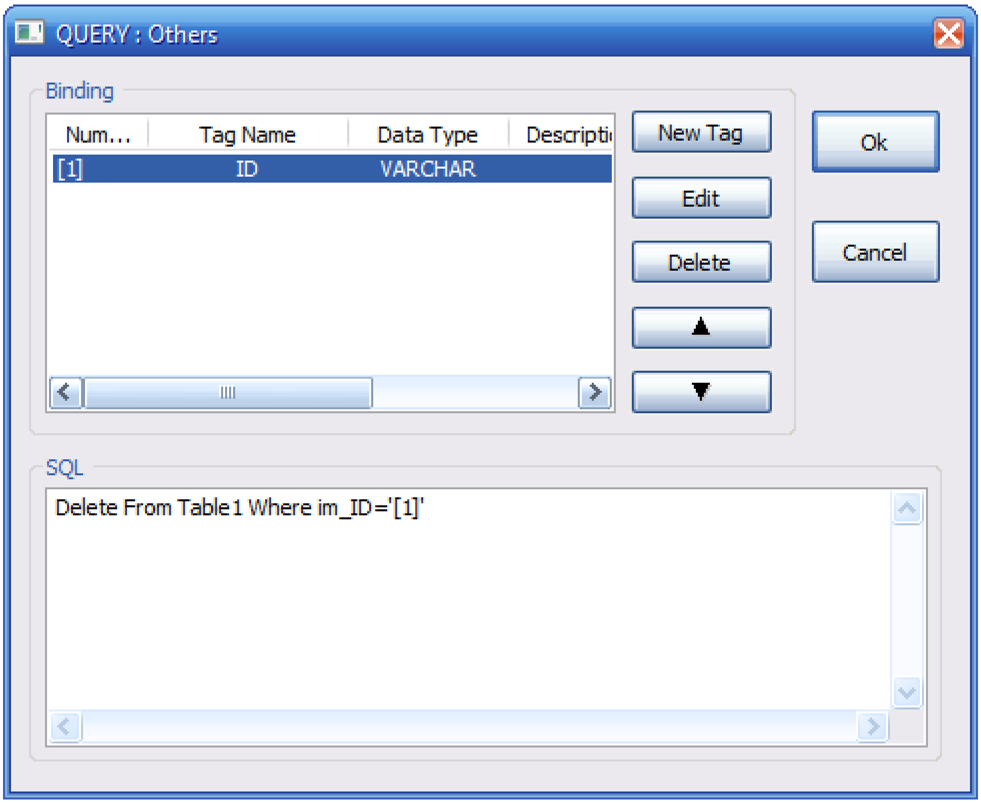
  Query Name : **DeleteQ**

  Query Type : Others

  How to Run Query : Run By Command Function
- Click “Create SQL”
- Click [New Field] and register a Field Name and following:

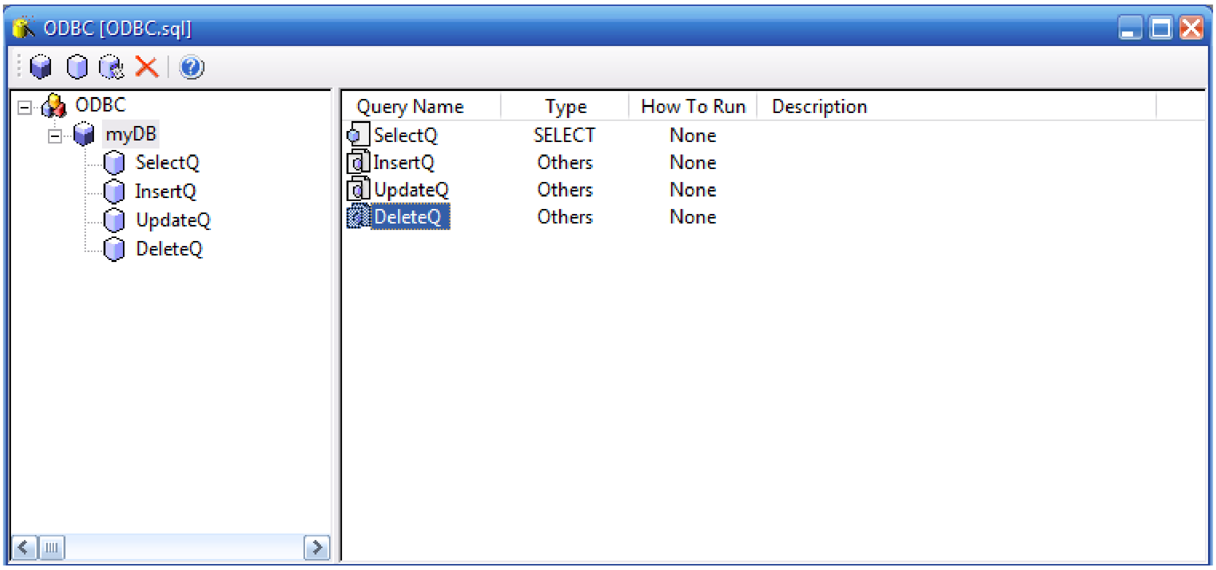
  Tag Name: ID

  Data Type: VARCHAR
- Write “Delete From Table1 Where im_ID=’[1]’” at SQL and then click “OK”


QUERY : Others
Binding
New Tag
Edit
Delete
▲
▼
Ok
Cancel
SQL

Num...	Tag Name	Data Type	Descripti
[1]	ID	VARCHAR	

Delete From Table1 Where im_ID='[1]'



Query Name	Type	How To Run	Description
SelectQ	SELECT	None	
InsertQ	Others	None	
UpdateQ	Others	None	
DeleteQ	Others	None	

After ODBC setting, create Script to run Select, Insert, Update and Delete function.

- Click [Tools] → [Script] and make 4 scripts as following:

Select Script;

```
Sub SelectS()
CSqlOpen("SelectQ")
CSqlClose("SelectQ")
  End Sub
```

Insert Script;

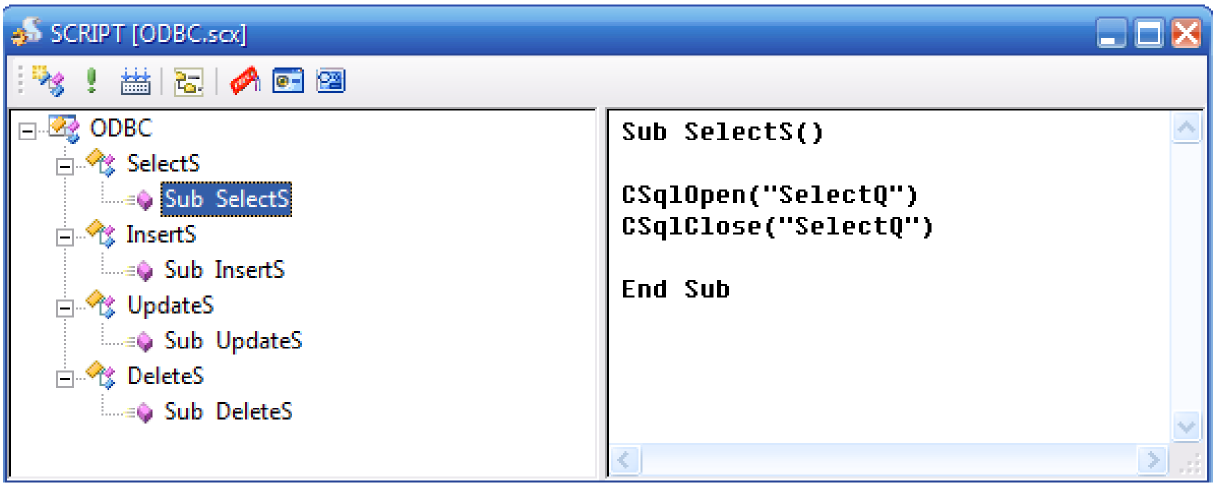
```
Sub InsertS()
CSqlRun "InsertQ"
End Sub
```

Update Script;

```
Sub UpdateS()
CSqlRun "UpdateQ"
End Sub
```

Delete Script;

```
Sub DeleteS()
CSqlRun "DeleteQ"
End Sub
```


SCRIPT [ODBC.scx]
ODBC
SelectS
Sub SelectS
InsertS
Sub InsertS
UpdateS
Sub UpdateS
DeleteS
Sub DeleteS

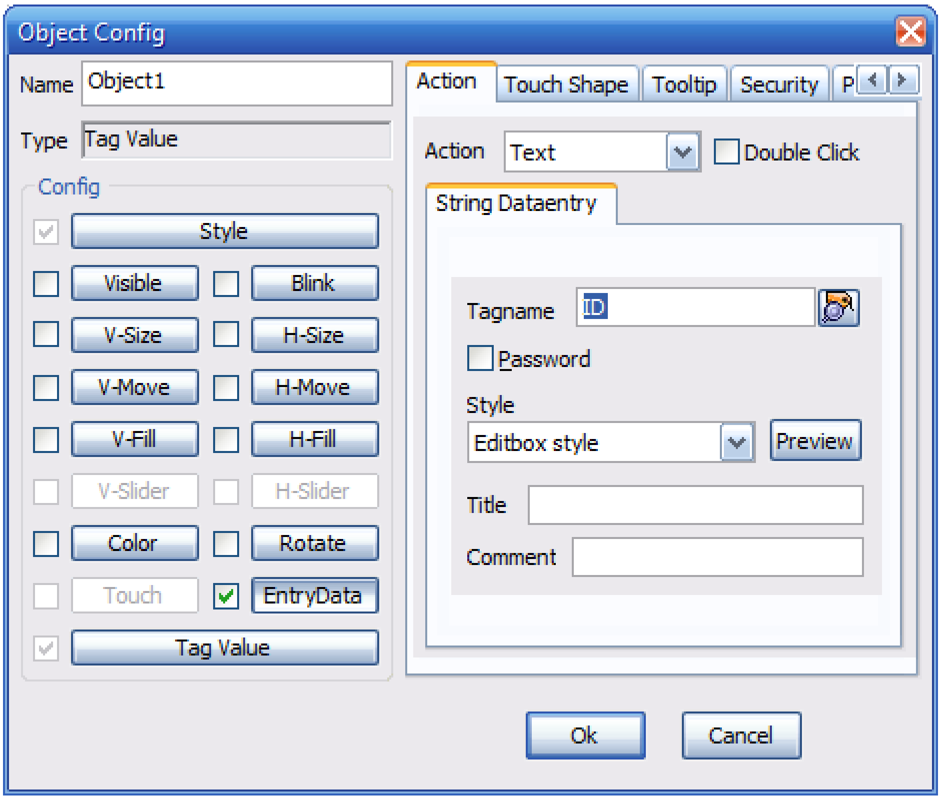
```
Sub SelectS()

CSqlOpen("SelectQ")
CSqlClose("SelectQ")

End Sub
```

In order to test ODBC, make a page as below:

- Make 3 dynamic tags : ID, name and major (red box)

  Config: EntryData

  Action: Text

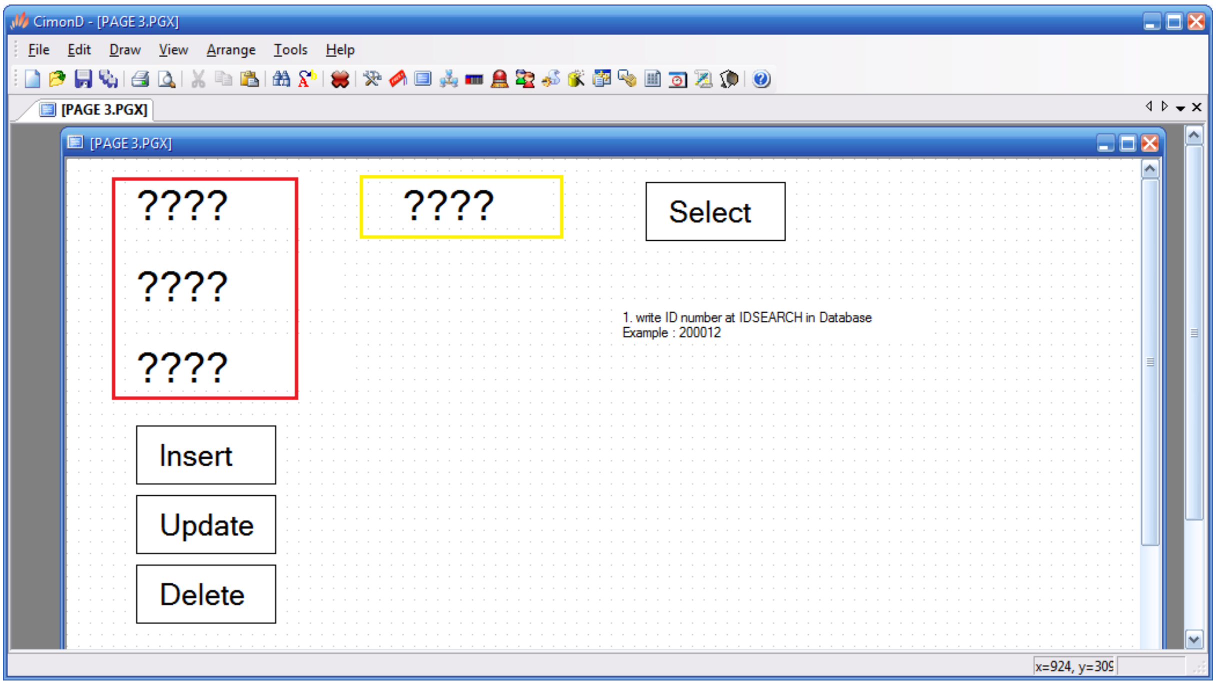

Object Config
Action
Touch Shape
Tooltip
Security
P
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Tag Value
String Dataentry
Preview
Ok
Cancel

Name: Object1
Type: Tag Value
☑ EntryData
Action: Text
☐ Double Click
Tagname: ID
☐ Password
Style: Editbox style
Title:
Comment:

- Make 1 dynamic tag : IDSEARCH (yellow box)

  Config: EntryData

  Action: Text


CimonD - [PAGE 3.PGX]
File Edit Draw View Arrange Tools Help
[PAGE 3.PGX]
????
????
????
????
Select
Insert
Update
Delete
x=924, y=309

1. write ID number at IDSEARCH in Database
Example : 200012

- Make 4 texts and rectangle objects : Insert, Update, Delete and Select

  Config: Touch

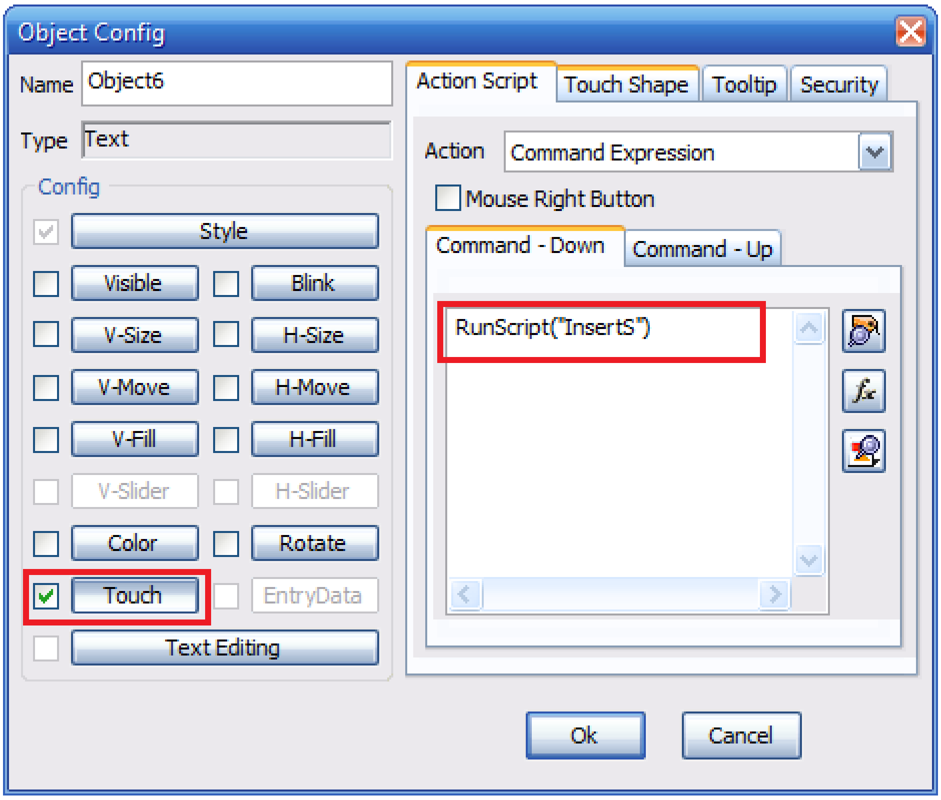
  Action: Command Expression

  Command Down: RunScript(“InsertS”)

  RunScript(“UpdateS”)

  RunScript(“DeleteS”)

  RunScript(“SelectS”)



Name Object6

Type Text

Action Command Expression

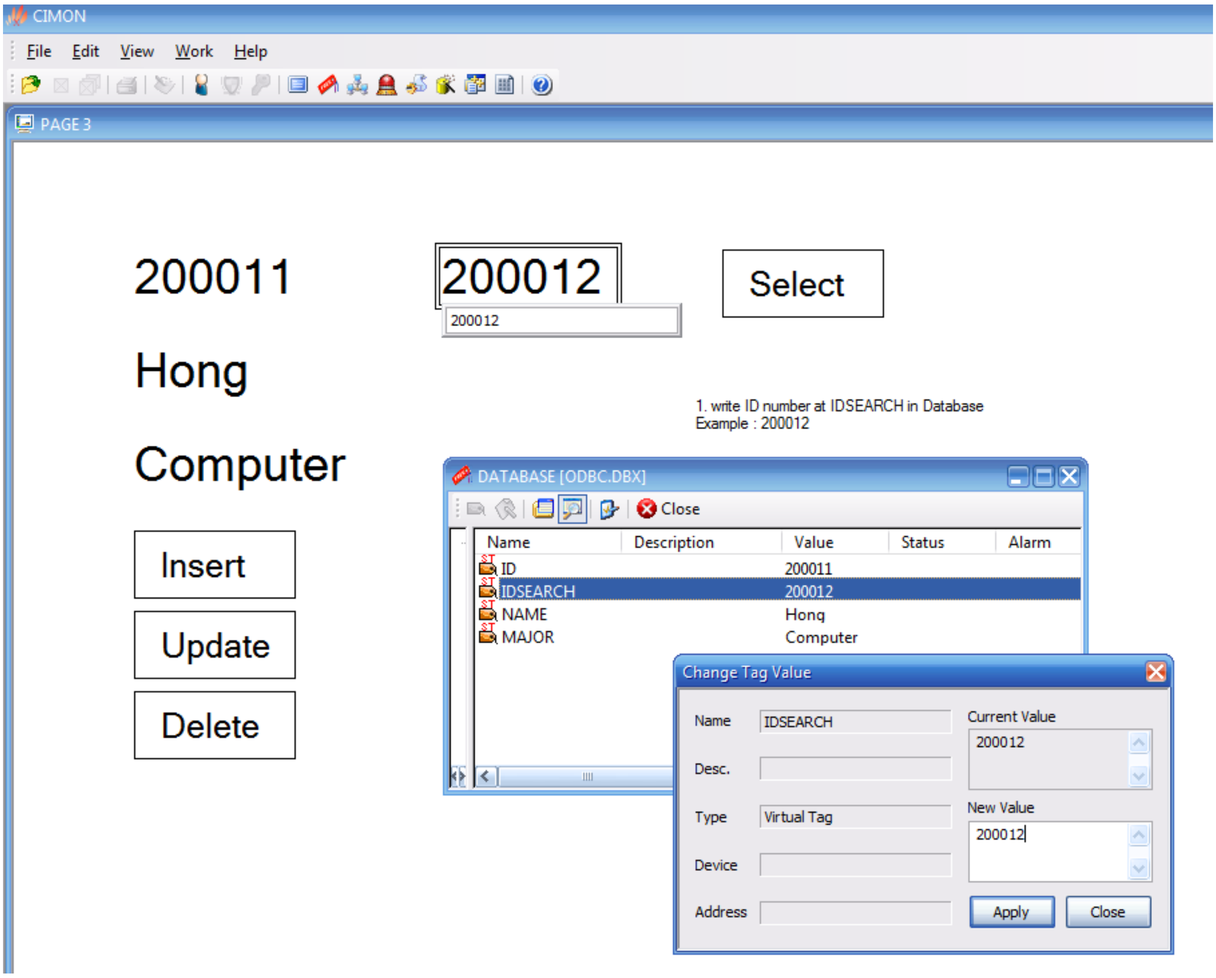
☐ Mouse Right Button

RunScript("InsertS")

☑ Touch

Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
EntryData
Text Editing
Action Script
Touch Shape
Tooltip
Security
Command - Down
Command - Up
Ok
Cancel

- Save the page and run CimonX with DS license key lock.
- If you double click dynamic tag and write ID and click “Select”, you can see the its database information.

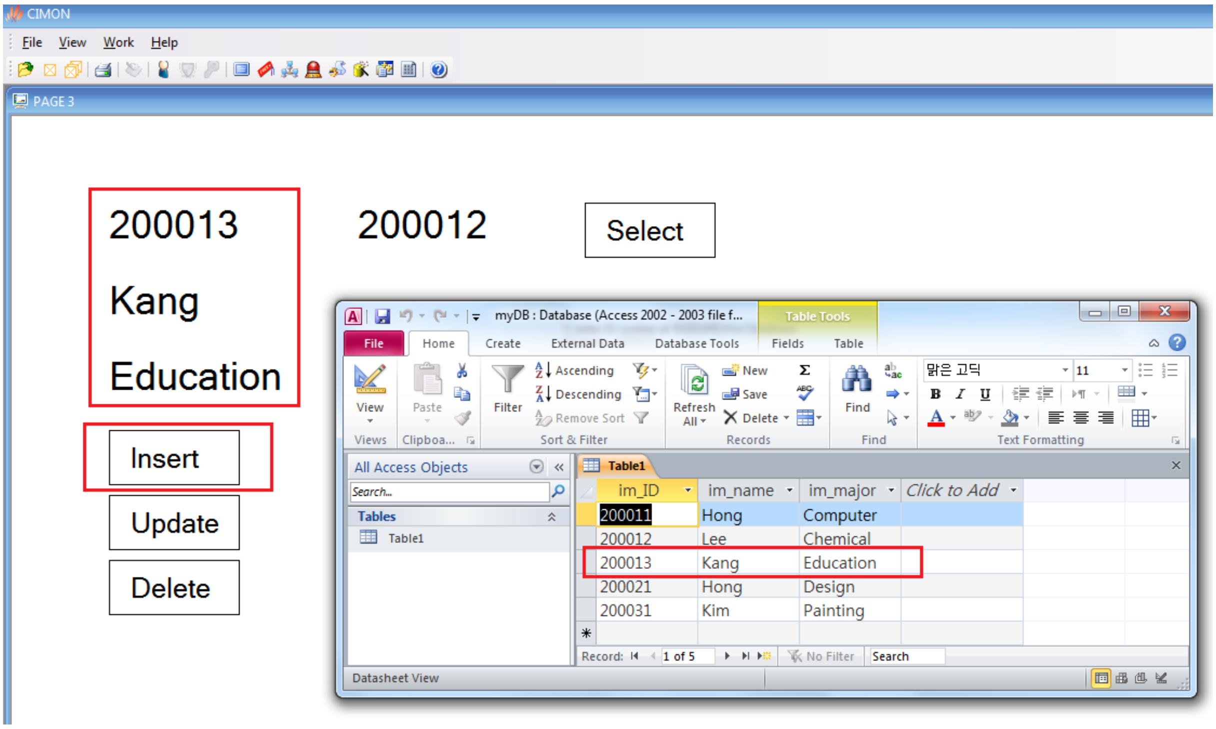

CIMON
File
Edit
View
Work
Help
PAGE 3
200011
Hong
Computer
200012
200012
Select
Insert
Update
Delete
DATABASE [ODBC.DBX]
Close
Change Tag Value
Apply
Close

1. write ID number at IDSEARCH in Database
Example : 200012

Name	Description	Value	Status	Alarm
ID		200011		
IDSEARCH		200012		
NAME		Hong		
MAJOR		Computer		

Name: IDSEARCH
Desc.:
Type: Virtual Tag
Device:
Address:
Current Value: 200012
New Value: 200012

- If you double click dynamic tag and write ID, name and major and then click "Insert", you can see the new database is inserted in Access 2010 as below picture.


CIMON
File View Work Help
PAGE 3
200013
Kang
Education
200012
Select
Insert
Update
Delete
myDB : Database (Access 2002 - 2003 file f...
Table Tools
File Home Create External Data Database Tools Fields Table
All Access Objects
Tables
Table1
Datasheet View

im_ID	im_name	im_major	Click to Add
200011	Hong	Computer	
200012	Lee	Chemical	
200013	Kang	Education	
200021	Hong	Design	
200031	Kim	Painting	

Record: 1 of 5 No Filter Search

You can test other functions like Update and Delete with the same method.

Chapter 11 Data Logging

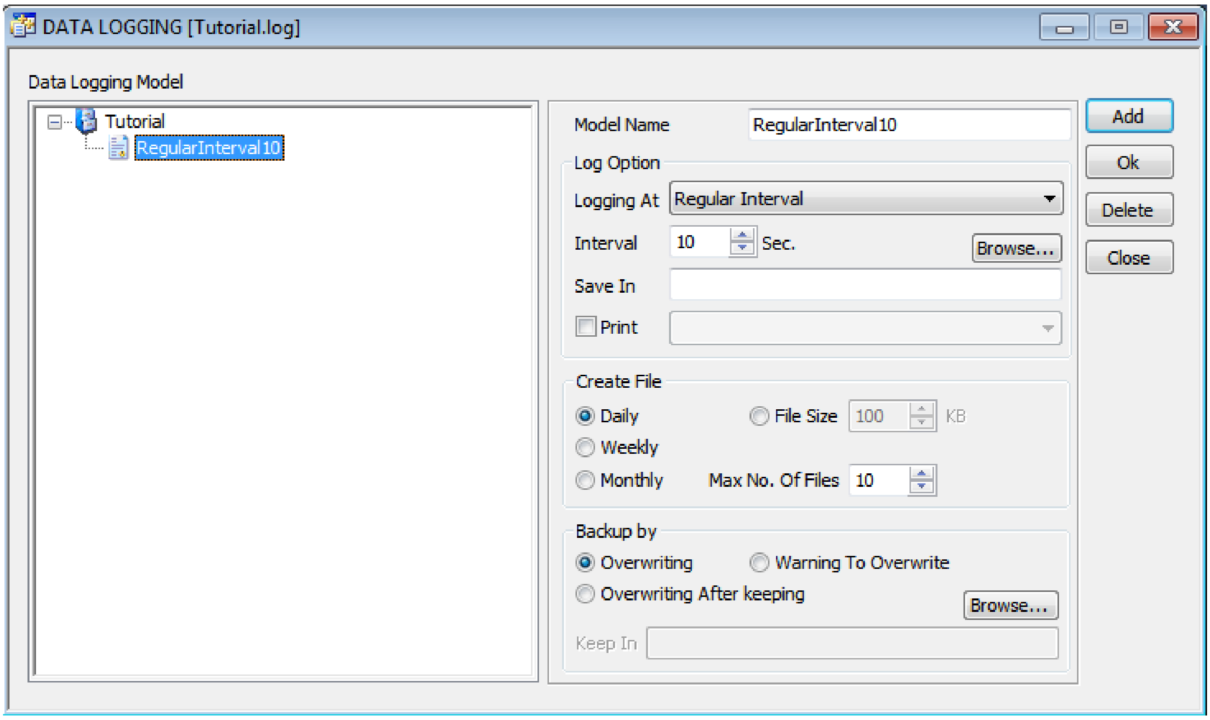
This function is used to save the tag value for logging in file type. The tags for logging are analog and digital tag. Only the tags selected for data logging when tags are registered to a database are available. For logging tag values, a data-logging model should be set up and be registered to a project. According to selected model, the data of a corresponding tag are logged and saved in file type. The logged tag data is used as the data for a trend.

Features

- The function to save a logged data in file is provided.
- Data are logged according to regular interval or in case that a value is changed.
- Files that are classified according to file size and logging term are saved.
- Back-up function, which is used to save logged data file to other location automatically, is provided.
- A specific data saved in a file can be read through Script language.
- Logged data can be displayed on a trend window through Historical Trend.

11-1 Configuration of Data Logging Window

The following picture is the main window of a Data Logger. If you select the **‘Data Logging’** in the ‘Tools’ menu of the CimonD, a window will appear as follows.



DATA LOGGING [Tutorial.log]

Data Logging Model

Tutorial
RegularInterval10

Model Name: RegularInterval10

Log Option

Logging At: Regular Interval

Interval: 10 Sec.

Save In:

☐ Print

Create File

● Daily ○ File Size 100 KB

○ Weekly

○ Monthly Max No. Of Files 10

Backup by

● Overwriting ○ Warning To Overwrite

○ Overwriting After keeping

Keep In

Model Name This is used to enter the name of the data-logging model created.

The limited conditions

1. It is available to enter in the combination of English, Korean, numeral and specific characters.
2. There is no limitation on the number of the characters entered.

If you do not enter it, an Error dialog box will appear.

Logging At This item is used to decide the style for data logging.

There are three types.

Only The Tags With Changed Value: Only the tags with changed value are logged.

Regular Interval: Tag values are logged at regular intervals.

A Minute Interval: Tag values are logged at intervals of a minute.

Interval In case of logging at regular intervals, enter a logging interval by the second.

Save In

In case that you select this item, a logging data file can be saved in a desired directory. Otherwise, it will be saved in a default folder. The default folder is the logging model name folder under a project folder.

(Saved as Project\Data Logging Model\YYYYMMDD.cld file type
YYYY : Year, MM : Month, DD : Date)

Browse

This is used to assign the folder where a data logging file will be saved by using the 'Data Logging' dialog box.

Print

In case you assign this item, a registered tag value is outputted with a printer at data-logging intervals. Select a printer among the printers registered to a system.

Create File

This is used to assign how to create a new file.

▶ To create a file at regular intervals

① Daily : Everyday
② Weekly : Every week
③ Monthly : Every month

▶ To create a file by capacity

① File size: This is used to assign the size of a file. If the size of a file is bigger than an assigned one, the data will be saved as other one and will be logged. Min. is 1 KB, Max. is 10000 KB.

② Max. No of File: This is used to assign the max. number of the files saved. (2 – 1000) For example, if you select the Daily and enter 7 as the Max. Pcs of File, the data for 7 days will be saved. If you assign100KB as the File Size and enter 10 as the Max. Pcs of File, the data will be saved up to 1000KB.

Backup by

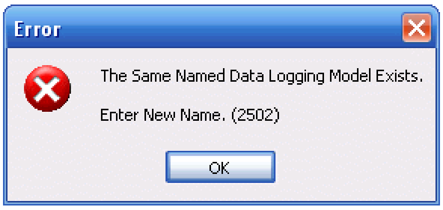
Overwriting: In case that the number of files is over Maximum, the oldest data file will be overwritten.

Warning to: In case that the number of files is over Maximum, the warning message will be shown at a certain time before overwriting. The user who saw warning message should back up, if necessary.

Overwrite After: In case that the number of files is over Maximum, all data files will be overwritten after they are backed up.

Keep In: In case of selecting the Overwrite After Backing Up, this is used to assign where data files are backed up. The folder backed up may be searched by using Browse

Add If you press the Add button after you configure data logging, a new model will be added. If a same logging model name exists, an Error dialogue box will appear.

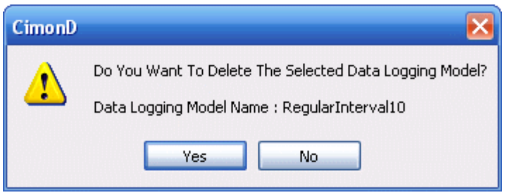


The Same Named Data Logging Model Exists.

Enter New Name. (2502)

Ok This is used to register a corresponding data-logging model. If you press this button, a registered model will be displayed in the data logging model list on the left.

Delete This is used to delete a created model. If you press the Delete button after you select the model deleted in a data logging model list, a Warning dialogue box will appear. If you want to delete, select “Yes”. Otherwise, select “No”.



Do You Want To Delete The Selected Data Logging Model?

Data Logging Model Name : RegularInterval10

Close This is used to close a Data Logging Configuration.

[Reference 1]

How to calculate the capacity of HDD for data logging

(In case of data logging at regular intervals, a data is 16 BYTE and in case of data logging at intervals of a minute, it is 4 BYTE.)

Necessary HDD Capacity = a data x No. of daily loggings x No. of storing days x No. of tags

[Ex.1] How much HDD is required to store 100 tags at intervals of 10 secs for 30 days?

16 x (6 x 60 x 24) x 30 x 100 = About 396 MByte

[Ex.2] How much HDD is required to store 100 tags at intervals of 1 min for a year?

4 x (60 x 24) x 365 x 100 = About 201 MByte

[Reference2]

Note to make a data-logging model and register a tag (How to search logged data fast)

1. Too many tags should be not registered to a logging model. It is proper to register around 20 tags.
2. The tag registered to a same trend graph should be registered to a same group.

11.2 Converting a Data Logging File

Let's study how to convert a data-logging file to a Text file or deliver it to Excel.

As the data-logging file logged from the CIMON by defining a data logging model (yyyymmdd.cld file) is saved in binary, users can not read.

Accordingly, to convert the logged data file to a text file, two functions are provided in the CIMON as follows.

LogFileConvert("Cld File Name", "Text File Name")

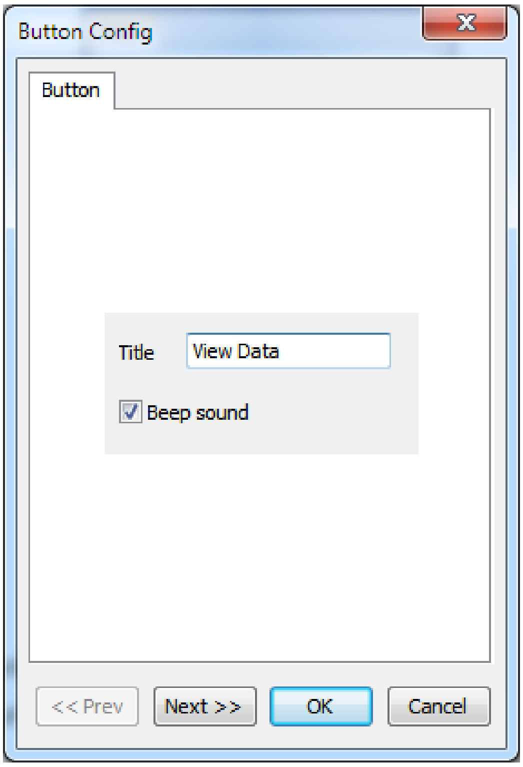
LogFileDialog()

The folder where a file is saved and the file name for Function LogFileConvert should be assigned in the function that converts File Cld in an assigned folder to Text file.

Ex)LogFileConvert("C:\ProgramFiles\CIMON50\MyProj\RegularInterval
10\19981027.cld","C:\19981027.txt")

To use Function LogFileDialog(), let's make the button called **'View Data'** first.

- If you click a desired location on a page after you click the **'User Button'** in the **'Draw'** menu of the CimonD, a **'Button Configuration'** dialog box will appear as follows.

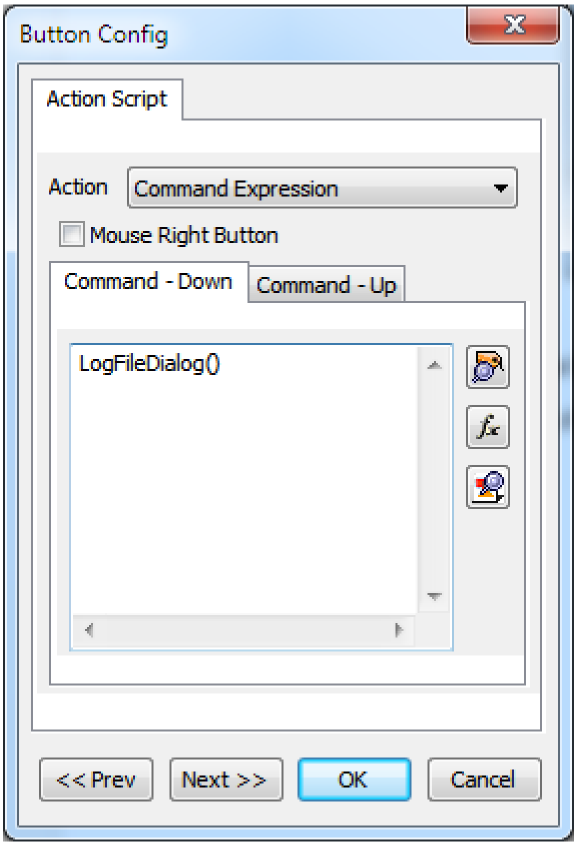

Button Config
Button
<< Prev
Next >>
OK
Cancel

Title: View Data

☑ Beep sound

- After you enter **'View Data'** as the title, press the **'Next>>'** button.
- Enter the Command of the Action as follows.

LogFileDialog()


Button Config
Action Script
Command - Down
Command - Up
<< Prev
Next >>
OK
Cancel

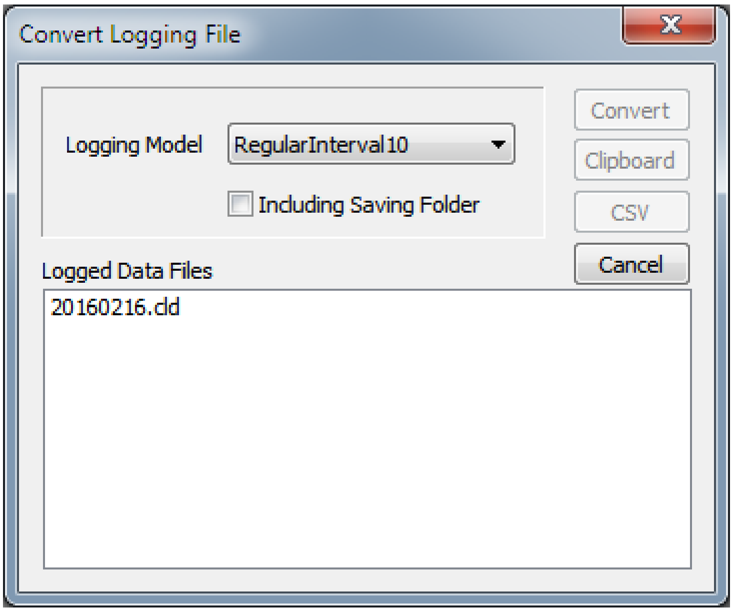
Action: Command Expression

☐ Mouse Right Button

```
LogFileDialog()
```

- If you click the **'Ok'** button, the **'View Data'** button will be created as follows.

- If you press the **'DATA'** button after the CIMON is run, the following window will appear.



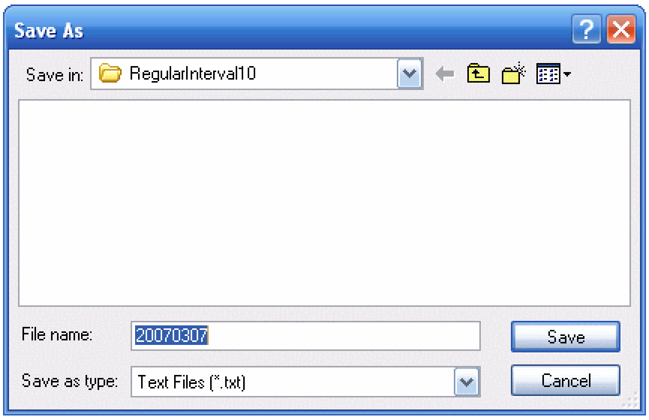
Logging Model: RegularInterval10

☐ Including Saving Folder

Logged Data Files

20160216.dd

- Select a desired logging model.
- Check whether a stored folder is included in case that the file is stored.
- The file in the stored folder is displayed in attaching … to the front of the file name.
- Select a desired file.
- To convert the file to a text file, press the **'Convert File'** button. If the following dialog box appears, enter the name of the text file saved.



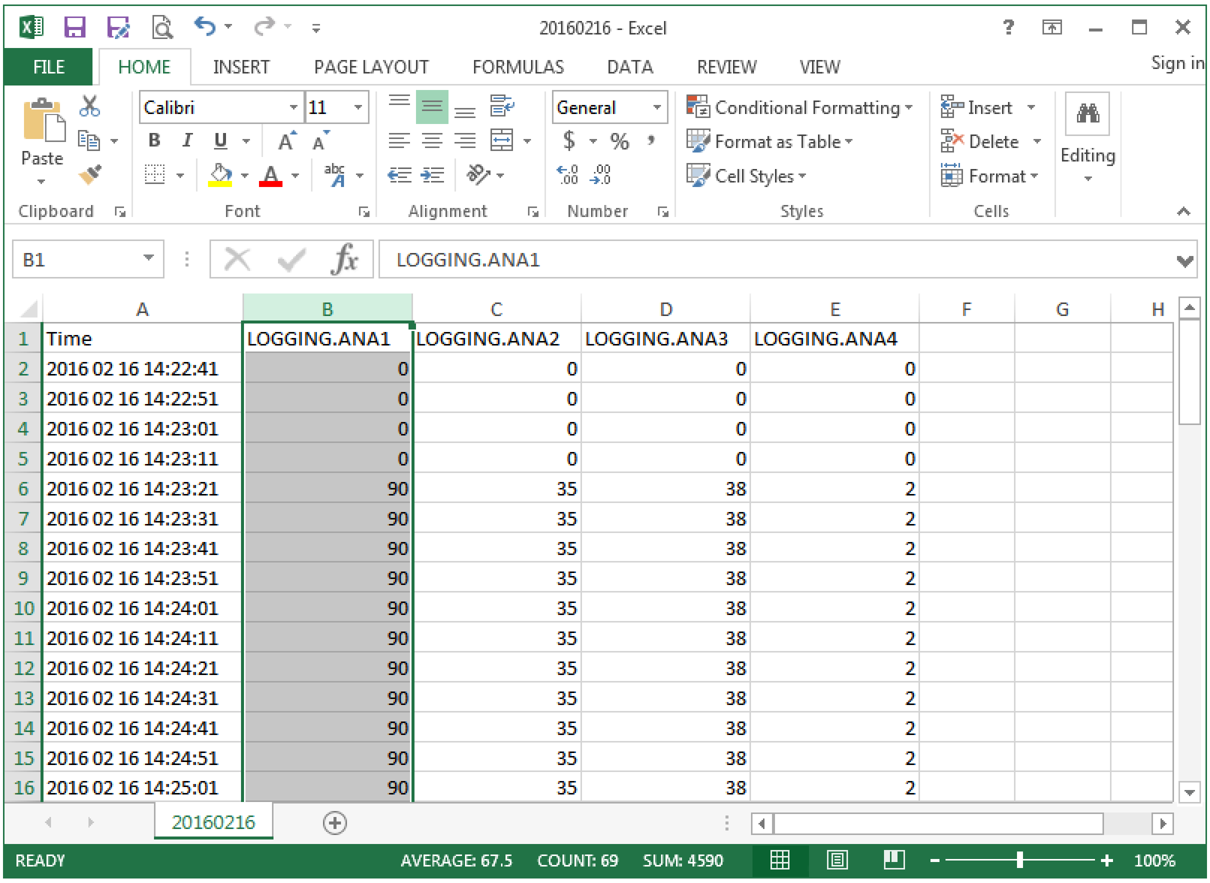
Save in: RegularInterval10

File name: 20070307

Save as type: Text Files (*.txt)

- To see the file by using Excel, press the **'Clipboard'** button on the window.

- If you select the **'CSV'**, the data will appear on Excel as below.


20160216 - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
Sign in
Paste
Calibri
11
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Editing
Clipboard
Font
Alignment
Number
Styles
Cells
B1
LOGGING.ANA1
20160216
READY
AVERAGE: 67.5
COUNT: 69
SUM: 4590
100%

	A	B	C	D	E
1	Time	LOGGING.ANA1	LOGGING.ANA2	LOGGING.ANA3	LOGGING.ANA4
2	2016 02 16 14:22:41	0	0	0	0
3	2016 02 16 14:22:51	0	0	0	0
4	2016 02 16 14:23:01	0	0	0	0
5	2016 02 16 14:23:11	0	0	0	0
6	2016 02 16 14:23:21	90	35	38	2
7	2016 02 16 14:23:31	90	35	38	2
8	2016 02 16 14:23:41	90	35	38	2
9	2016 02 16 14:23:51	90	35	38	2
10	2016 02 16 14:24:01	90	35	38	2
11	2016 02 16 14:24:11	90	35	38	2
12	2016 02 16 14:24:21	90	35	38	2
13	2016 02 16 14:24:31	90	35	38	2
14	2016 02 16 14:24:41	90	35	38	2
15	2016 02 16 14:24:51	90	35	38	2
16	2016 02 16 14:25:01	90	35	38	2

Chapter 12 Reports

The CIMON makes a report by using application programs such as Excel or Word. If you make an assigned form by using Excel or Word, the CIMON output the report required at regular intervals or an event or on time.

12-1. Features of Reports

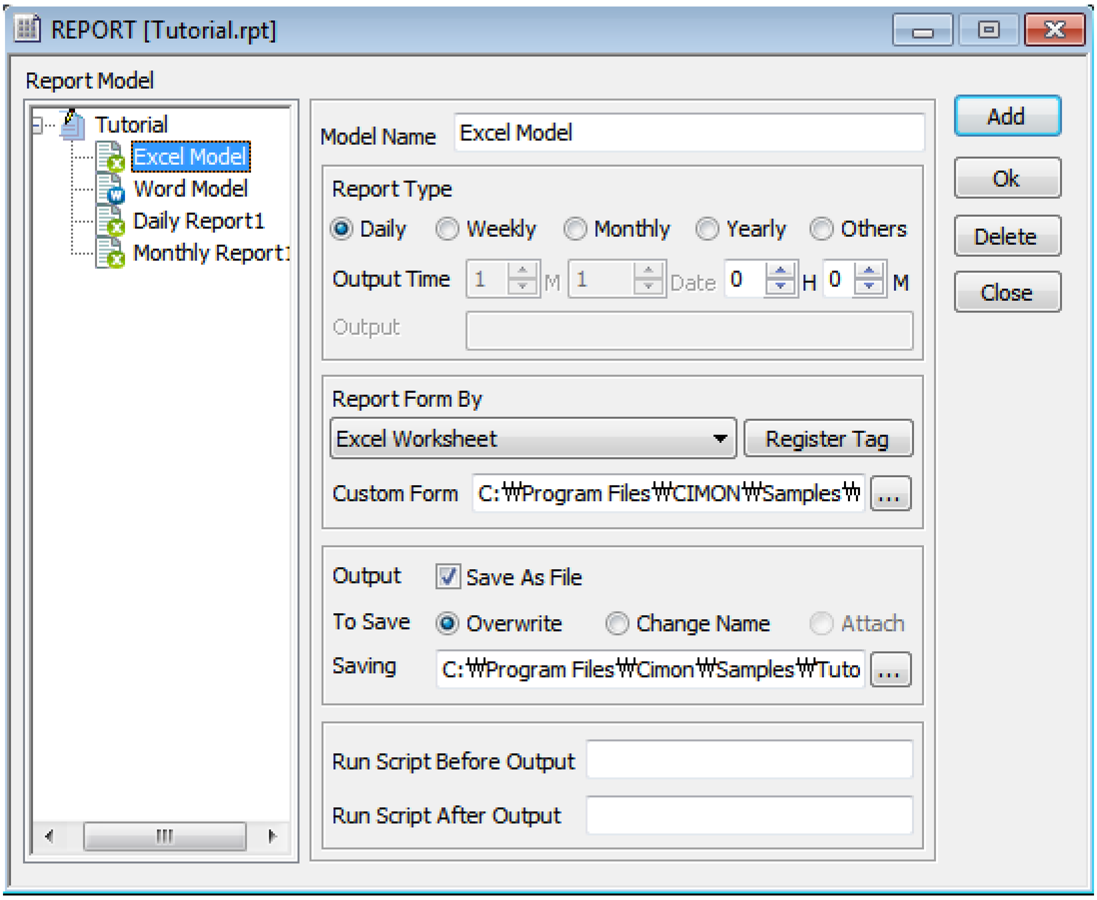
- A daily report, weekly report, monthly report and annual report are provided and a report can be outputted by a specific condition or user’s command.
- A report can be outputted with a printer and saved in a file.
- The basic form of a report is made in Excel or Word. The file type outputted is as same as the form file of a report.
- As data are assigned directly to Excel form in Script language by using OLE Automation, it is simple to make the form of a basic report or to set up data.
- As a report is outputted as edited in Excel or Word, and a picture or a chart is printed as displayed on a window, a fine output is produced.

12-2. Configuration of Report Window

To set up a report output model, select the **‘Reports’** in the tools menu of CimonD and use a Report Manager Dialog box.

The extension name of a report data file is ***.rpt**. The report data in the type of “ProjectName.rpt” is created in the folder assigned in a Project.

The dialog box to set up a report output model is as follows. If you select the **‘Reports’** in the Tools menu of the CimonD, the following dialog box will appear.



REPORT [Tutorial.rpt]

Report Model
- Tutorial
  - Excel Model
  - Word Model
  - Daily Report1
  - Monthly Report

Model Name: Excel Model

Report Type: ● Daily ○ Weekly ○ Monthly ○ Yearly ○ Others

Output Time: 1 M 1 Date 0 H 0 M

Output:

Report Form By: Excel Worksheet

Custom Form: C:₩Program Files₩CIMON₩Samples₩

Output: ☑ Save As File

To Save: ● Overwrite ○ Change Name ○ Attach

Saving: C:₩Program Files₩Cimon₩Samples₩Tuto

Run Script Before Output:

Run Script After Output:

The followings are the details on the necessary items to set up the output model of a report.

Model Name This is used to enter a report model name.

The limited conditions

1. It is available in the combination of English, Korean, numeral and specific characters.
2. There is no limitation on the number of the characters entered.

Report Type This is used to select a report type according to output time.

- ▷ Daily: Once a day
- ▷ Weekly: Once a week
- ▷ Monthly: Once a month
- ▷ Yearly: Once a year
- ▷ Others: By conditional expression.

If you select the Others, the Output condition will be active.

Output Condition In case that the Report Type is the others, this is used to enter a conditional expression for output. For example, this is used to output a report by a desired conditional expression in case that a specific tag value is bigger than a certain value or an alarm for a tag occurs.

[Reference]

To output a report if the digital tag (DTAG1) is 1, enter the condition of the output as follows.

DTAG1 == 1

If you input as the above, the report will be outputted as soon as the DTAG1 is changed from 0 to 1.

Output Time This is used to set up the time when a report is outputted.

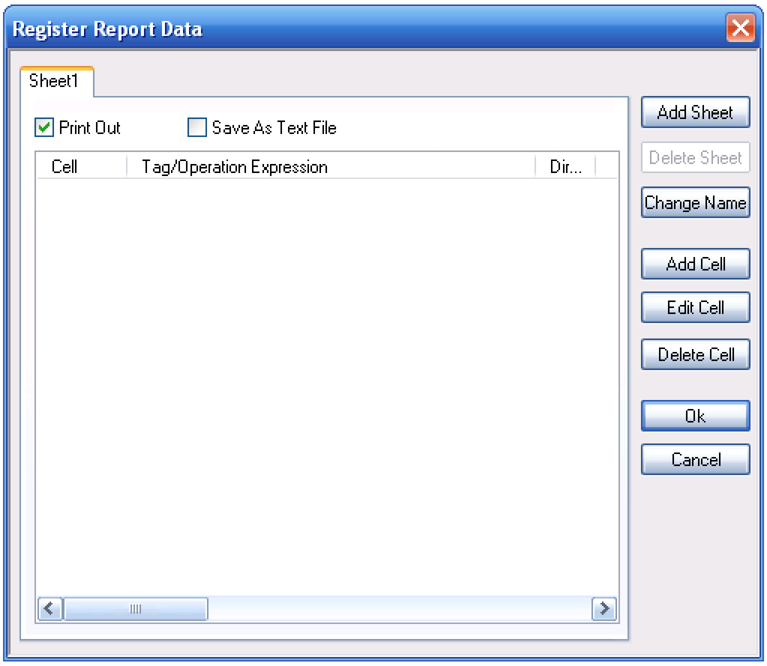
Assign the hour·minute outputted for a daily report, the weekday·hour·minute outputted for a weekly report, the date·hour·minute outputted for a monthly report, the month·day·hour·minute outputted for a annual report.

(In case of a weekly report, to assign the last day of every month, assign date 31.)

Report Form By This is used to assign the form outputted, being linked with a report.

- ▷ Excel Worksheet: This is used to output in Excel.
- ▷ Word Document: This is used to output in Word.
- ▷ Virtual Excel Worksheet: This is used to output in Excel without excel application.

Register Tag This is used to register the contents printed and the position where they are printed in a report. If you select this button, a **'Register Report Data'** dialog box will appear to register the contents and the position printed. (Refer to the explanation on the following Register Report Data dialog box for registration method.)


Register Report Data
Sheet1
Cell
Tag/Operation Expression
Dir...
Add Sheet
Delete Sheet
Change Name
Add Cell
Edit Cell
Delete Cell
Ok
Cancel

☑ Print Out ☐ Save As Text File

Custom Form This used to assign a form file. Enter the folder and the name of a file made in Excel or Word. Enter them directly or move to the folder where the form files for a report are by using … button and select the form file outputted.

Output Save As File: This is used to assign whether a report is saved in a file. If this item is set up, the following **To Save** should be assigned.

To Save In case that the Save As File is selected, this is used to assign how to save.

1. Overwrite: A file is created and saved as the assigned name.
   In case a file exists, it will be overwritten and saved.
2. Change Name: A file is saved as the following name type in
   an assigned folder.

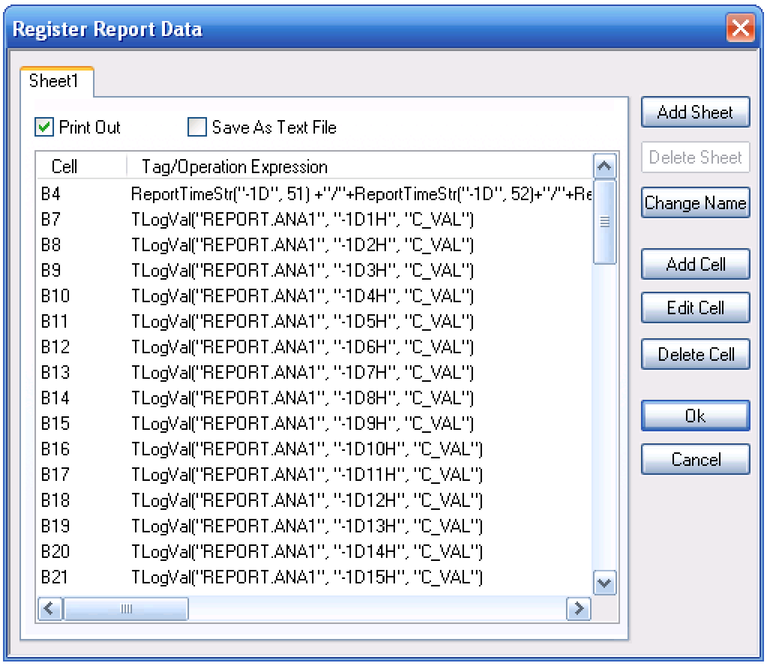
YYYYMMDD.EXT

(YYYY:Year, MM:Month, DD:Date.EXT : Extension)

Save As	In case that the To Save is the Overwrite, this is used to enter a file name including a folder name. But, in case that a folder name is omitted, the file will be saved in a project directory. In case that the To Save is the Change Name, assign the name of the folder where a file is saved. Also, you may assign a folder and a file name by using the **'Browse'**. The saving folder should be assigned according to report model differently.
Run Script Before Output	This is used to enter the name of the script run before a report is outputted. When you need an action before a report is outputted, write the script run.
Run Script After Output	This is used to enter the name of the script run after a report is outputted. When you need an action after a report is outputted, write the script run.
Add	This is used to add a new report model. In case that you make the model for a corresponding report and click the Add button, the name of the added report to the left report model of a Report Manger will appear and all the items are initialized.
Ok	This is used to register a newly made report model to the report output model or to revise a registered report data model. If you select the model registered to the report output model and revise the defined items (Report model name revisable), pressing the OK button, the selected model will be revised.
Delete	This is used to delete a registered report model.
Close	In case that a report output model is set up or a report manager will not be used any more, if you press the **"Close'**, the report manager will disappear.

12-3 Register Report Data Dialog box

This is used to define the contents printed and the position where they are printed in a report in a Register Report Data dialog box. The form of this dialog box appears differently each other in case of Excel and Word. The following picture is the Register Report Data dialog box when Excel is selected as the form.

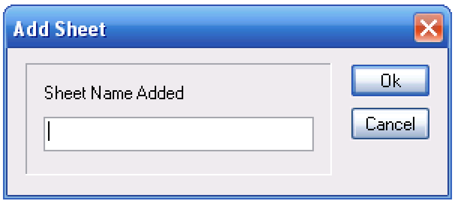


☑ Print Out ☐ Save As Text File

Cell	Tag/Operation Expression
B4	ReportTimeStr("-1D", 51) +"/"+ReportTimeStr("-1D", 52)+"/"+Re
B7	TLogVal("REPORT.ANA1", "-1D1H", "C_VAL")
B8	TLogVal("REPORT.ANA1", "-1D2H", "C_VAL")
B9	TLogVal("REPORT.ANA1", "-1D3H", "C_VAL")
B10	TLogVal("REPORT.ANA1", "-1D4H", "C_VAL")
B11	TLogVal("REPORT.ANA1", "-1D5H", "C_VAL")
B12	TLogVal("REPORT.ANA1", "-1D6H", "C_VAL")
B13	TLogVal("REPORT.ANA1", "-1D7H", "C_VAL")
B14	TLogVal("REPORT.ANA1", "-1D8H", "C_VAL")
B15	TLogVal("REPORT.ANA1", "-1D9H", "C_VAL")
B16	TLogVal("REPORT.ANA1", "-1D10H", "C_VAL")
B17	TLogVal("REPORT.ANA1", "-1D11H", "C_VAL")
B18	TLogVal("REPORT.ANA1", "-1D12H", "C_VAL")
B19	TLogVal("REPORT.ANA1", "-1D13H", "C_VAL")
B20	TLogVal("REPORT.ANA1", "-1D14H", "C_VAL")
B21	TLogVal("REPORT.ANA1", "-1D15H", "C_VAL")

Sheet Tab Control	A currently registered Sheet is shown in the type of tab control. (In case of Excel form, several sheets can be registered.)
Print Out	If this item is selected, a corresponding sheet will be printed out. Otherwise, it is not.
Save As Text File	If this item is selected, a corresponding sheet will be saved to text File. Otherwise, it is not.
Data List	Currently registered data are shown. You are able to select the data edited and deleted in this list.

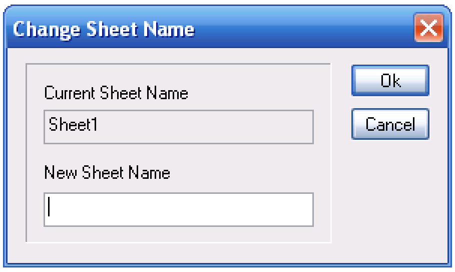
Add Sheet This is available in case of Excel model and is used to add a new sheet. You are able to register several sheets to Excel form file. If you select this item, a **'Add Sheet'** dialogue box will appear. If you enter the name of the sheet added and press the **'Ok'** button, the new sheet will be added.



Note) The name of the sheet added should be as same as the sheet name of Excel form file.

Delete Sheet This is used to delete a registered sheet.

Change Name This is used to change the name of a registered sheet. If you select this item, a **'Change Sheet Name'** dialogue box will appear. If you enter the new name of a sheet and press the Ok, the name of the Sheet will be changed.



Current Sheet Name: Sheet1

New Sheet Name:

Add Cell This is used to add a new Cell data. If this item is selected, A Edit Cell dialogue box will appear. Enter the contents outputted in a report in this dialogue box. (Refer to the following explanation on the Edit Cell dialog box.)

Edit Cell This is used to edit the contents of a registered cell. If you select a desired cell in a data list and click this button, an Edit Cell dialogue box will appear. Then, you are able to edit the contents in this dialogue box.

Reference) You are able to edit a cell in a data list by double-clicking it.

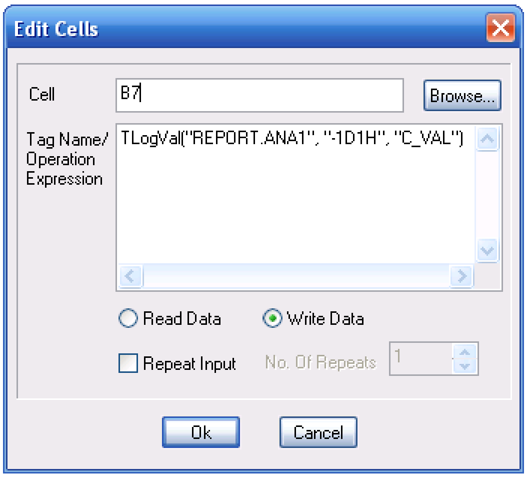
Delete Cell This is used to delete a registered cell.

Reference) You are able to select a cell in a data list and press the Delete key to delete.

12-4 Edit Cell Dialog Box

This is used to define the contents printed and the position where they are printed in a report in an Edit Cell Data dialog box. The form of this dialog box is shown differently each other in case of Excel and Word. (Reference, You can enter big amount of data fast in the Edit Cell dialog box. How to use is described as follows.)

Dialog box in case of Excel form



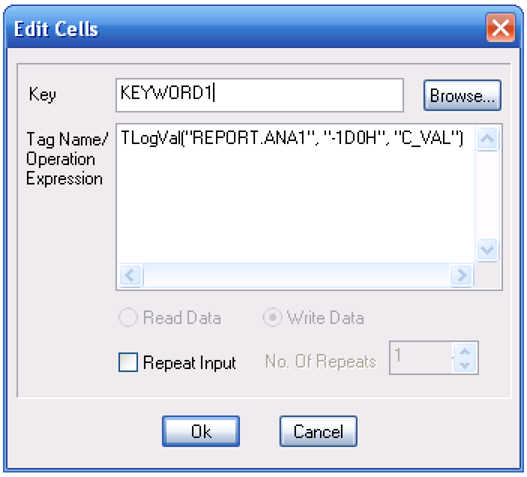
Cell: B7

Tag Name/ Operation Expression: TLogVal("REPORT.ANA1", "-1D1H", "C_VAL")

○ Read Data ● Write Data

☐ Repeat Input No. Of Repeats 1

Dialog box in case of Word form



Key: KEYWORD1

Tag Name/ Operation Expression: TLogVal("REPORT.ANA1", "-1D0H", "C_VAL")

○ Read Data ● Write Data

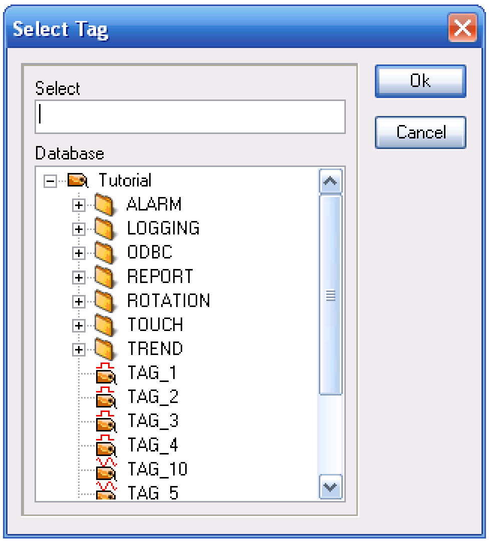
☐ Repeat Input No. Of Repeats 1

Cell (In case of Excel) This is used to enter a position in an Excel worksheet as Cell number. For example, if you want to output the value of Tag_1 at C2 in an Excel Worksheet, enter “C2” in the Cell number and “Tag_1’ in the Tag Name.

Key (In case of Word) This is used to assign a specific key word. The string corresponding to a key word is found and replaced with the data assigned in the Tag Name/Operation Expression.

For example, if you want to output the value of Tag_1 at a specific position, enter Value1 at the position when you make a Word Document. And if you assign “Value1” as key word and “Tag_1” as tag name, the value of Tag_1 will be outputted at the position.

Browse This is used to find a tag name. If you click this button, the following **‘Select Tag’** dialogue box will appear. You are able to search currently registered tags and select one among them.



Tag Name/ Operation Expression This is used to enter the tag outputted to the Tag Name/Operation Expression report. If you register a tag name, the tag value will be outputted. You may enter in Operation expression type. Also, each parameter of each database can be outputted by using a tag variable.

Examples of Tag Name/Operation Expression

Tag Name/Operation Expression	Description	Re.
Tag_1	Outputs the value of Tag_1.	
Tag_1 + Tag_2	Outputs the sum value of Tag_1 & Tag_2.	
Tag_1:UNIT	Outputs the unit of Tag_1.	
TLogVal("ANA1", "-1 D 1 H", "C_VAL")	Outputs the instant value of Tag ANA1 at 1 a day before.	D
TLogVal("ANA1", "-1 D 0 H", "I_VAL")	Outputs the accumulation value of Tag ANA1 between 0 H and 1 H of the day before.	D
TLogVal("ANA1", "-1 D 3 H", " C_VAL ")	Outputs the instant value of ANA1 at 0 H on 3 of the previous month.	M
TLogVal("ANA1", "-1 M 3 D", "A_VAL")	Outputs the average value of the instant values by hours of Tag ANA1 on 3 of the previous month.	M
TLogVal("ANA1", "-1 M 3 D", "I_VAL")	Outputs the accumulation value of Tag ANA1 on 3 of the previous month.	M
TLogVal("DIG1", "-1 D", "ON_TIME1")	Outputs the first operation time of Tag DIG1 the previous day in the type of “02:25 – 08:30”.	D
TLogVal("DIG1", "-1 D ", " ON_TIME ")	Outputs the total operation time of Tag DIG1 the previous day by the minute.	D
TLogVal("DIG1", "-1 D", "ON_CNT")	Outputs the total number of operation of Tag DIG1 the previous day.	D
TLogVal("DIG1", "-1 M 1 D"," ON_TIME ")	Outputs the daily total operation time of Tag DIG1 on 1 of the previous month.	M
TLogVal("DIG1", "-1 M", "T_SUM")	Outputs the total operation time of Tag DIG1 for the previous month by the minute.	M
TLogVal("DIG1", "-1 M ", "N_SUM")	Outputs the total number of operations of Tag DIG1 the previous month.	M

(Reference) The time is calculated on the basis of the time when a report is printed. Function TlogVal is explained in the Chapter 21 in detail.

Direction This is used to select whether to write a value at a cell, or to read and bring a value in a cell. (Available in Excel form)

Read Data: The value for an assigned cell is read and brought to an assigned tag. If you select this item, enter only the Tag Name in the Tag Name/Operation Expression part.

Write Data: The value for an assigned tag is written in an assigned Cell.

Repeat Data This is used to run the continuous cell-input at a time. For example, it is used when you enter a tag value to the data from 0 H to 23 H in a daily report.

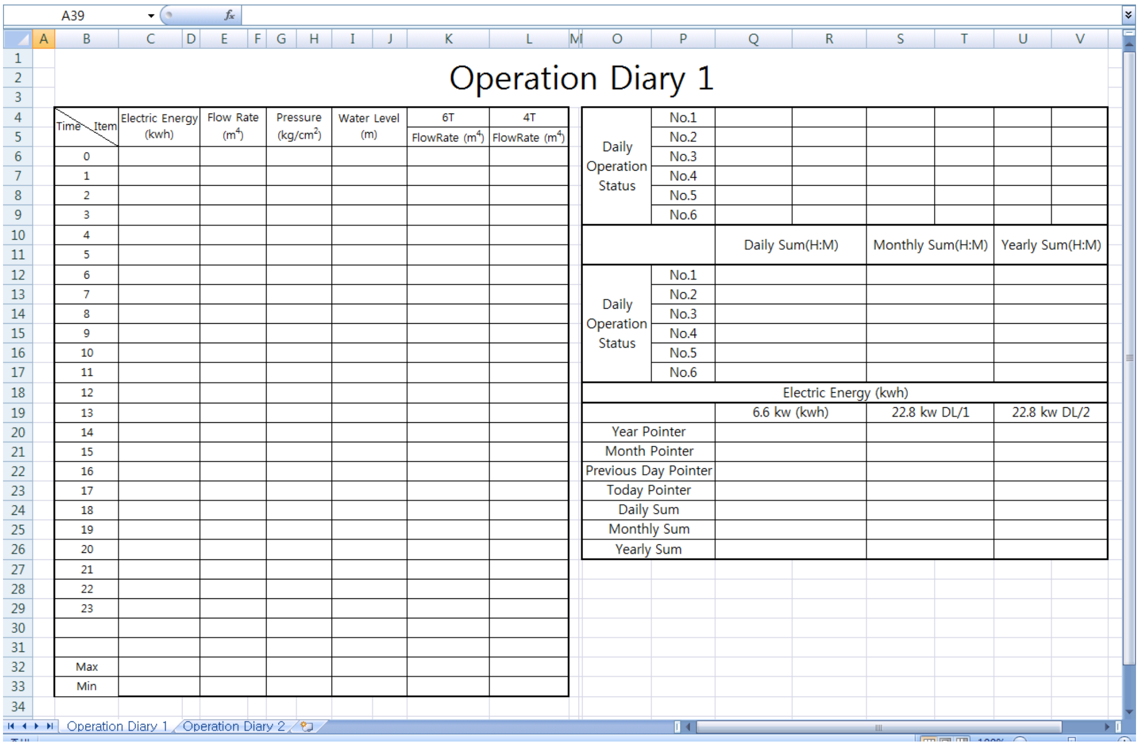
If you select the Repeat Data, the time value of a cell position and a tag name is increased automatically by 1 and is entered as much as the number of assigned repeats.

12-5 Creat a Report

Let’s set up to output a daily report with two sheets as follows.

- After you make the report form outputted as follows, click the menu to save it.

  (For example, use the previous way to save as C:\Form\Rpt.xls.)



Operation Diary 1

Time \ Item	Electric Energy (kwh)	Flow Rate (m^4)	Pressure (kg/cm^2)	Water Level (m)	6T	4T
					FlowRate (m^4)	FlowRate (m^4)
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
Max						
Min						

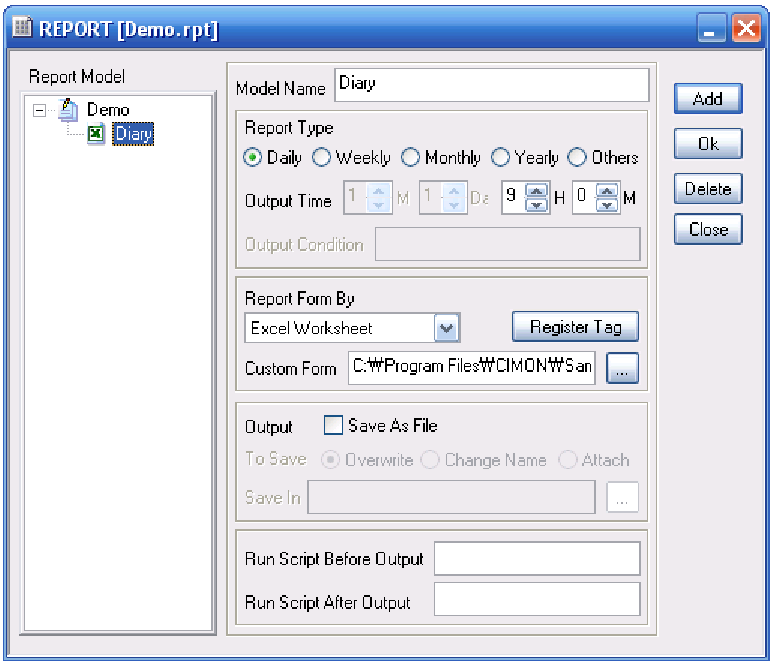
Daily Operation Status	No.1						
	No.2						
	No.3						
	No.4						
	No.5						
	No.6						

		Daily Sum(H:M)	Monthly Sum(H:M)	Yearly Sum(H:M)
Daily Operation Status	No.1			
	No.2			
	No.3			
	No.4			
	No.5			
	No.6			

Electric Energy (kwh)

	6.6 kw (kwh)	22.8 kw DL/1	22.8 kw DL/2
Year Pointer			
Month Pointer			
Previous Day Pointer			
Today Pointer			
Daily Sum			
Monthly Sum			
Yearly Sum			

- Press the **'Report'** in the Tools menu of the CimonD to float a **'Report Manger'**. And enter as follows.


REPORT [Demo.rpt]

Report Model: Demo / Diary

Model Name: Diary

Report Type: ● Daily ○ Weekly ○ Monthly ○ Yearly ○ Others

Output Time: 1 M 1 Da 9 H 0 M

Report Form By: Excel Worksheet

Custom Form: C:₩Program Files₩CIMON₩San

Output: ☐ Save As File

To Save: ● Overwrite ○ Change Name ○ Attach

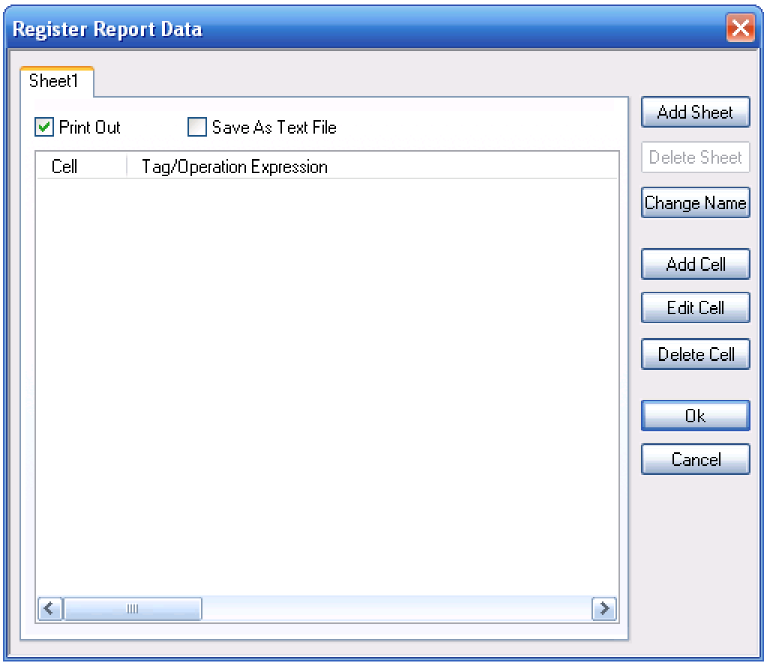
Output Condition
Register Tag
Save In
Run Script Before Output
Run Script After Output
Add
Ok
Delete
Close

This report, after File Rpt.xls is opened at 9 H 0 M everyday and data are inputted in a file, is created in the file with the following name and is saved under folder C:\Report\Diary.

YYYYMMDD.xls (YYYY: Year, MM: Month, DD: Date)

Let's study how to set up the data inserted to an assigned form file.

- If you press the **'Register'** button in the Report Manager, the following window will appear.


Register Report Data

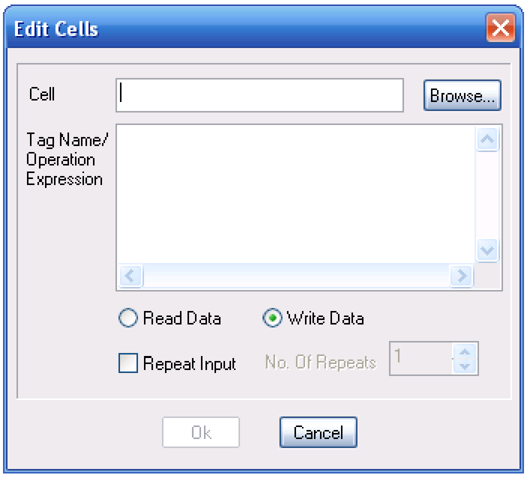
Sheet1

☑ Print Out ☐ Save As Text File

Cell	Tag/Operation Expression

Add Sheet
Delete Sheet
Change Name
Add Cell
Edit Cell
Delete Cell
Ok
Cancel

- Press the **'Change Name'** button and change the Sheet1 to the **Operation Diary 1'** to be as same as the Sheet name of Rpt.xls.
- To set up a desired data at a specific position in a form file, press the **'Add Cell'** button. A window will appear as follows.


Edit Cells
Cell
Browse...
Tag Name/
Operation
Expression
○ Read Data
● Write Data
☐ Repeat Input
No. Of Repeats
1
Ok
Cancel

- Write as follows at Cell B1 in the report form file.

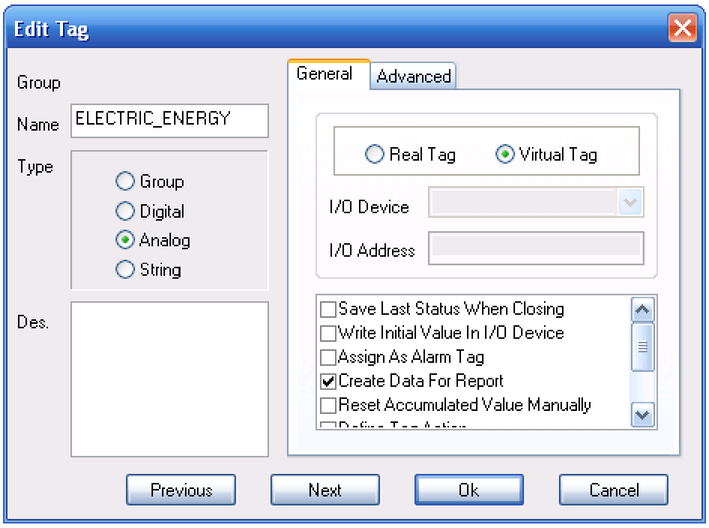
ReportTimeStr("-1 D", 12) + "   " + ReportTimeStr("-1 D", 64)

As the ReportTimeStr("-1 D", 12) outputs the date of the previous day in the type of 1998Y 10M 27D, and the ReportTimeStr("-1 D", 64) outputs the corresponding weekday to the previous day in the type of Tuesday, this is outputted as follows at Cell B1. (For ReportTimeStr Function, refer to Help -> Index -> CIMON Functions -> Functions for report.)

1998Y 10M 27D   Tuesday

Let's register Electric Energy.

- Use an Edit Tag dialog box to create the tag displaying the electric energy as the analog tag called '**Electric_Energy'** and to assign the basic items related to the tag. And check a Create Data For Report as follows.



Group

Name: ELECTRIC_ENERGY

Type: ○ Group ○ Digital ● Analog ○ String

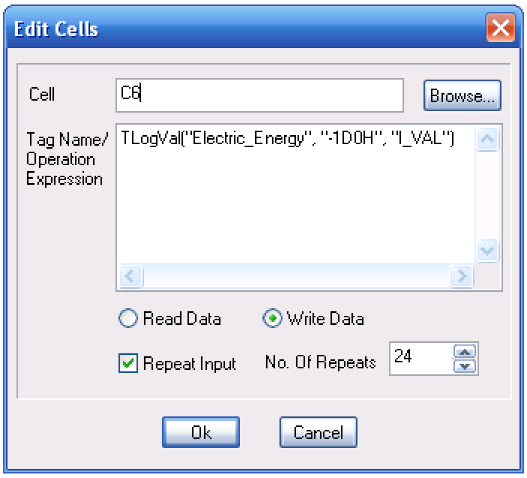
○ Real Tag ● Virtual Tag

☐ Save Last Status When Closing
☐ Write Initial Value In I/O Device
☐ Assign As Alarm Tag
☑ Create Data For Report
☐ Reset Accumulated Value Manually

- Press the **'Add Cell'** button in the **'Register Report Data'** dialog box. Enter as follows in it.

  Cell : C6
  Tag/Operation Expression : TlogVal("Electric_Energy", "-1 D 0 H", "I_VAL")
  Repeat Input : Check mark
  No. of Repeats : 24

  The completed window is as follows.



Cell: C6

Tag Name/ Operation Expression: TLogVal("Electric_Energy", "-1D0H", "I_VAL")

○ Read Data ● Write Data

☑ Repeat Input No. Of Repeats 24

- If you press the Ok button, the data will be registered at twenty-four cells automatically.

C6	TlogVal("Electric_Energy", "-1 D 0 H", "I_VAL")
C7	TlogVal("Electric_Energy", "-1 D 1 H", "I_VAL")
:	:
C29	TlogVal("Electric_Energy", "-1 D 23 H", "I_VAL")

The TlogVal("Electric_Energy", "-1 D 0 H", "I_VAL") outputs the increased value of the electric energy tag between 00:00 ~ 01:00 of the previous day.

- Enter in the same way for **'Flow Rate'**.
- As the **'Pressure'** is the instant value at an assigned time, use the previous way to register as follows.

G6	TlogVal("Pressure", "-1 D 0 H", "C_VAL")
G7	TlogVal("Pressure", "-1 D 1 H", "C_VAL")
:	:
G29	TlogVal("Pressure", "-1 D 23 H", "C_VAL")

- Use the same way to register the data to the following cells.

Let's study how to register the data for operation hours.

- To assign the operation status of No1, the cells should be registered as follows.

S4	TlogVal("No1", "-1 D", "ON_TIME 1")
U4	TlogVal("No1", "-1 D", "ON_TIME 2")
W4	TlogVal("No1", "-1 D", "ON_TIME 3")
Y4	TlogVal("No1", "-1 D", "ON_TIME 4")
AA4	TlogVal("No1", "-1 D", "ON_TIME 5")
AC4	TlogVal("No1", "-1 D", "ON_TIME 6")

The TlogVal("No1", "-1 D", "ON_TIME 1") outputs the first operation time of "No1" during the previous day in the type of 03:20 – 05:45, the TlogVal("No1", "-1 D", "ON_TIME 2") outputs the second operation time.

If "No. 1" were operated once, the TlogVal("No1", "-1 D", "ON_TIME 2") would not output any value.

In case that the date is changed under operation, the first operation time will be set up as 00:00 automatically and the last operation time during the previous day will be set up as 24:00.

- Use the same way to register the cell data for the "No 2" ~ "No 5".

- Let's register the sum of the operation time during the previous day.

S15	TimeConvert(TlogVal("No1", "-1 D", "ON_TIME"), 3)
W15	TimeConvert(TlogVal("No1", "-1 DM", "ON_TIME"), 3)
AA15	TimeConvert(TlogVal("No1", "-1 DY", "ON_TIME"), 3)

The TlogVal(“No1”, “-1 D”, “ON_TIME”) outputs the sum of the operation time of “No1” during the previous day by the minute.

The TlogVal(“No1”, “-1 DM”, “ON_TIME”) outputs the sum of the operation time of ‘No1” during the previous month by the minute.

The TlogVal(“No1”, “-1 DY”, “ON_TIME”) outputs the sum of the operation hours of “No1” during the previous year by the minute.

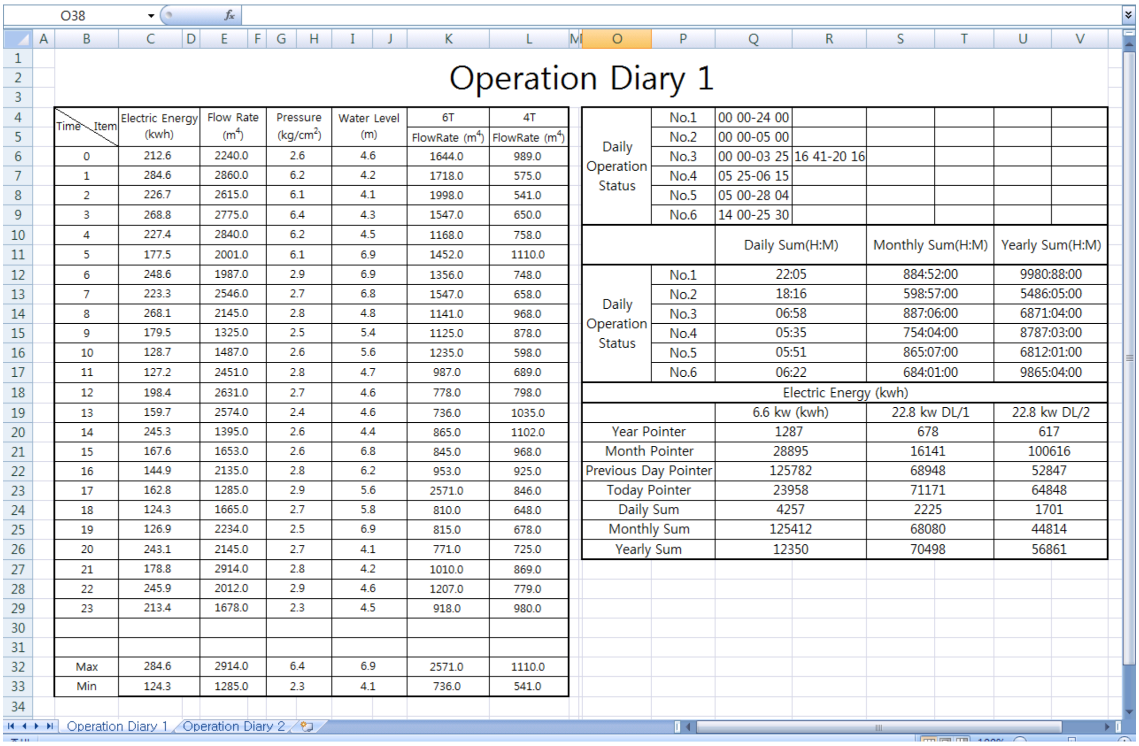
Accordingly, to output the operation time outputted by the minute in the type of HH:MM, Function TimeConvert is used.

- Use the same way to register the sum of the operating time from “No2” to “No5”.
- Use the previous way to register the year pointer, month pointer, previous day pointer, daily sum, monthly sum and annual sum of the electric energy as follows.

S27	TlogVal(“Electric_Energy”, “-1 DY”, “C_VAL”)
S28	TlogVal(“Electric_Energy”, “-1 DM”, “C_VAL”)
S29	TlogVal(“Electric_Energy”, “-1 D”, “C_VAL”)
S30	TlogVal(“Electric_Energy”, “D”, “C_VAL”)
S31	TlogVal(“Electric_Energy”, “-1D”, “I_VAL”)
S32	TlogVal(“Electric_Energy”, “-1 DM”, “I_VAL”)
S33	TlogVal(“Electric_Energy”, “-1 DY”, “I_VAL”)

- After the report is set up, select the menu to run the CIMON.

- The following report is outputted with a printer and saved in a file simultaneously at 09:00 everyday.



Operation Diary 1

Time \ Item	Electric Energy (kwh)	Flow Rate (m^4)	Pressure (kg/cm^2)	Water Level (m)	6T	4T
					FlowRate (m^4)	FlowRate (m^4)
0	212.6	2240.0	2.6	4.6	1644.0	989.0
1	284.6	2860.0	6.2	4.2	1718.0	575.0
2	226.7	2615.0	6.1	4.1	1998.0	541.0
3	268.8	2775.0	6.4	4.3	1547.0	650.0
4	227.4	2840.0	6.2	4.5	1168.0	758.0
5	177.5	2001.0	6.1	6.9	1452.0	1110.0
6	248.6	1987.0	2.9	6.9	1356.0	748.0
7	223.3	2546.0	2.7	6.8	1547.0	658.0
8	268.1	2145.0	2.8	4.8	1141.0	968.0
9	179.5	1325.0	2.5	5.4	1125.0	878.0
10	128.7	1487.0	2.6	5.6	1235.0	598.0
11	127.2	2451.0	2.8	4.7	987.0	689.0
12	198.4	2631.0	2.7	4.6	778.0	798.0
13	159.7	2574.0	2.4	4.6	736.0	1035.0
14	245.3	1395.0	2.6	4.4	865.0	1102.0
15	167.6	1653.0	2.6	6.8	845.0	968.0
16	144.9	2135.0	2.8	6.2	953.0	925.0
17	162.8	1285.0	2.9	5.6	2571.0	846.0
18	124.3	1665.0	2.7	5.8	810.0	648.0
19	126.9	2234.0	2.5	6.9	815.0	678.0
20	243.1	2145.0	2.7	4.1	771.0	725.0
21	178.8	2914.0	2.8	4.2	1010.0	869.0
22	245.9	2012.0	2.9	4.6	1207.0	779.0
23	213.4	1678.0	2.3	4.5	918.0	980.0
Max	284.6	2914.0	6.4	6.9	2571.0	1110.0
Min	124.3	1285.0	2.3	4.1	736.0	541.0

Daily Operation Status	No.1	00 00-24 00					
	No.2	00 00-05 00					
	No.3	00 00-03 25	16 41-20 16				
	No.4	05 25-06 15					
	No.5	05 00-28 04					
	No.6	14 00-25 30					

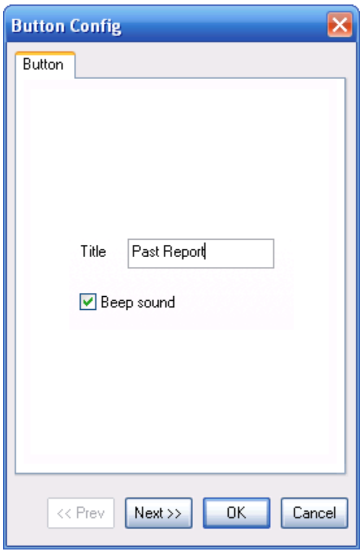
		Daily Sum(H:M)	Monthly Sum(H:M)	Yearly Sum(H:M)
Daily Operation Status	No.1	22:05	884:52:00	9980:88:00
	No.2	18:16	598:57:00	5486:05:00
	No.3	06:58	887:06:00	6871:04:00
	No.4	05:35	754:04:00	8787:03:00
	No.5	05:51	865:07:00	6812:01:00
	No.6	06:22	684:01:00	9865:04:00

Electric Energy (kwh)			
	6.6 kw (kwh)	22.8 kw DL/1	22.8 kw DL/2
Year Pointer	1287	678	617
Month Pointer	28895	16141	100616
Previous Day Pointer	125782	68948	52847
Today Pointer	23958	71171	64848
Daily Sum	4257	2225	1701
Monthly Sum	125412	68080	44814
Yearly Sum	12350	70498	56861

12-6 Outputting a Report

Let’s study how to see the report outputted in the past on a window or print it. Let’s make a **“Past Report”** button to open and see the report outputted in the past or print it.

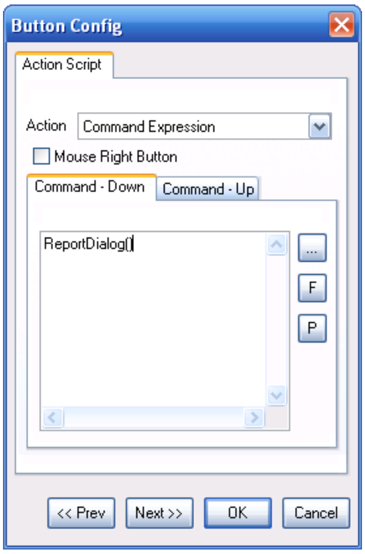
- If you click the **‘Button’** in the **‘Draw’** menu of the CimonD and any location in the appearing page, the following **‘Button Configuration’** window will appear.


Button Config
Button
<< Prev
Next >>
OK
Cancel

Title: Past Report

☑ Beep sound

- Enter **‘Past Report’** as the Caption and press the **‘Next>>’** button.
- Enter the Command as follows.

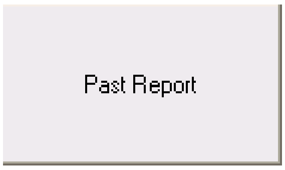

Button Config
Action Script
Command - Down
Command - Up
...
F
P
<< Prev
Next >>
OK
Cancel

Action: Command Expression

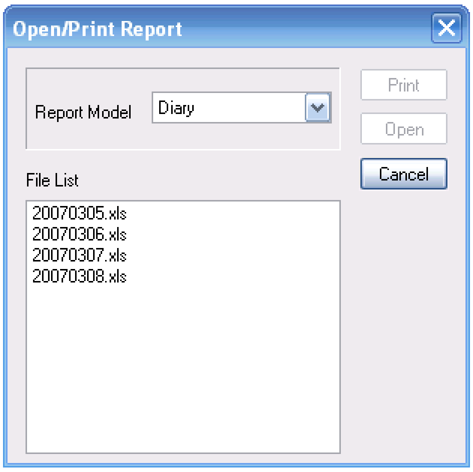
☐ Mouse Right Button

```
ReportDialog()
```

- If you click the **'Ok'** button, a **'Past Report'** button will be created as follows..



- Select the menu to run the CimonX. If you press the **'Past Report'** button, the following window will appear.


Open/Print Report

Report Model: Diary

File List

20070305.xls
20070306.xls
20070307.xls
20070308.xls

- Then if you press the **'Open'** or **'Print'** after assigning a report model and selecting a desired file, the desired action will be run.

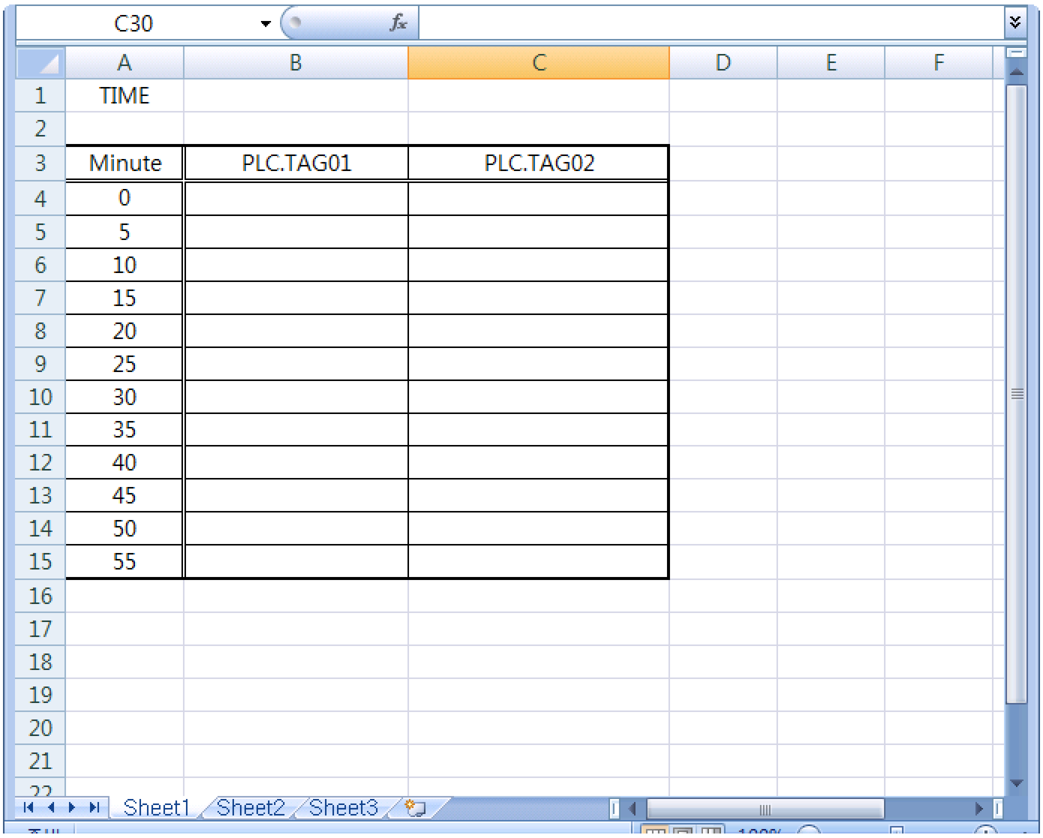
12-7 Outputting a Report by Using a Script

The report of special type, not general type, can be outputted if you use a script. An example will explain how to output a report.

[Example to make the report outputting tag values at intervals of 5 min. every hour]

This is an example to acquire the value of a real tag at intervals of 5 min., to store it in a virtual tag at intervals of 5 min. and to output a report every hour. The Others as Report Type is used. And a script is used to acquire a value at intervals of 5 min.

1. Make a report form as follows.



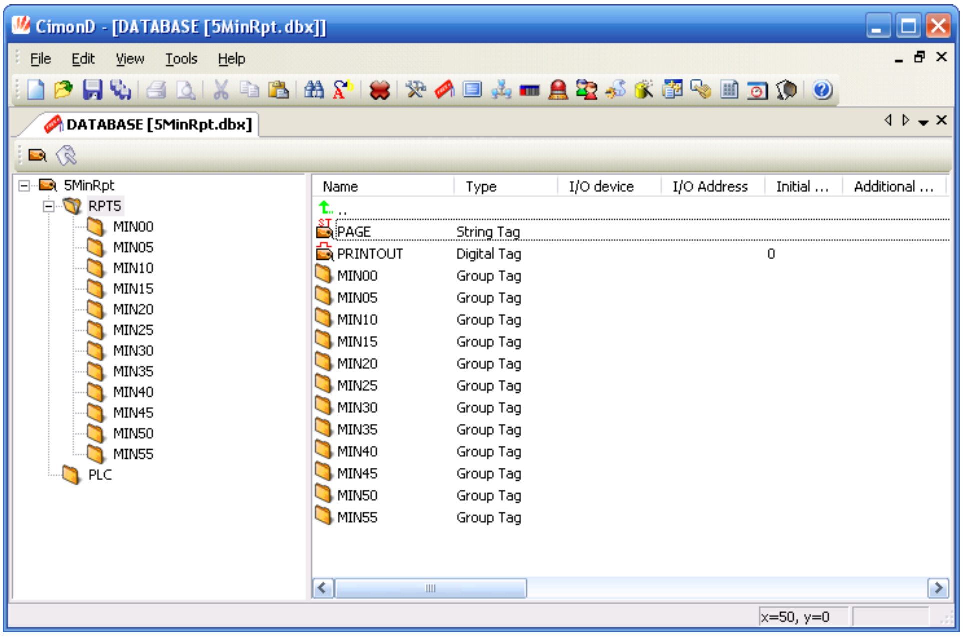
	A	B	C	D	E	F
1	TIME					
2						
3	Minute	PLC.TAG01	PLC.TAG02			
4	0					
5	5					
6	10					
7	15					
8	20					
9	25					
10	30					
11	35					
12	40					
13	45					
14	50					
15	55					

Select the menu to save a form file as the following name.

C:\Form\From.xls

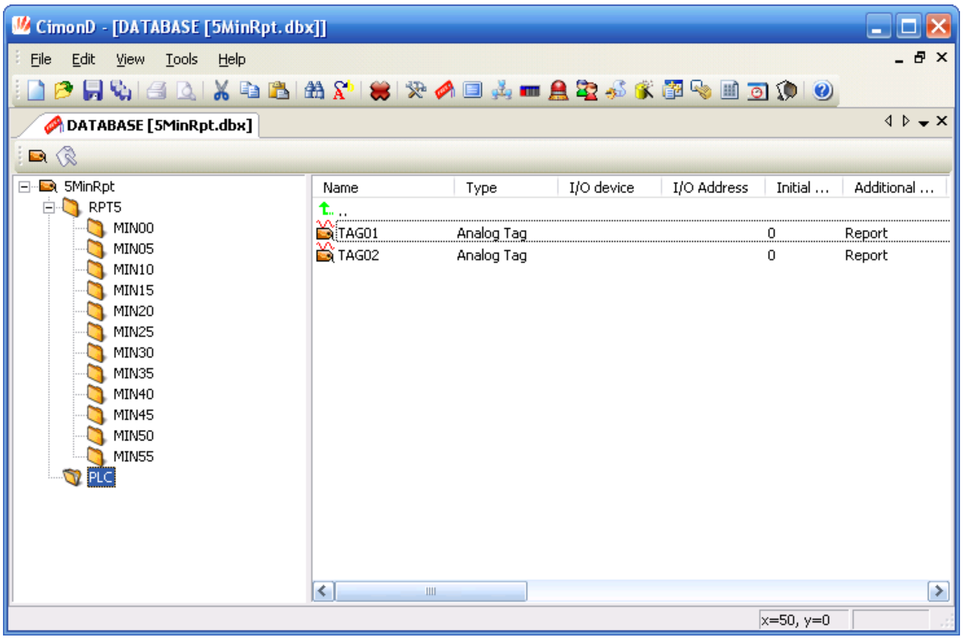
2. Select the Virtual Tag in an Edit Tag dialog box to register the virtual tag in which the value acquired at intervals of 5 min. is saved.

   Let's assume that the real tags outputted are PLC.TAG01 and PLC.TAG02. And the tag saving the value acquired at intervals of 5 min. for each tag is registered as follows.


CimonD - [DATABASE [5MinRpt.dbx]]
File
Edit
View
Tools
Help
DATABASE [5MinRpt.dbx]
5MinRpt
RPT5
MIN00
MIN05
MIN10
MIN15
MIN20
MIN25
MIN30
MIN35
MIN40
MIN45
MIN50
MIN55
PLC
x=50, y=0

Name	Type	I/O device	I/O Address	Initial ...	Additional ...
..					
PAGE	String Tag				
PRINTOUT	Digital Tag			0	
MIN00	Group Tag				
MIN05	Group Tag				
MIN10	Group Tag				
MIN15	Group Tag				
MIN20	Group Tag				
MIN25	Group Tag				
MIN30	Group Tag				
MIN35	Group Tag				
MIN40	Group Tag				
MIN45	Group Tag				
MIN50	Group Tag				
MIN55	Group Tag				

The RPT5.PAGE is used to print the outputted time and Tag RPT5.PRINTOUT is used for the Output Condition of the report

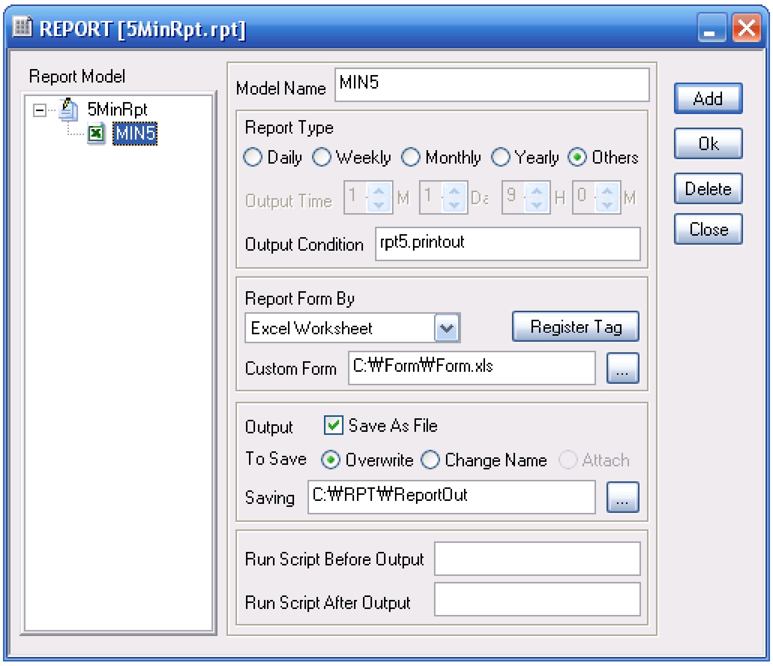

CimonD - [DATABASE [5MinRpt.dbx]]
File
Edit
View
Tools
Help
DATABASE [5MinRpt.dbx]
5MinRpt
RPT5
MIN00
MIN05
MIN10
MIN15
MIN20
MIN25
MIN30
MIN35
MIN40
MIN45
MIN50
MIN55
PLC
x=50, y=0

Name	Type	I/O device	I/O Address	Initial ...	Additional ...
..					
TAG01	Analog Tag			0	Report
TAG02	Analog Tag			0	Report

Use the Add Tag in a Database Manager to register Group Tag MIN05, MIN10, …, MIN55 under Group Tag RPT5 MIN00 and Tag TAG01, TAG02 under each the group tag.

That is, the value of Real Tag PLC.TAG01 at intervals of 15 min. is saved in RPT5.MIN15.TAG01.

3. Use the previous way to register a Report Manager as follows.



REPORT [5MinRpt.rpt]
Report Model
5MinRpt
MIN5
Model Name
Report Type
Daily
Weekly
Monthly
Yearly
Others
Output Time
M
Da
H
M
Output Condition
Report Form By
Register Tag
Custom Form
Output
Save As File
To Save
Overwrite
Change Name
Attach
Saving
Run Script Before Output
Run Script After Output
Add
Ok
Delete
Close

Model Name: MIN5
Report Type: ○ Daily ○ Weekly ○ Monthly ○ Yearly ● Others
Output Time: 1 M 1 Da 9 H 0 M
Output Condition: rpt5.printout
Report Form By: Excel Worksheet
Custom Form: C:₩Form₩Form.xls
Output: ☑ Save As File
To Save: ● Overwrite ○ Change Name ○ Attach
Saving: C:₩RPT₩ReportOut

Model Name : MIN5

Report Type : Others

Output Condition : RPT5.PRINTOUT

Report Form By : Excel Worksheet

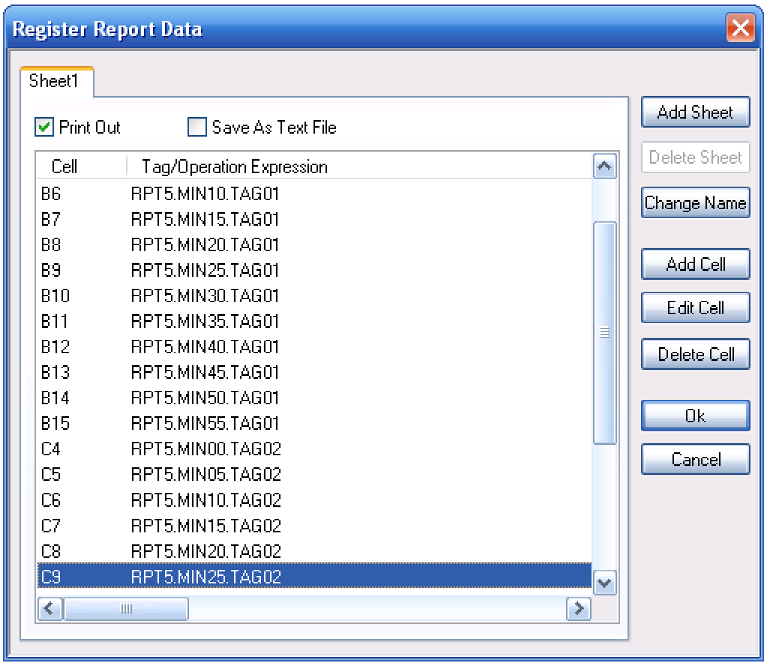
Custom Form : C:\Form\Form.xls

Output : Save As File

To Save : Overwrite

Saveing : C:\RPT\ReportOut

Define the Register Report Data as follows.



☑ Print Out ☐ Save As Text File

Cell	Tag/Operation Expression
B6	RPT5.MIN10.TAG01
B7	RPT5.MIN15.TAG01
B8	RPT5.MIN20.TAG01
B9	RPT5.MIN25.TAG01
B10	RPT5.MIN30.TAG01
B11	RPT5.MIN35.TAG01
B12	RPT5.MIN40.TAG01
B13	RPT5.MIN45.TAG01
B14	RPT5.MIN50.TAG01
B15	RPT5.MIN55.TAG01
C4	RPT5.MIN00.TAG02
C5	RPT5.MIN05.TAG02
C6	RPT5.MIN10.TAG02
C7	RPT5.MIN15.TAG02
C8	RPT5.MIN20.TAG02
C9	RPT5.MIN25.TAG02

B1 : ReportTimeStr("0 D", 12) + " " + RPT5.PAGE + “H”

B4 : RPT5.MIN00.TAG01

B5 : RPT5.MIN05.TAG01

……

B15 : RPT5.MIN55.TAG01

C4 : RPT5.MIN00.TAG02

C5 : RPT5.MIN05.TAG02

……

C15 : RPT5.MIN55.TAG02

4. Make the script (Report5Min) acquiring a value at intervals of 5 min., saving it in a corresponding virtual tag and setting the tag value corresponding to output conditions every hour. To run this script when a system starts, the Run Script should be registered to a Main Script.

```
Sub Main()
    RunScript("Report5Min")
End Sub
```

```
' Script for outputting a report at intervals of 5 min. every hour
 Dim fPrtOut
 Dim fLog

Sub Report5Min()
While 1
    fPrtOut = 0          ' Starting to make new report
    fLog = 0
    ClearBuffer          ' Initialization of virtual tag
    While (fPrtOut=0)          ' Loop for data logging at intervals of 5 min.
        ' Acquiring current time
        CurTime# = Now()
        ' Data Logging at intervals of 5 min. (remainder 0, dividing current min. by 5)
        If ((Minute(CurTime#) mod 5) = 0) Then
            If (fLog = 0) Then
                fLog = 1
                GrName$ = "RPT5.MIN" & Format$(Minute(CurTime#), "00") & "."
                Tname$ = GrName$ & "TAG01"
                SetTagVal Tname$, GetTagVal("PLC.TAG01")

                Tname$ = GrName$ & "TAG02"
                SetTagVal Tname$, GetTagVal("PLC.TAG02")
            End If
        Else
            fLog = 0
        End If

       ' Outputting a report (After 55 min. every hour)
        If (Minute(CurTime#) = 56) Then
            fPrtOut = 1
            SetTagVal "RPT5.PAGE", Hour(CurTime#)+1
            PulseOn "RPT5.PRINTOUT", 3000                           'Output of report
            Sleep(120000)                                          '  Sleep   for   120
sec.
```

```
                ' Change output file name (yyyymmddhh.xls)
                Directory$ = "C:\RPT\"
                NewName$ = Directory$ & Format$(CurTime#, "yyyymmddhh") & ".xls"
                OldName$ = Directory$ & "ReportOut.xls"
                ' Delete the file of same name.
                If FileExists(NewName$) Then
                    Kill NewName$
                End If
                ' Change name from file ReportOut.xls to yyyymmddhh.xls.
                Name OldName$ As NewName$
            End If
            ' Run this script at intervals of a sec.
            Sleep(1000)
        Wend
    Wend
    End Sub

    ' Initialize the virtual tag for saving data (Register under the script Report5Min)
    Sub ClearBuffer()
        For J=0 To 55 Step 5
            GrName$ = "RPT5.MIN" & Format$(J, "00") & "."
                SetTagVal GrName$ &    "TAG01", 0
                SetTagVal GrName$ &    "TAG02", 0
        Next J
End Sub
```

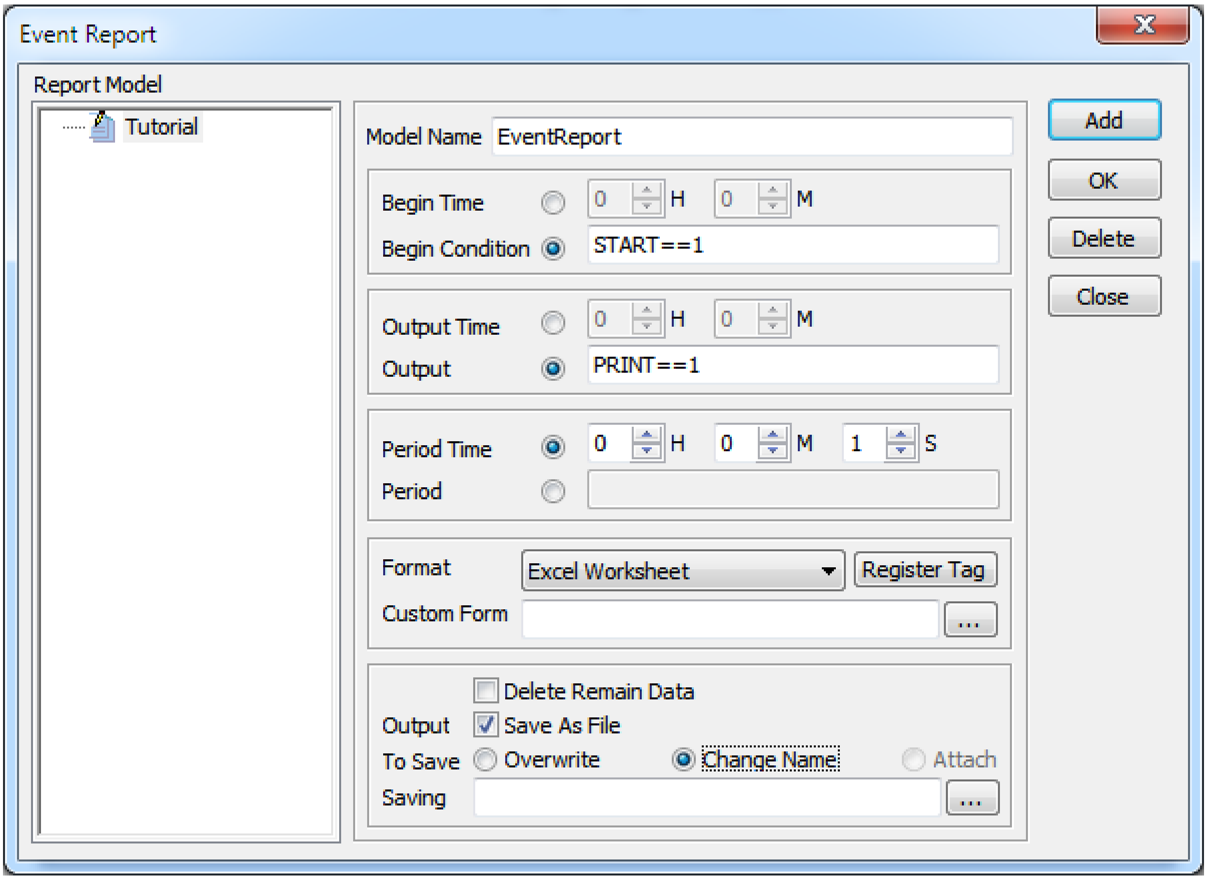
Chapter 13 Event Reports

In event report module, you can specify a report data logging start time/condition, logging period/condition and output time/condition of report.

Without using script, you can easily get a event style report.

13-1. Configuration of Event Report Window

The dialog box to set up a event report model is as follows. If you select the **'Event Report'** in the Tools menu of the CimonD, the following dialog box will appear.



Model Name: EventReport

○ Begin Time: 0 H 0 M
● Begin Condition: START==1

○ Output Time: 0 H 0 M
● Output: PRINT==1

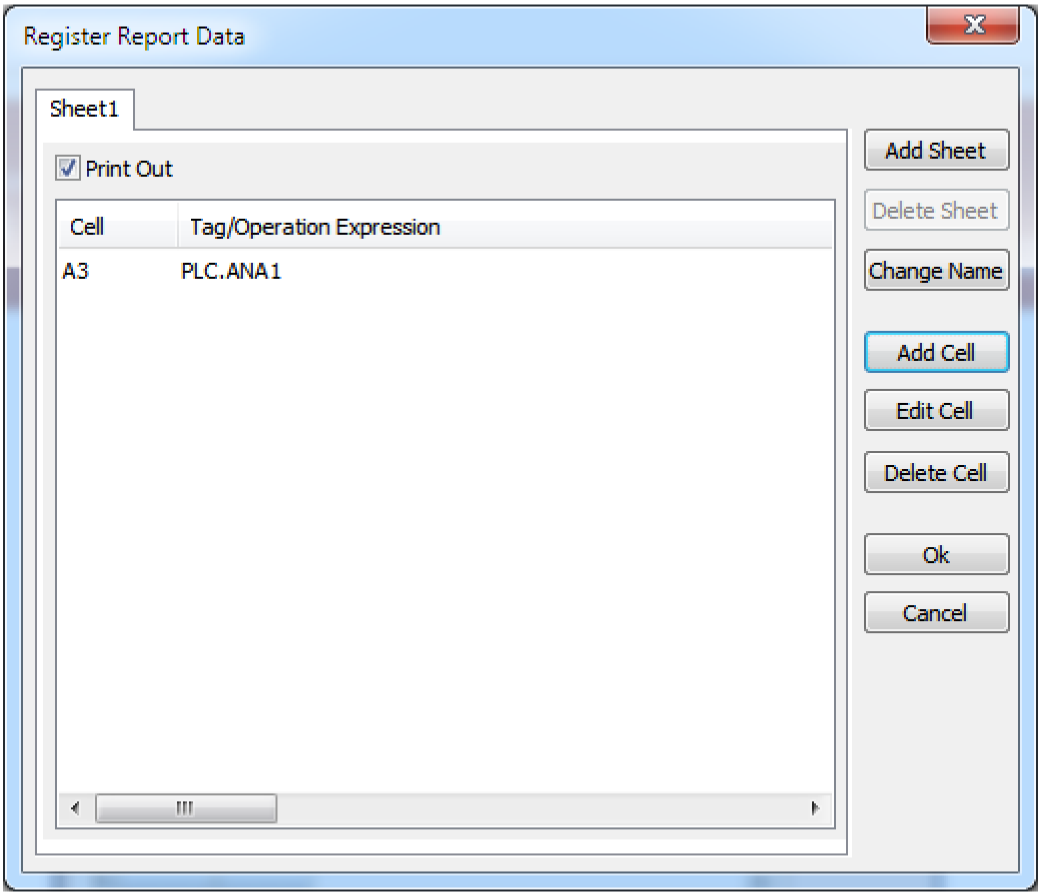
● Period Time: 0 H 0 M 1 S
○ Period:

Format: Excel Worksheet
Custom Form:

☐ Delete Remain Data
Output To Save: ☑ Save As File
○ Overwrite ● Change Name ○ Attach
Saving:

The followings are the details on the necessary items to set up the model of the event report.

Model Name	This is used to enter a event report model name. The limited conditions 1. It is available in the combination of alphabetical, numerical and specific characters. 2. There is no limitation on the number of the characters entered.
Begin Time	This is used to set up the time when a event report data logging is begin.
Begin Condition	This is used to set up the condition when a event report data logging is begin. Examples) StartTag == 1, StartVal > 10
Output Time	This is used to set up the time when a event report is outputted.
Output Condition	This is used to set up the condition when a event report is outputted.
Period Time	This is used to set up the periodic time of event report data logging.
Period Condition	This is used to set up the condition of event report data logging.
Format	This is used to assign the document format outputted. ▷ Excel Worksheet: This is used to output in Excel format.
Register Tag	This is used to register the contents printed and the position where they are printed in a event report. If you select this button, a **'Register Report Data'** dialog box will appear to register the contents and the position printed. (Refer to the explanation on the following Register Report Data dialog box for registration method.)



☑ Print Out

Cell	Tag/Operation Expression
A3	PLC.ANA1

Custom File	This is used to assign a form file. Enter the folder and the name of a file made in Excel. Enter the file name directly or move to the folder where the form files for a report are by using "…" button and select the form file outputted.
Delete Remain Data	This is to determine delete a event report data when CIMON-SCADA restarted. If this option is set, CIMON-SCADA delete the remain report event data when system initial time.
Output	Save As File: This is used to assign whether a report is saved in a file. If this item is set up, the following **Saving** should be assigned.
To Save	In case that the Save As File is selected, this is used to assign how to save. 1. Overwrite: A file is created and saved as the assigned name. In case a file exists, it will be overwritten and saved. 2. Change Name: A file is saved as the following name type in an assigned folder.

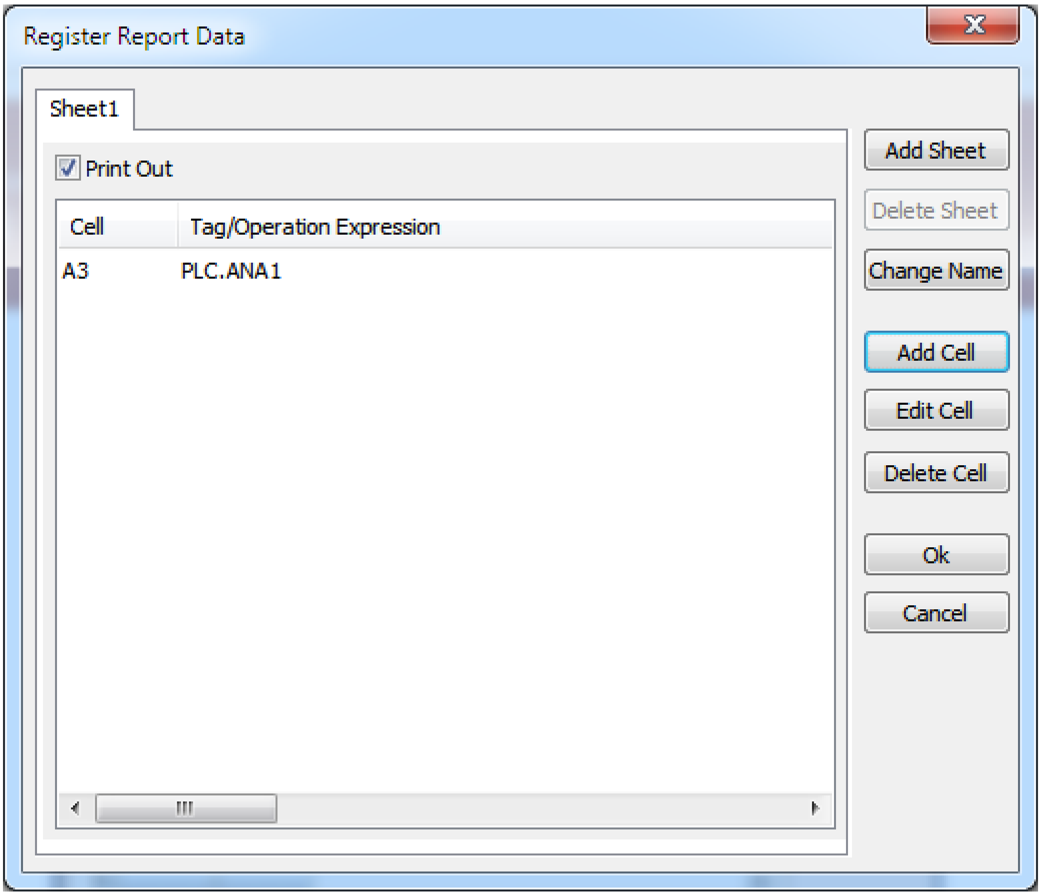
YYYYMMDDhhmm.xls (example: 200701050900.xls)

(YYYY:Year, MM:Month, DD:Date, hh:Hour, mm: Minute)

Save As	In case that the To Save is the Overwrite, this is used to enter a file name including a folder name. But, in case that a folder name is omitted, the file will be saved in a project directory. In case that the To Save is the Change Name, assign the name of the folder where a file is saved. Also, you may assign a folder and a file name by using the **'Browse(…)'**. The saving folder should be assigned according to report model differently.
Add	This is used to add a new event report model. In case that you make the model for a corresponding report and click the Add button, the name of the added event report to the left event report model of a Event Report Manger will appear and all the items are initialized.
OK	This is used to register a report model to the event report model or to revise a registered model.
Delete	This is used to delete a registered event report model.
Close	In case that a event report model is set up or a report manager will not be used any more, if you press the **"Close'**, the report manager will disappear.

13-2 Register Report Data

This is used to define the contents printed and the position where they are printed in a report in a "Register Report Data" dialog box.



Register Report Data
Sheet1
Add Sheet
Delete Sheet
Change Name
Add Cell
Edit Cell
Delete Cell
Ok
Cancel

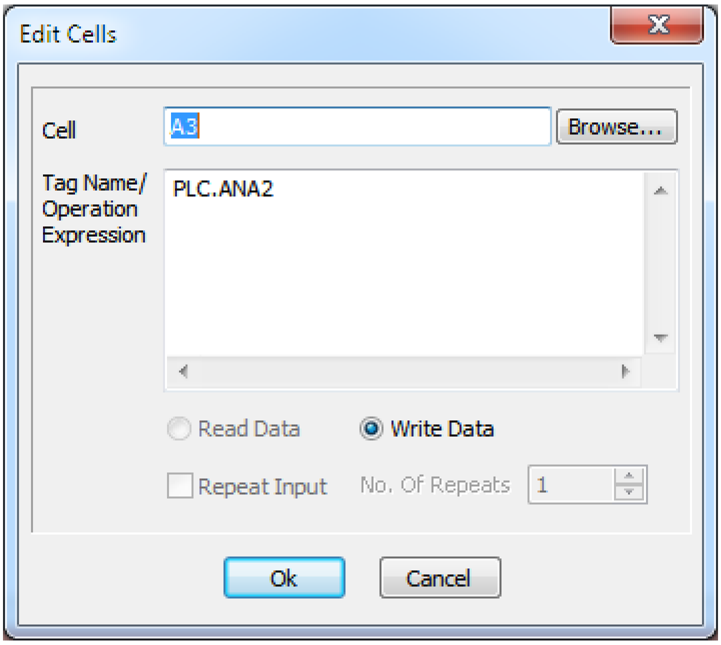
☑ Print Out

Cell	Tag/Operation Expression
A3	PLC.ANA1

Same as Chapter 12. Report

13-3 Edit Cell

This is used to define the contents printed and the position where they are printed in a report in an “Edit Cells” dialog box.



Cell A3

Tag Name/ Operation Expression PLC.ANA2

○ Read Data ● Write Data

☐ Repeat Input No. Of Repeats 1

[Note] All cell data must have same start row number.

example : A1, B1, C1…

Max row number is 65535 per sheet

Chapter 14 Trends

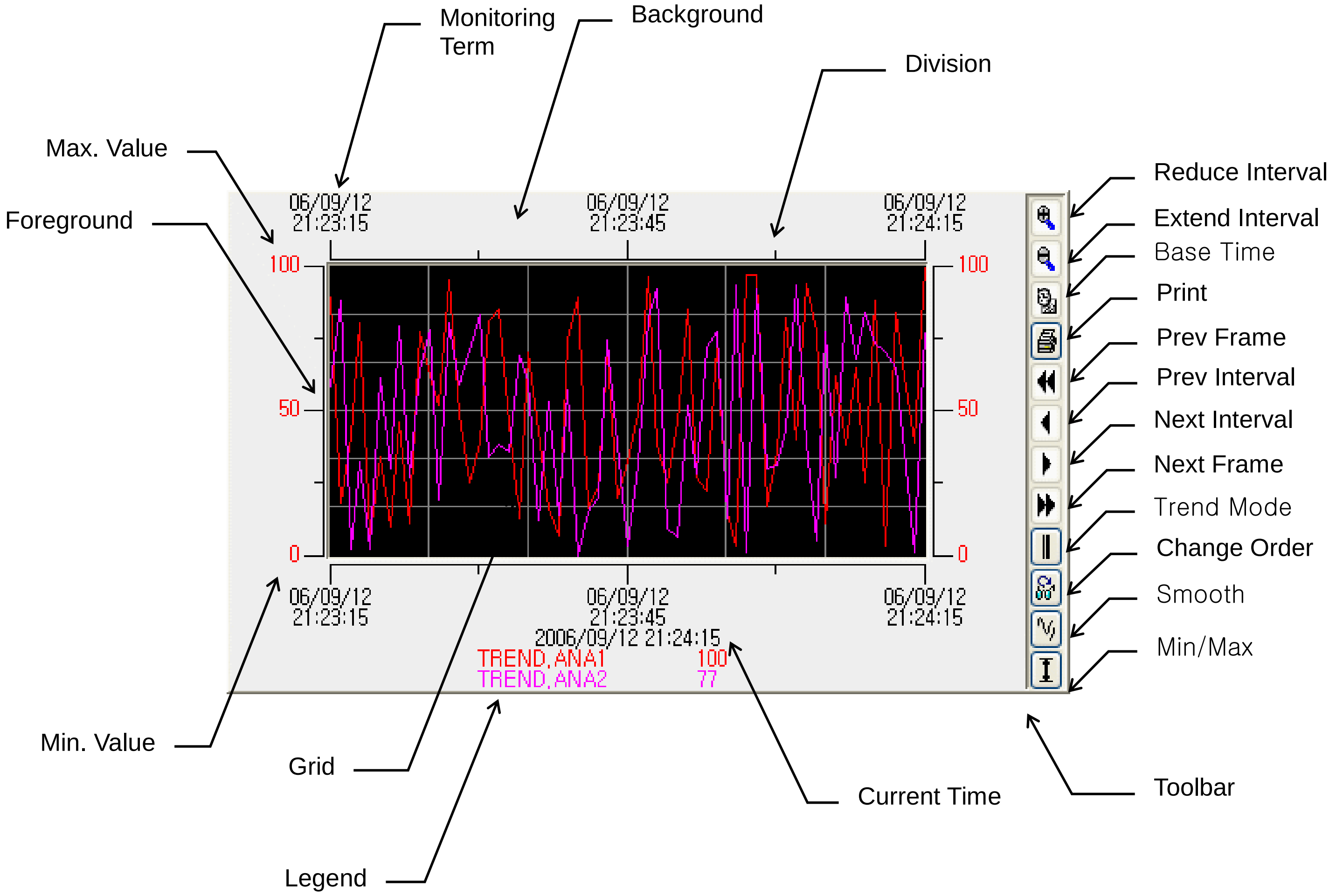
Trend is classified into **'Real-Time Trend'** and '**Historical Trend'**. The real-time trend is used to show currently logged data and the historical trend is used to analyze the transition of data by hours, on the basis of the past data saved in a hard disc by using data logging function.

Features

- As it is available to make the background window of a trend, the pen managing pen data and the X-Axis setup managing the data of a time-axis each, various trend types can be set up.
- 16 pens as maximum can be registered and investigated at the same time.
- The transition of data can be investigated by zooming in/out.
- As several trend objects can be entered in a page, a lot of main tags can be monitored at the same time.
- It is available to monitor the transition of data in a trend conveniently by using various tools.
- As various trend types such as YT trend, Multiple trend, XY trend are provided, data can be monitored as the trend of a desired type.

14-1 Configuration of YT Trend Window

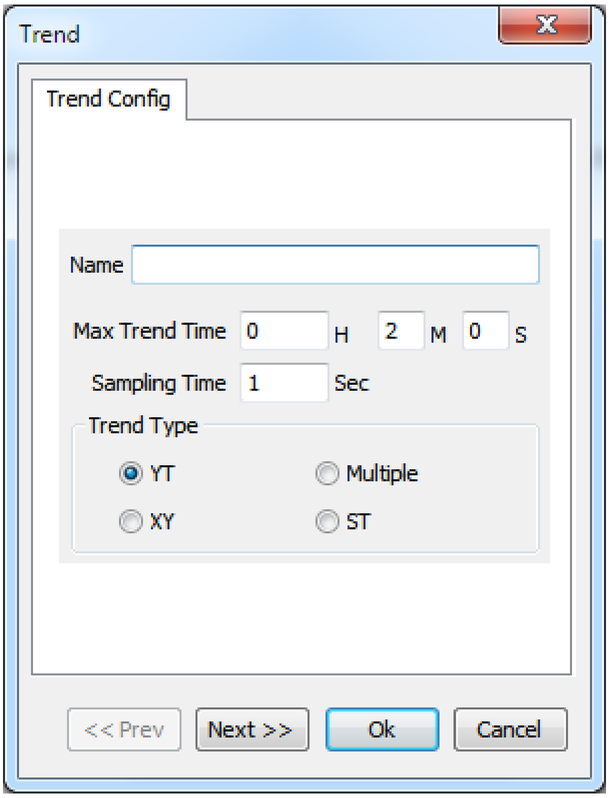
The following picture is an YT (Y-Axis and Time Base) trend window.


Monitoring Term
Background
Division
Max. Value
Foreground
Reduce Interval
Extend Interval
Base Time
Print
Prev Frame
Prev Interval
Next Interval
Next Frame
Trend Mode
Change Order
Smooth
Min/Max
06/09/12 21:23:15
06/09/12 21:23:45
06/09/12 21:24:15
100
50
0
2006/09/12 21:24:15
TREND.ANA1 100
TREND.ANA2 77
Min. Value
Grid
Legend
Current Time
Toolbar

YT Trend Menu

- Trend Config

Click Draw and select Trend in CimonD and then click on the page then the **Trend** dialog box will appear as below.



Name

Max Trend Time 0 H 2 M 0 S

Sampling Time 1 Sec

Trend Type
● YT ○ Multiple
○ XY ○ ST

The items to set up the standard specifications of a trend are as follows.

Name This is used to enter the peculiar name of a trend object.

The limited conditions

1. It is available to set up in the combination of English, Korean, numeral and specific characters.
2. There is no limitation on the number of the characters entered.

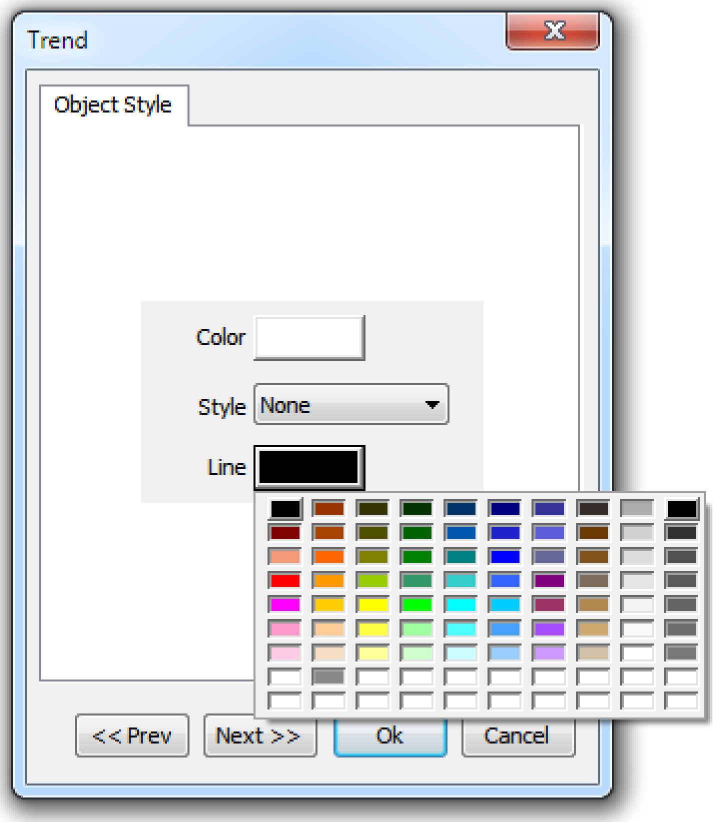
Max Trend Time This is used to set up the time span monitored.

Sampling Time This is used to set up the logging interval for the periodically registered tag in a trend. The minimum is 1sec and the maximum is 43200sec.

Trend Type	This is used to select the type of the trend monitored. YT: This is used to monitor tag values by time zones. Multiple: This is used to display a Tag-axis (Y-axis) independently on the same Time-axis (X-axis). XY: This is the trend of which X-axis and Y-axis are configured with tag values. This is used to investigate the interrelation among different process data each other. After assigning a tag as the base on an X-axis, you can assign 16 tags as maximum on a Y-axis. ST : This enables the users to mark the data in the trend by user specified steps.
Previous	This is used to move to a previously set trend item.
Next	This is used to move to a next set trend item.
Ok	This is used to make a trend object with all the setup by then.
Cancel	This is used to cancel all the edit by then and close a Trend dialog box.

- **Object Style**

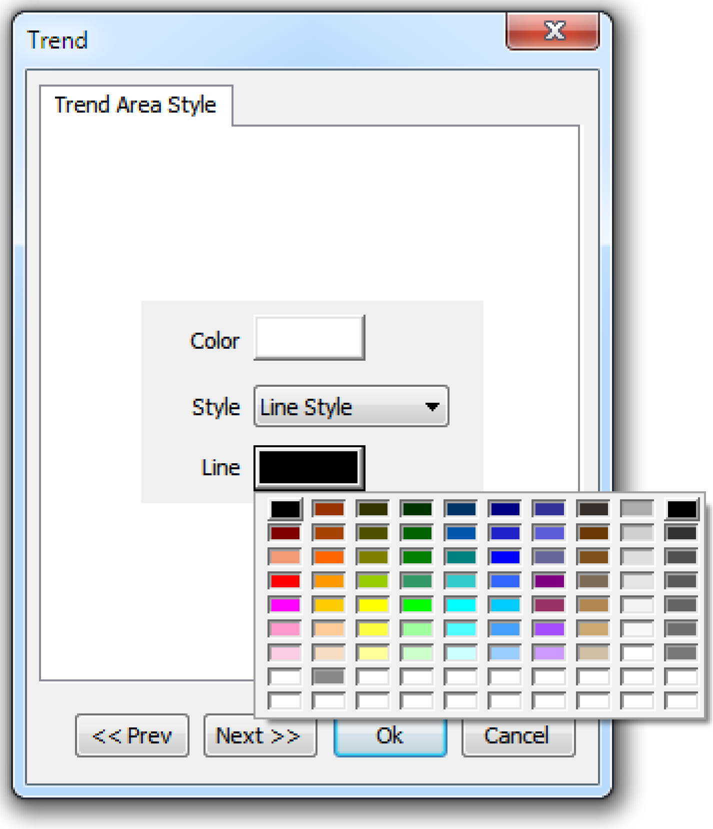
This is used to assign the color, style and border color for a background. If you click the **'Next>>'** button in a Trend Config dialog box, the following dialog box will appear.



Color	This is used to assign the color of a Background. If you press this button, the above colors will be displayed. They are 90 colors.
Style	This is used to set up the border style for a background. Style : None Line Style Button PUSH Button Style
Line	This is used to assign the border color for a background. It is available only for the case of the "None" and the "Single Line"

- **Trend Area Style**

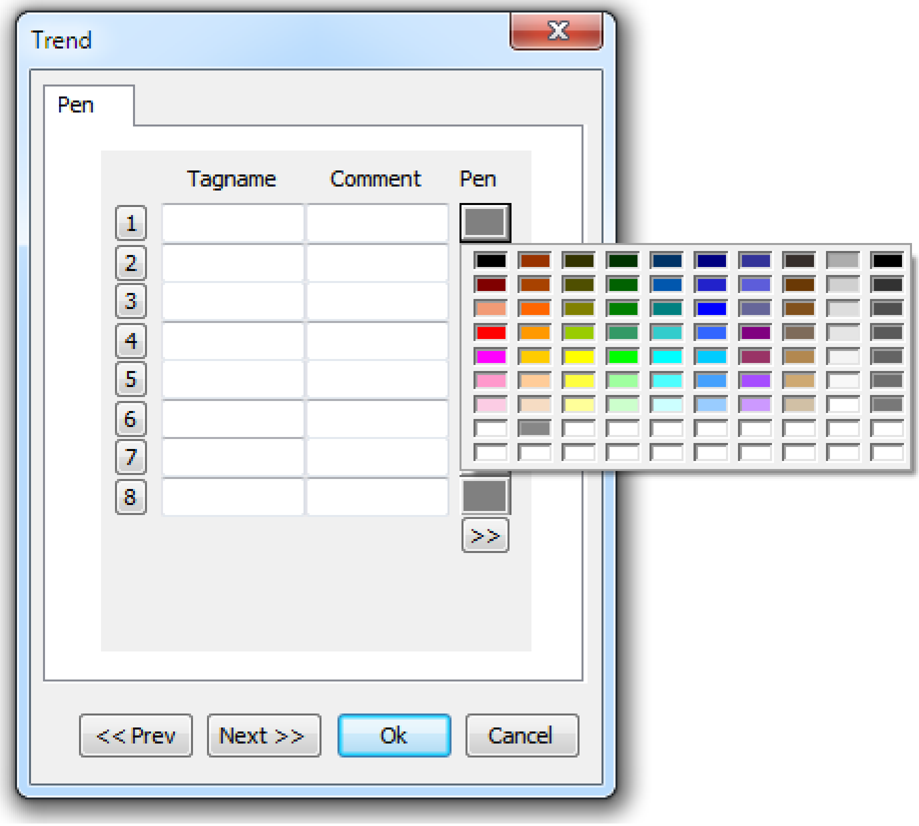
This is used to assign the color, style and the border color for a trend area. If you click the **'Next>>'** button in a Object Style dialog box, the following dialog box will appear.


Trend
Trend Area Style
Color
Style
Line Style
Line
<< Prev
Next >>
Ok
Cancel

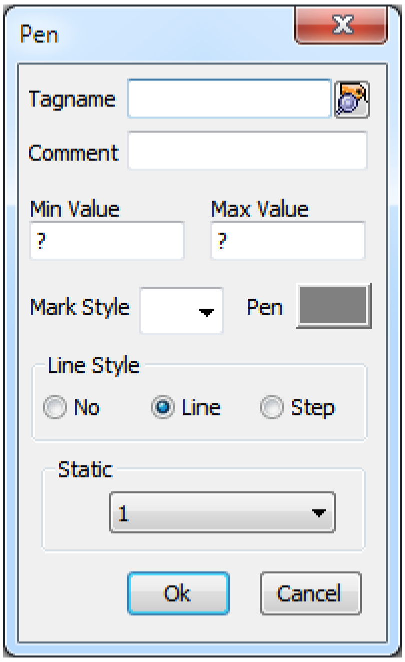
Color	This is used to assign the color of a trend area. If you press this button, the above colors will be displayed. They are 90 colors.
Style	This is used to set up the border style for a background. Style : None Line Style Button PUSH Button Style
Line	This is used to assign the border color for a trend area. It is available only for the case of the "None" and the "Single Line".

- **Pen**

This is used to set up the tags monitored on a trend window. 16 tags as maximum can be monitored on a trend window. If you click the **'Next>>'** button in a Trend Area Style dialog box, the following dialog box will appear.


Trend
Pen
Tagname
Comment
Pen
1
2
3
4
5
6
7
8
>>
<< Prev
Next >>
Ok
Cancel

Tag Name This is used to enter the name of the tag monitored. Enter the tag name directly. Or, if you press the Number button aside, a **'Pen'** dialog box will appear.



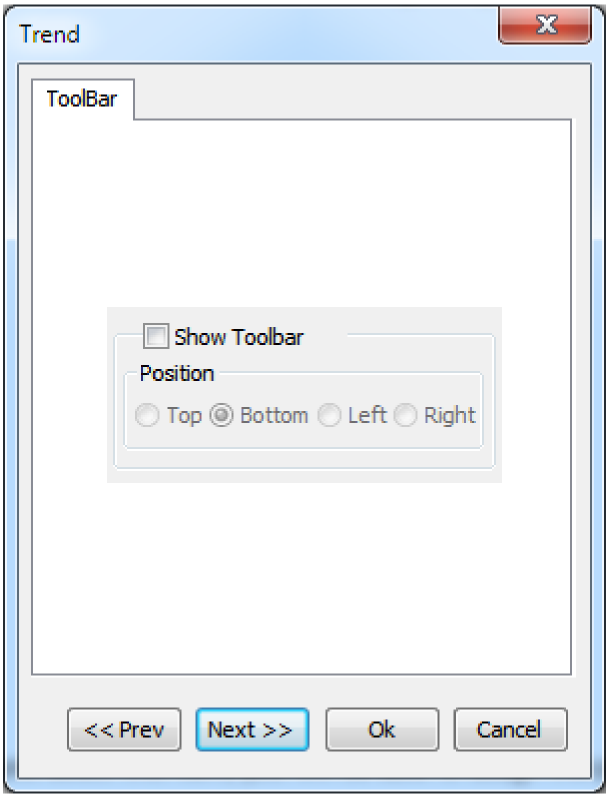
Tag Name	This is used to enter the name of the tag monitored. Enter a tag name directly or select a currently registered tag by using a Find Tag dialog box.
Description	This is used to enter the description about a corresponding tag.
Min. Value	This is used to set up the minimum value displayed on a Trend Area.
Max. Value	This is used to set up the maximum value displayed on a Trend Area.
Mark Style	This is used to select the text or picture of other type as the tag on a Trend Area window.
Pen	This is used to assign the color of the tag monitored. There are ninety colors.
Line Style	This is used to decide how to draw from a current data value to the next data value in a corresponding tag trend. Type: None, Line, Step

Comment	This is used to enter the description about the tag monitored.
Pen	This is used to assign the color of the tag monitored.

- **Toolbar**

Toolbar is used to monitor historical data while monitoring a real-time trend. Generally, it is used to investigate a historical data trend by changing a time zone and using a slide wire cursor.

If you click the **'Next >>'** button in the Pen, the following dialog box will appear.

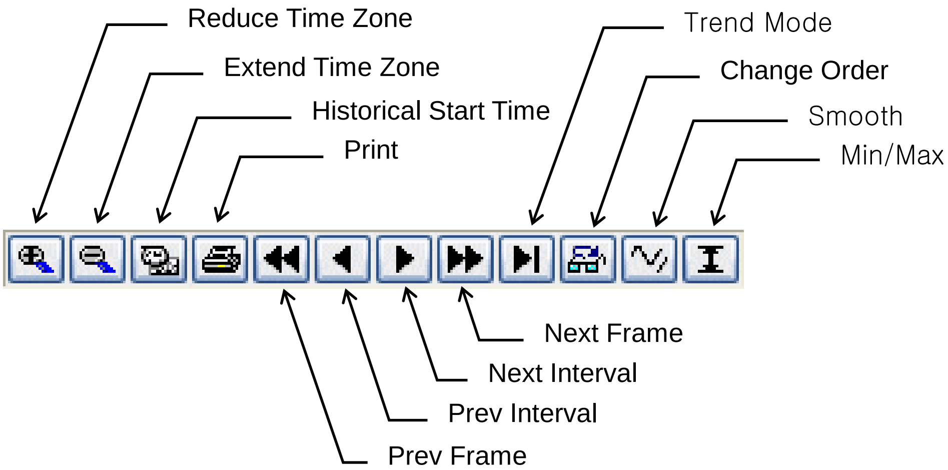

Trend
ToolBar
<< Prev
Next >>
Ok
Cancel

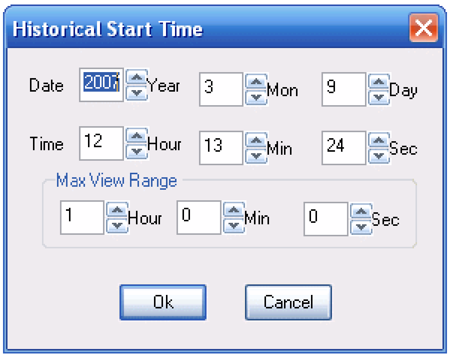
☐ Show Toolbar

Position

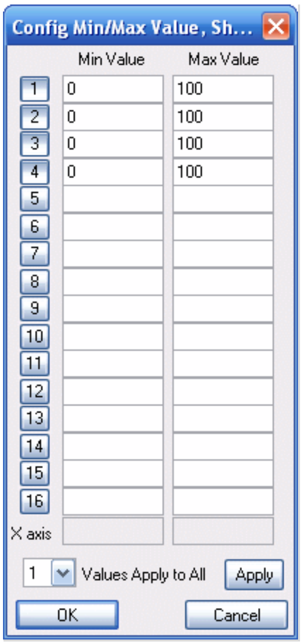
○ Top ● Bottom ○ Left ○ Right

Show Toolbar	If you select this item, you will be able to assign the position where the toolbar of a trend is put. Otherwise, this toolbar will not be provided.


Reduce Time Zone
Extend Time Zone
Historical Start Time
Print
Trend Mode
Change Order
Smooth
Min/Max
Next Frame
Next Interval
Prev Interval
Prev Frame

Reduce Time Zone	This is used to reduce the monitoring time zone of a corresponding trend by half to monitor in detail within a short time zone. For example, in case that the interval of a current trend is 2 minutes and the time zone is 12:00:00 – 12:02:00, the data for 12:01:00 – 12:02:00 will be monitored if you press this button.
Extend Time Zone	This is used to extend the monitoring time zone of a corresponding trend by double to monitor during wide time zone. For example, in case that the interval of a current trend is 2 minutes and the time zone is 12:00:00 – 12:02:00, the data for 11:58:00 – 12:02:00 will be monitored if you press this button.
Historical Start Time	This is used to change the historical time zone monitored. If you press this button, the following dialog box will appear.  Date 2007 Year 3 Mon 9 Day Time 12 Hour 13 Min 24 Sec Max View Range 1 Hour 0 Min 0 Sec Assign the starting time monitored through the above historical start time dialog box.
Print	This is used to print a current trend window.
Prev Frame	This is used to monitor the data at a previous time zone as much as a current time zone. That is, to see the frame previous to a currently monitored frame. For example, in case the logging interval of a current trend is two minutes and the time zone is 12:00:00 – 12:02:00, the data for 11:58:00 – 12:00:00 will be monitored if you press this button.
Prev Interval	This is used to see the data at a previous interval as much as the logging interval of a corresponding trend.

Next Interval	This is used to see the data at a next interval as much as the logging interval of a corresponding trend.
Next Frame	This is used to monitor the data at a next time zone as much as a current time zone. That is, to see the frame next to a currently monitored frame. For example, in case the logging interval of a current trend is two minutes and the time zone is 12:00:00 – 12:02:00, the data for 12:02:00 – 12:04:00 will be monitored if you press this button.
Trend Mode	This is used to change trend mode to real-time mode. In real-time trend mode, this button is used to change trend mode to historical trend mode.
Change Order	This is used to change the order of a currently monitored tag. Whenever you press this button, the order of a tag is changed and the maximum value and the minimum value displayed on the Y-axis of a corresponding tag are changed.
Smooth	Smoothing the line of trend.
Min/Max	Config the min/max value and show status. Following dialog box is displayed. Input min/max value in each pen’s edit box. You can set show status by clicking pen number button.


Config Min/Max Value, Sh...
Apply
OK
Cancel

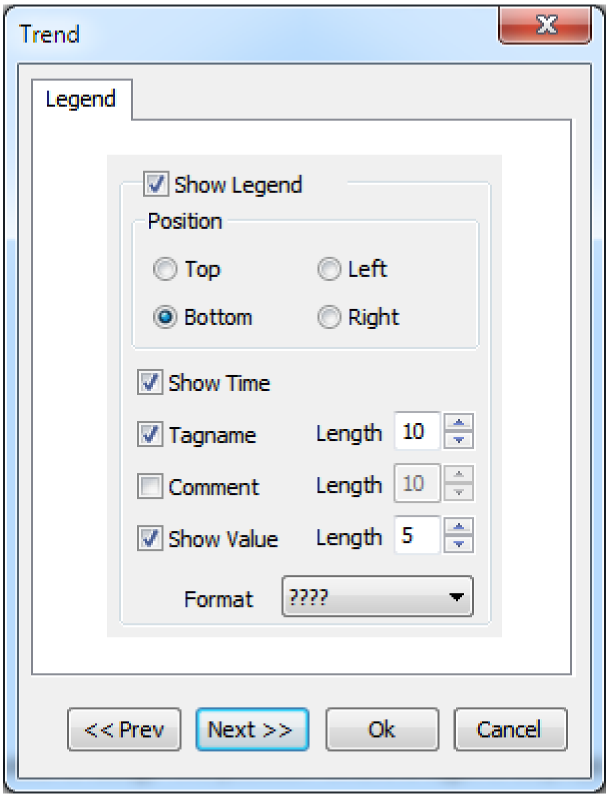
	Min Value	Max Value
1	0	100
2	0	100
3	0	100
4	0	100
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
X axis		

1 Values Apply to All

- **Legend**

This is used to display the name, the description, the time and the data value about the tag monitored.

If you click the **'Next>>'** button in the Toolbar, the following dialog box will appear.


Trend
Legend
<< Prev
Next >>
Ok
Cancel

☑ Show Legend

Position

○ Top ○ Left

● Bottom ○ Right

☑ Show Time

☑ Tagname Length 10

☐ Comment Length 10

☑ Show Value Length 5

Format ????

Position This is used to assign the position where a legend displays. (T, B, L, R)

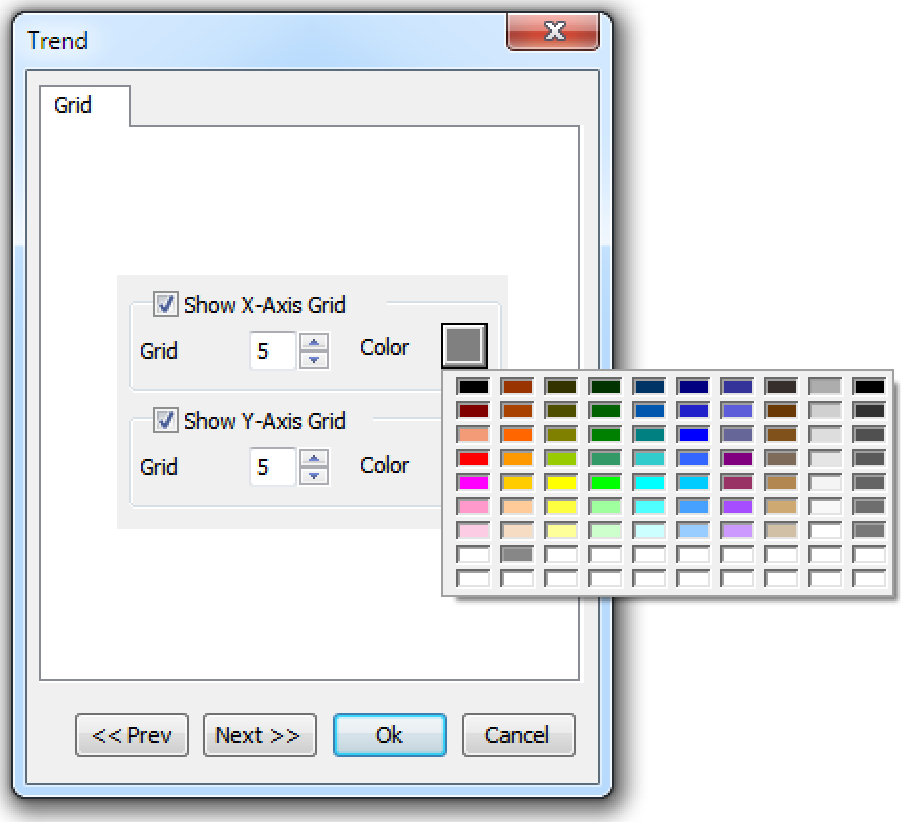
Show Time	This is used to display a current time.
Tag Name	This is used to set up whether a tag name is displayed. In case that this item is selected, assign the Length. The minimum length is 1 and the maximum one is 99.
Comment	This is used to set up whether the description for a tag is displayed. In case that this item is selected, assign the Length. The minimum length is 1 and the maximum one is 99.
Show Value	This is used to set up whether the data value of a tag is displayed. In case that this item is selected, assign the Length. The minimum length is 1 and the maximum one is 99.
Format	This is used to assign how to display a data value. Type: ???? #### ####.0 ####.00 ####.000 #,### #,###.0 #,###.00 #,###.000 HHHH

- **Print**

This is used to print a currently configured control window. Refer to the Print Setup of the Chapter 2 CimonD.

- **Grids**

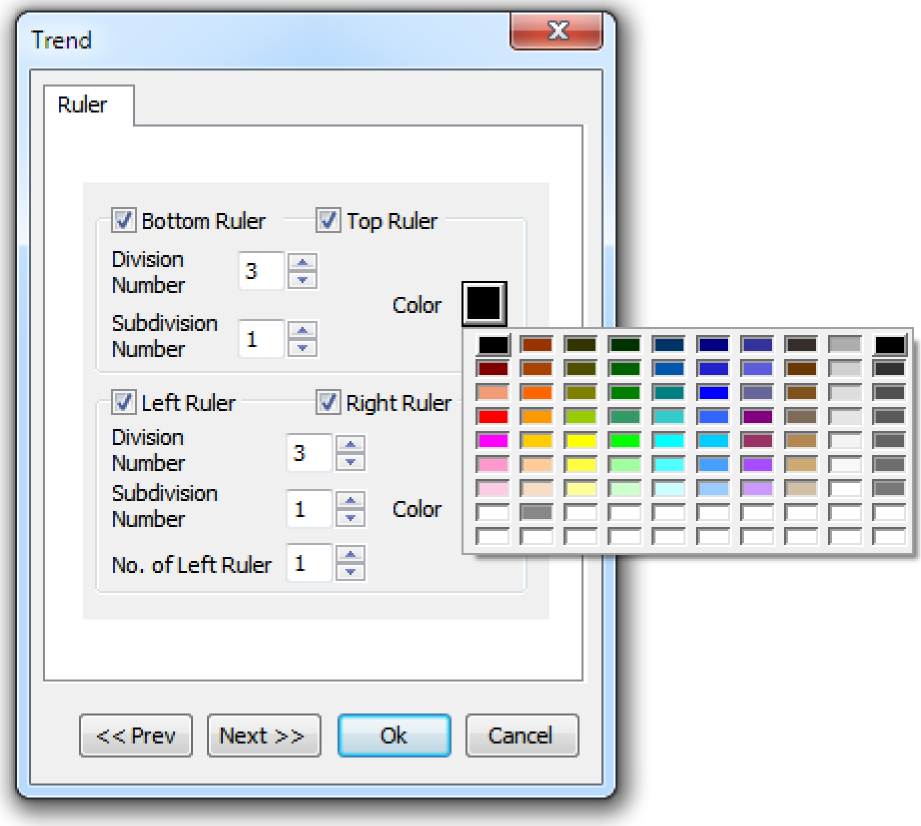
This is provided to investigate the data on a Trend Area fast and exactly. If you click the **'Next>>'** button in the Print, the following dialog box will appear.


Trend
Grid
Show X-Axis Grid
Grid
5
Color
Show Y-Axis Grid
Grid
5
Color
<< Prev
Next >>
Ok
Cancel

Show X-Axis	This is used to display grids on an X-axis.
Grid	This is used to assign the number of the grids displayed on an X-axis.
Color	This is used to assign the color of the grids displayed on an X-axis. If you press the Color button, the palette with 90 colors will appear.
Show Y-Axis	This is used to display grids on a Y-axis.
Grids	This is used to assign the number of the grids displayed on a Y-axis.
Color	This is used to assign the color of the grids displayed on a Y-axis. If you press the Color button, the palette with 90 colors will appear.

- **Ruler**

These, which are the function similar to Grids, are provided to investigate the data on a Foreground fast and exactly. If you click the **'Next>>'** button in the Grids, the following dialog box will appear.



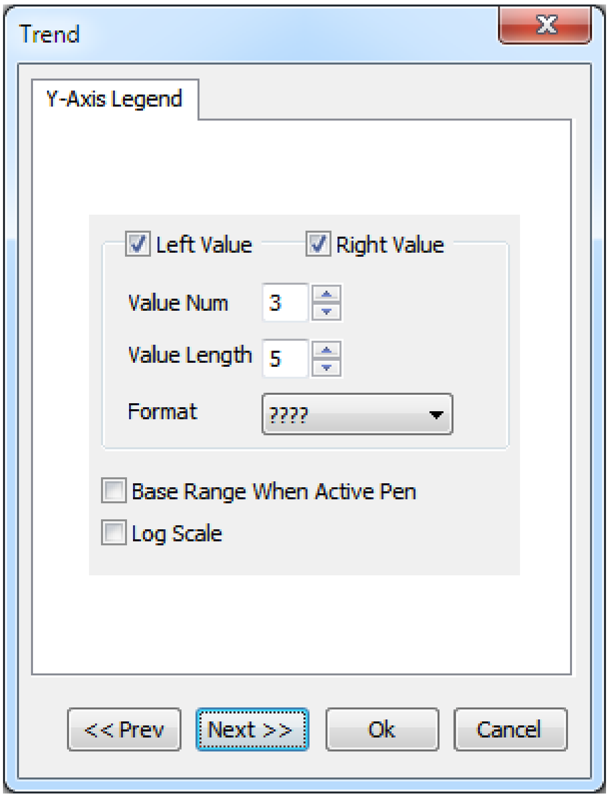
☑ Bottom Ruler ☑ Top Ruler
Division Number 3
Subdivision Number 1
Color
☑ Left Ruler ☑ Right Ruler
Division Number 3
Subdivision Number 1
Color
No. of Left Ruler 1

Bottom Ruler	This is used to set up whether divisions are displayed at the bottom of a Trend Area.
Top Ruler	This is used to set up whether divisions are displayed at the top of a Trend Area.
Left Ruler	This is used to set up whether Divisions are displayed at the left of a Trend Area.
Right Ruler	This is used to set up whether Divisions are displayed at the right of a Trend Area.
Division	This is used to assign the number of major rulers.
Subdivision	This is used to assign the number of the minor rulers between major rulers.

Color	This is used to assign the color of divisions. If you press the Color button, the palette with 90 colors will appear.

- **Y-Axis Legend**

This is used to set up the items for the data value displayed on a Y-axis. If you click the **'Next>>'** button in the Rulers, the following dialog box will appear.



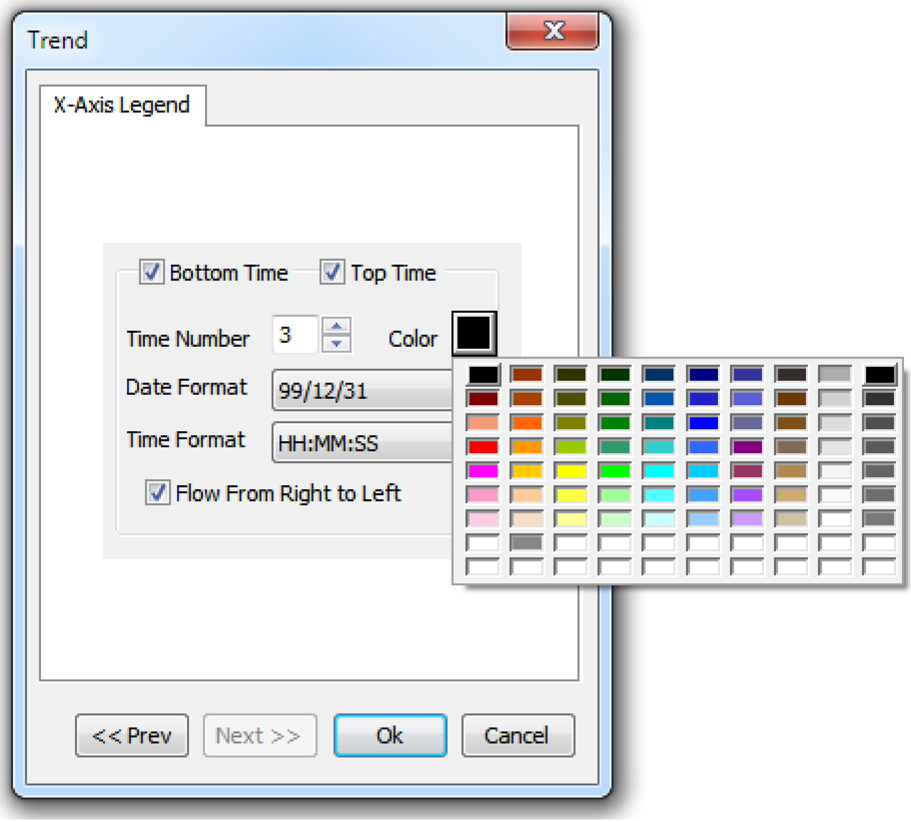
☑ Left Value ☑ Right Value
Value Num 3
Value Length 5
Format ????
☐ Base Range When Active Pen
☐ Log Scale

Left Value	This is used to set up whether the Maximum and Minimum value are displayed at the left of a Trend Area.
Right Value	This is used to set up whether the Maximum and Minimum value are displayed at the right of a Trend Area.
Values Num	This is used to assign the number of the indication values displayed on a Y-axis. The range of the value is from 2 to 99.
Value Length	This is used to assign the length of the value displayed on a window. The range of the value is from 2 to 99.

Format	This is used to assign how to display an indication value.
Base Range When Active Pen	This is used to select whether the data displayed on a Y-axis is based on an active pen. If you select this item, the data at a Y-axis will be displayed as the maximum and minimum value. Otherwise, they will be displayed as the maximum and the minimum value of the first pen.
Log Scale	It changes the screen with log scale.

- **X-Axis Legend**

This is used to set up the items for the data value displayed on an X-axis. If you click the **'Next>>'** button in a Y-Axis, the following dialog box will appear.



☑ Bottom Time ☑ Top Time

Time Number 3

Date Format 99/12/31

Time Format HH:MM:SS

☑ Flow From Right to Left

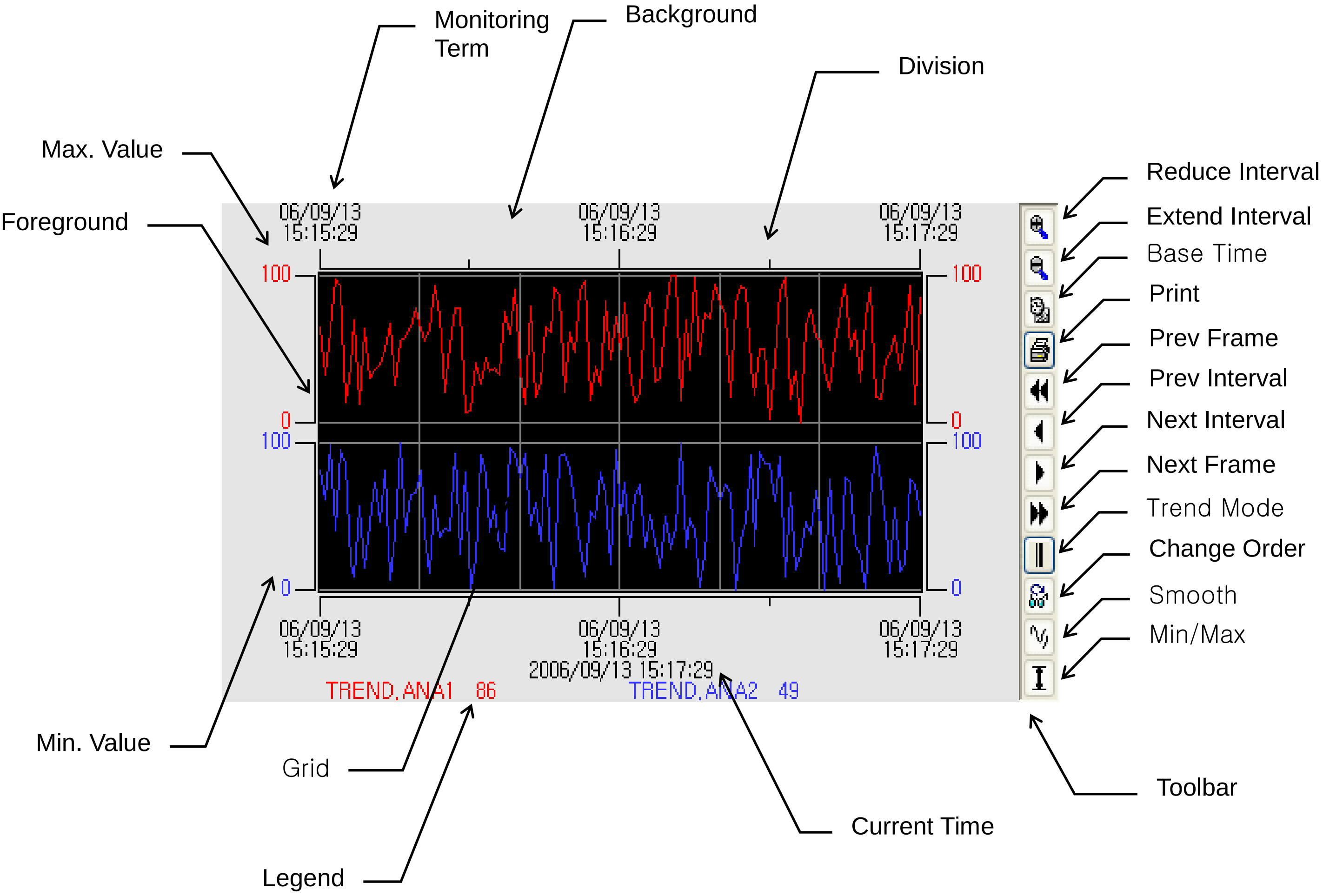
Bottom Time	This is used to set up whether time is displayed at the bottom of a Trend Area.
Top Time	This is used to set up whether time is displayed at the top of a Trend Area.

Time Number	This is used to assign the number of the times displayed. The minimum is 2 and the maximum is 99.
Color	This is used to assign the color of the time displayed. If you press the Color button, the palette with 90 colors will appear.
Date Format	This is used to set up how to display date. Type: None Y/M/D Y/M M/D Y M D
Time Format	This is used to set up how to display time. Type: None H:M:S H:M M:S H M S

14-2. Configuration of Multiple Trend Window

As a same Time-axis (X-axis) is used and a Tag-axis (Y-axis) independently is displayed to distinguish each tag easily, data can be monitored conveniently. Generally, a multiple trend is used to monitor digital tags mainly.

The following window is the sample picture of the Multiple trend monitoring two analog tags.

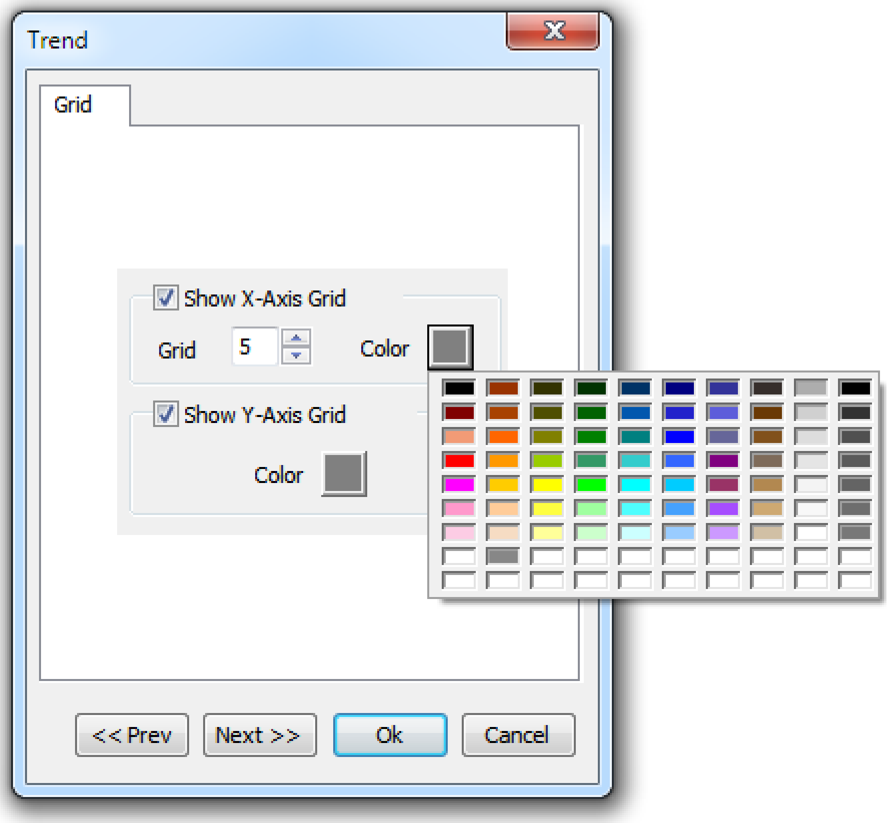

Monitoring Term
Background
Division
Max. Value
Foreground
Reduce Interval
Extend Interval
Base Time
Print
Prev Frame
Prev Interval
Next Interval
Next Frame
Trend Mode
Change Order
Smooth
Min/Max
06/09/13 15:15:29
06/09/13 15:16:29
06/09/13 15:17:29
100
0
100
0
2006/09/13 15:17:29
TREND.ANA1 86
TREND.ANA2 49
Min. Value
Grid
Legend
Current Time
Toolbar

Multiple Trend Menu

To create a multiple trend, click a desired position on a page with the mouse after clicking the **'Trend'** icon in the CimonD icons. Select **'Multiple'** on the Trend Type in the **'Trend Config'** dialog box. The following contents are the explanation about the menus of an YT trend and a multiple trend.

- **Grids**

These are provided to investigate the data on a Trend Area fast and exactly.

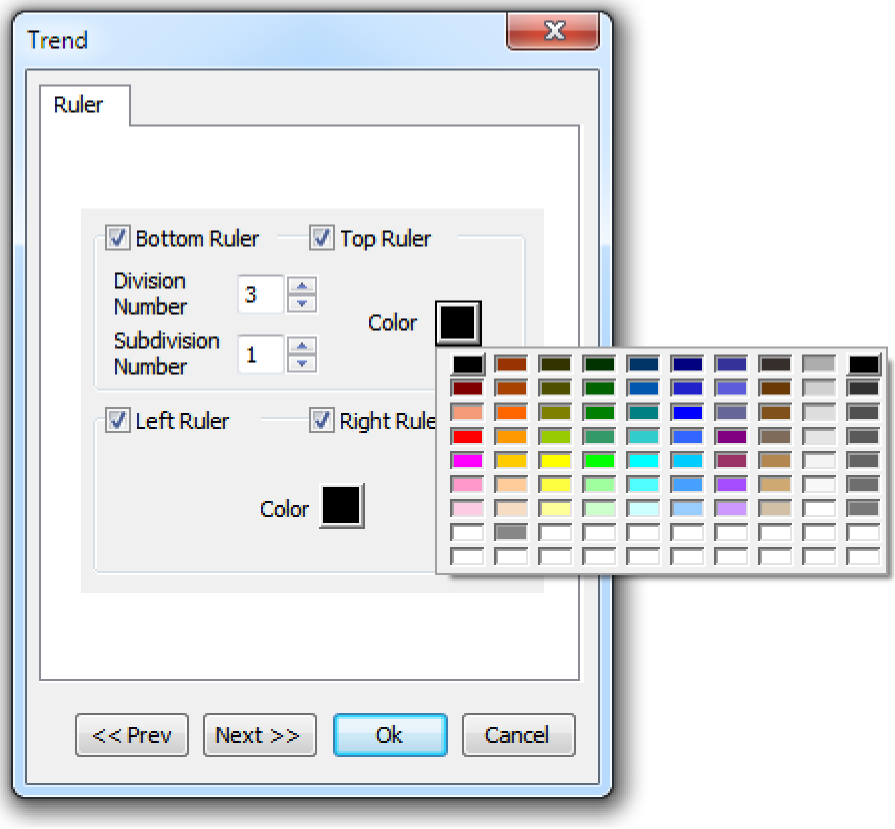


Show X-Axis	This is used to display grids on an X-axis.
Grid	This is used to assign the number of the grids displayed on an X-axis.
Color	This is used to assign the color of the grids displayed on an X-axis. If you press the Color button, the palette with 90 colors will appear.
Show Y-Axis	This is used to display grids on a Y-axis.

Color	This is used to assign the color of the grids displayed on a Y-axis. If you press the Color button, the palette with 90 colors will appear.

- **Rulers**

These, which are the function similar to Grids, are provided to investigate the data on a Trend Area fast and exactly.



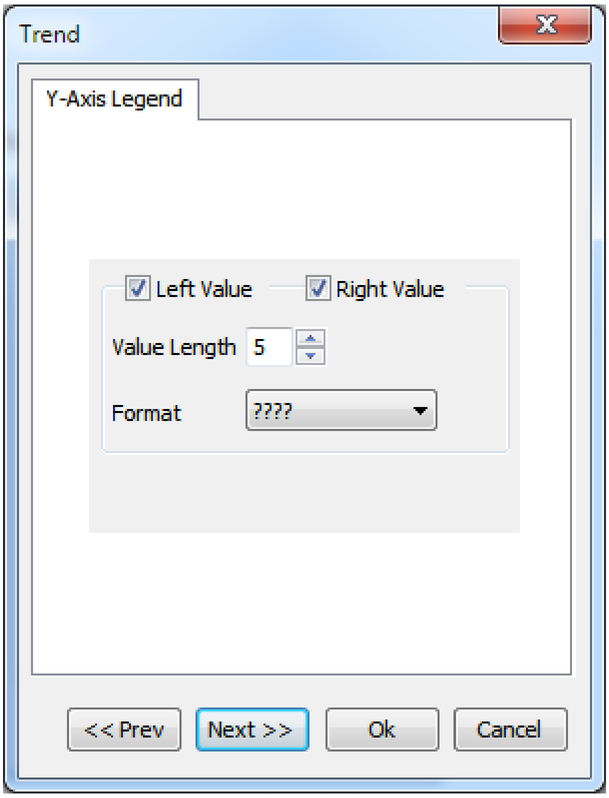
☑ Bottom Ruler ☑ Top Ruler
Division Number 3
Subdivision Number 1
☑ Left Ruler ☑ Right Rule

Bottom Ruler	This is used to set up whether divisions are displayed at the bottom of a Trend Area.
Top Ruler	This is used to set up whether divisions are displayed at the top of a Trend Area
Left Ruler	This is used to set up whether divisions are displayed at the left of a Trend Area.

Right Ruler	This is used to set up whether divisions are displayed at the right of a Trend Area.
Color	This is used to assign the color of divisions. If you press the Color button, the palette with 90 colors will appear.

Y-Axis Legend

This is used to set up the items for the data value displayed on a Y-axis.


Trend
Y-Axis Legend
☑ Left Value
☑ Right Value
Value Length
Format
<< Prev
Next >>
Ok
Cancel

Value Length: 5

Format: ????

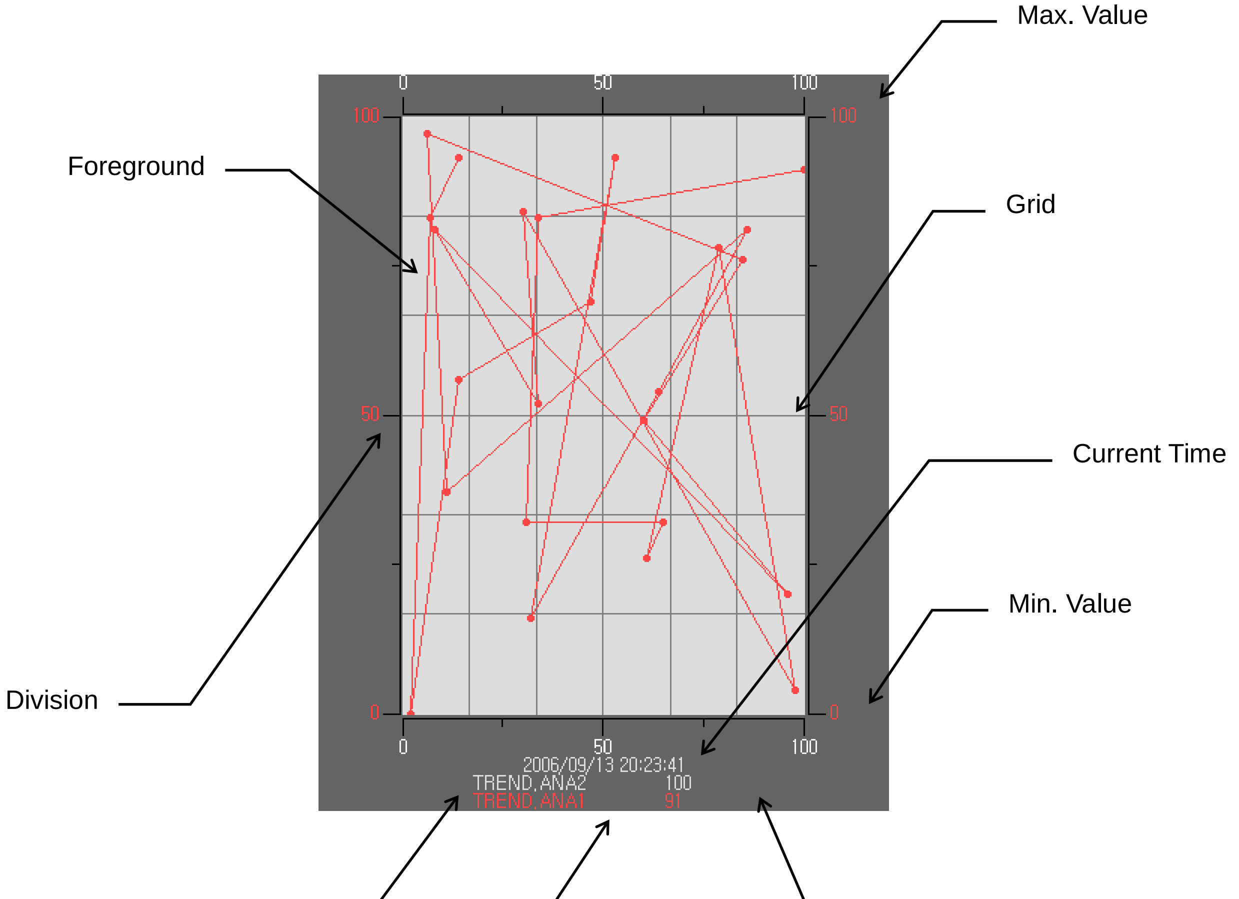
At Left	This is used to set up whether the Maximum value and the Minimum one are displayed at the left of a Trend Area.
At Right	This is used to set up whether the Maximum value and the Minimum one are displayed at the right of a Trend Area
Length of Value	This is used to assign the length of the value displayed on a window. The range of the value is from 2 to 99.

Format This is used to assign how to display an indication value.

Type: ????
####
####.0
####.00
####.000
#,###
#,###.0
#,###.00
#,###.000
HHHH

14-3 Configuration of XY Trend Window

This trend of which X-axis and Y-axis are composed of the tag value is used to investigate the interrelation between different process data each other. The following picture is the example of the monitoring window that Tag “Trend.ANA2” is based on an X-axis and Tag “Trend.ANA1” is set up on a Y-axis.


Max. Value
Foreground
Grid
Current Time
Min. Value
Division
0
50
100
100
50
0
100
50
0

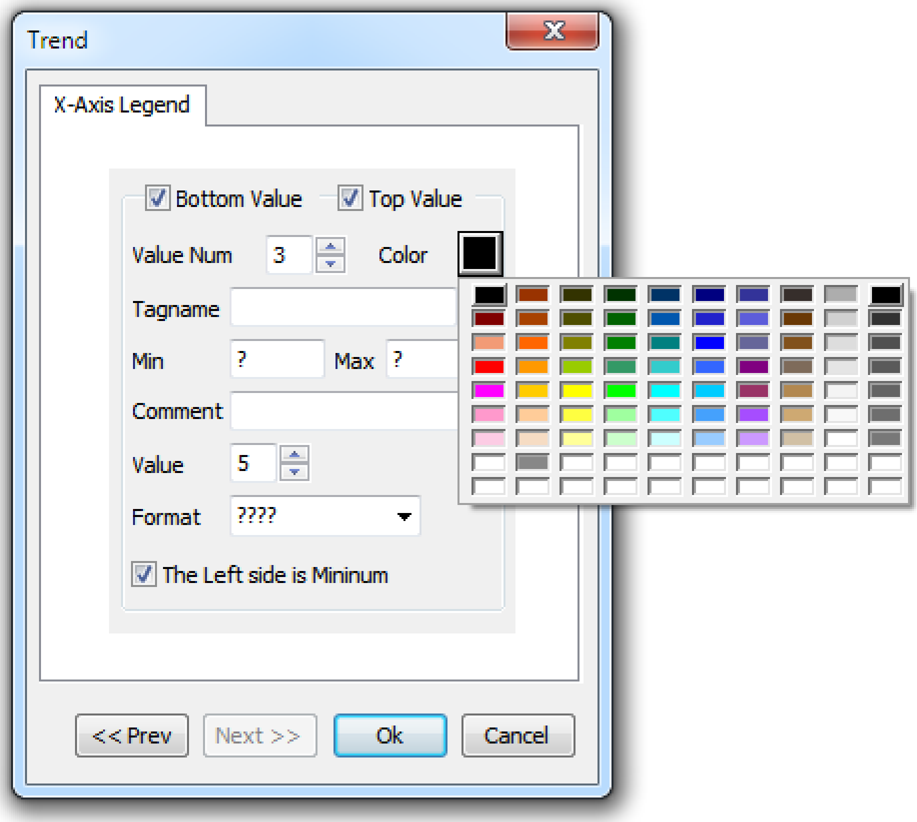
2006/09/13 20:23:41
TREND.ANA2 100
TREND.ANA1 91

XY Trend Menu

To create a XY trend, click a desired position on a page with the mouse after clicking the **'Trend'** icon in the CimonD icons. And assign **'XY'** to the Trend Type in the **'Trend Config'** dialog box.

The following contents are the explanation about the menu for an YT trend and other XY trend.

- **X-Axis Legend**



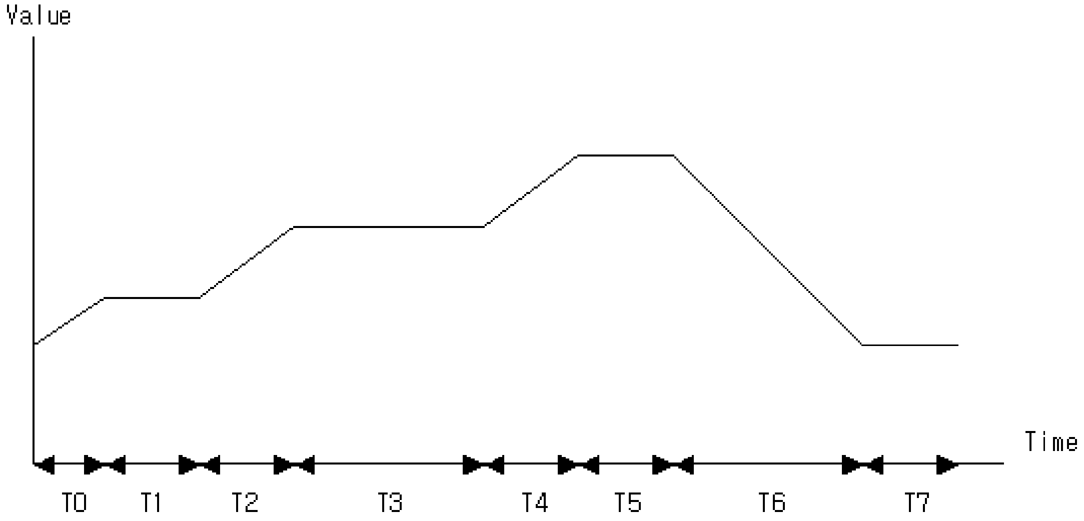
☑ Bottom Value ☑ Top Value
Value Num 3
Tagname
Min ? Max ?
Comment
Value 5
Format ????
☑ The Left side is Mininum

Bottom Value	This is used to set up whether the minimum value and maximum value are displayed at the bottom of a Trend Area.
Top Value	This is used to set up whether the minimum value and maximum value are displayed at the top of a Trend Area.
Value Num	This is used to assign the number of the indication values displayed on an X-axis. The range of the value is from 2 to 99.

Color	This is used to assign the color of the indication value displayed. If you press the Color button, the palette with 90 colors will appear.
Tag Name	This is used to enter the name of the tag that is the base of an X-axis. Enter a tag name directly or select a tag by using the **'…'** button aside.
Min	This is used to set up the minimum value of a corresponding tag. This is the minimum value displayed on a Trend Area. "?" means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot be bigger than the maximum value.
Max	This is used to set up the maximum value of a corresponding tag. This is the maximum value displayed on a Trend Area. "?" means that the minimum and maximum value of a corresponding tag is a default value. The minimum value cannot be bigger than the maximum value.
Comment	This is used to enter the description about the tag monitored. The limited conditions 1. It is available to set up in the combination of English, Korean, numeral and specific characters. 2. There is no limitation on the number of the characters entered.
Value	This is used to assign the length of the value displayed on a window. The range of the value is from 2 to 99.
Format	This is used to assign how to display an indication value.

14-4 Configuration of ST Trend Window

- **Basic Concept**



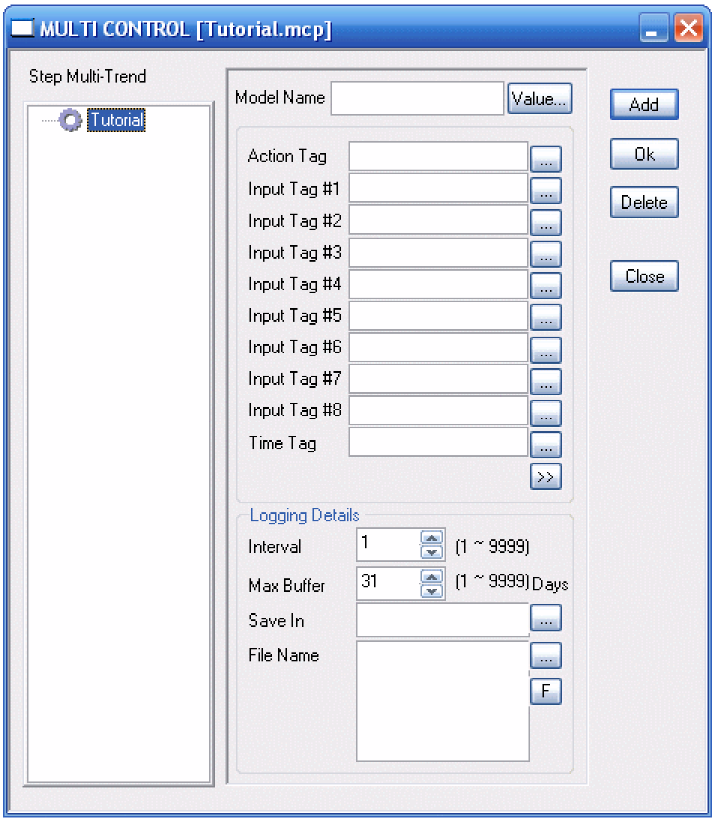
- Maximum 16 Steps are configurable. (V0 – V15, T0 – T15)
- Input 0 to set value for not used step.
- Input 0 for last time value.

Step	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Set Value	V0	V1	V2	V3	V4	V5	V6	V7	V8	0	0	0	0	0	0	0
Time	T0	T1	T2	T3	T4	T5	T6	T7	0	0	0	0	0	0	0	0

- Maximum 16 Input tags are configurable.
- Action tag is used to control the step logging and step trend object.

Action Tag	Action
OFF→ON	Initialize the step trend object. Start step trend logging with new data file name.
ON→OFF	Stop trending. Stop step trend logging.

1. Create a multiple control model


MULTI CONTROL [Tutorial.mcp]
Step Multi-Trend
Tutorial
Model Name
Value...
Add
Ok
Delete
Close
Action Tag
Input Tag #1
Input Tag #2
Input Tag #3
Input Tag #4
Input Tag #5
Input Tag #6
Input Tag #7
Input Tag #8
Time Tag
>>
Logging Details
Interval
Max Buffer
Save In
File Name
F
(1 ~ 9999)
(1 ~ 9999) Days

Interval: 1
Max Buffer: 31

1) Model Name : Input a unique model name

2) Action Tag : Input a tag name for control a step logging.

3) Input Tag #1 - #16 : Input a tag name to be logged.

4) Time Tag : If using time tag, the data is logged when a time tag value is increased. The time tag's value must start from 0.

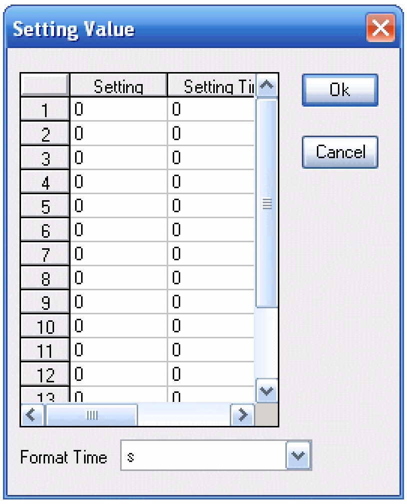
5) Interval : Periodic data logging interval (No use the time tag)

6) Max Buffer : Saving Days.

7) Save In : File Saving Path.

8) FileName : FileName to be saved (Operations)
(Examples, TimeStr(12))

9) Values…


Setting Value
Ok
Cancel

	Setting	Setting Ti
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0

Format Time: s

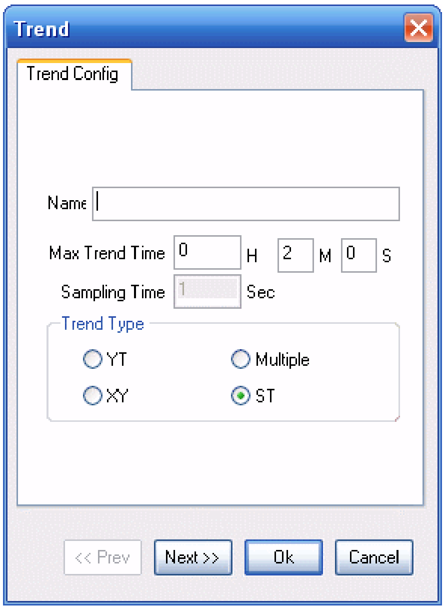
(1) Input set values and times upto 16.

(2) Select a time format

Note) Last time must be 0.

2. Create a ST Trend

Select a trend object in draw toolbar and click in a page.


Trend
Trend Config
<< Prev
Next >>
Ok
Cancel

Name:

Max Trend Time: 0 H 2 M 0 S

Sampling Time: 1 Sec

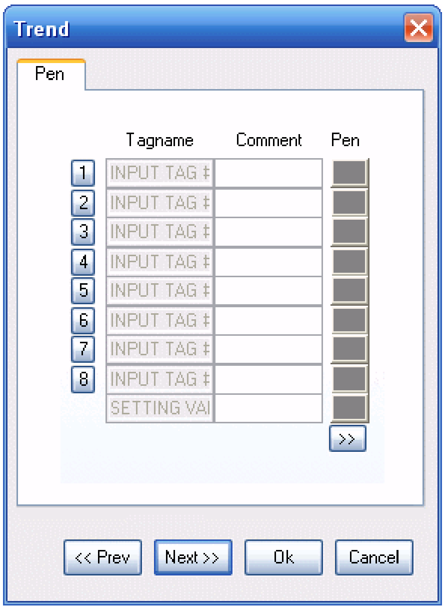
Trend Type

○ YT ○ Multiple

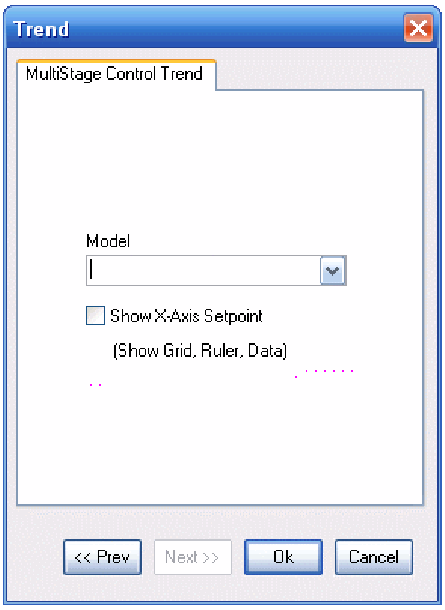
○ XY ● ST

1) Select ST of Trend Type. Others are same to YT Trend.

2) Pen : Tag is automatically linked with multiple control model. You can set pen colors and minimum/maximum values


Trend
Pen
Tagname
Comment
Pen
1
2
3
4
5
6
7
8
INPUT TAG ‡
SETTING VAI
>>
<< Prev
Next >>
Ok
Cancel

3) MutiStage Control Trend : Select a multi control model.


Trend
MultiStage Control Trend
Model
☐ Show X-Axis Setpoint
(Show Grid, Ruler, Data)
<< Prev
Next >>
Ok
Cancel

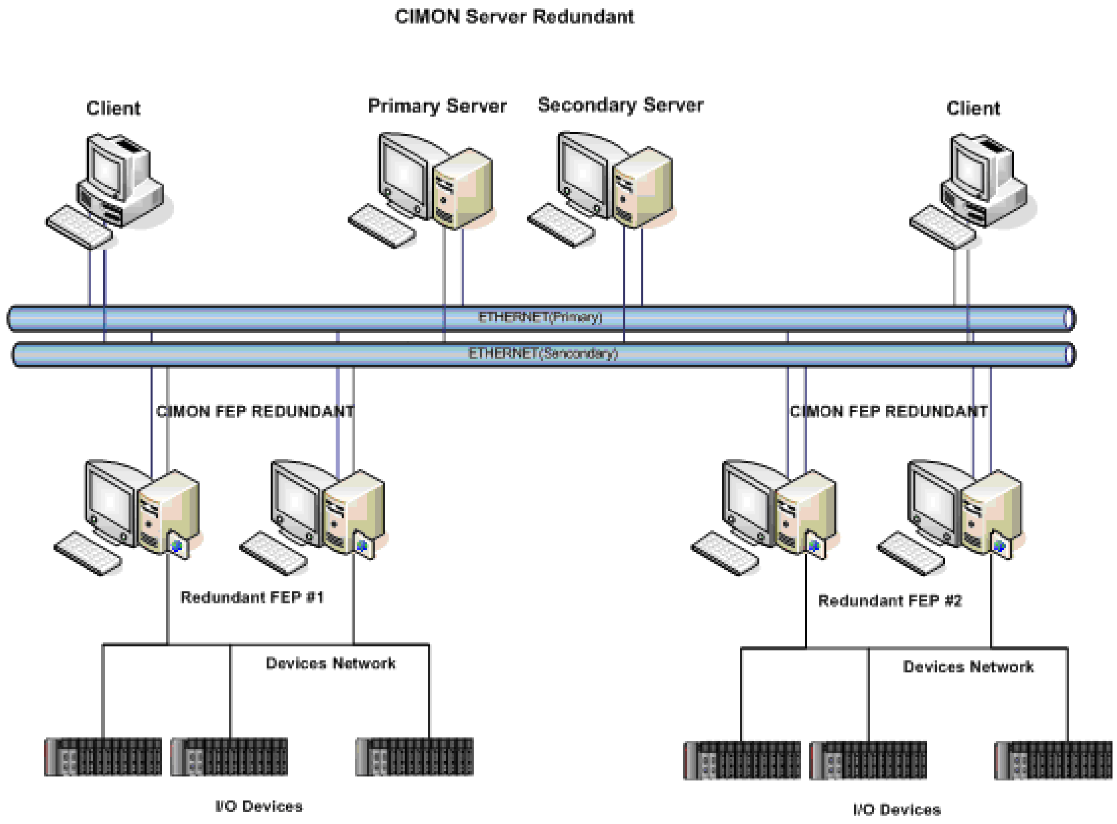
3. Functions for multiple control trend.

Functions	Description
StTrend_FileConvert("Multi control model", "BIN file", "TEXT file")	Convert a multiple control model's binary file to text file.
StTrend_GetVal("Trend Name", ValueType)	Get current value by value type of a trend object. ValueType 0 : Model Name 1 – 16 : Set Value for each step 17 – 32 : Ttime for each step 33 : Total time 34 : Display status(On/Off) 35 : Position of cursor 36 : Current Selected name if histrocal mode.
StTrend_SetVal("Trend Name", ValueType, SetValue)	Setting a value. ValueType 0 : Model Name 1 – 16 : Set Value for each step 17 – 32 : Time for each step 33 : Display status(On/Off) 34 : Histroical mode 35 : Show setup dialog box. 36 : Apply a set value to model 37 : Loading a set value from a file 38 : Saving a set value to a file
StTrend_GetVal ("[Multi control model]", ValueType)	Get current value by value type of multi control model. Value Type 0 : Model Name 1 ~ 16 : Set Value for each step 17 ~ 32 : Ttime for each step 33 : Total time 36 : baseTime → When Running : Start time → When Stopped : 0 → While Reset : -1
StTrend_SetVal ("[Multi control model]", ValueType, SetValue)	Set a value of multi control model. ValueType 1 ~ 16 : Set Value for each step 17 ~ 32 : Time for each step
StTrend_LoadConfig("Multi control model", "FileName")	Loading a set value from a file
StTrend_SaveConfig("Multi control model", "FileName")	Saving a set value to a file

Chapter 15 Network

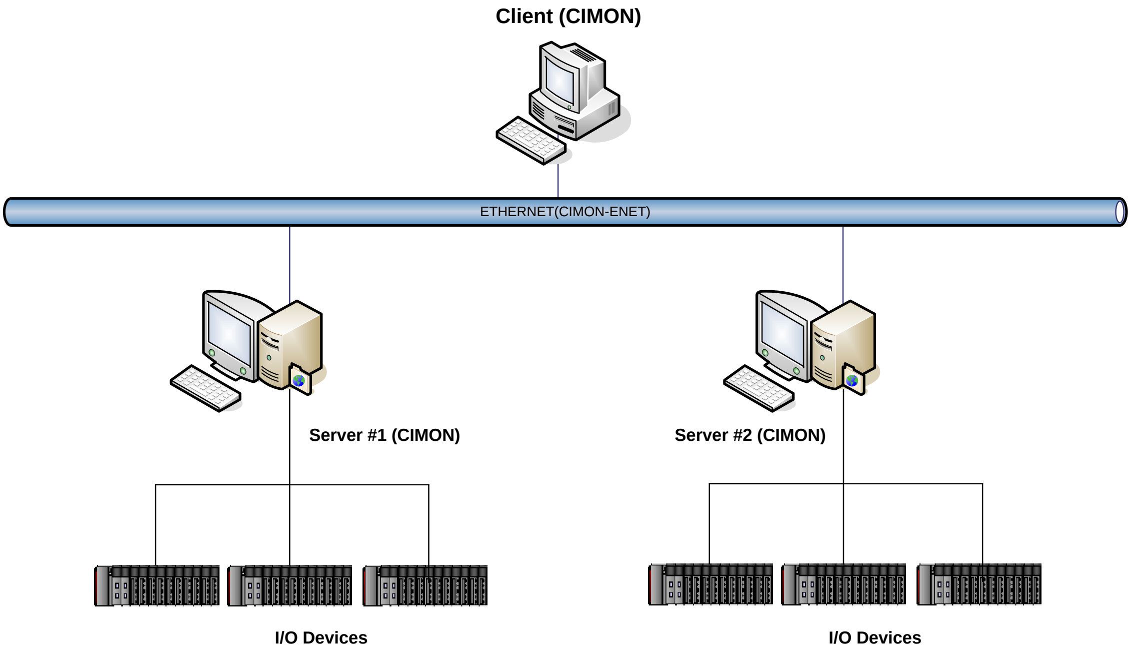
The CIMON equips two types of its own network protocol, which are the **CIMON-CSNet** used to configure Client-Server & redundancy and the **CIMON-Net** for data link with other systems. The CIMON-CSNet is the protocol for Ethernet (TCP/IP), and the CIMON-CSNet is the one for Ethernet and RS232/485. Here, the system for the above two networks are configured, including the setup for line redundancy and server redundancy.

The following system configuration is the example that the CIMON is configured with FEPs, Servers and Clients. This is the case that the FEP and the Server as well as the Communication line are redundant.


CIMON Server Redundant
Client
Primary Server
Secondary Server
Client
ETHERNET(Primary)
ETHERNET(Secondary)
CIMON FEP REDUNDANT
CIMON FEP REDUNDANT
Redundant FEP #1
Redundant FEP #2
Devices Network
Devices Network
I/O Devices
I/O Devices

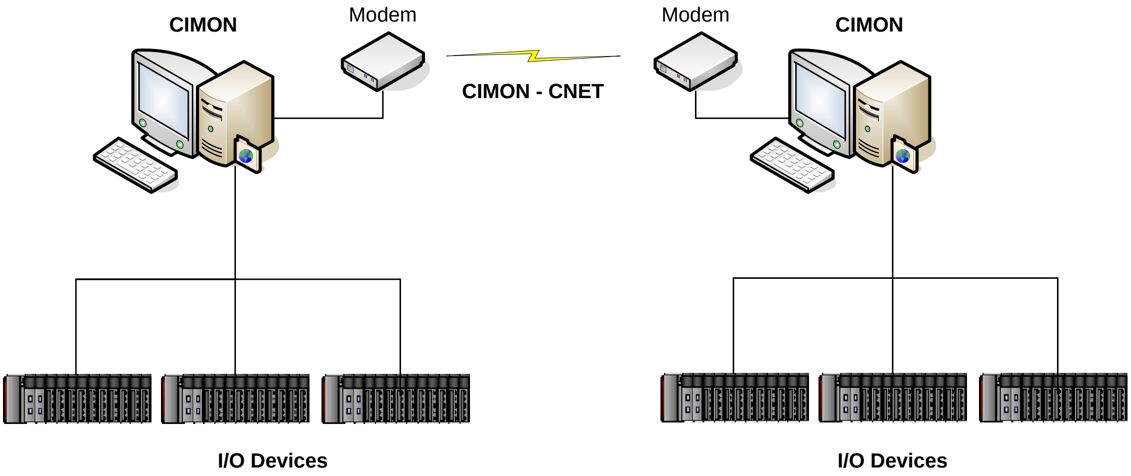
In this case, the CIMON-CSNet is used for the communication between a Server and a Client and the CIMON-Enet is used for the communication between a Server and a FEP. But, the CIMON-CSNet is used for the communication between redundant FEPs.

The following system configuration is the example using the CIMON-ENet. In this diagram, Client #1 CIMON considers Lower-Level Server #1/#2 CIMON as a lower-level I/O Device and takes the data of the two Servers. Also, Server #1 and #2 CIMON are set up as the CIMON-ENet Server (FEP) to send each data to the high-level CIMON Client #1.


Client (CIMON)
ETHERNET(CIMON-ENET)
Server #1 (CIMON)
Server #2 (CIMON)
I/O Devices
I/O Devices

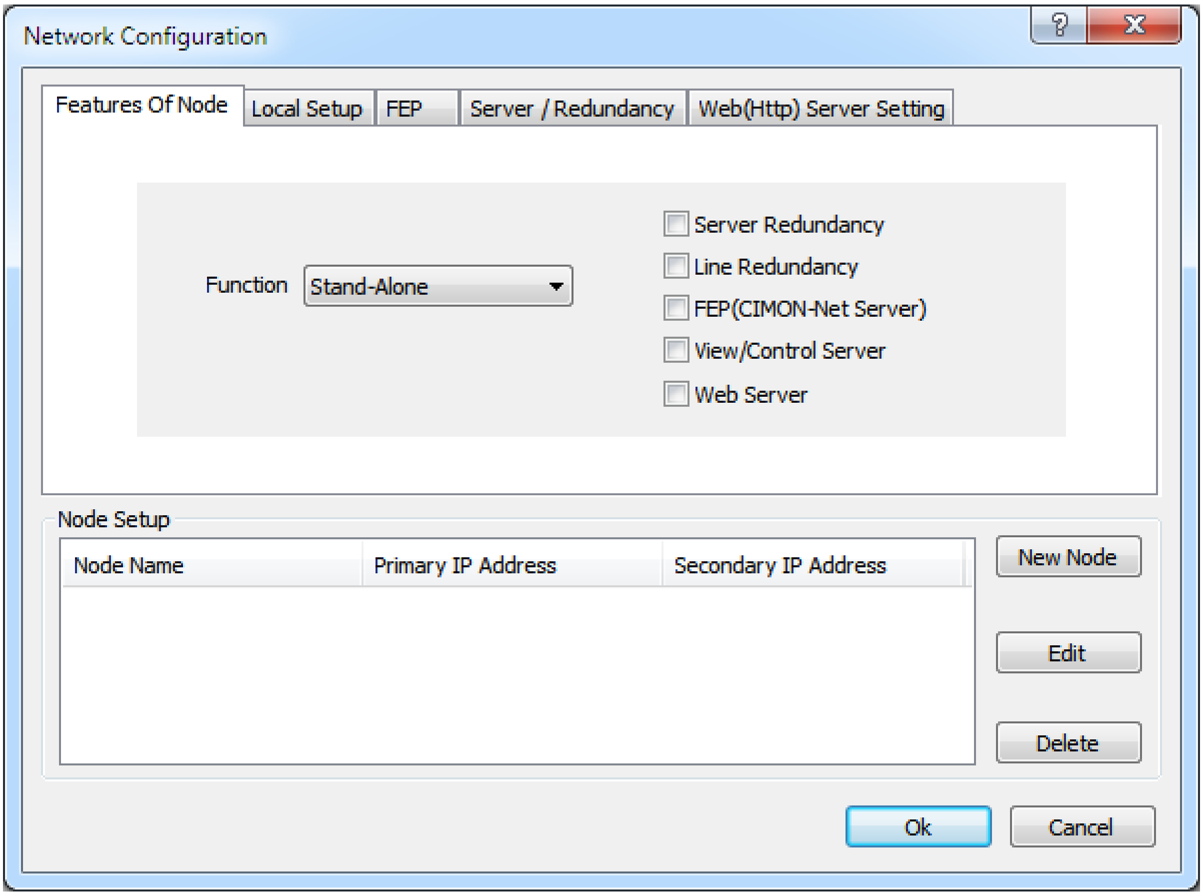
In the above diagram, in case that Sever #1 CIMON is the CIMON-ENet Client and the Server for Server #2 CIMON without Client #1 CIMON, the exchange of the data (Peer-To-Peer) between Server #1 and #2 CIMON is available.

The following system configuration is the example that the two CIMONs located at a long distance are linked by the CIMON-CNet. In the same manner as the ENet, one CIMON can be acted as a Server or a Client. And as the CIMON acts both functions, it is available to link in the Peer-To-Peer, too.


CIMON
Modem
Modem
CIMON
CIMON - CNET
I/O Devices
I/O Devices

15-1 Configuration of Network Window

If you select the **'Network'** in the **'Tools'** menu of the CimonD, a **'Network Configuration'** will appear as follows. Four setup pages and the list of registered nodes are displayed in this dialog box.


Network Configuration
?
X
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Node Setup
Node Name
Primary IP Address
Secondary IP Address
New Node
Edit
Delete
Ok
Cancel

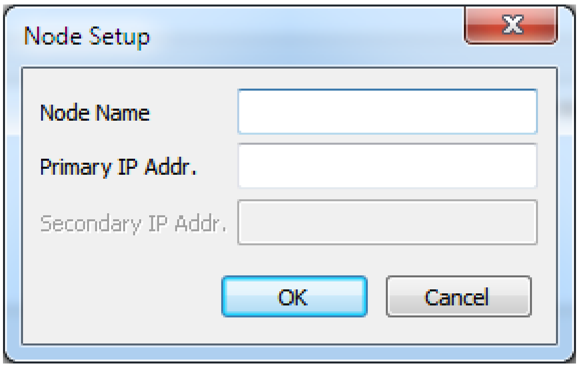
Function: Stand-Alone

☐ Server Redundancy
☐ Line Redundancy
☐ FEP(CIMON-Net Server)
☐ View/Control Server
☐ Web Server

Node setup

To register or edit the node linked, use the **'New Node'**, the **'Edit'** and the **'Delete'** button.

New Node	If you select this button, the following **'Node Setup'** dialog box will appear. If you assign the Node Name and each IP Address here and press the **'Ok'** button, the contents registered in the list box will be displayed. But, the **'Secondary IP Address'** can be entered in case of Line Redundancy. The Node Name should be set up to be same in all Nodes.



Edit If you press the **'Edit'** button after you select a node name in a list box or double-click it, the previously explained **'Node Setup'** dialog box will appear again to revise the previously edited contents.

Delete If you select the node deleted among the nodes registered in the list box and press the **'Delete'** button, the node will be deleted.

- **Features of Node**

This page is used to set up the role of the CIMON and the major features in a whole network configuration.

Function

According to the role of Node, the CIMON is classified into 4 types. Select one among them.

- **Stand-Alone**

  This node is the one to manage by itself the real-time database necessary for system operation, HMI window and all the data related to other functions. As the system configuration of general type I/O Device such as other CIMON-SCADA, PLC and etc are placed at low-level, and diverse data are provided to high-level system through the CIMON-Net. FEP function can be run.

- **Primary Server**

  This node is the one to include all the functions of Stand-Alone Node, and to provide a real-time database under its management with a CIMON-SCADA (Client) system.

- **Secondary Server**

  This node is the one to keep the setup contents and database as same as a primary server node, and to substitute the functions in case of malfunction in a primary server. Accordingly, all the functions and specifications correspond to the primary server node.

- **Client**

  This node has not its real-time database. It executes SCADA and other functions by using the database that a server node provides. Accordingly, a lower-level I/O Device cannot be linked, but it is available to link with the high-level by using the CIMON-Net.

Server Redundancy

This is used to check in case of server redundancy. In case of a secondary server, this item is automatically checked. In case of stand-alone, it cannot be selected.

Line Redundancy

In case of redundancy between a server and a client, or line redundancy between redundancy servers, this is used to check this item. If this item is selected, you should assign a Secondary IP Address in other page. In case of stand-alone, you are not able to select.

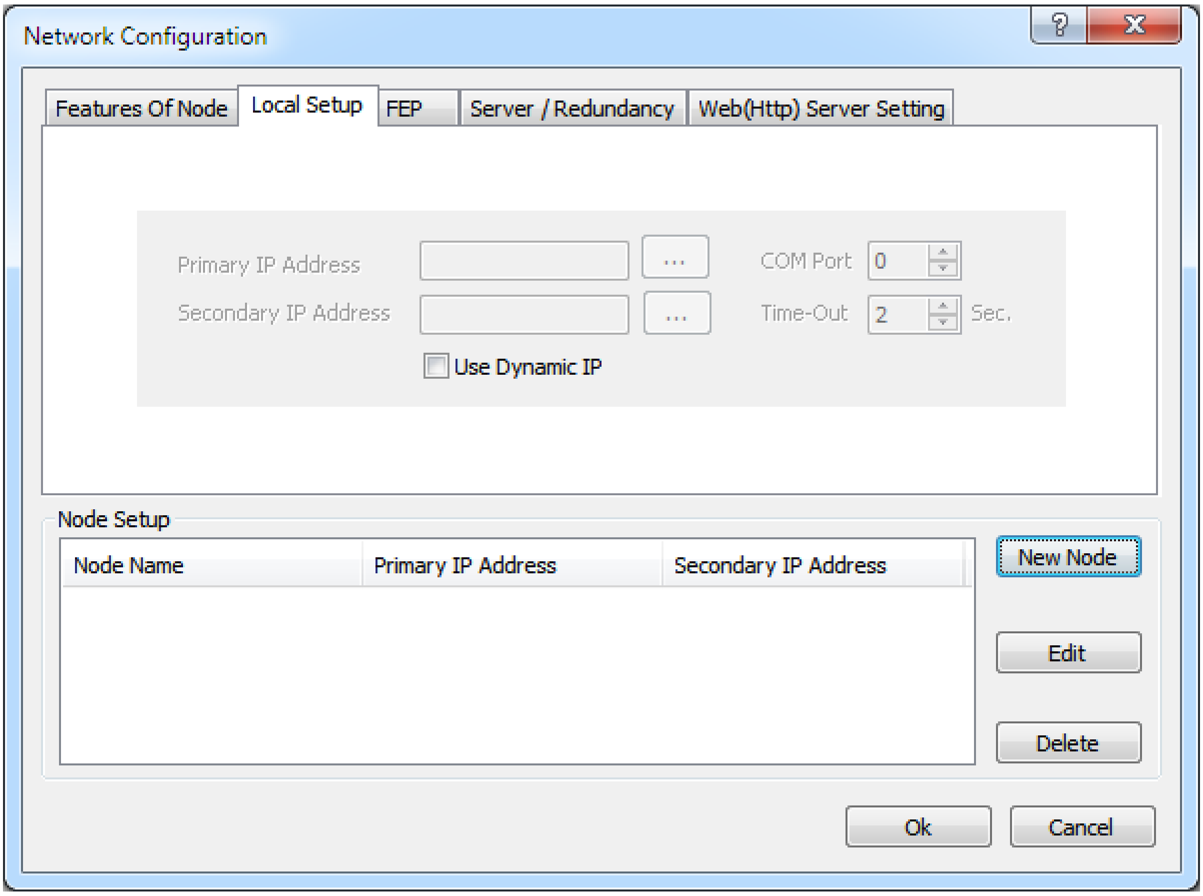
FEP (CIMON-Net Server)

This is used to assign whether tag data are delivered to other system through the CIMON-Net. You are able to get the information about the tag of this node from the other systems linked by using Ethernet or RS232C (MODEM). (Other systems correspond to all systems to understand the CIMON-Net protocol including the CIMON-SCADA.)

If you select this item, you should assign a network type (Ethernet/RS232C).

- **Local Setup**

This is used to set up the parameter for communication between a node and a client (or Server) node.


Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Primary IP Address
Secondary IP Address
...
...
COM Port
0
Time-Out
2
Sec.
☐ Use Dynamic IP
Node Setup
Node Name
Primary IP Address
Secondary IP Address
New Node
Edit
Delete
Ok
Cancel

Primary IP Address This is used to enter the primary IP address of a system.

Secondary IP Address This is used to set up in case of line redundancy. Assign the IP address used in case that a primary IP address cannot be used. (The case that two Ethernet cards are installed in PC)

Port Number linked to Client (In case a node is set up as Primary/Secondary Server)

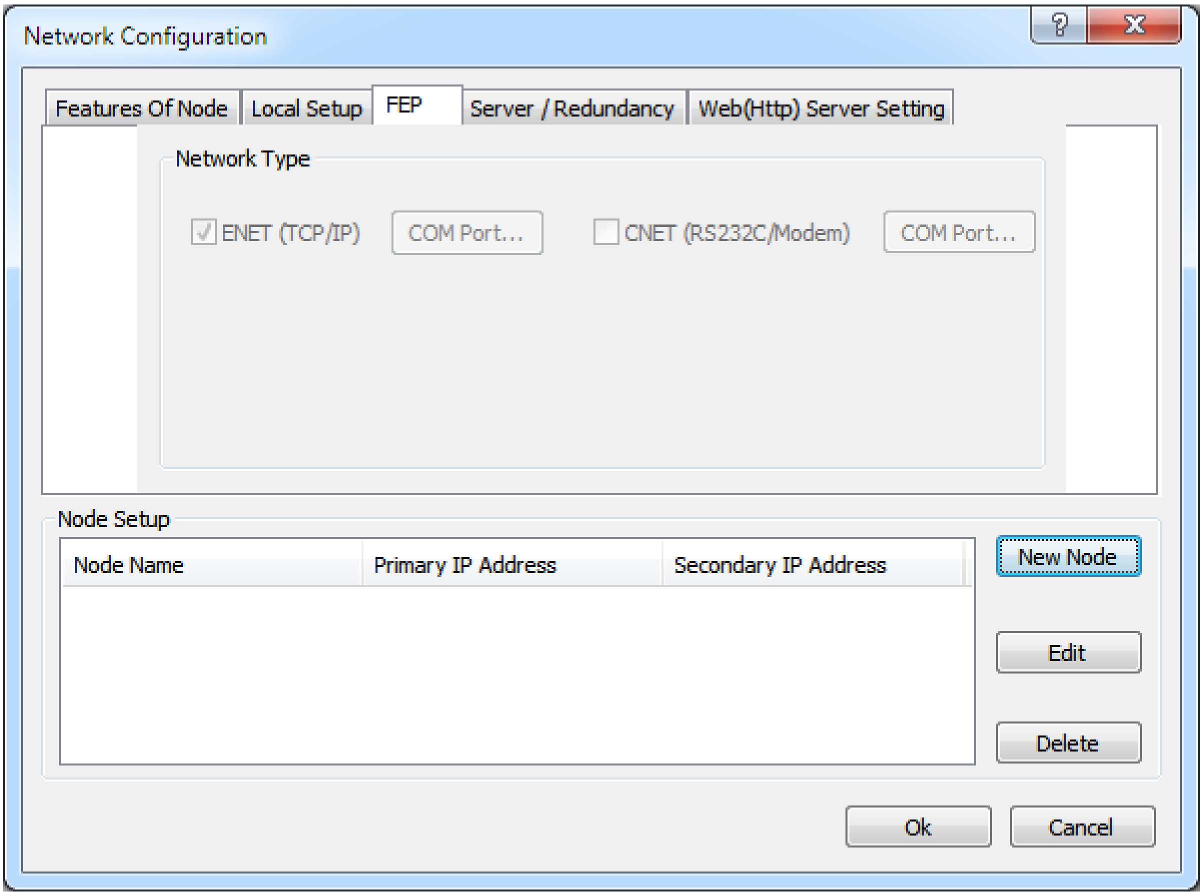
Port Number at Server linked (In case a node is set up as Client)

Assign the socket port number used for TCP/IP communication between a server and a client in the value from 0 to 99. Generally, it is not necessary to change the default value. In case of malfunction in communication, change this value. But the port number assigned to the server and the client should be same.

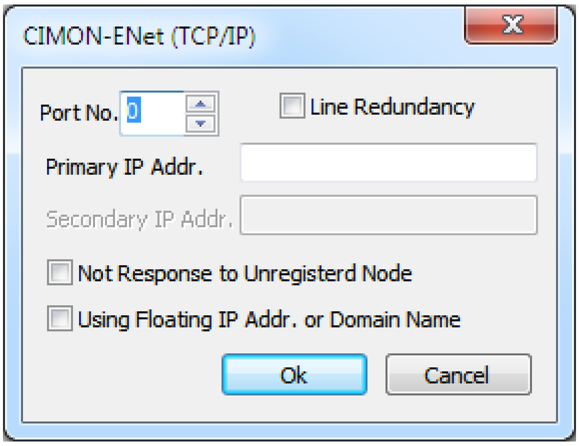
Time Out The time assigned in this is a rule that a client decides whether there is malfunction in a server. A client decides that there is malfunction in a server, in case of no response from the server for an assigned time. If a server is in redundancy, a client will try to link to other server of backup status.

- **FEP**

In case that a node is used as FEP, this is used to assign the network type linked to the high-level and to set up the communication parameter necessary for an assigned network. In case that **'FEP (CIMON-Net Server)'** is checked in the **'Features of Node'**, it becomes the status that you are able to edit. In this case, you should assign a network at least between the ENET and the CNET.


Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Network Type
☑ ENET (TCP/IP)
COM Port...
☐ CNET (RS232C/Modem)
COM Port...
Node Setup
Node Name
Primary IP Address
Secondary IP Address
New Node
Edit
Delete
Ok
Cancel

ENET (TCP/IP) If you select the ENET (TCP/IP) and press the **'COM Port…'** button, the following **'CIMON-Net (TCP/IP)'** dialog box will appear. Here, assign the parameters for the Ethernet communication, of which contents conform to the Client of the CIMON-Net.



CIMON-ENet (TCP/IP)

Port No. 0

☐ Line Redundancy

Primary IP Addr.

Secondary IP Addr.

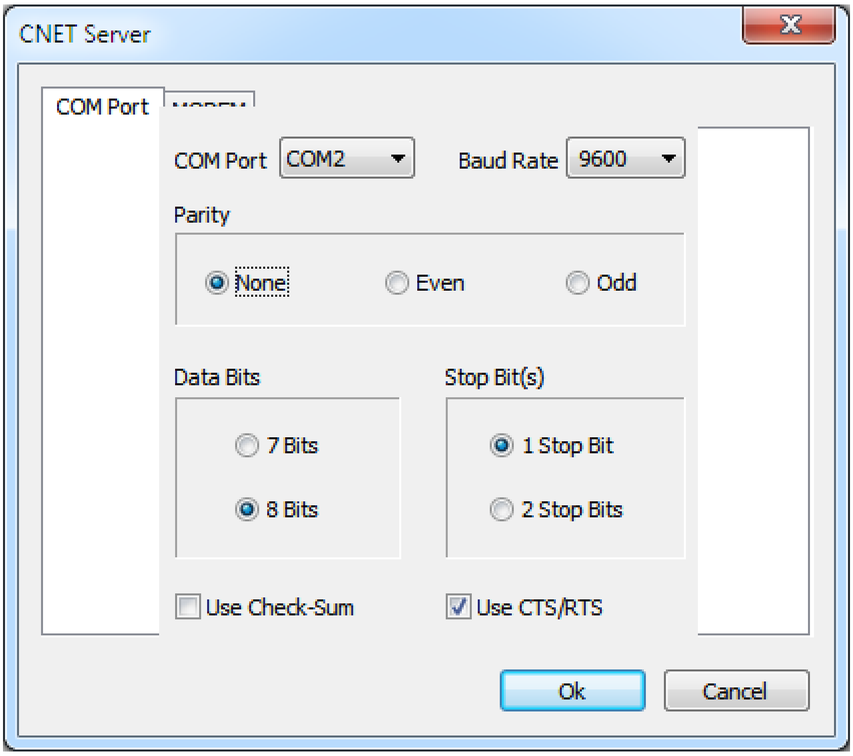
☐ Not Response to Unregisterd Node

☐ Using Floating IP Addr. or Domain Name

If the Client of the CIMON-Net is another CIMON, the node will be the lower-level I/O Device of a concept like a PLC. Accordingly, if the CIMON is the Client of the CIMON-Net, the communication with the node will be set up through the I/O Device Setup. Refer to the '**CIMON-ENet I/O Device'** in I/O Device Manual for the details.

CNET (RS232C/MODEM) If you select the CNET (RS232C/MODEM) and press the **'COM Port…'** button, the following **'CNET Server'** dialog box will appear.

Here, assign the parameters for the communication, of which contents conform to the Client of the CIMON-Net.



CNET Server

COM Port: COM2

Baud Rate: 9600

Parity: ● None ○ Even ○ Odd

Data Bits: ○ 7 Bits ● 8 Bits

Stop Bit(s): ● 1 Stop Bit ○ 2 Stop Bits

☐ Use Check-Sum

☑ Use CTS/RTS

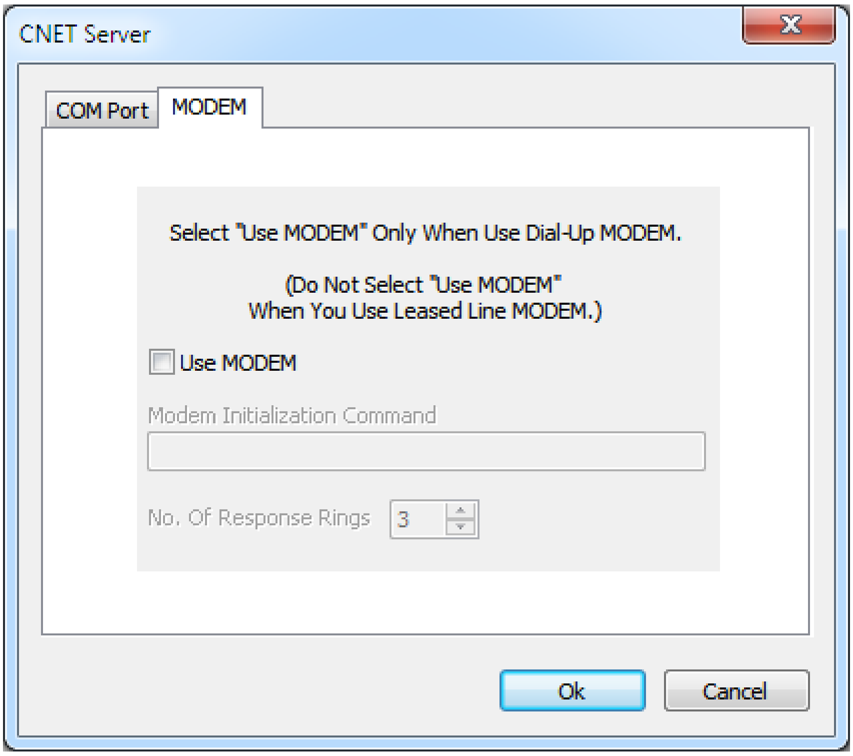
If the Client of the CIMON-Net is another CIMON-SCADA, the node will be the lower-level I/O Device of a concept like a PLC. . Accordingly, if the CIMON-SCADA is the Client of the CIMON-Net, the communication with the node will be set up through the I/O Device Setup. Refer to the '**CIMON-CNet I/O Device'** in I/O Device Manual for the details.

The Page **'COM Port…'** in the **'CNET Sever'** dialog box is used to set up the following items.

- COM Port: COM1 ~ COM32
- Baud Rate: 300, 600, 1200, 2400, 9600, 19200
- Check-Sum: This is assigned to check the communication error.
- Parity: None, Even, Odd
- Data Bit: 7bits, 8 Bits
- Stop Bit: 1bit, 2 bits

Select 8 bits as the Data Bit if possible. In case of 7 bits, the transfer rate will be promoted a little bit, but an error will occur when sending/receiving the data.

The CNET supports to send and receive data at a long distance through a Modem. In this case, it is necessary to set up the Page **'Modem'** in the **'CNET Sever'** dialog box as follows.



Select "Use MODEM" Only When Use Dial-Up MODEM.

(Do Not Select "Use MODEM"
When You Use Leased Line MODEM.)

☐ Use MODEM

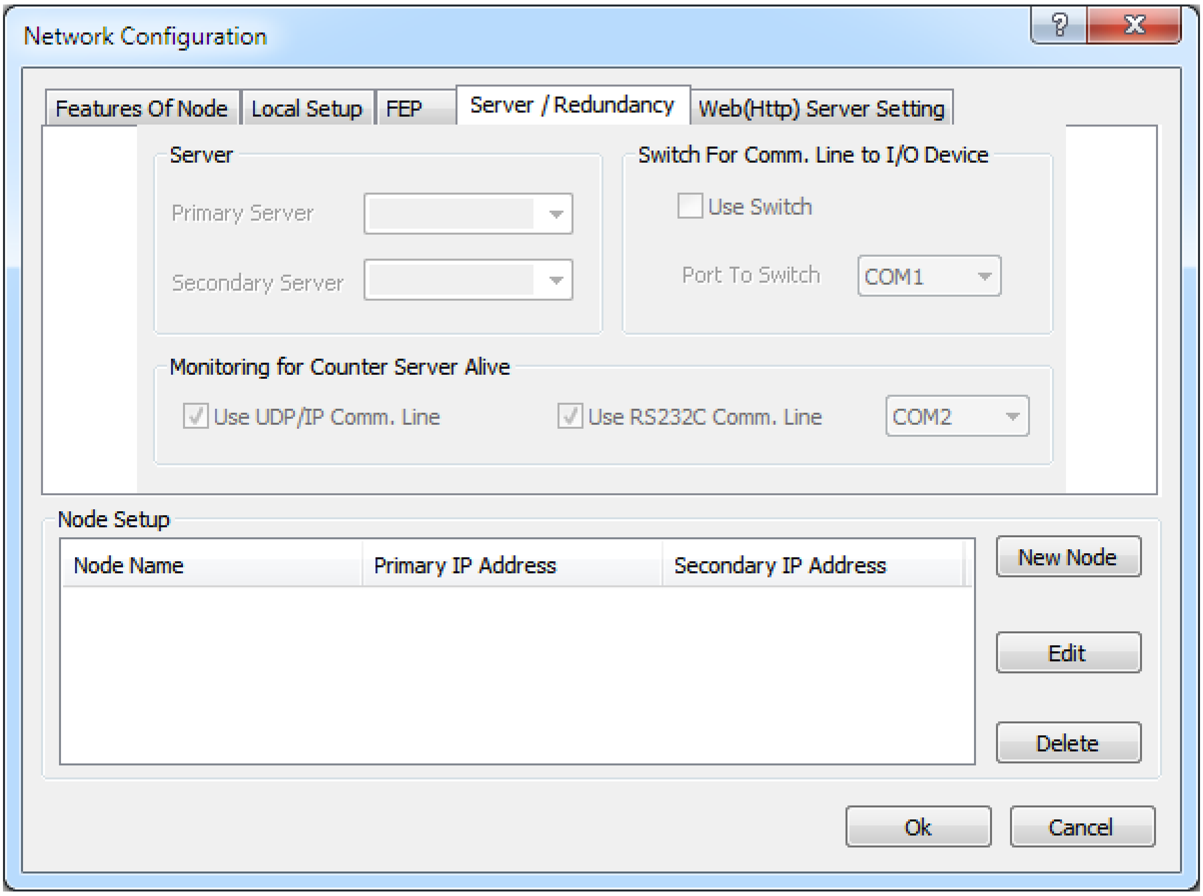
Modem Initialization Command

No. Of Response Rings 3

Check the **'Use Modem'**, and assign the Modem Initialization if necessary. The Number of Response Ring is used to assign the number of the calls that the CIMON-SCADA will receive automatically.

- **Sever/Redundancy**

If a node is set up as the **'Client'**, this is used to assign the server linked. And if a node is set up as a redundant server, this is used to set up the other server and the device used to switch the shared lower-level device communication line. The following window is the case that a node is set up as the **'Client'.**


Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Server
Primary Server
Secondary Server
Switch For Comm. Line to I/O Device
☐ Use Switch
Port To Switch
COM1
Monitoring for Counter Server Alive
☑ Use UDP/IP Comm. Line
☑ Use RS232C Comm. Line
COM2
Node Setup
Node Name
Primary IP Address
Secondary IP Address
New Node
Edit
Delete
Ok
Cancel

Primary Sever In case that a node is set up as the **'Secondary Server'** or the **'Client'**, assign the Primary server. The Primary Server is registered to the node linked. If you press the combo box, you are able to select one of the registered nodes.

Secondary Server	In case a node is set up as the **'Primary Server'** or the **'Client'** under Server Redundancy, assign the Secondary Server. The Secondary Server is registered to the node linked. If you press the combo box, you are able to select one of the registered nodes.
Use UDP/IP Comm. Line	Select this if the UDP/IP is used for the line to monitor the status of a server additionally in case of Server Redundancy.
Use RS232C Comm. Line	Select this if the RS232C is used for the line to monitor the status of a server additionally in case of Server Redundancy. In this case, assign the COM Port of a computer.

- **Server-Client Configuration**

To synchronize a file with server, you make "ServerFile.ini" file in project folder. (Only Client PC needs this file.)

Sample File(ServerFile.ini) of Client Node

```
[File]
File1=*.pgx
File2=*.wgx
File3=*.gtd
File4=*.ttd
```

Redundancy Configuration

To synchronize a file with the other Server, you make "ServerFile.ini" file in project folder. (Both Priamry and Secondary Server PC need this file.)

Sample File(ServerFile.ini) of Primary And Secondary Server Node

```
[Folder]
Folder1=AlarmBin.Log
Folder2=SoeBin.Log
Folder3=DataLoggingFolder                    // Need to be Edited
Folder4=ReportOutputFolder          // Need to be Edited

[File]
File1=ReportTag.dat
File2=*.pgx
File3=*.wgx
File4=*.dbx
File5=*.log
File6=*.rpt
File7=*.hkd
File8=*.scx
File9=*.sql
File10=*.sch
File11=*.gtd
File12=*.ttd
File13=*.rcp
File14=*.mcp
File15=*.mdb
```

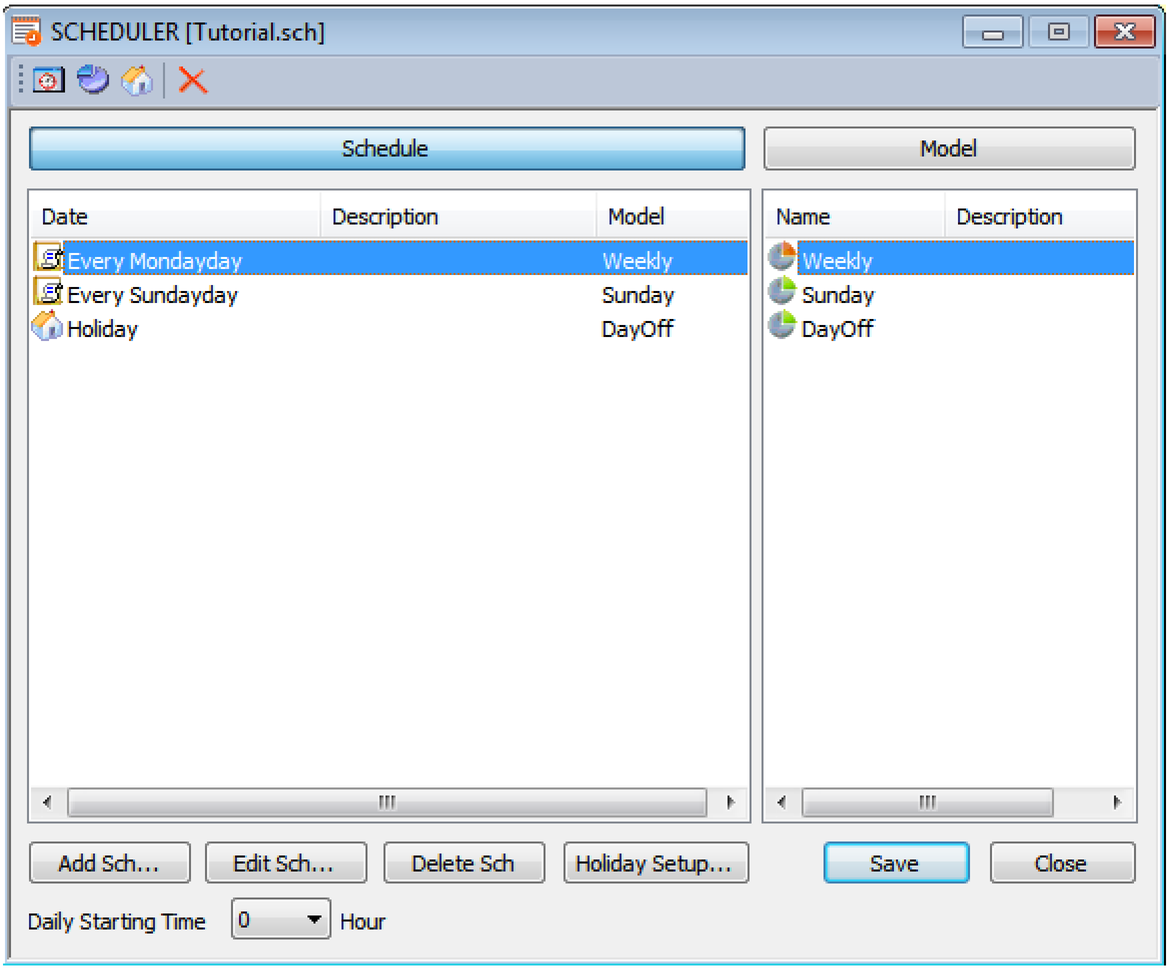
Chapter 16 Scheduler

This function is used for the case that the method to manage acquired data or the one to control a system is different by days such as weekday, holiday and day of the week. For example, in case of an electric system, the CIMON-SCADA gets power consumption from lower level devices. The rate of power consumption is different by hours and days. Accordingly, the acquired power consumption data should be classified by the level of the rate and the result be accumulated. The direct management by using scripts is available to realize that. But it will be easier to use the function of a scheduler.

First edit a scheduler model and then edit a schedule.

16-1. Configuration of Scheduler Window

If you select the **'Scheduler'** in the Tools menu of the CimonD, the following window will appear. Various schedules, models and holidays are registered on this window.



Date	Description	Model
Every Mondayday		Weekly
Every Sundayday		Sunday
Holiday		DayOff

Name	Description
Weekly	
Sunday	
DayOff	

Daily Starting Time 0 Hour

First, the four important terms used in this function are as follows.

Schedule	This term is the common name of the various day-schedules that a system manages. There are 3 types such as specific date, holiday and day of the week in a Schedule. If you select the **'New Schedule'** in the **'Edit'** menu, the Edit Schedule dialog box to configure a schedule type will appear. There is the case that two or more schedules may be overlapped in the process of a system, and the way to manage this case will be discussed in the 'Priority of Schedule'.

Date	This is used to assign the date in the form of year, month and day. For example, it is the form of every year, every month 1st day.
Holiday	This is used to set holiday working schedule. The "Holiday Setup" button is used to assign the national holidays and the festive days registered. If necessary, they can be changed.
Day	This is used to assign weekday as Sunday, Monday… Saturday.
Base Schedule	All the days that are not registered to the schedules are considered as the base schedule.

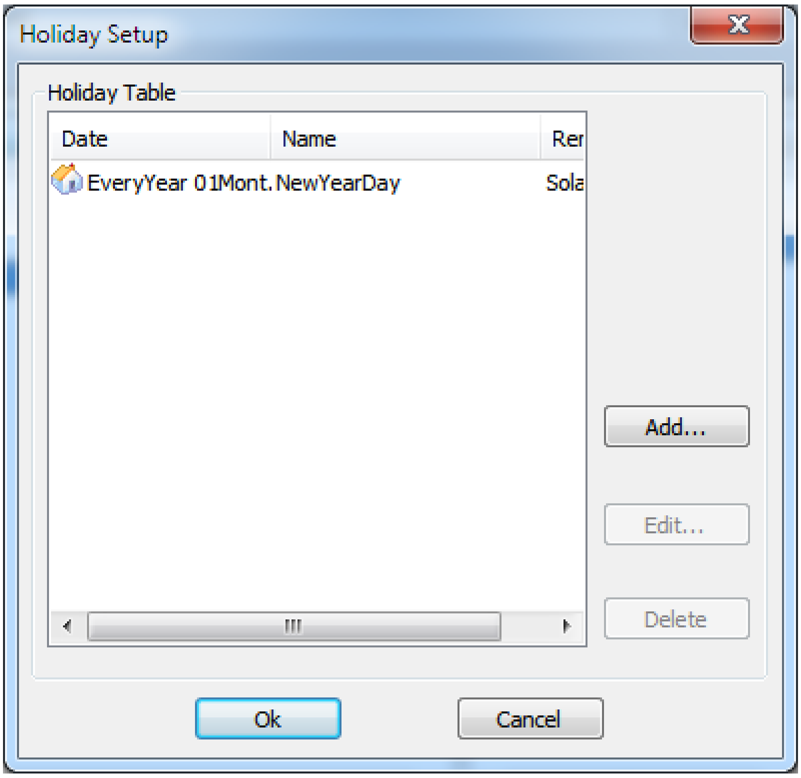
Model	This is a kind of the timetable in which management method is defined. That is, the definition like "What will be performed from what time to what time" within the range from 00:00 to 23:59" is assigned. Generally, holiday model and weekday model are defined as a few base models and a corresponding model is assigned when a schedule is defined. But in case of a base schedule, select the **'Use Base Schedule'** when you define a model without an additional schedule definition procedure.
Holiday	The Holiday is the common name of national holidays and festive days. This function is provided to remove the inconvenience that all national holidays and festive days are registered.
Daily Start Time	This is used to set up start time of days. At start time of days, the working model of the day are changed.

16-2. Editing a Holiday

If a new project is created or the file for schedule management (*projectname*.SCH) is deleted, the new file for schedule management will be created. New year's day have been registered to the file as follows.

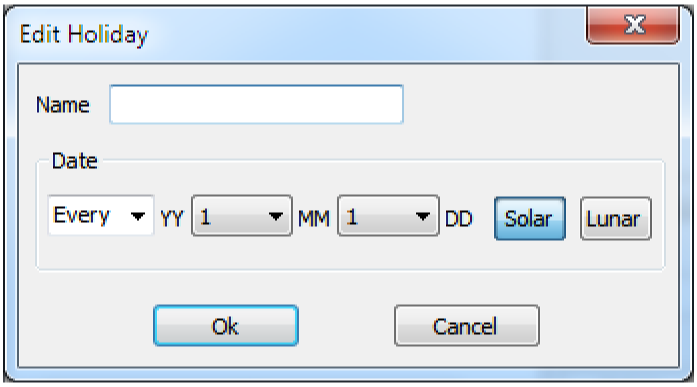
NAME	DATE	REMARKS
New Year's Day	January 1	solar

If you use the **'Holiday Setup'** button or select the **'Holiday Setup'** in the **'Edit'** menu to change the contents, the following dialog box will appear.


Holiday Setup
Holiday Table
Date
Name
Rer
Add...
Edit...
Delete
Ok
Cancel

Date	Name	Rer
EveryYear 01Mont.	NewYearDay	Sola

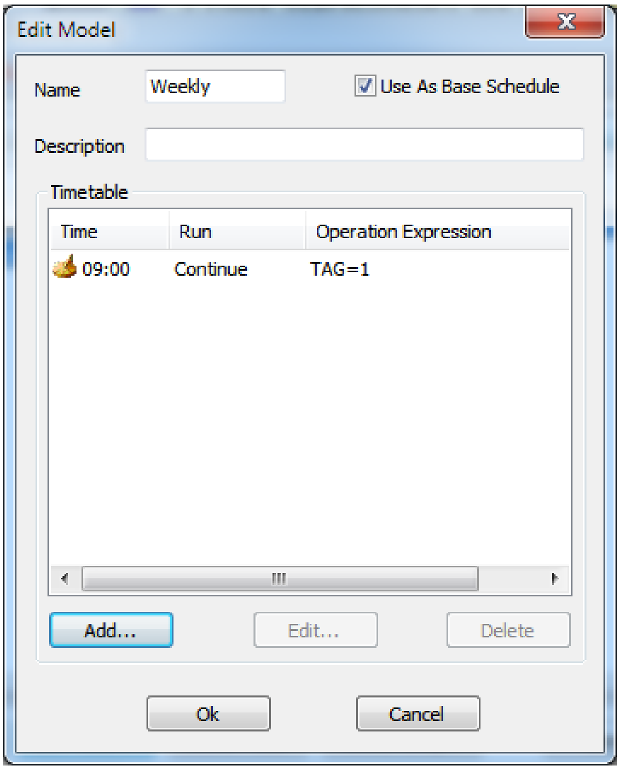
If you click Add, please dialog box will appear.



Name	This is used to assign the name of the holiday edited. But, the name should not be as same as the name of other registered holidays.
YY	This is used to assign the year for a holiday. The 'Every' or up to '2037' can be assigned. But, The holiday should not be as same as the date of other registered holidays and be the future than the year when this is set up.
MM	This is used to assign the month for a holiday. The 'Every' or the one from January to December can be assigned.
DD	This is used to assign the date for a holiday. The 'Last' or the one from 1 to 31 can be assigned. If the month is not the Every, it should be set up within the range of the date for a corresponding month. That is, February 31 cannot be set up.
Solar/Lunar	This is used to assign whether the date is a solar calendar day or a lunar calendar day. Lunar calendar has the system (leap month, long month, even month) different from solar month. The details will be discussed in 'Lunar Calendar (Leap Month).

16-3. Editing a Model

To edit a model means to configure the timetable for a day. But, the process to edit this model is not to configure the timetable for a specific day. The date is assigned in the schedule edit process explained next.


Edit Model

Name: Weekly

☑ Use As Base Schedule

Description:

Timetable

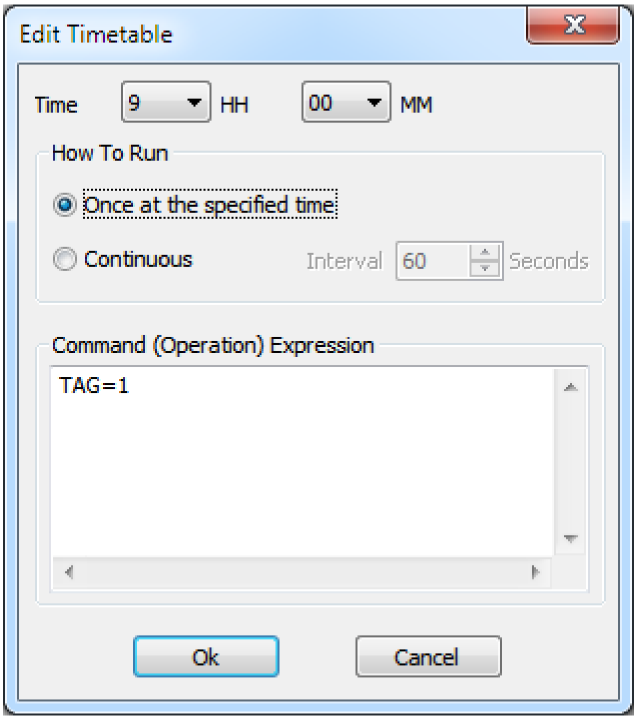
Time	Run	Operation Expression
09:00	Continue	TAG=1

If you select the **'New Model'** in the **'Edit'** menu, or use the **'Add…'** button or the **'Edit'** button, the **'Edit Model'** dialog box to set up a corresponding model will appear. How to set up each item in the dialog box is as follows.

Name	This is used to assign a model name. This name is used in the process to set up the model performed on the day (or holiday, day of week) corresponding to the "Editing a Schedule" explained next. Accordingly, the name should be not as same as other model names.
Use As Base Schedule	This is used to perform this model on the day when it is not registered to the "Editing Schedule". That is, it is the timetable to perform on weekday. Only one model can be assigned as a base schedule and the assigned model is displayed in a red round icon on a model list window.
Description	This is used to describe the brief explanation about a model.
Timetable	This is used to display a registered timetable as a list. The **'Add…'** button or the **'Edit…'** button can be used to set up each item. The following dialog box will appear.

16-4. Editing a Timetable

If you select the **'Add…'** button or the **'Edit…'** button in a **'Edit Model'** dialog box, the following dialog box will appear. And each time can be set up in detail.



Time: 9 HH 00 MM

● Once at the specified time

○ Continuous Interval 60 Seconds

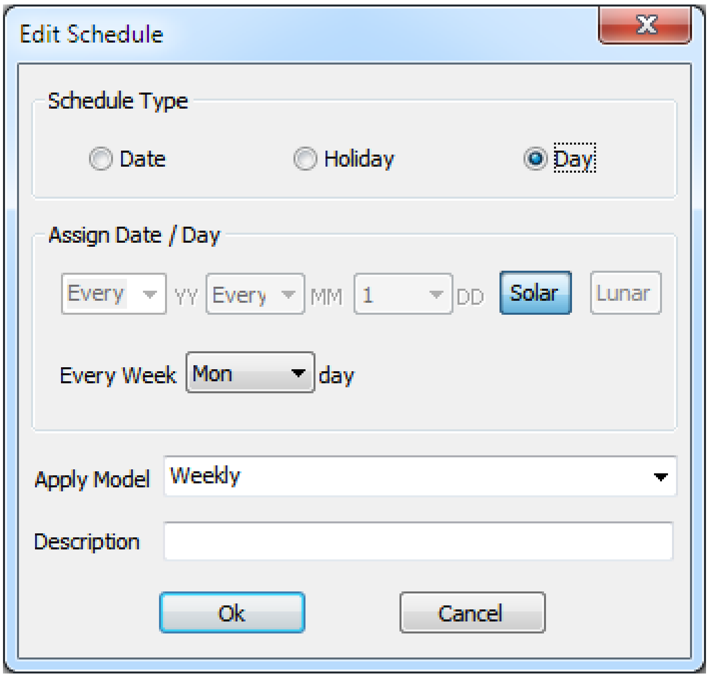
```
TAG=1
```

Time	This is used to assign the base time when a command (operation) expression is run. It can be assigned from 0 hr 0 min to 23 hr 59 min.
How To Run	One between the 'Once On The Assigned Time' and the 'Continuously' can be assigned. In case of the continuously, assign the 'Interval' in second.
	Once On The Assigned Time: This is used to run an expression once at an assigned time (effective for a minute). Accordingly, if a system is run at the time that is not assigned, a command expression will be not run.
	Continuously: This is used to run an assigned command (operation) expression repeatedly from assigned time to the next assigned time. But, the interval is the set value in second. More details will be discussed in the 'How To Run Timetable'.
Command (Operation) Expression	This is used to assign the command or the operation expression run on an assigned time. Refer to the Chapter 22 for the details about command expression and operation expression.

16-5. Editing a Schedule

If the previously explained holiday and model are edited, a schedule can be registered. Though the holiday and model setup are not preceded certainly, this order is desirable in the configuration of general function.

If you select the **'New schedule…'** in the **'Edit'** menu, or the **'Add Schedule'** or the **'Edit Schedule'** in the Scheduler, the following **'Edit Schedule'** dialog box will appear.



○ Date ○ Holiday ● Day

Every YY Every MM 1 DD

Every Week Mon day

Apply Model Weekly

Description

Schedule Type The schedule is distinguished into three types as the previously explained contents. Select one among them.

- **Date** This is used to assign a specific date like 'yyyy mm dd'.
- **Holiday** This is used to assign the assigned dates in the previously explained 'Editing Holiday' at a time. It is not necessary to assign a date or a day of week separately.
- **Day** This is used to assign a specific day of week such as 'Saturday', 'Sunday'.

Assign Date/Day A schedule is distinguished into three types as the previously explained contents. Select one among them. But, the date/holiday/day of week registered to all the schedules should not duplicate.

YY/MM/DD (Solar/Lunar)	This should be assigned in case of "Date" schedule type. The year can be assigned as the value from an edit year to Year 2037 or 'Every Year'. The month can be assigned as 'Every Month' or the value from January to December. The day can be assigned as the date from 1 to 31 or 'Last Day'. And select whether an assigned date is solar calendar day or lunar calendar day.
Every Week	This is used to assign a day of the week. It can be assigned from Sunday to Saturday.

Apply Model This is used to the name of the model run on an assigned date/holiday/day of week. If a model is set up earlier, one of currently registered models can be selected.

Description This is used to enter the brief description on the schedule under editing.

- **Priority of Schedule**

The CIMON-SCADA selects one among the several schedules registered on the basis of a running-date when a system is run. Two or more schedules may be selected in this process. For example, it is the case that the 'March 1', which has been registered to the holiday, is Sunday in the circumstance that holiday schedule and day schedule (Sunday) are registered.

In this case, one between holiday schedule and Sunday schedule should be selected. The priority is as follows.

- 1st Priority: Date
- 2nd Priority : Holiday
- 3rd Priority : Day
- 4th Priority : Basic schedule

Note In the case that the schedules with different priority each other are duplicated, one will be selected as the above. But, in the case that the schedule with the same priority is duplicated, it is unable to know which one is selected. For example, the two schedules of date type like **'Every/every/lastday'** and **'Every/3/31'** can be duplicated.

- How to Run a Timetable

The CIMON-SCADA selects the schedule run after a system is operated. If a schedule is selected, the CIMON-SCADA will run the command expressions of a corresponding time as follows, referring to the timetable of an assigned model here. Let’s assume that the following timetable is made for selected models to help your understanding.

◆	00:00	Continuously (60 sec.)	Command 1
◆	09:00	On Time	Command 2
◆	10:00	Continuously (4000 sec.)	Command 3
◆	11:00	Continuously	Command 4
◆	…		

On Starting The CIMON-SCADA finds the nearest past time from a current time. If the running form for a found time is the **‘Continuously’**, the assigned command expression will be run continuously at assigned intervals. But, if it is the **‘Once On The Assigned Time’**, the expression will run on the time. If the CIMON starts at 7 o’clock on the basis of the above timetable, the content for 0 o’clock will be found. This time, the command expression 1 will be run, as the command expression of the found time is the ‘Continuously’. If the CIMON-SCADA starts at 09:01, the command expression for 09:00 will be selected but Command 2 will not be run, as the time does not coincide.

Effective The command expression assigned as the ‘Continuously’ will be effective till the next time. Command 1 for 00:00 on the basis of the example will be run once every 60 seconds till 08:59:59. But, the command expression assigned at 09:00 will effective for a minute. In the above example, Command 2 assigned at 09:00 will be run once from 09:00:00 to 09:00:59.

Interval Interval should be assigned in case of the command expression assigned as the ‘Continuously’. This interval can be assigned from 1 second to 32767 seconds. If this interval is assigned in a big number to be after the next assigned time, the expression will be run once. (The command expression assigned at 10:00 corresponds to the above example.)

- **Lunar Calendar (Leap Month)**

The CIMON-SCADA can use lunar calendar day to assign schedules and holidays. But, in lunar calendar, the special month called leap month exits. The CIMON-SCADA manages the leap month as the following basis.

In case the month is assigned

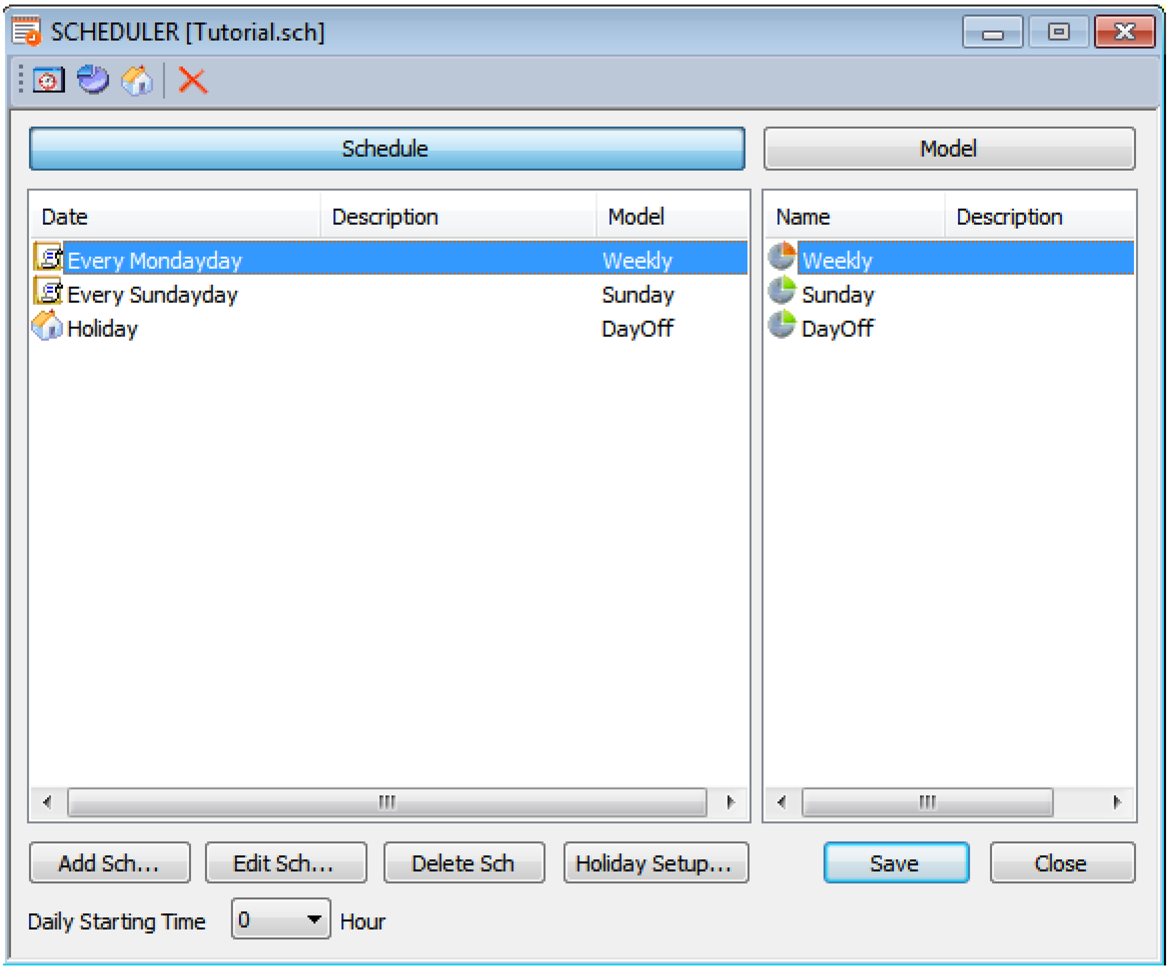
In case that a month is assigned clearly like “Lunar Every year/**8**/15”, the “Leap/8/15” will be managed as non-corresponding day.

In case the month is assigned as the ‘Every’

In case that a specific month is not assigned like “Lunar yyyy/**every**/dd”, it will be managed normally in the leap month, if the year coincides with the date(dd) in the leap month.

16-6. Online Editing

You can edit the schedule on-line. To display schedule editor at CimonX, select the **‘Scheduler’** in the ‘View’ menu of the CimonX


SCHEDULER [Tutorial.sch]
Schedule
Model
Add Sch...
Edit Sch...
Delete Sch
Holiday Setup...
Save
Close
Daily Starting Time
0
Hour

Date	Description	Model
Every Mondayday		Weekly
Every Sundayday		Sunday
Holiday		DayOff

Name	Description
Weekly	
Sunday	
DayOff	

If you hide the CimonX’s menu, you can show/hide schedule editor by following commands

To show scheduler editor

AddOnCommand("Scheduler", 1, "")

To hide scheduler editor

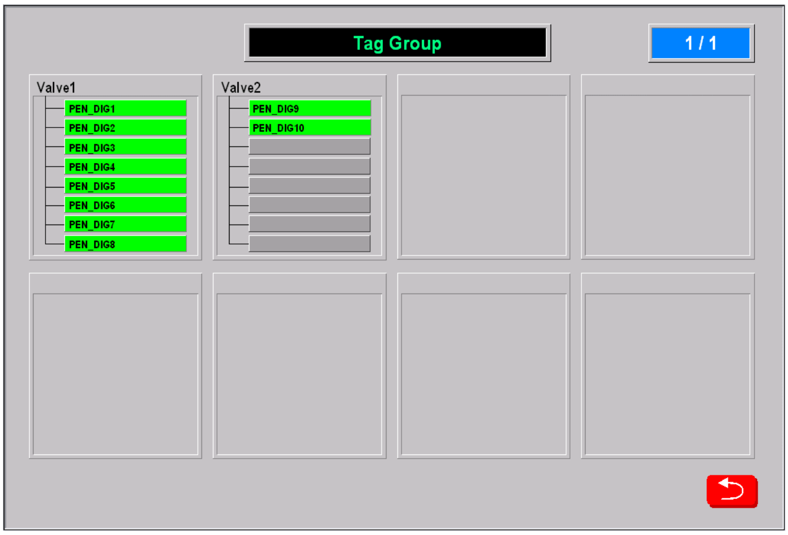
AddOnCommand("Scheduler", 2, "")

- **Note** Schedule editor on CimonX is same as CimonD’s. But, at all edit dialog box, if you select OK or Applay, the edited data is applied immediately.

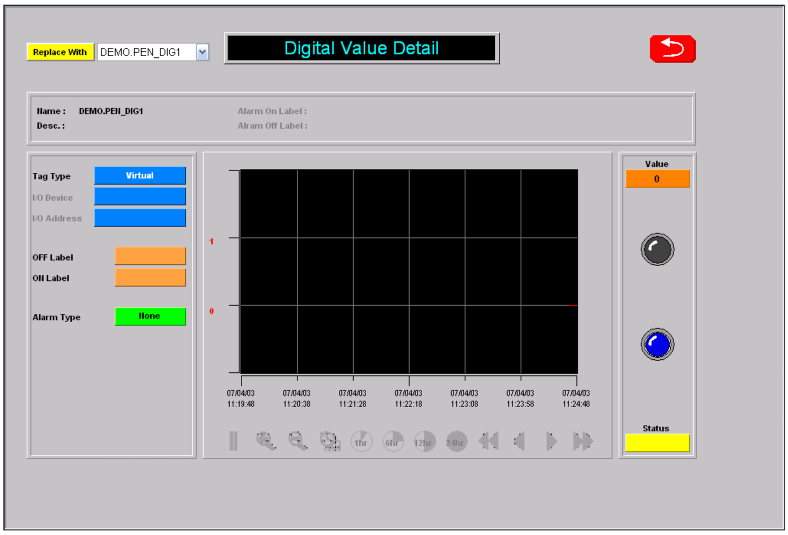
Chapter 17 Group Editor & Trend Panel Editor

17-1. Group Editor

The CIMON provides the tool to create a group tag more easily. If a **'Group Editor'** is used, a **'Group Outline Window'** and a **'Group Details Window'** will be made easily. Through those windows, the status of a tag by groups can be monitored.


Tag Group
1 / 1
Valve1
PEN_DIG1
PEN_DIG2
PEN_DIG3
PEN_DIG4
PEN_DIG5
PEN_DIG6
PEN_DIG7
PEN_DIG8
Valve2
PEN_DIG9
PEN_DIG10

Group Outline Window


Replace With
Digital Value Detail
1
0
07/04/03 11:19:48
07/04/03 11:20:38
07/04/03 11:21:28
07/04/03 11:22:18
07/04/03 11:23:08
07/04/03 11:23:58
07/04/03 11:24:48
1hr
6hr
12hr
24hr
Status

DEMO.PEN_DIG1

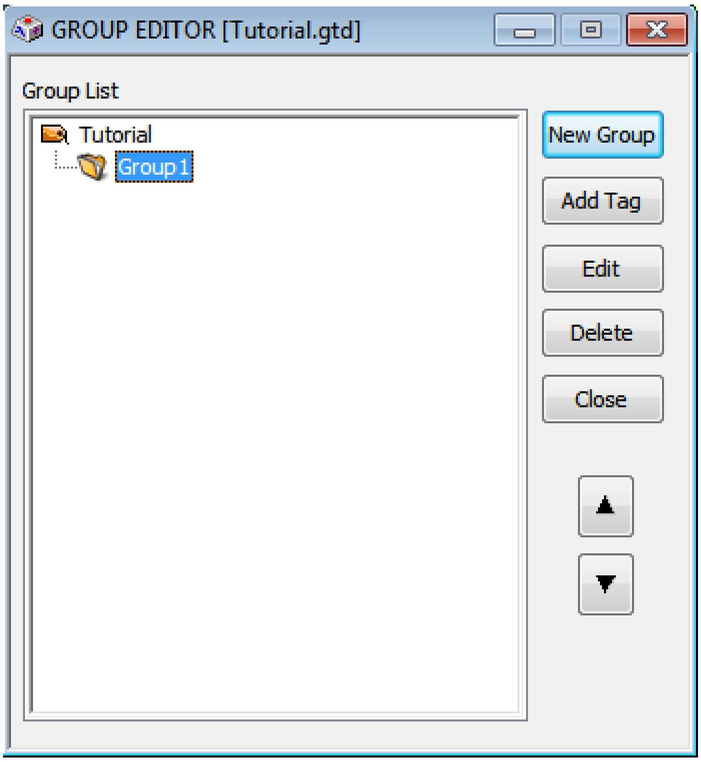
Name : DEMO.PEN_DIG1
Desc. :
Alarm On Label :
Alram Off Label :

Tag Type: Virtual
I/O Device:
I/O Address:
OFF Label:
ON Label:
Alarm Type: None
Value: 0

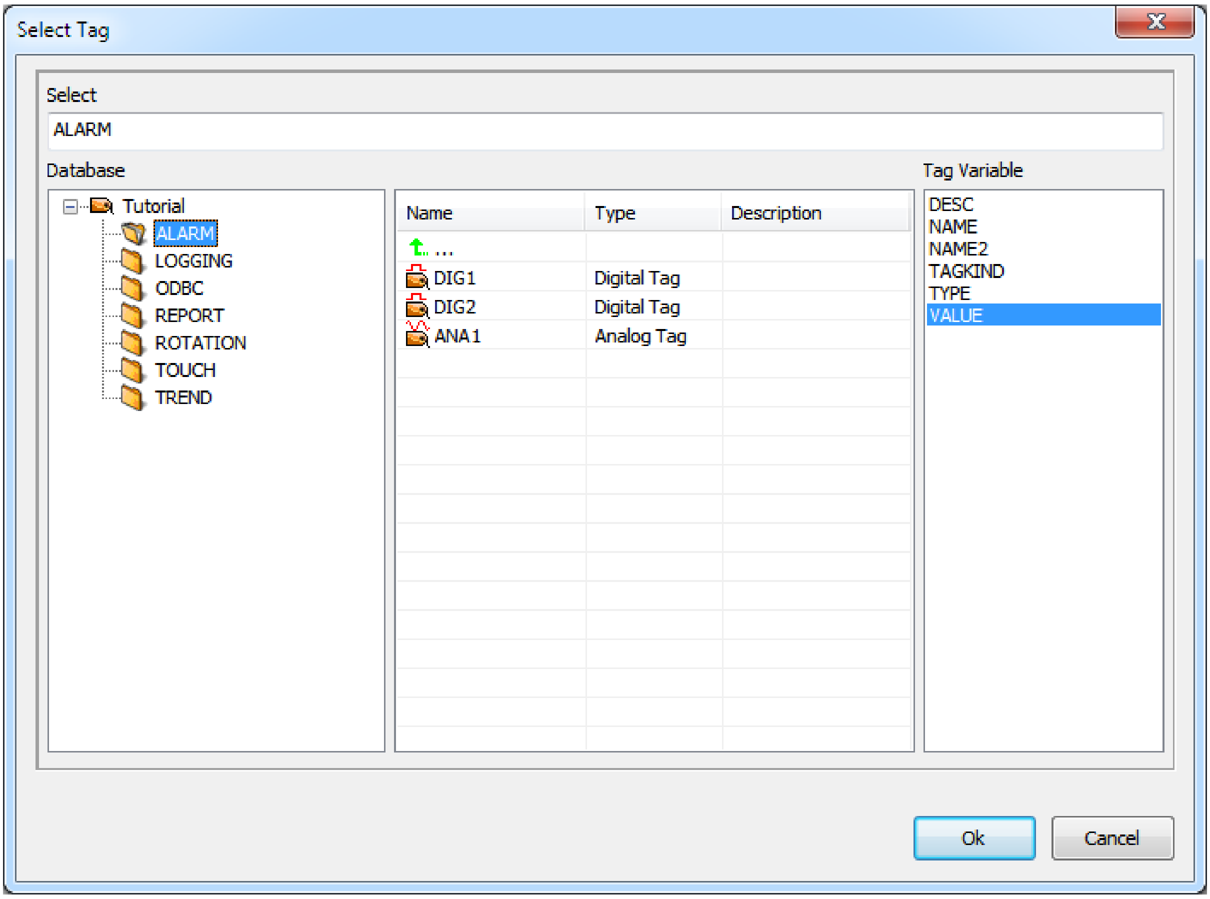
Group Details Window

1) Configuration of Group Editor Window

If you select the **'Group Editor'** in the Tools menu of the CimonD, a **'Group Editor'** window will appear as follows.


GROUP EDITOR [Tutorial.gtd]
Group List
Tutorial
Group1
New Group
Add Tag
Edit
Delete
Close

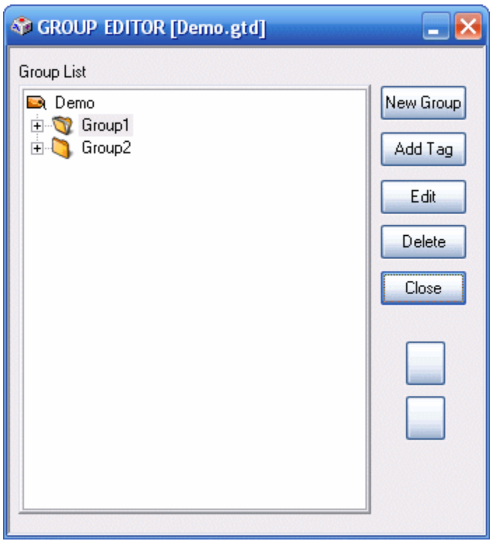
New Group	This is used to add a new group.
Add Tag	This is used to add a tag to a group. If you select the **'Add Tag'**, the following window will appear.


Select Tag
Select
ALARM
Database
Tag Variable
Tutorial
ALARM
LOGGING
ODBC
REPORT
ROTATION
TOUCH
TREND
Name
Type
Description
...
DIG1
Digital Tag
DIG2
Digital Tag
ANA1
Analog Tag
DESC
NAME
NAME2
TAGKIND
TYPE
VALUE
Ok
Cancel

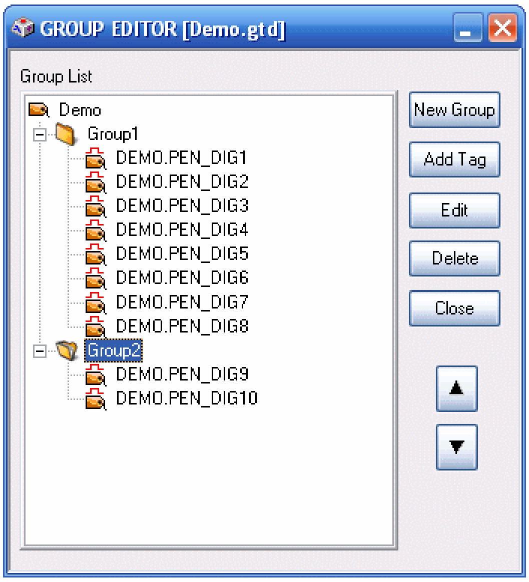
Edit	This is used to revise the name or tag of a registered group. If you click the 'Edit' button, the 'Select Tag' dialog box will appear like selecting in the 'Add Tag'.
Delete	This is used to delete the selected item among the group or tags arranged on the left of the buttons.
Close	This is used to close a **'Group Editor'** window.
▲ Button	This is used to move the order of a selected item a step up.
▼ Button	This is used to move the order of a selected item a step down.

2) Using a Group Editor

1. Click Tools and select Group Editor.
2. Click New Group and make Group1 and Group2


GROUP EDITOR [Demo.gtd]
Group List
Demo
Group1
Group2
New Group
Add Tag
Edit
Delete
Close

3. Click Add Tag to add tags as below. If you click Group tag **'Group 1'**, you will know **'PEN_DIG1 ~ PEN_DIG8'** are added to the **'Group 1'** and **'PEN_DIG9 ~ PEN_DIG10'** are the **'Group 2'**.


GROUP EDITOR [Demo.gtd]
Group List
Demo
Group1
DEMO.PEN_DIG1
DEMO.PEN_DIG2
DEMO.PEN_DIG3
DEMO.PEN_DIG4
DEMO.PEN_DIG5
DEMO.PEN_DIG6
DEMO.PEN_DIG7
DEMO.PEN_DIG8
Group2
DEMO.PEN_DIG9
DEMO.PEN_DIG10
New Group
Add Tag
Edit
Delete
Close
▲
▼

[Notice]

● Maximum 8 tags can be selected at once in a Group Editor.

4. Click the **'Edit'** to change **'Group 1'** to **'Valve 1'**.
5. Click the **'Edit'** to change **'Group 2'** to **'Valve 2'**.

6. After clicking the **'New Page'** icon in the Toolbar of the CimonD, assign the environment of the new page as follows.

   Page Title: Edit Group Panel   Page Background: Violet

7. Click the **'Button'** icon in the Toolbar of the CimonD.
8. After entering **'Open Group Outline Window'** as the title, click the **'Next'**.

9. After selecting the **'Command Expression'**, enter as follows.

   ShowSysPage (1, -1)

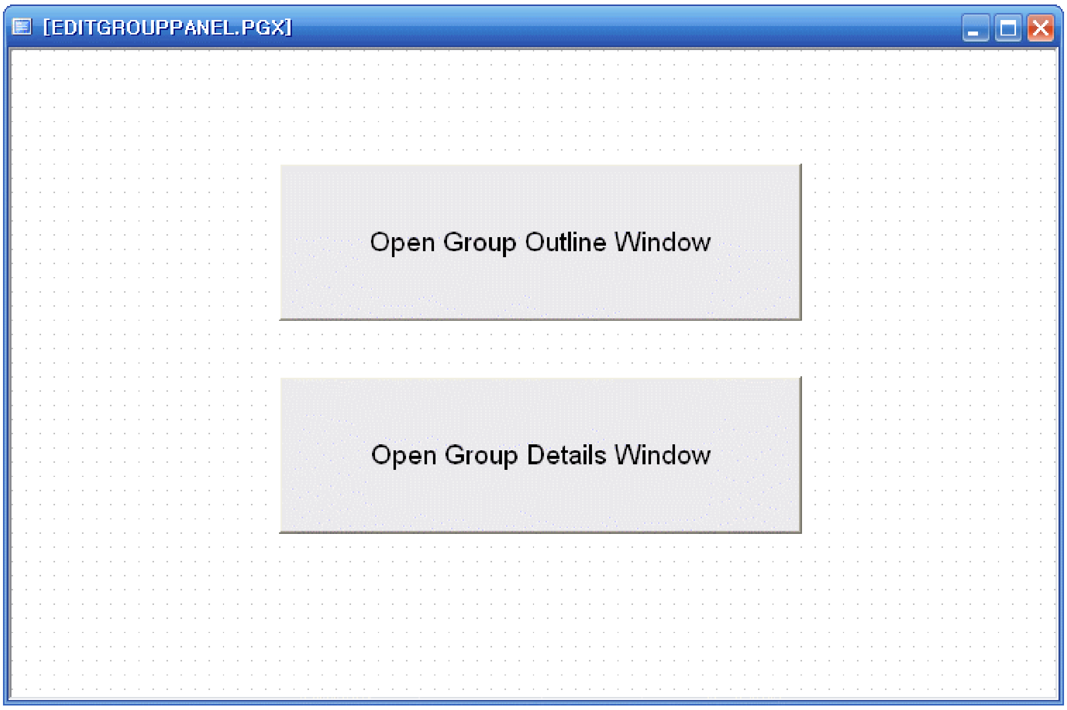
Example) **ShowSysPage (Type, Index)**

- In (1, -1), '1' opens the group outline window and '-1' opens the first page.
- In (2, -1), '2' opens the group details window and '-1' opens the first page.

10. Click the **'Ok'** button.
11. Click the **'Button'** icon in the toolbar of the CimonD.
12. Enter **'Open Group Outline Window'** as the title.
13. Click the **'Next'**.
14. After selecting the **'Command Expression'**, enter as follows.

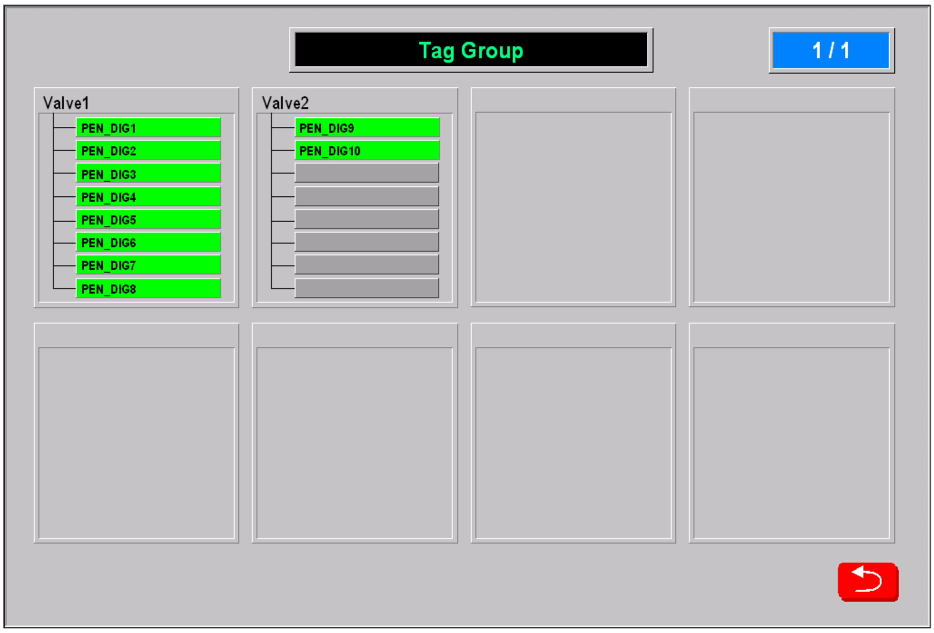
    ShowSysPage (2, -1)

15. If you click the **'Ok'** button, the following window will appear.

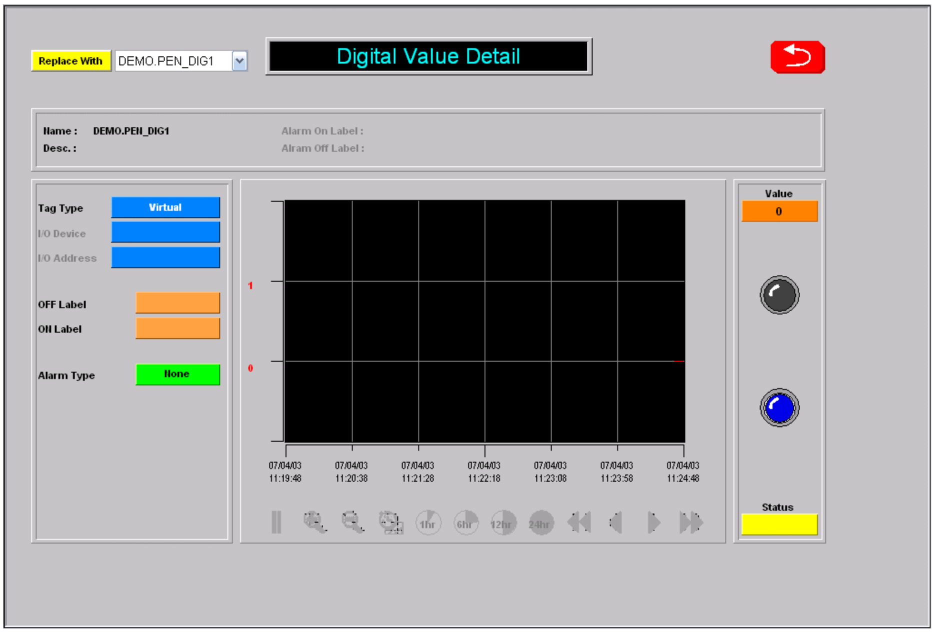


16. Select the menu to save the window as the name of **‘EditGroupPanel.pgx’**.

17. Select the menu to run the CimonX and open Page **‘EditGroupPanel.pgx’**. And if you click the **‘Open Group Outline Window’** button, the **‘Group Outline Window’** will appear as follows.


Tag Group
1 / 1
Valve1
PEN_DIG1
PEN_DIG2
PEN_DIG3
PEN_DIG4
PEN_DIG5
PEN_DIG6
PEN_DIG7
PEN_DIG8
Valve2
PEN_DIG9
PEN_DIG10

18. If you click the**‘Demo.PEN_ANA1’** of the **‘Valve 1’**, the **‘Digital Details Window’** will appear as follows.


Digital Value Detail
1
0
07/04/03 11:19:48
07/04/03 11:20:38
07/04/03 11:21:28
07/04/03 11:22:18
07/04/03 11:23:08
07/04/03 11:23:58
07/04/03 11:24:48
1hr
6hr
12hr
24hr

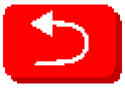
Replace With DEMO.PEN_DIG1

Name : DEMO.PEN_DIG1
Desc. :
Alarm On Label :
Alram Off Label :

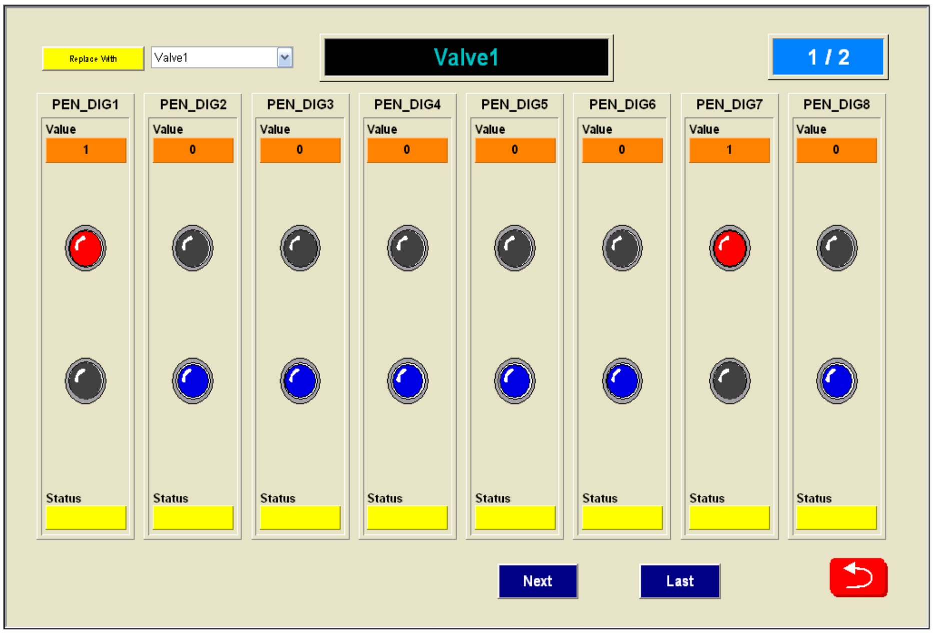
Tag Type Virtual
I/O Device
I/O Address
OFF Label
ON Label
Alarm Type None

Value 0
Status

19. Click the **'Next'** button on the top of the window.

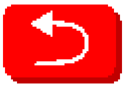


20. The **'Valve 1'** window will appear. Here, the eight tags in Group Panel **'Valve 1'** are shown at a time.

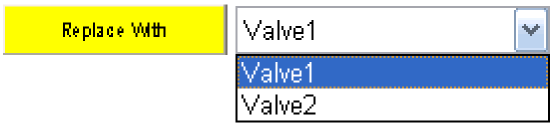

Replace With
Valve1
Valve1
1 / 2
PEN_DIG1
PEN_DIG2
PEN_DIG3
PEN_DIG4
PEN_DIG5
PEN_DIG6
PEN_DIG7
PEN_DIG8
Value
Status
Next
Last

PEN_DIG1	PEN_DIG2	PEN_DIG3	PEN_DIG4	PEN_DIG5	PEN_DIG6	PEN_DIG7	PEN_DIG8
1	0	0	0	0	0	1	0

21. If you click the Next button on the bottom of the window, the window will be returned to the previous page.

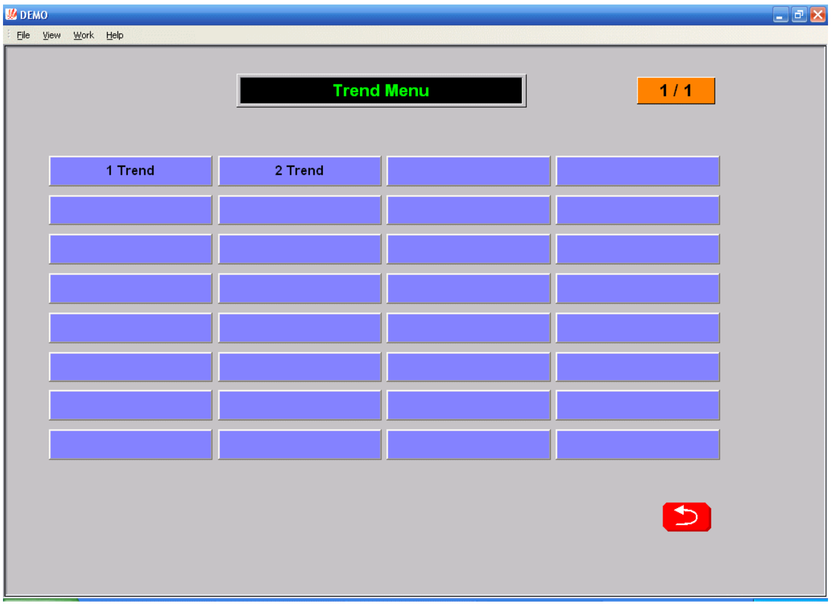


22. Select the menu to return to the **'Edit Group Panel Window'** again.
23. Click the **'Open Group Details Window'** button.
24. The **'Valve 1'** window will appear first. The window can be moved to the **'Valve 2'** by the Move button on the left top of the window.

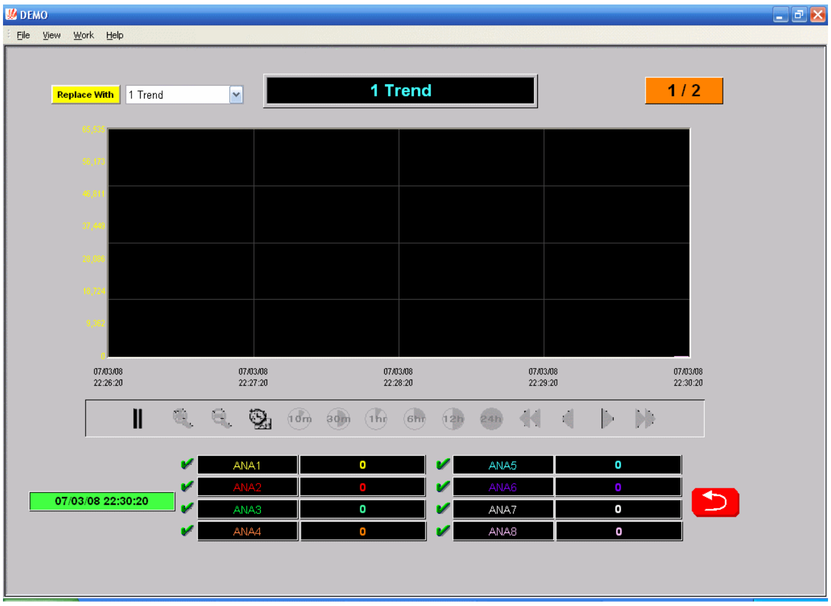

Replace With
Valve1
Valve1
Valve2

17-2. Trend Panel Editor

The CIMON provides the tool to create a trend window more easily. If a **'Trend Panel Editor'** is used, a **'Trend Menu Window'** and a **'Trend Details Window'** will be made easily.


DEMO
File View Work Help
Trend Menu
1 / 1
1 Trend
2 Trend

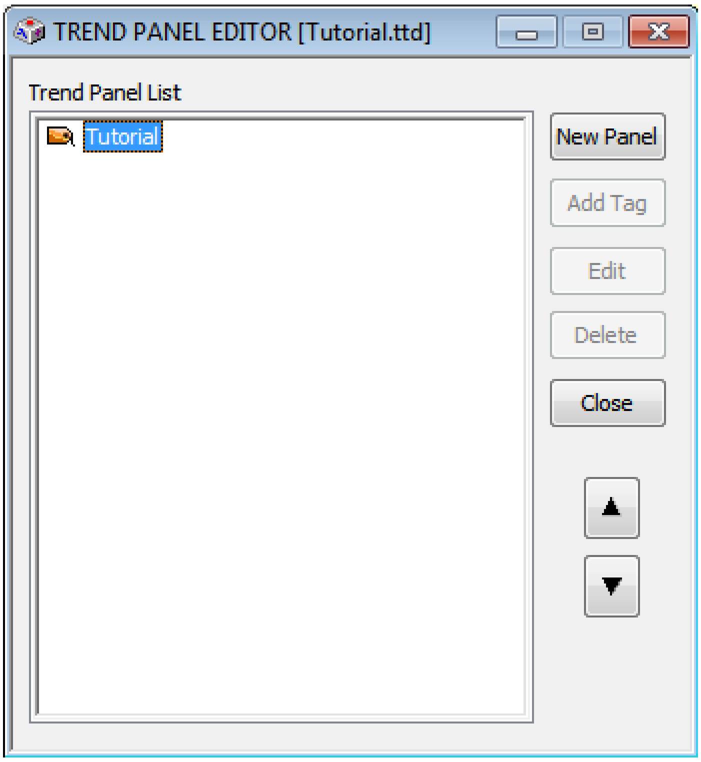
Trend Menu Window


DEMO
File View Work Help
Replace With
1 Trend
1 Trend
1 / 2
07/03/08 22:26:20
07/03/08 22:27:20
07/03/08 22:28:20
07/03/08 22:29:20
07/03/08 22:30:20
10m
30m
1hr
6hr
12h
24h
07/03/08 22:30:20
ANA1 0
ANA2 0
ANA3 0
ANA4 0
ANA5 0
ANA6 0
ANA7 0
ANA8 0

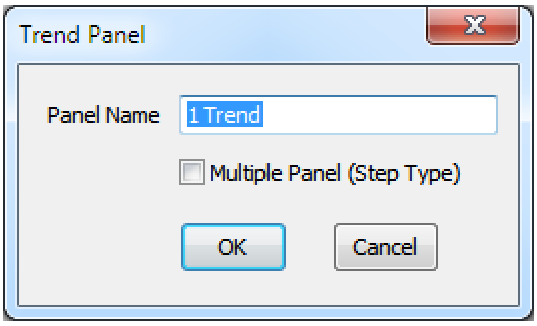
Trend Details Window

1) Configuration of Trend Panel Editor

If you select the **'Trend Panel'** in the Tools menu of the CimonD, a **'Trend Panel Editor'** window will appear.


TREND PANEL EDITOR [Tutorial.ttd]
Trend Panel List
Tutorial
New Panel
Add Tag
Edit
Delete
Close
▲
▼

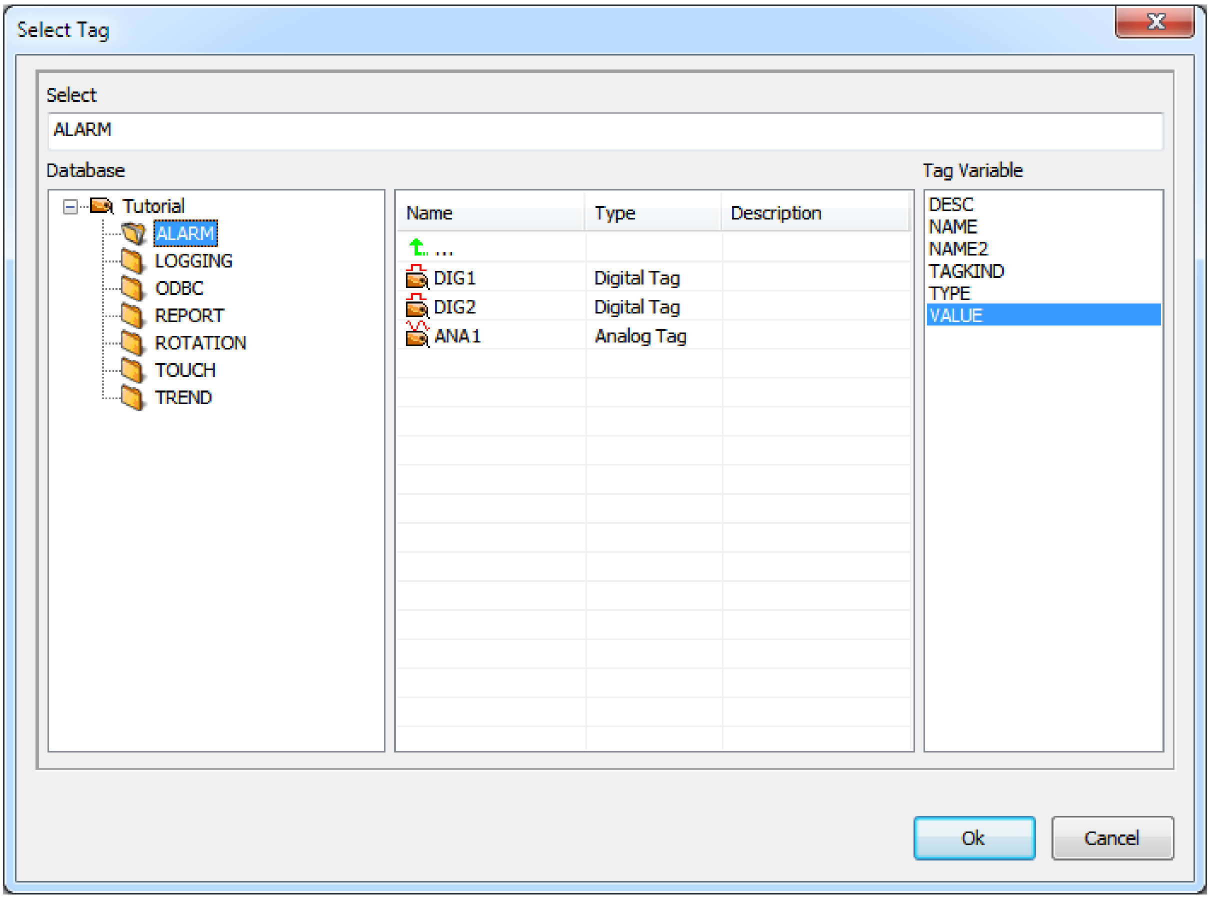
New Panel This is used to add a new panel. If you select the **'New Panel'**, the following window will appear.


Trend Panel
☐ Multiple Panel (Step Type)
OK
Cancel

Panel Name: 1 Trend

Panel Name	This is used to enter a panel name.
Multiple Panel	This is used to assign multiple-type to trend graph type. If this item is not selected, the graph will be displayed as YT type.

Add Tag This is used to register a tag to the panel. If you select the **'Add Tag'**, the following window will appear.


Select Tag
Select
Database
Tutorial
ALARM
LOGGING
ODBC
REPORT
ROTATION
TOUCH
TREND
Tag Variable
DESC
NAME
NAME2
TAGKIND
TYPE
VALUE
Ok
Cancel

Select: ALARM

Name	Type	Description
...		
DIG1	Digital Tag	
DIG2	Digital Tag	
ANA1	Analog Tag	

Edit This is used to revise the name of a registered panel or to change the type of a panel. Or, this is used to edit a registered tag. If you select one among the panels arranged on the left and click the **'Edit'** button, the dialog box as same as the one when you select the 'New Panel' will appear.

If you click the 'Edit' button while selecting a tag, the dialog box as same as the one when you select the 'Add Tag' will appear.

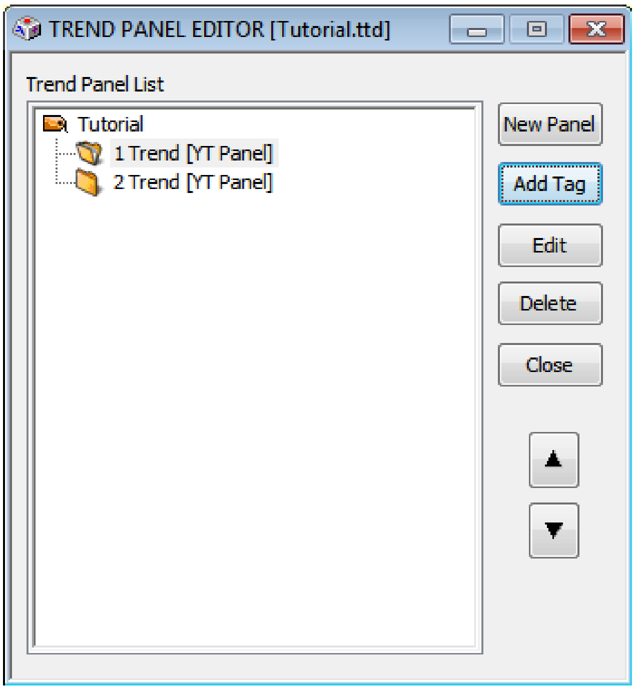
Delete This is used to delete a trend panel or a tag. If you press this button while selecting the item deleted, the corresponding item will be deleted.

▲ Button This is used to move the order of a selected item a step up.

▼ Button This is used to move the order of a selected item a step down.

2) Using a Trend panel Window

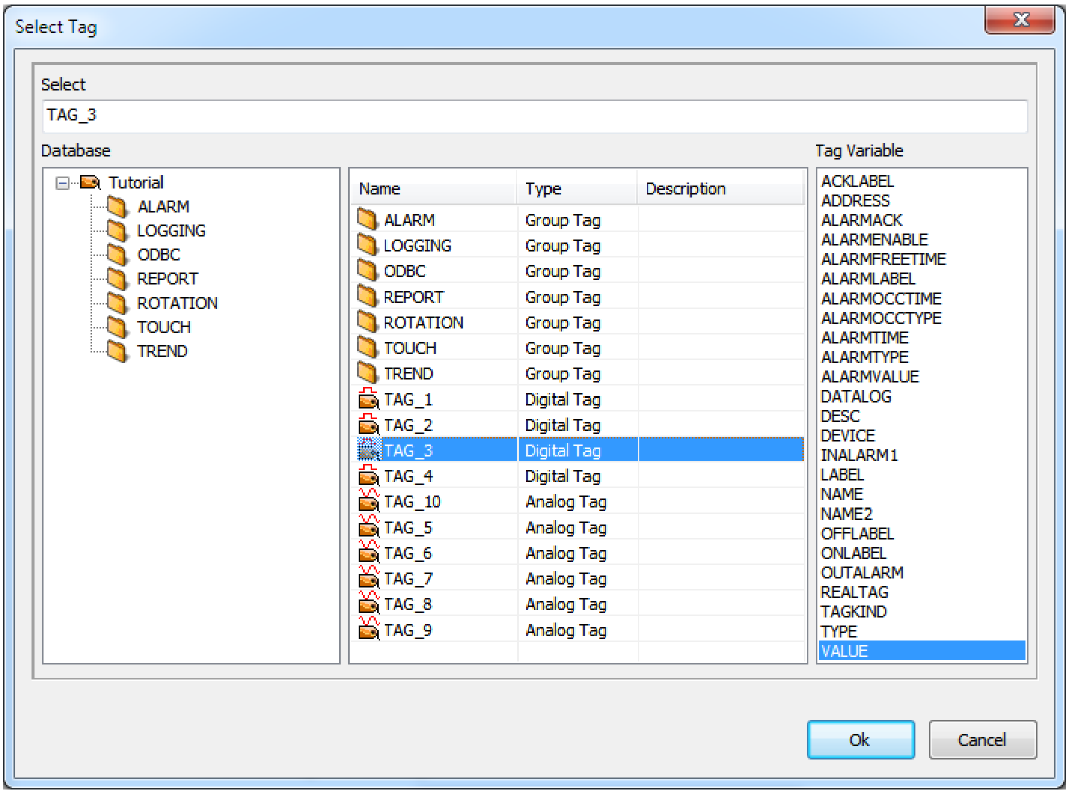
1. Click Tools and select Trend Panel.
2. Click Add Tag and make 2 Trends.



Trend Panel List

- Tutorial
  - 1 Trend [YT Panel]
  - 2 Trend [YT Panel]

3. Click Add Tag choose tags that you want to add in 1 Trend or 2 Trend.



Select: TAG_3

Database

- Tutorial
  - ALARM
  - LOGGING
  - ODBC
  - REPORT
  - ROTATION
  - TOUCH
  - TREND

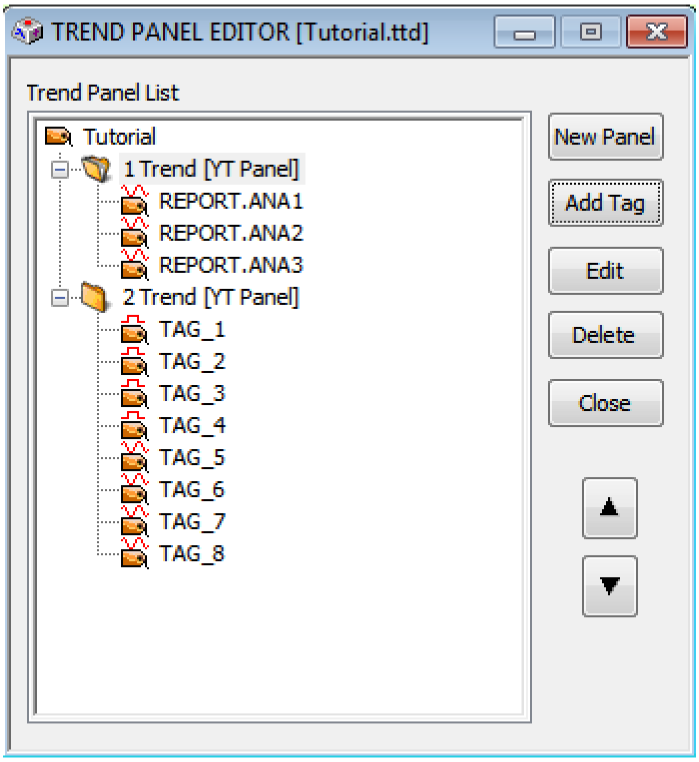
Name	Type	Description
ALARM	Group Tag	
LOGGING	Group Tag	
ODBC	Group Tag	
REPORT	Group Tag	
ROTATION	Group Tag	
TOUCH	Group Tag	
TREND	Group Tag	
TAG_1	Digital Tag	
TAG_2	Digital Tag	
TAG_3	Digital Tag	
TAG_4	Digital Tag	
TAG_10	Analog Tag	
TAG_5	Analog Tag	
TAG_6	Analog Tag	
TAG_7	Analog Tag	
TAG_8	Analog Tag	
TAG_9	Analog Tag	

Tag Variable

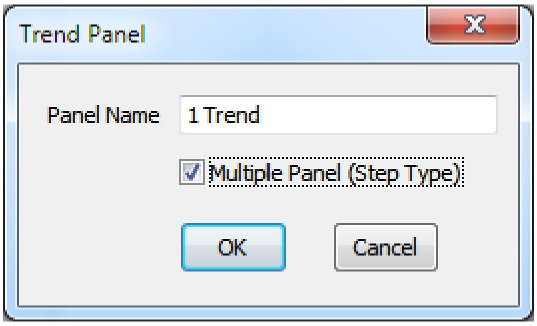
ACKLABEL
ADDRESS
ALARMACK
ALARMENABLE
ALARMFREETIME
ALARMLABEL
ALARMOCCTIME
ALARMOCCTYPE
ALARMTIME
ALARMTYPE
ALARMVALUE
DATALOG
DESC
DEVICE
INALARM1
LABEL
NAME
NAME2
OFFLABEL
ONLABEL
OUTALARM
REALTAG
TAGKIND
TYPE
VALUE

[Notice]

- Maximum 8 tags can be selected at once in a Trend Panel editor.


TREND PANEL EDITOR [Tutorial.ttd]
Trend Panel List
Tutorial
1 Trend [YT Panel]
REPORT.ANA1
REPORT.ANA2
REPORT.ANA3
2 Trend [YT Panel]
TAG_1
TAG_2
TAG_3
TAG_4
TAG_5
TAG_6
TAG_7
TAG_8
New Panel
Add Tag
Edit
Delete
Close

4. If you click the **'Edit**' button after selecting the '**Trend 1[YT Panel]'**, the following window will appear.


Trend Panel
OK
Cancel

Panel Name 1 Trend

☑ Multiple Panel (Step Type)

5. Click the **'Multiple Panel (Step Type)'** and then click OK.
6. Click the **'Close**' button after repeating the same edit process for '**Trend 2[YT Panel]'**.
7. After clicking the **'New Page'** icon in the Toolbar of the CimonD, assign the environment of the new page as follows.

Page Title: Edit Trend Panel   Page Background: Violet

8. Enter **'Open Trend panel'** as the title after clicking the **'Button'** icon in the Toolbar of the CimonD.
9. After clicking the **'Next'** and selecting the **'Command Expression'**, enter as follows.

ShowSysPage (9, -1)

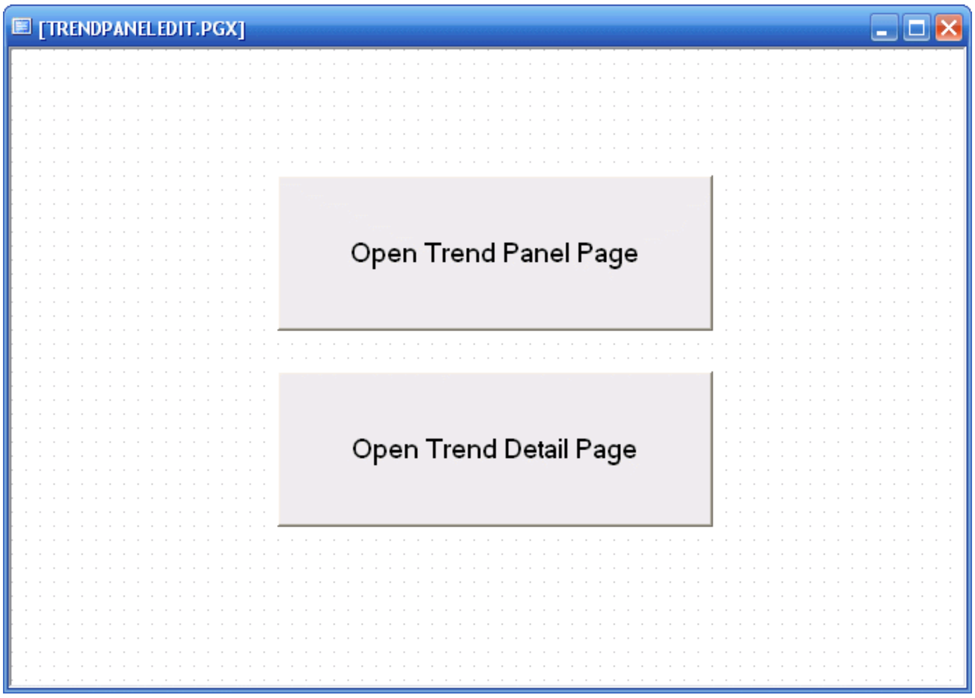
Example) **ShowSysPage (Type, Index)**

- In (9, -1), '9' opens the Trend panel window and '-1' opens the first page.
- In (10, -1), '10' opens the group details window and '-1' opens the first page.

10. Click the **'Ok'** button.
11. Click the **'Button'** icon in the Toolbar of the CimonD.
12. Enter **'Open Trend Details Window'** as the title and click the **'Next'** button.
13. After selecting the **'Command Expression'**, enter as follows.

ShowSysPage (10, -1)

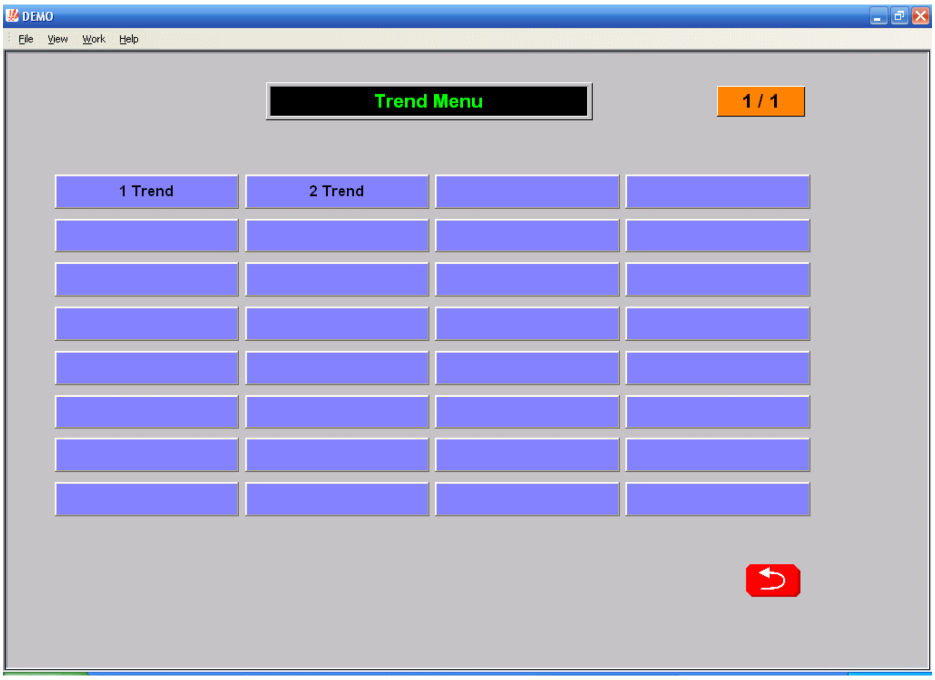
14. If you click the **'Ok'** button, the following window will appear.



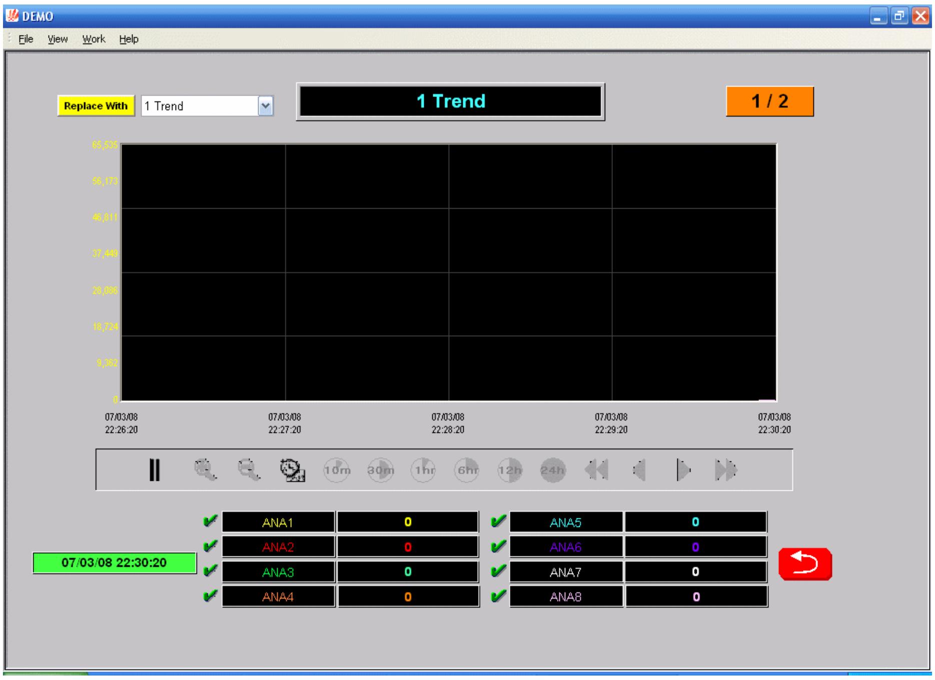
15. Select the menu to save the window as **'EditTrendPanel.pgx'**.

16. Select the menu to run the CIMON and to open Page **'EditTrendPanel.pgx'**.

17. If you click the **'Open Trend Panel Window'** button, a **'Trend Menu'** window will appear as follows.

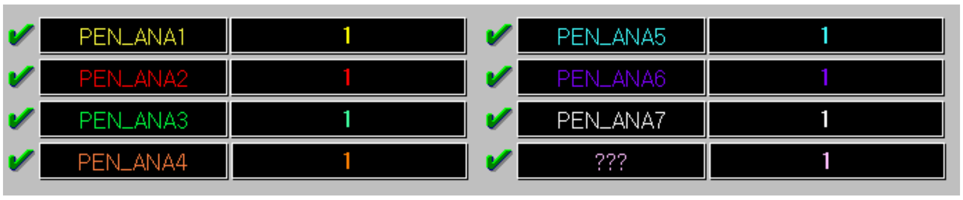

DEMO
File
View
Work
Help
Trend Menu
1 / 1
1 Trend
2 Trend

18. If you press the **'Trend 1'**, the following window will appear.


DEMO
File
View
Work
Help
Replace With
1 Trend
1 Trend
1 / 2
65,535
56,173
46,811
37,449
28,086
18,724
9,362
0
07/03/08
22:26:20
07/03/08
22:27:20
07/03/08
22:28:20
07/03/08
22:29:20
07/03/08
22:30:20
10m
30m
1hr
6hr
12h
24h
07/03/08 22:30:20

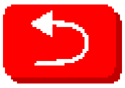
✓	ANA1	0	✓	ANA5	0
✓	ANA2	0	✓	ANA6	0
✓	ANA3	0	✓	ANA7	0
✓	ANA4	0	✓	ANA8	0

19. You can select the tags to see a trend on the bottom of the window. The selected tags will be check-marked.

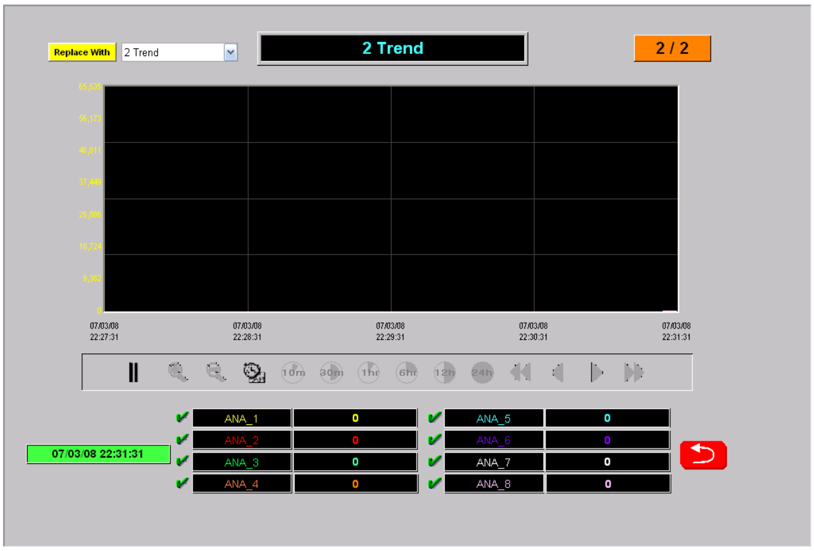


✓	PEN_ANA1	1	✓	PEN_ANA5	1
✓	PEN_ANA2	1	✓	PEN_ANA6	1
✓	PEN_ANA3	1	✓	PEN_ANA7	1
✓	PEN_ANA4	1	✓	???	1

20. If you click the Next button on the bottom of the window, the window will be returned to the previous page.

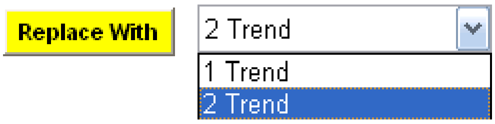


21. If you click the **'Trend 2'**, the following window will appear.


Replace With
2 Trend
2 Trend
2 / 2
65,535
56,173
46,811
37,449
28,086
18,724
9,362
0
07/03/08 22:27:31
07/03/08 22:28:31
07/03/08 22:29:31
07/03/08 22:30:31
07/03/08 22:31:31
10m
30m
1hr
6hr
12h
24h
07/03/08 22:31:31

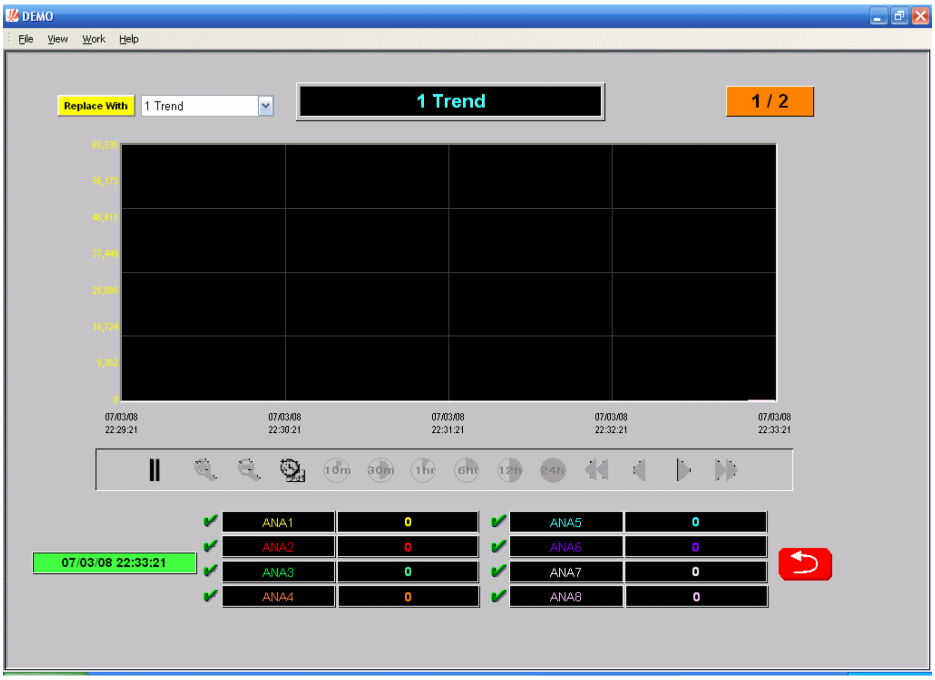
✓	ANA_1	0	✓	ANA_5	0
✓	ANA_2	0	✓	ANA_6	0
✓	ANA_3	0	✓	ANA_7	0
✓	ANA_4	0	✓	ANA_8	0

22. The window can be moved to the **'Trend 2'** by the **'Move'** button on the left top of the window.


Replace With
2 Trend
1 Trend
2 Trend

23. Select the menu to return to the **'Edit Trend Panel Window'** and click the **'Open Trend Details Window'** button.

24. The 'Trend 1' will appear.


DEMO
File
View
Work
Help
Replace With
1 Trend
1 Trend
1 / 2
65,535
56,173
46,811
37,449
28,086
18,724
9,362
0
07/03/08 22:29:21
07/03/08 22:30:21
07/03/08 22:31:21
07/03/08 22:32:21
07/03/08 22:33:21
10m
30m
1hr
6hr
12h
24h
07/03/08 22:33:21
ANA1 0
ANA2 0
ANA3 0
ANA4 0
ANA5 0
ANA6 0
ANA7 0
ANA8 0

Chapter 18 Hot Keys

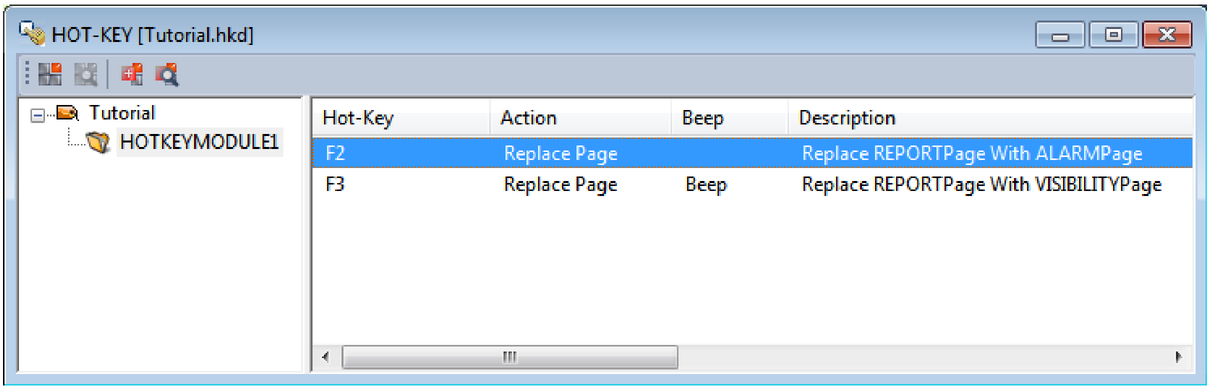
The Hot key means to run a pre-defined command simply by key input without any other input tool when the CimonX is run. The purpose of Hot Key is to process frequent input fast and to use without displaying the information about a specific input caused by security or others on a window.

The Hot Key is the list defining about applicable Hot Key in running a monitoring/control window, and is inputted, edited and run by the file. Hot Key can be applied while a monitoring/controlling window is running.

The extension name of hot key is **"hkd"**. The directory of Hot Key is saved in the work folder assigned as "Projectname.hkd" when a project is created.

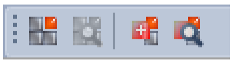
18-1. Configuration of Hot Key Window

The following window is displayed when a Hot Key Manger is run.



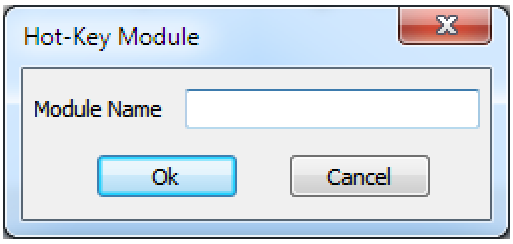
Hot-Key	Action	Beep	Description
F2	Replace Page		Replace REPORTPage With ALARMPage
F3	Replace Page	Beep	Replace REPORTPage With VISIBILITYPage

The following picture displays the tool bar of the Hot Key Manager.



1) Add Hot-Key Module

This is used to add a new Hot Key module. This groups several hot keys as a module to use Hot Key easily. If you select this command, a Hot Key Configuration dialogue box will appear.



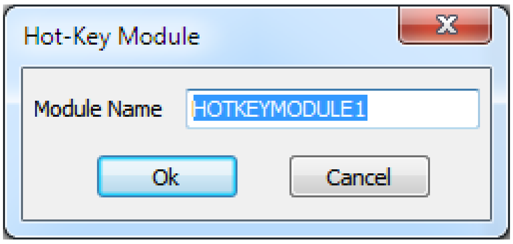
Module Name: This is to enter a Module Name to create a new module.

[The limited conditions]

1. It is available to enter in the combination of English, Korean, numeral and specific characters.
2. There is no limitation on the number of the characters entered.

2) Edit Hot-Key Module

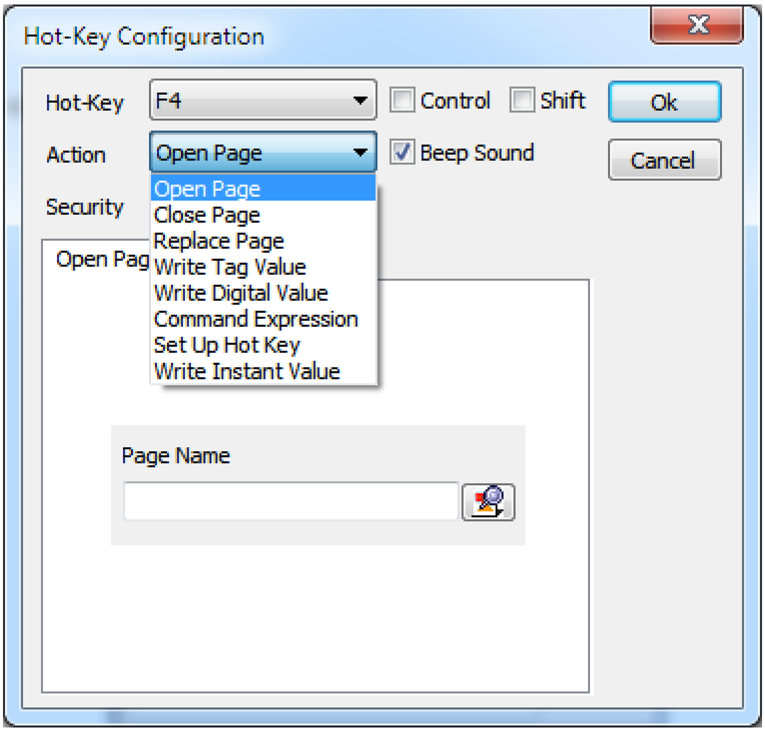
This is used to change a selected module name. If you select this item, the following dialog box will appear. The dialog box is as same as the one for the Add Hot Key Module.



Module Name: HOTKEYMODULE1

3) Add Hot-Key

This is used to set up the hot key added to a corresponding module.



Hot-Key Configuration

Hot-Key: F4 ☐ Control ☐ Shift

Action: Open Page ☑ Beep Sound

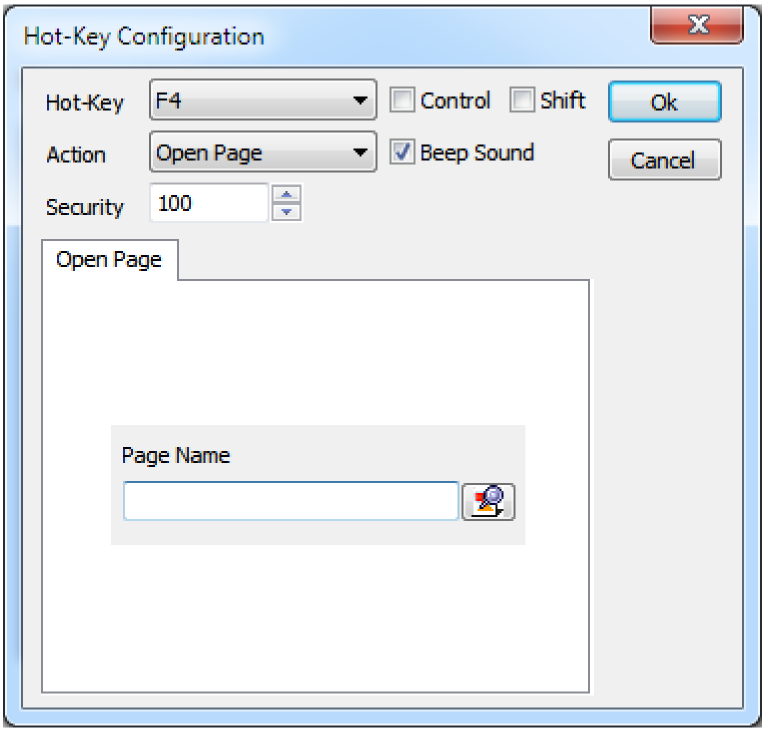
Ok
Cancel
Security
Open Pag
Open Page
Close Page
Replace Page
Write Tag Value
Write Digital Value
Command Expression
Set Up Hot Key
Write Instant Value
Page Name

Hot Key	The keys defined as hot key on the keyboard are as follows. Back Space, TAB, Enter, Caps Lock, Escape, Space, Page Up, Page Down, End, Home, Left, Up, Right, Down, Print Screen, Insert, Del, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, *, +, -, ., /, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, Num Lock, Scroll Lock
Control	This is assigned to use in combining the Control key and a hot key.
Shift	This is assigned to use in combining the Shift key and a hot key.
Beep Sound	This is assigned to sound “Beep” when a hot key is run.
Action	The types of action are Open Page, Close Page, Replace Page, Write Tag Value, Write Digital Value, Command Expression, and Set Hot Key.
Security	This is used to set up a Security level from 1 to 100.

Pull-down menu of Action

- **Open Page**

This is used to open a page by using a hot key.



Hot-Key Configuration
Ok
Cancel
Open Page
Page Name

Hot-Key: F4
☐ Control ☐ Shift
Action: Open Page
☑ Beep Sound
Security: 100

Page Name	Select the page name that you want to open.

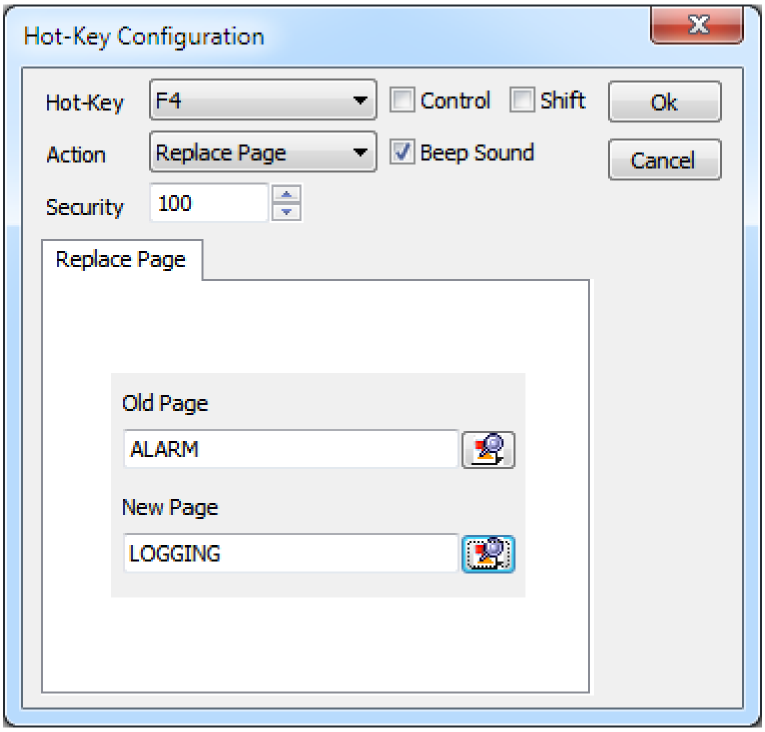
- **Close Page**

This is used to close a page by using a hot key.

Page Name	Select the page name that you want to close. If you input "*", all pages except a default page will be closed.

- **Replace Page**

  This is used to replace a page by using a hot key.



Hot-Key Configuration

Hot-Key: F4 ☐ Control ☐ Shift

Action: Replace Page ☑ Beep Sound

Security: 100

Replace Page

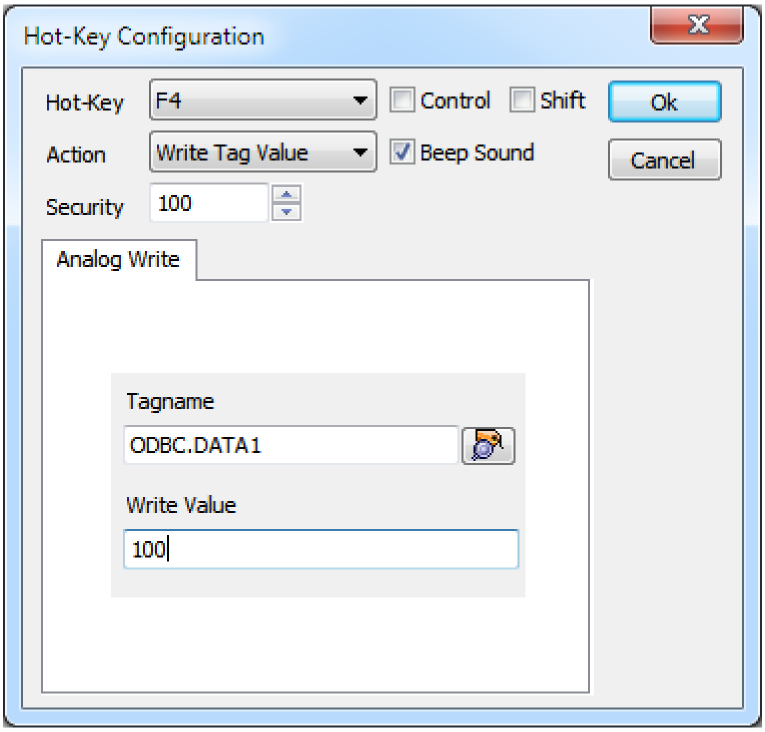
Old Page: ALARM

New Page: LOGGING

Old Page	Select the page name that you want to close. If you enter “*”, all pages except a default page will be closed and a new will be shown.
New Page	Select the page name that you want to open.

- **Write Tag Value**

This is used to write the value of a tag by using a hot key.

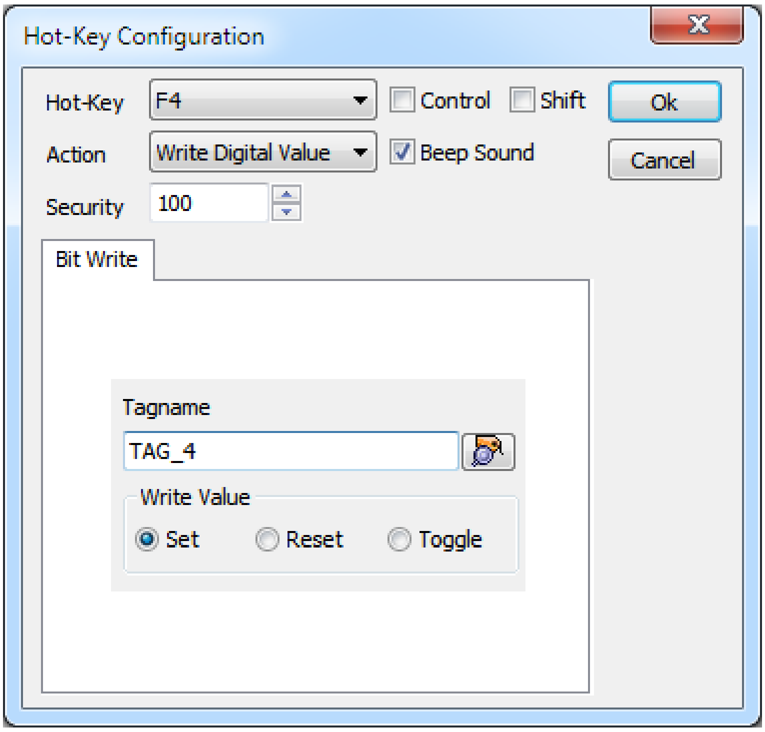


Hot-Key: F4
☐ Control ☐ Shift
Action: Write Tag Value
☑ Beep Sound
Security: 100
Tagname: ODBC.DATA1
Write Value: 100

Tag Name	Select a Tag Name directly or select a specific tag by using a **'Select Tag'** dialog box.
Write Value	Write a desired value. In case of a digital tag, it is 0 or 1. In case of an analog tag, it is entered in integer or floating decimal point form.

- **Write Digital Value**

This is used to write the value of a digital tag by using a hot key.



Hot-Key Configuration

Hot-Key: F4 ☐ Control ☐ Shift

Action: Write Digital Value ☑ Beep Sound

Security: 100

Bit Write

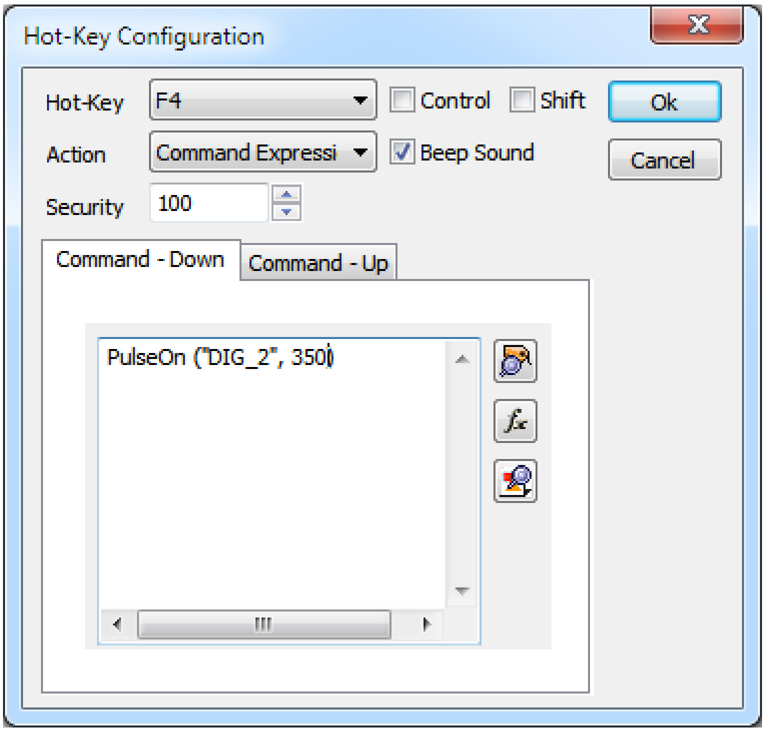
Tagname: TAG_4

Write Value: ● Set ○ Reset ○ Toggle

Tag Name	Select a Tag Name directly or select a digital tag by using a **‘Select Tag’** dialog box.
Set	This is used to assign 1 to the value of a corresponding digital tag.
Reset	This is used to assign 0 to the value of a corresponding digital tag.
Toggle	Comparing the value of a current digital tag, if 0, assign 1 to it and if 1, assign 0 to it.

- **Command Expression**

  This is used to define to run a command by using a hot key.


Hot-Key Configuration
Ok
Cancel
Command - Down
Command - Up

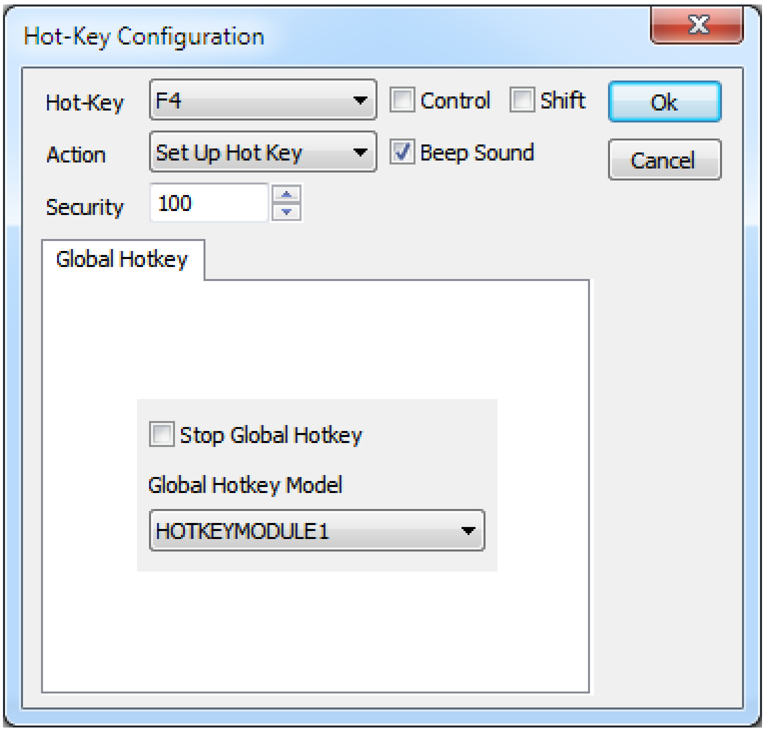
Hot-Key: F4
☐ Control ☐ Shift
Action: Command Expressi
☑ Beep Sound
Security: 100

```
PulseOn ("DIG_2", 350)
```

Command - Down	Enter the command expression run on pressing a key. For example, it is available to assign a tag value, to run or stop a script function and enter the command expression for log-in/log-out.
Command – Up	Enter the command expression run on releasing a key.

- **Set Up Hot Key**

  This is used to set up or stop a global hot key.



Hot-Key: F4 ☐ Control ☐ Shift
Action: Set Up Hot Key ☑ Beep Sound
Security: 100
☐ Stop Global Hotkey
Global Hotkey Model: HOTKEYMODULE1

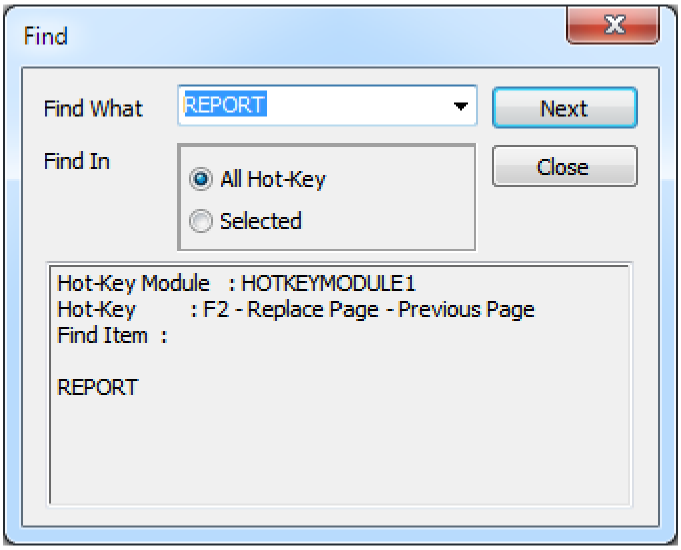
Stop Global Hot Key	If this item is set up, the action of a global hot key will be stopped.
Global Hot Key Module	This is used to assign a specific hot key module to a global hot key module. This item is assigned so that the defined hot key module can be applied to all the windows of the CimonX.

4) Edit Hot Key

This is used to edit an added hot key. If you double-click a registered record on the right window of a Hot Key Manager, or select a defined hot key in a corresponding module and press the **‘Edit Hot Key’**, a **‘Hot Key Configuration’** dialog box will appear. Edit each set item. If you want to save the edited contents, select “OK”. Otherwise, select “Cancel”.

- **Find**

This is used to find the string in a hot key. This menu cab be activated in the Edit menu when the Hot-Key editor opens. A **'Find'** dialog box is as follows.



Find What: REPORT

Find In: ● All Hot-Key ○ Selected

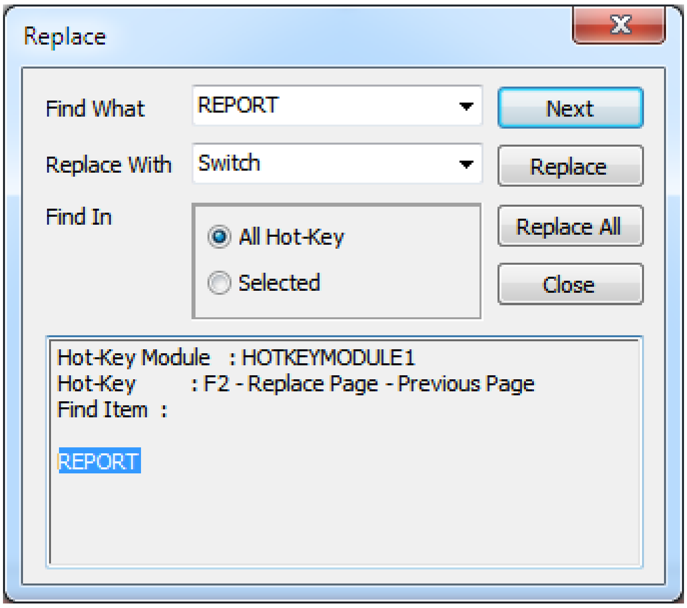
Hot-Key Module : HOTKEYMODULE1
Hot-Key : F2 - Replace Page - Previous Page
Find Item :

REPORT

Find What	This is used to enter the string found.
Find In	Select one between the All Hot Key and the Currently Selected Hot Key Module to find a string.
Next	This is used to find a same string at a current location continuously.
Close	This is used to close a Find dialog box.

- **Replace**

  This is used to replace the string found with other string. This menu cab be activated in the Edit menu when the Hot-Key editor opens. A string may be found and replaced in a selected location and range. Enter the string which you want to find to the Find What and the string with which you want to replace it to the Replace With. Press the **'Find/Replace'** button. The All Hot Key is used to replace the string entered in the Find What for all tags.



Find What REPORT

Replace With Switch

Find In

● All Hot-Key

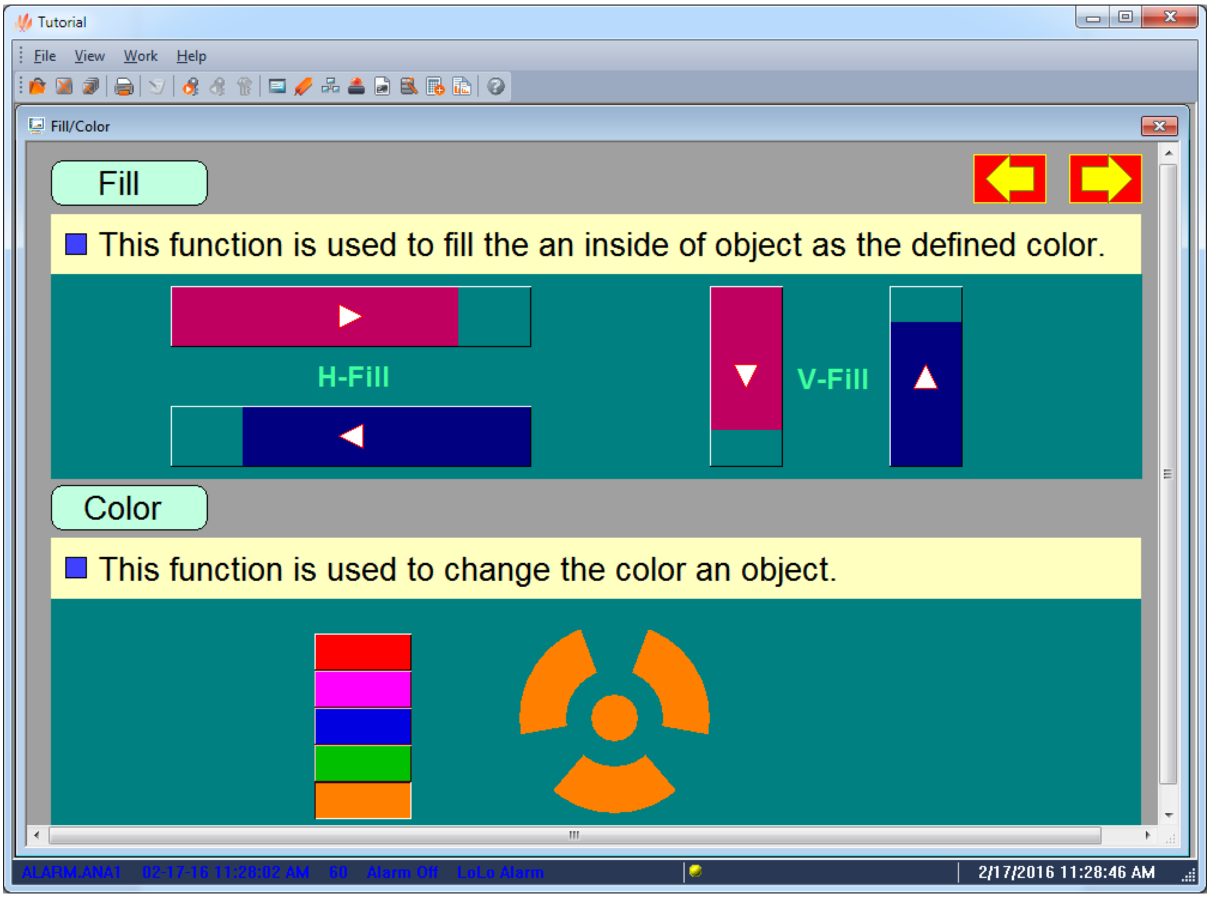
○ Selected

```
Hot-Key Module   : HOTKEYMODULE1
Hot-Key        : F2 - Replace Page - Previous Page
Find Item  :

REPORT
```

Find What	This is used to enter the string found.
Replace With	This is used to enter the string replaced.
Find In	Select one between the All Hot Key and the Currently Selected Hot Key Module to find a string.
Next	This is used to find a same string at a current location continuously.
Replace	This is used to replace the found string with the string replaced.
Replace All	This is used to replace all the string in the range assigning the Find What and the Replace With.

18-2. Creating a Hot Key

Let’s run the Replace in the **‘MAINMENU’** located in the Demo Directory of the CIMON by using the Hot Key (F2, F3).


Tutorial
File
View
Work
Help
Fill/Color
Fill
H-Fill
V-Fill
Color

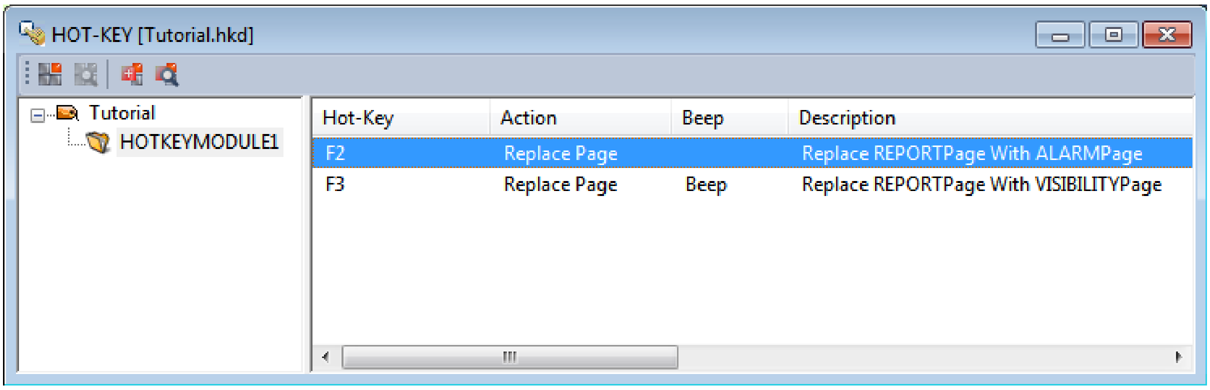
This function is used to fill the an inside of object as the defined color.

This function is used to change the color an object.

ALARM.ANA1 02-17-16 11:28:02 AM 60 Alarm Off LoLo Alarm

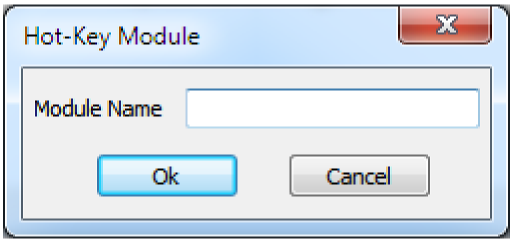
2/17/2016 11:28:46 AM

- If you select the **‘Hot Key’** in the Tools menu, the following window will appear.


HOT-KEY [Tutorial.hkd]
Tutorial
HOTKEYMODULE1

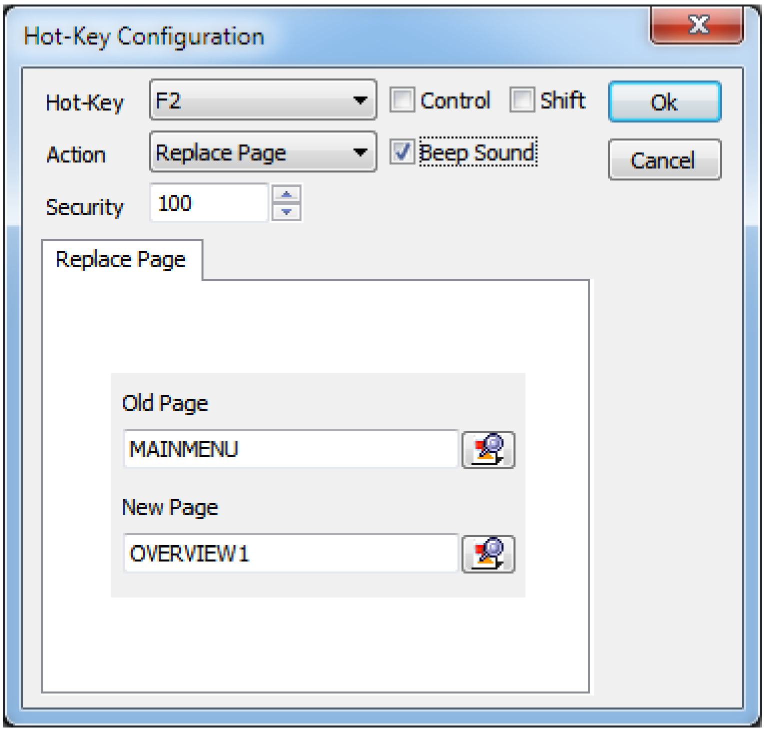
Hot-Key	Action	Beep	Description
F2	Replace Page		Replace REPORTPage With ALARMPage
F3	Replace Page	Beep	Replace REPORTPage With VISIBILITYPage

- If you click the **'Add Hot Key Module'**, a **'Hot Key Module'** dialog box will appear as follows.


Hot-Key Module
Module Name
Ok
Cancel

- Enter **'Hot Key Module 1'** as the Module Name.
- Click the **'Ok'** button.
- Click the **'Add Hot Key'** icon in the Toolbar of the **'Hot Key Editor'**.

  The following **'Hot Key Configuration'** dialog box will appear.


Hot-Key Configuration
Ok
Cancel
Replace Page

Hot-Key: F2
☐ Control ☐ Shift
Action: Replace Page
☑ Beep Sound
Security: 100
Old Page: MAINMENU
New Page: OVERVIEW1

- Assign the following characteristics to replace with the page **'OVERVIEW1'** if you press the F2 key.

  Hot Key: F2

  Action: Replace Page

  Beep Sound: Check mark (Select)

  Previous Page: MAINMENU

  New Page: OVERVIEW1

- If you click the **'Ok'** button, the hot key will be added.

- Assign to replace with Page **'ODBC'** if you press the F3 in the same way.

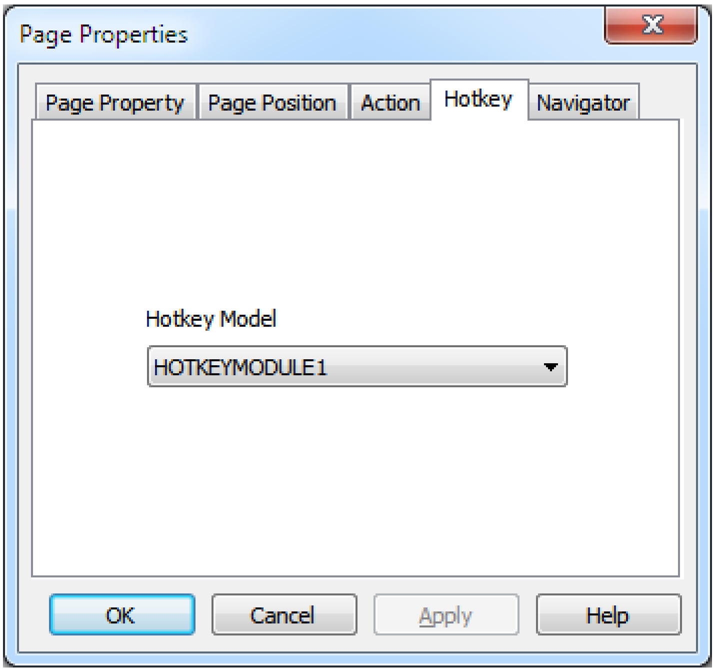
  Hot Key: F3

  Action: Replace Page

  Beep Sound: Check mark (Select)

  Previous Page: MAINMENU

  New Page: ODBC
- Click the **'Ok'** button.
- Click the **'Open'** icon of the standard toolbar to open the 'MAINMENU in a Demo Directory.
- Click Tools and select **'Page Setup'**.
- If you select the **'HotKey'** tab control, the following window will appear.


Page Properties
Page Property
Page Position
Action
Hotkey
Navigator
OK
Cancel
Apply
Help

Hotkey Model: HOTKEYMODULE1

- Select the **'Hot Key Module 1'** in the **'Hot Key Model'** combo box.
- Click the **'Ok'** button to save all.
- Move to the **'MAINMENU'** page after the CIMON runs.
- Make sure the page is replaced with the **'OVERVIEW1'** when you press the **'F2'** key.
- Make sure the **'MAINMENU'** is replaced with the **'ODBC'** when you press the **'F3'** key.
- Click to exit the CIMON.

Chapter 19 WEB SERVER

Web Server is used to monitor and control system through internet network. Client can access CIMON-SCADA Web server through Internet web browser(Internet Explorer 8 or higher version).

19-1. Web Server Settings

Required System specification

PC specification for Webserver

- OS : Windows XP, Vista, Windows 7, 8, Windows Server2003, 2008
- Microsoft .NET 3.5 Service Pac 1.
- Network : Local intranet or internet, Fixed/Dynamic IP used.
- WS version license

PC specification for Client

- OS : Microsoft Windows
- Microsoft .NET 3.5 Service Pac. 1
- Web Browser : Internet Explorer 8 or higher version.

Install WS version USB dangle

1. Plug WS version USB dangle in Web server PC and run CimonD.
   Click [Tools] → [Database] and click [File] → [Save].
2. Click [Help] → [About CimonD] and check the version of USB dangle as f0llowing.

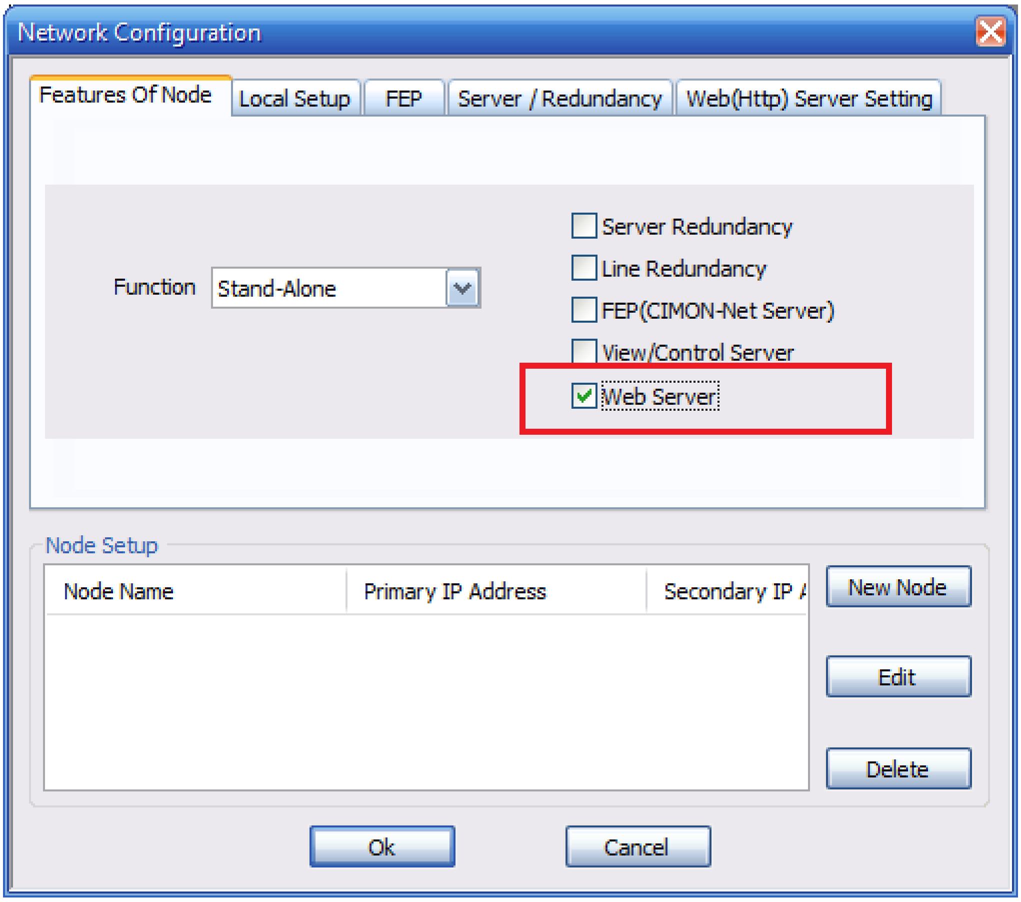
CIMON-SCADA
Copyright © 1996-2015
CIMON
(주)싸이몬 CIMON CO.,LTD www.cimon.com

V3.03 (Release : R150415)
Key : 0010/WS - Option 0

Ex) CM01-0010/WS

HTTP Server Setting

1. Click Tools → Network and then select "Web Server".

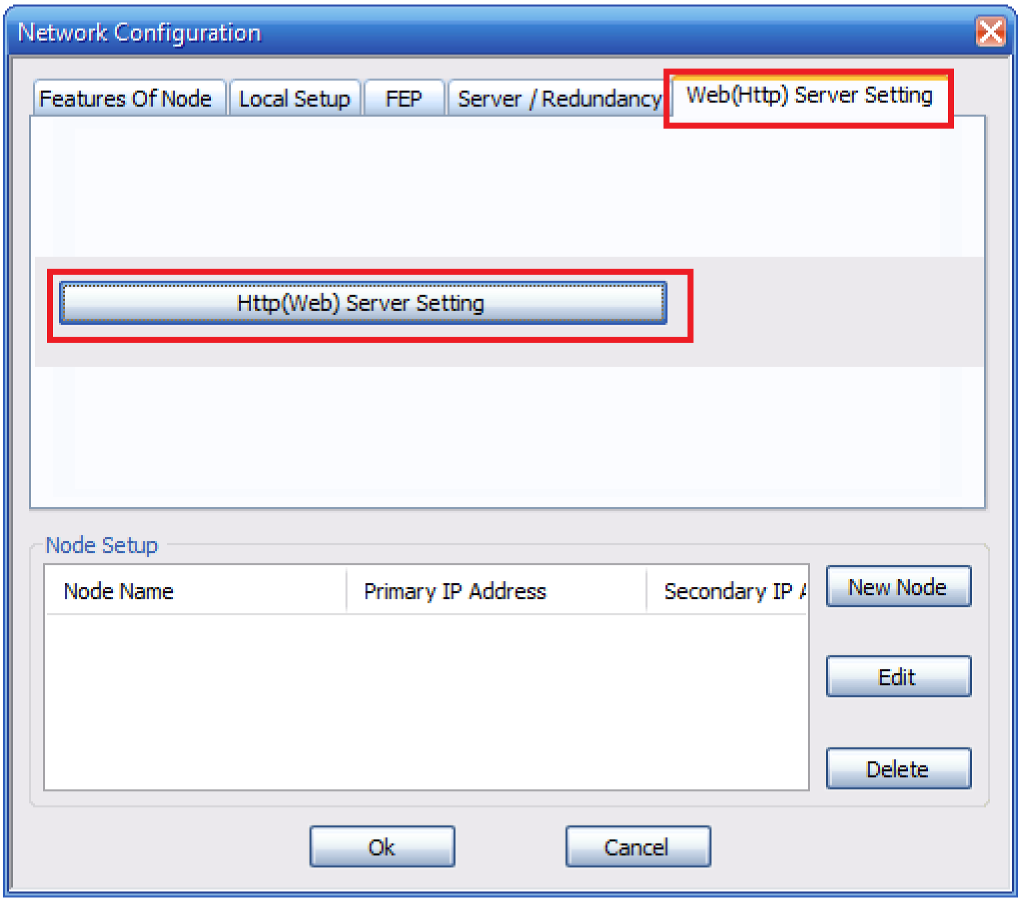

Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Node Setup
Node Name
Primary IP Address
Secondary IP A
New Node
Edit
Delete
Ok
Cancel

Function: Stand-Alone

☐ Server Redundancy
☐ Line Redundancy
☐ FEP(CIMON-Net Server)
☐ View/Control Server
☑ Web Server

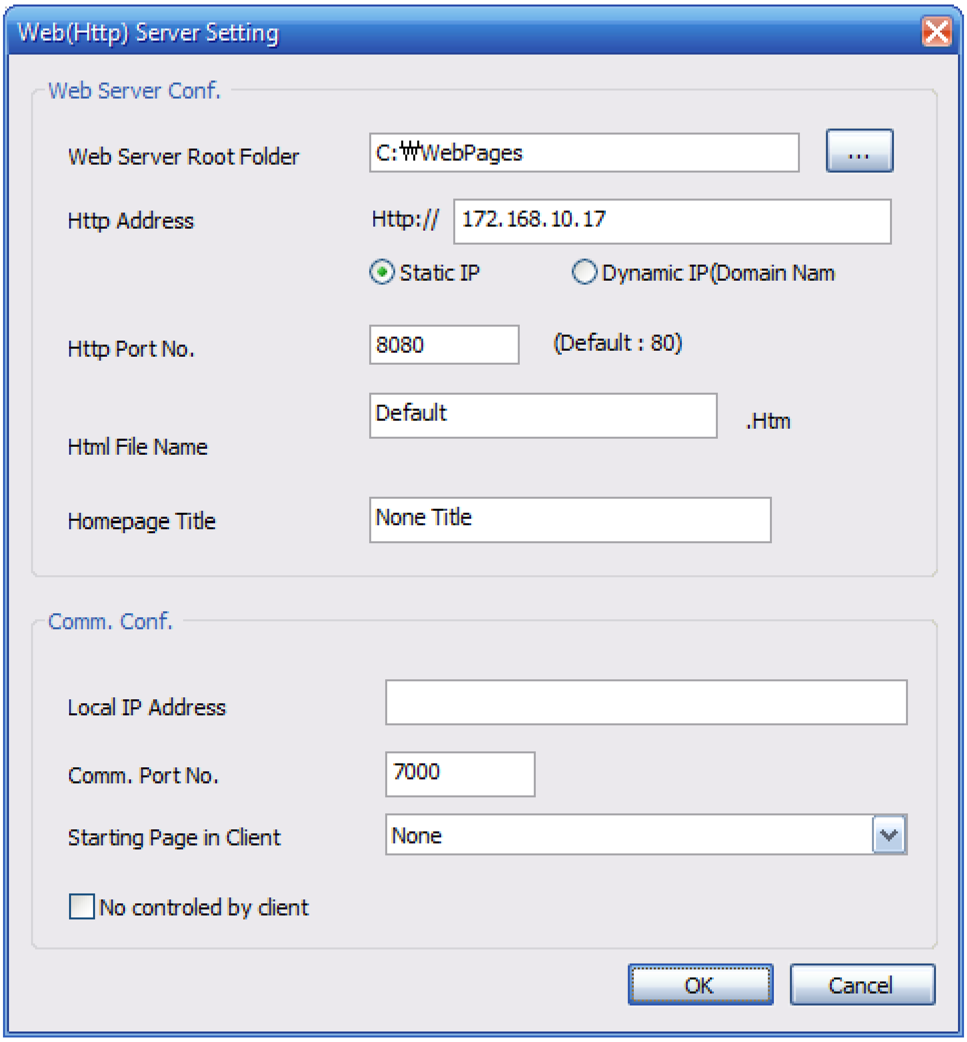
[Picture 3] Network Configuration 1

2. Click “Web(Http) Server Setting” and click “Http(Web) Server Setting”


Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Http(Web) Server Setting
Node Setup
Node Name
Primary IP Address
Secondary IP A
New Node
Edit
Delete
Ok
Cancel

[Picture 4] Network Configuration 2

3. Set up the Web Server Configuration as following.



Web Server Root Folder: C:₩WebPages

Http Address: Http:// 172.168.10.17

● Static IP ○ Dynamic IP(Domain Nam

Http Port No.: 8080 (Default : 80)

Html File Name: Default .Htm

Homepage Title: None Title

Local IP Address:

Comm. Port No.: 7000

Starting Page in Client: None

☐ No controled by client

[Picture 5] Web(Http) Server Setting

- Web Server Root Folder

  Client PC must download Html files and client program from the Main Server. Select the Root Folder where those files will be saved. When CimonX program runs, Html files and client programs will be saved this folder automatically.

- Http Address

  Write IP address or Domain name that Client will connect through internet explorer browser. You could have Domain name from company who provides service converting Dynamic IP to Fixed Domanin.

◆ Http Port Number

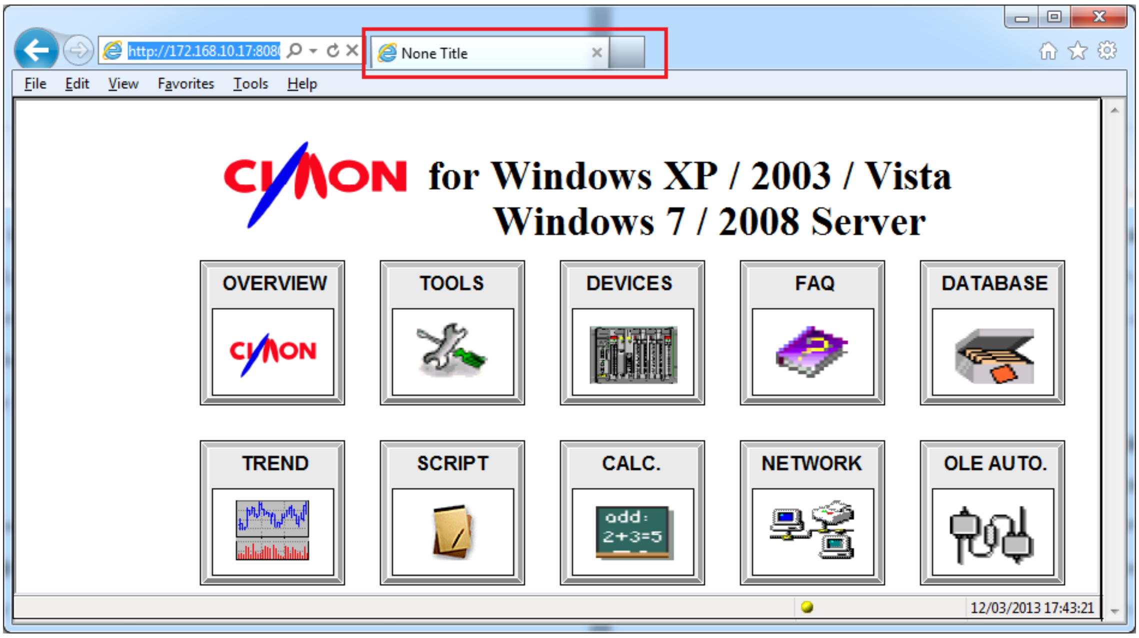
Write the port number in order to connect Http server from Client through internet at the first time. Port number must be free from the Firewall. Default port number is 80. If other port number is used, port number must be included in the Internet address for web connection. For example, if port number is “8080”, IP address is “172.168.10.17” and Html file name is “Default”, Internet address will be http://172.168.10.17**:8080**/Default.htm.

◆ Html File Name

When Client connects to Web Server PC at the first time, this Html file will be connected. If IP address is “172.168.10.17” and Html file name is “Default”, Internet address will be http://172.168.10.17/Default.htm.

◆ Homepage Title

If you write “None Title”, the Internet Explorer shows “None Title” as below picture.


http://172.168.10.17:808
None Title
File
Edit
View
Favorites
Tools
Help
CIMON for Windows XP / 2003 / Vista
Windows 7 / 2008 Server
OVERVIEW
TOOLS
DEVICES
FAQ
DATABASE
TREND
SCRIPT
CALC.
NETWORK
OLE AUTO.
odd: 2+3=5
12/03/2013 17:43:21

[Picture 6] Client PC opens internet explorer

◆ Local IP address

It is used when Http Internet IP address is not the same with IP address of PC that runs CimonX. Local IP address is used for Port Forwarding.

◆ Communication Port Number

Write port number for communicating between Client and CimonX. Use port number which is free from Firewall. You can open UDP port number at the Firewall if needed.

- Starting page in Client

  Select the Starting page which will open first when Client logs in program through Internet Explorer. If you do not select this, initial page which project assigned will open.

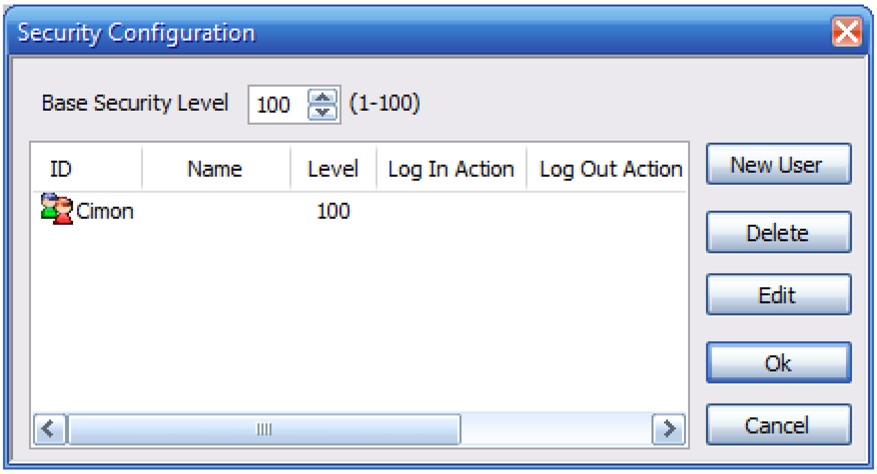
- No Controled by Client

  It is used when you do not want to control project through internet explorer. Default is that you can control project through internet explorer.

Security

You must log in to access Web server. Therefore, at least one user ID must be registered.

Click [Tools] → [Security]



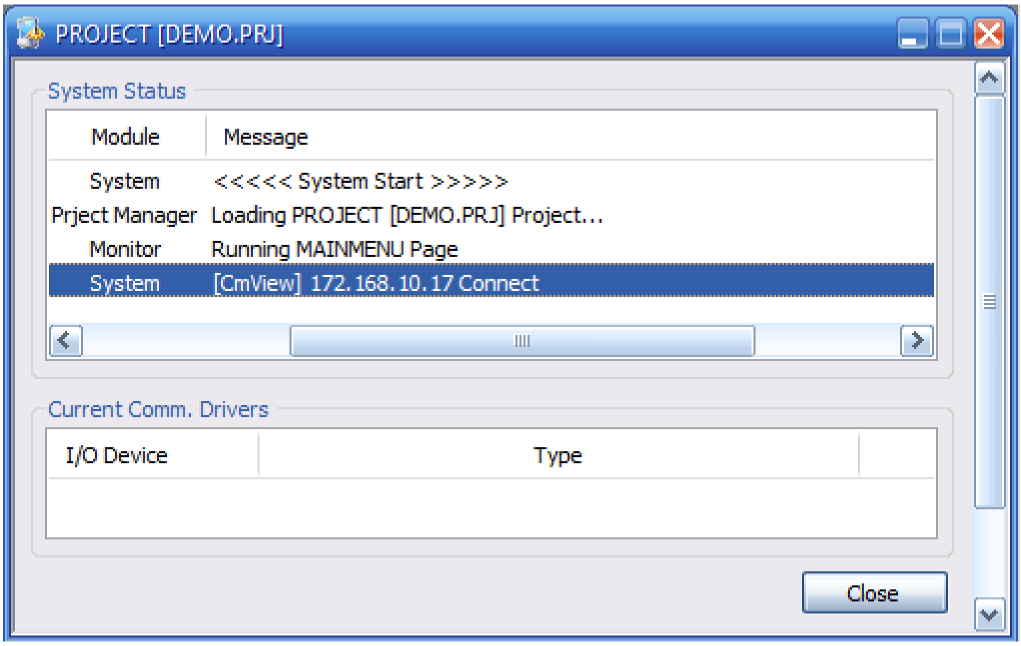
Base Security Level 100 (1-100)

ID	Name	Level	Log In Action	Log Out Action
Cimon		100		

[Picture 7] Security

Run Cimon X

Run CimonX and click [View] → [System Status] to verify web server works properly. If there is “172.168.10.17 Connect”, Web server is working fine.

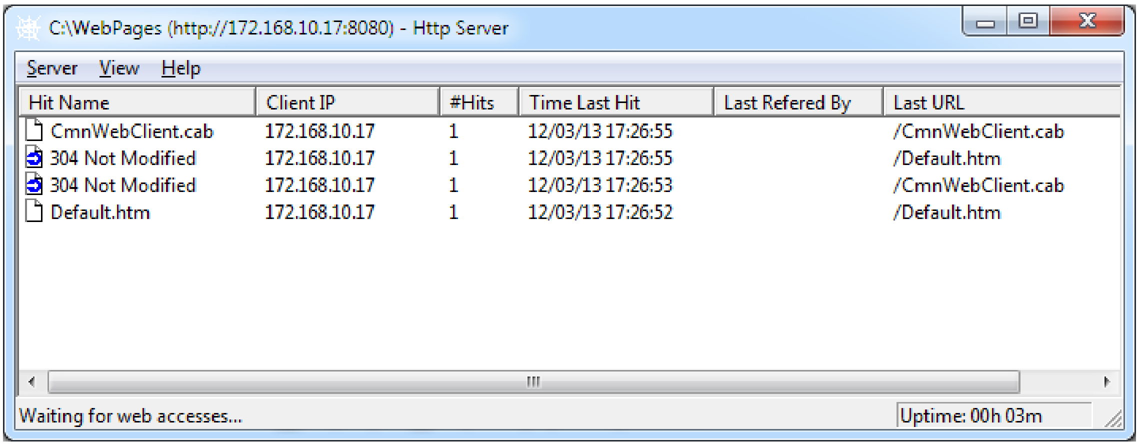

PROJECT [DEMO.PRJ]
System Status
Current Comm. Drivers
Close

Module	Message
System	<<<<< System Start >>>>>
Prject Manager	Loading PROJECT [DEMO.PRJ] Project...
Monitor	Running MAINMENU Page
System	[CmView] 172.168.10.17 Connect

I/O Device	Type

[Picture 8] System Status of Cimon X

If Web server is working properly, Http Server runs automatically. The title (WebPages(http://172.168.10.17:8080) must be the same with “Web(Server) Server Setting” as Picture 5.


C:\WebPages (http://172.168.10.17:8080) - Http Server
Server
View
Help

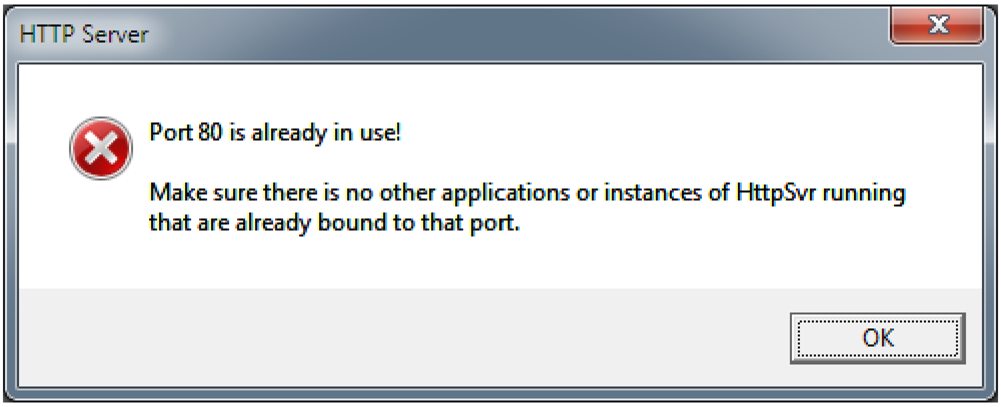
Hit Name	Client IP	#Hits	Time Last Hit	Last Refered By	Last URL
CmnWebClient.cab	172.168.10.17	1	12/03/13 17:26:55		/CmnWebClient.cab
304 Not Modified	172.168.10.17	1	12/03/13 17:26:55		/Default.htm
304 Not Modified	172.168.10.17	1	12/03/13 17:26:53		/CmnWebClient.cab
Default.htm	172.168.10.17	1	12/03/13 17:26:52		/Default.htm

Waiting for web accesses...

Uptime: 00h 03m

[Picture 9] Http Server program

If the Error message pops up as below picture, there should be two reasons.


HTTP Server
OK

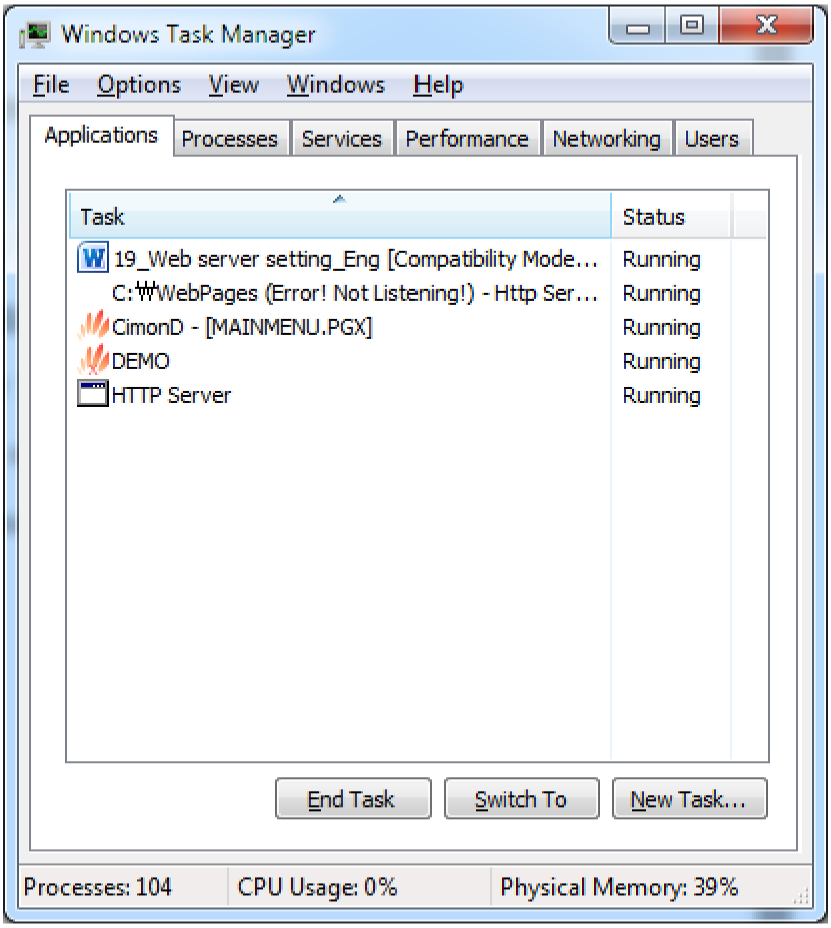
Port 80 is already in use!

Make sure there is no other applications or instances of HttpSvr running that are already bound to that port.

[Picture 10] Error message on Http Server program

- In case more than one same Http Server programs are running

  Delete all Http Server programs in "Windows Task Manager". CimonX will open and run new Http Server program in a minute automatically.


Windows Task Manager
File
Options
View
Windows
Help
Applications
Processes
Services
Performance
Networking
Users
End Task
Switch To
New Task...

Task	Status
19_Web server setting_Eng [Compatibility Mode...	Running
C:₩WebPages (Error! Not Listening!) - Http Ser...	Running
CimonD - [MAINMENU.PGX]	Running
DEMO	Running
HTTP Server	Running

Processes: 104 CPU Usage: 0% Physical Memory: 39%

- In case there are other Web Server programs

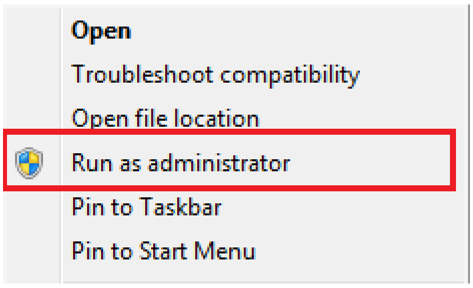
  Close CimonX and Http Server program and change the "Http Port Number" at the "Web(Http) Server Setting" as picture 5.

19-2. Web Server Connection Test

After setting all Web server and running CimonX, open Internet Explorer at the Clinet’s PC to check web connection.

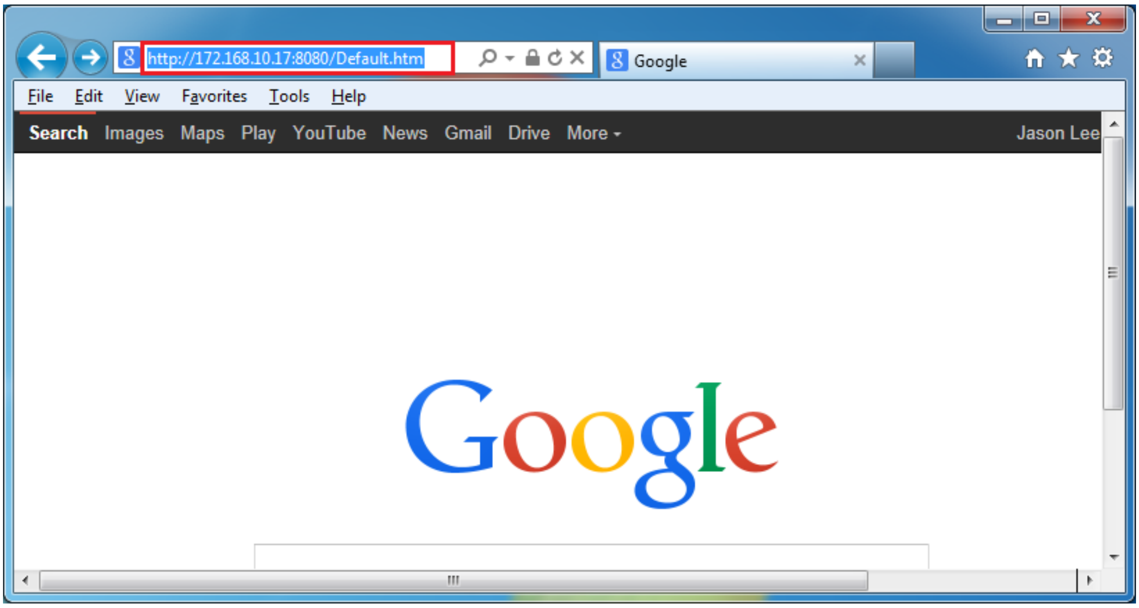
Run Internet Explorer (Web browser)

If the OS version of Client PC is higher than Vista, run Internet Explorer as administrator. (Run as administrator)


Open
Troubleshoot compatibility
Open file location
Run as administrator
Pin to Taskbar
Pin to Start Menu

[Picture 11] Run as administrator

Open Internet Explorer and write the Web server address as following picture 12.

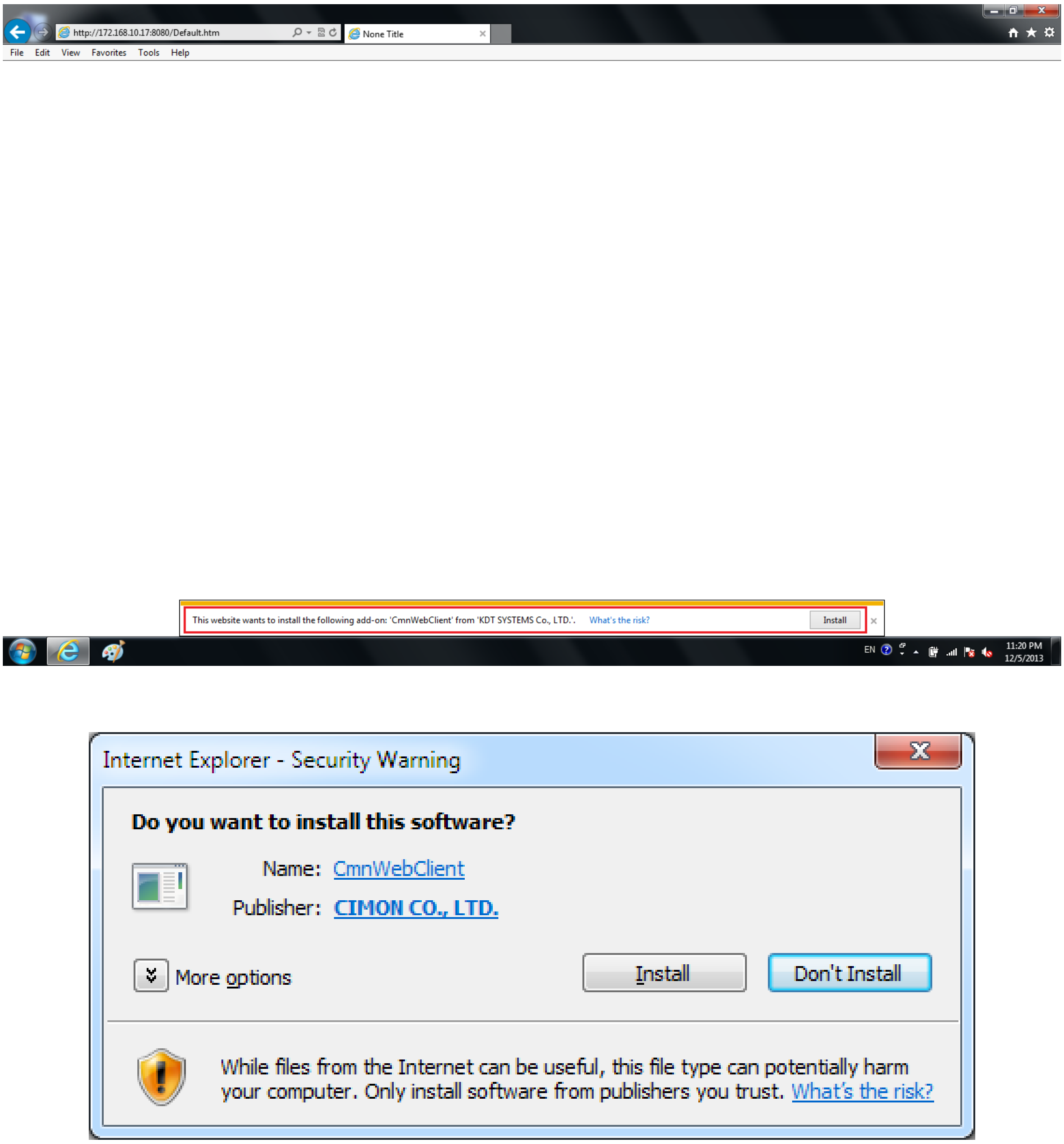


http://172.168.10.17:8080/Default.htm

Google
File
Edit
View
Favorites
Tools
Help
Search
Images
Maps
Play
YouTube
News
Gmail
Drive
More
Jason Lee
Google

[Picture 12] Web server address

If it is the first time to connect to Web Server, below messages may pop up.


http://172.168.10.17:8080/Default.htm
None Title
File Edit View Favorites Tools Help
What's the risk?
Install
EN
11:20 PM
12/5/2013
Internet Explorer - Security Warning
Install
Don't Install
More options

This website wants to install the following add-on: 'CmnWebClient' from 'KDT SYSTEMS Co., LTD.'.

Do you want to install this software?

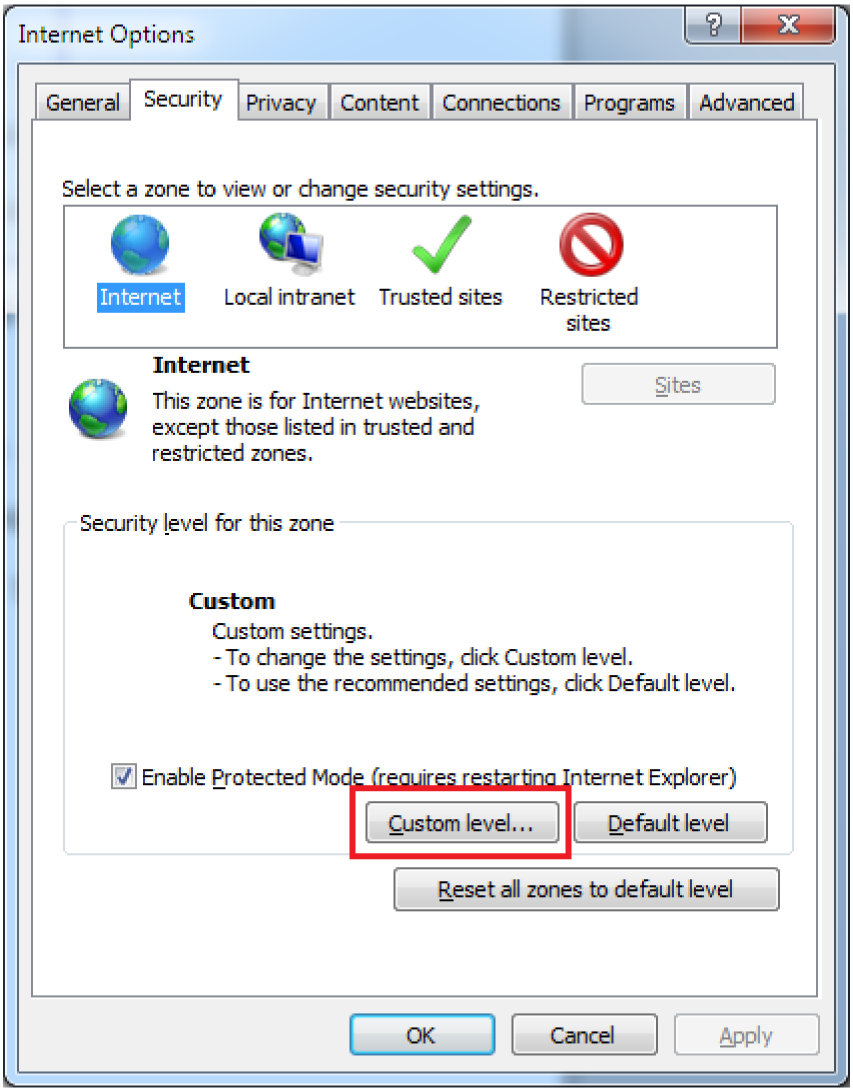
Name: CmnWebClient

Publisher: CIMON CO., LTD.

While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

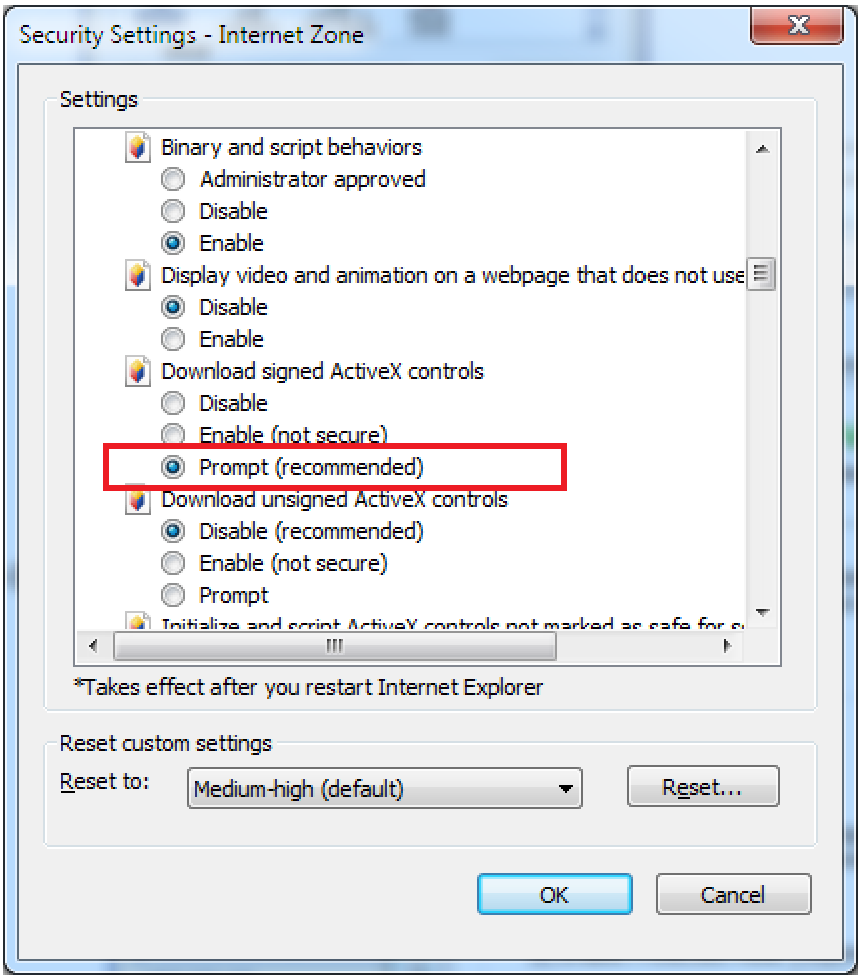
[Picture 14] Security Warning at Windows 7

In order to solve this problem, click [Internet Explorer] → [Tools] → [Internet Options] → [Security].


Internet Options
General
Security
Privacy
Content
Connections
Programs
Advanced
Select a zone to view or change security settings.
Internet
Local intranet
Trusted sites
Restricted sites
Internet
This zone is for Internet websites, except those listed in trusted and restricted zones.
Sites
Security level for this zone
Custom
Custom settings.
- To change the settings, click Custom level.
- To use the recommended settings, click Default level.
☑ Enable Protected Mode (requires restarting Internet Explorer)
Custom level...
Default level
Reset all zones to default level
OK
Cancel
Apply

[Picture 15] Internet Options

Click “Custom level…].



Security Settings - Internet Zone

Settings

- Binary and script behaviors
  - ○ Administrator approved
  - ○ Disable
  - ● Enable
- Display video and animation on a webpage that does not use
  - ● Disable
  - ○ Enable
- Download signed ActiveX controls
  - ○ Disable
  - ○ Enable (not secure)
  - ● Prompt (recommended)
- Download unsigned ActiveX controls
  - ● Disable (recommended)
  - ○ Enable (not secure)
  - ○ Prompt
- Initialize and script ActiveX controls not marked as safe for s

*Takes effect after you restart Internet Explorer

Reset custom settings

Reset to: Medium-high (default)

[Picture 16] ActiveX Settings

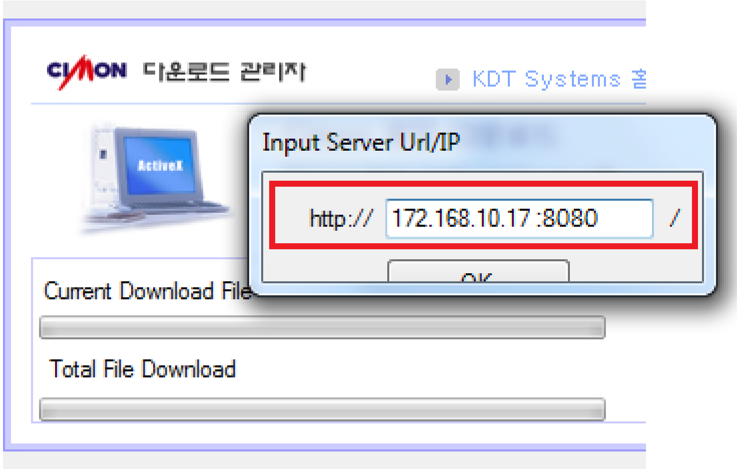
Select “Prompt (recommaended)” at the [Download signed ActiveX controls].

Download Client program

When you click “Install” at the Picture 14, “Input Server Url/IP” dialog box pops up as below.

Write IP address here. If Http port number is not default (80), write “:” and “port number”.

For example) 172.168.10.17:8080

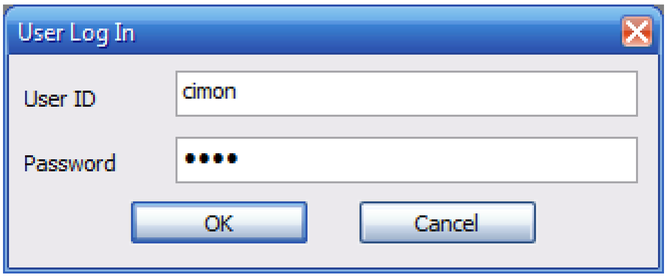

CIMON 다운로드 관리자
KDT Systems 홈
Input Server Url/IP
Current Download File
Total File Download
OK

http:// 172.168.10.17 :8080 /

[Picture 17] Downloading Cimon Client program

After downloade is finished, “User Log In” dialog box pops up.

Write User ID and Password that you set up at CimonD.

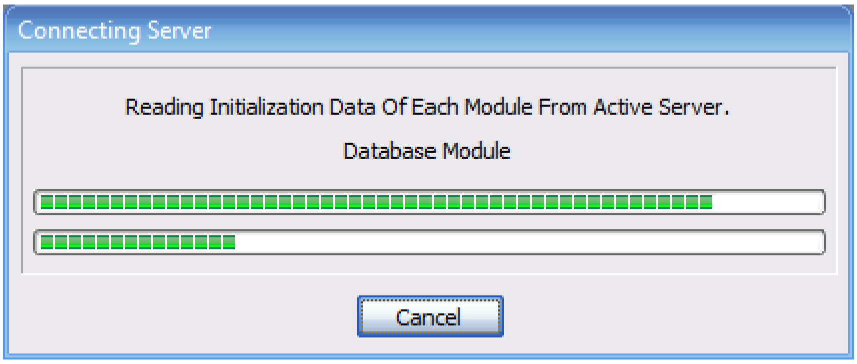

User Log In
OK
Cancel

User ID: cimon

Password: ●●●●

[Picture 18] User Log In

Client PC connects Main Server and brings the current data.

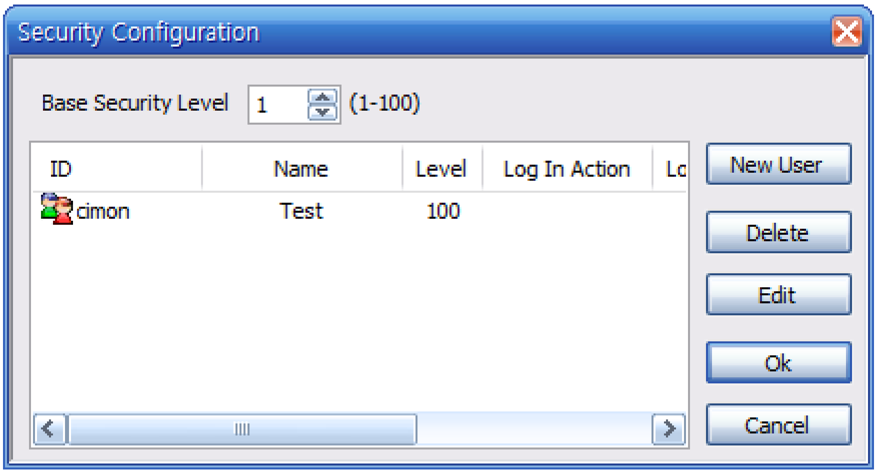

Connecting Server
Cancel

Reading Initialization Data Of Each Module From Active Server.

Database Module

19-3. View/Control Server

1. Click [Tools] → [Security]

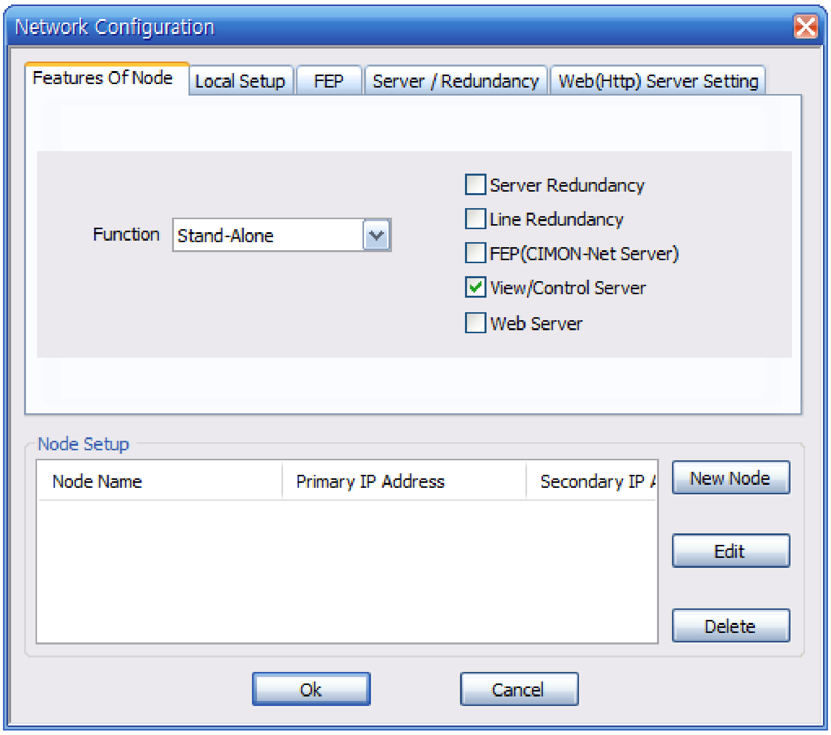

Security Configuration
New User
Delete
Edit
Ok
Cancel

Base Security Level 1 (1-100)

ID	Name	Level	Log In Action	Lo
cimon	Test	100		

2. Click [New User] to create user's ID and Password. Refer to "Security" manual for detailed setting guide line. This security ID and Password will be used when clients log in Server.

3. Click [Tools] → [Network]

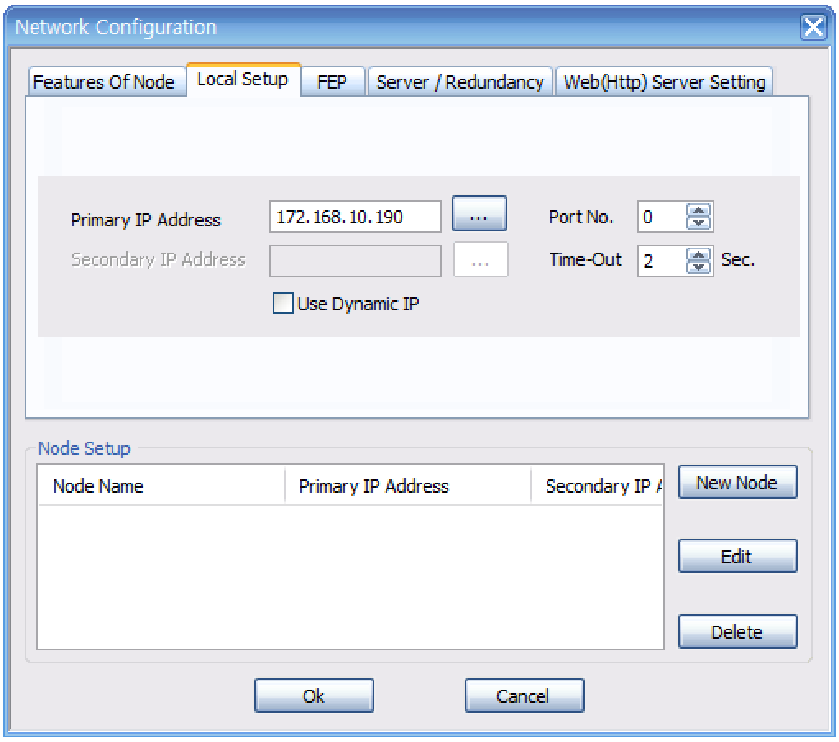

Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
Node Setup
Node Name
Primary IP Address
Secondary IP A
New Node
Edit
Delete
Ok
Cancel

Function Stand-Alone

☐ Server Redundancy
☐ Line Redundancy
☐ FEP(CIMON-Net Server)
☑ View/Control Server
☐ Web Server

4. Select "View/Control Server" at the "Features of Node" tap menu.

5. Click "Local Setup" tap menu.


Network Configuration
Features Of Node
Local Setup
FEP
Server / Redundancy
Web(Http) Server Setting
...
...
Node Setup
New Node
Edit
Delete
Ok
Cancel

Primary IP Address: 172.168.10.190

Secondary IP Address:

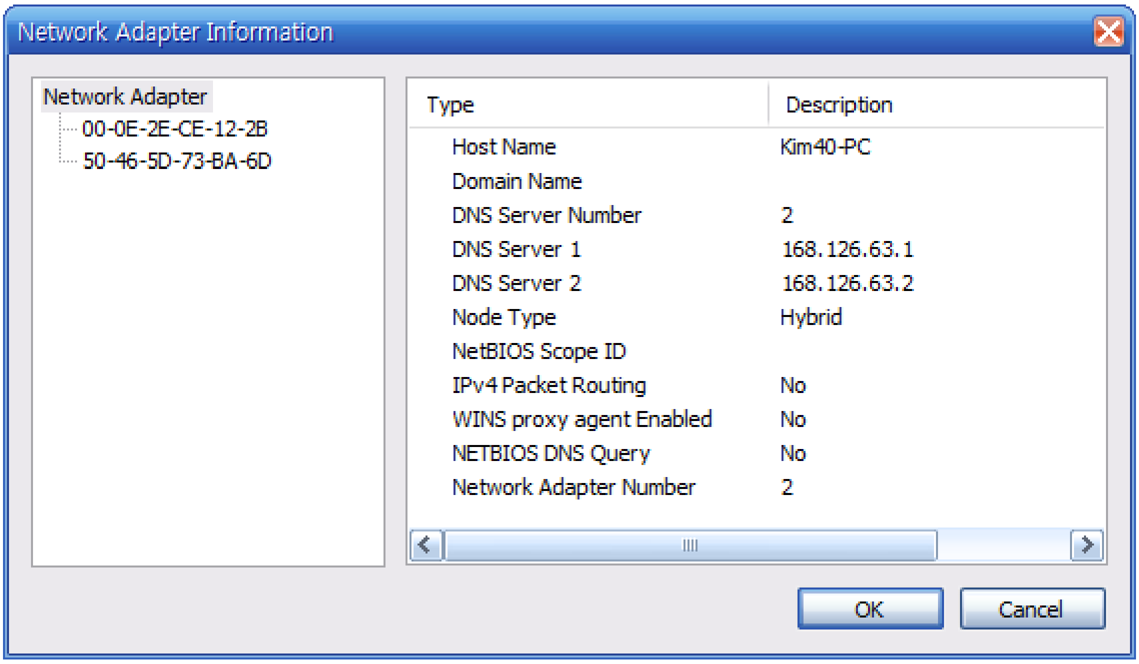
Port No.: 0

Time-Out: 2 Sec.

☐ Use Dynamic IP

Node Name	Primary IP Address	Secondary IP A

6. Write down your PC's IP Address at the "Primary IP Address". If you do not know IP Address, click ... to open "Network Adapter Information" and select LAN card. If "Use Dynamic IP" is selected, selected LAN card's MAC Address will be set up.


Network Adapter Information
OK
Cancel

Network Adapter
- 00-0E-2E-CE-12-2B
- 50-46-5D-73-BA-6D

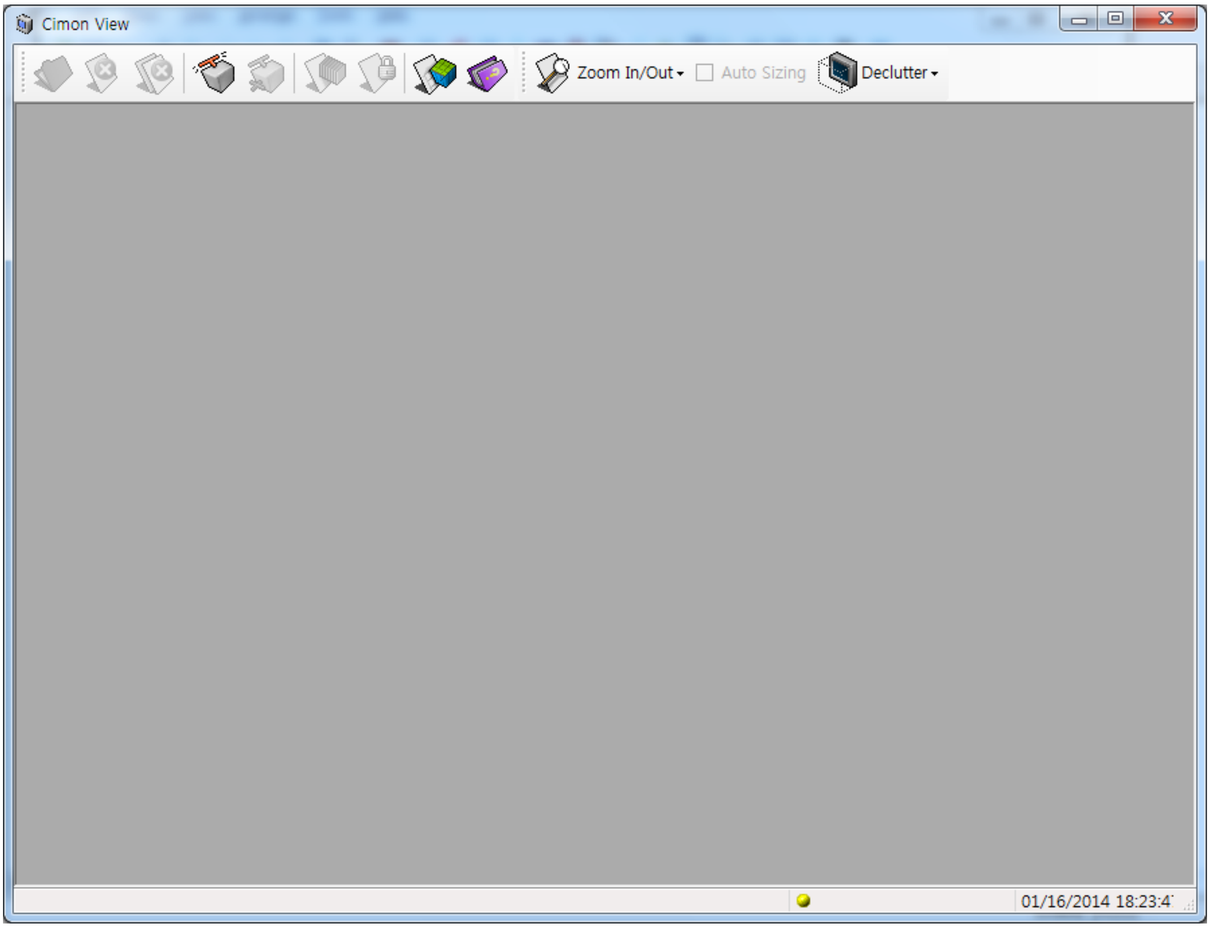
Type	Description
Host Name	Kim40-PC
Domain Name	
DNS Server Number	2
DNS Server 1	168.126.63.1
DNS Server 2	168.126.63.2
Node Type	Hybrid
NetBIOS Scope ID	
IPv4 Packet Routing	No
WINS proxy agent Enabled	No
NETBIOS DNS Query	No
Network Adapter Number	2

7. Write down service port number at the "Port No." If you write "0", its real port number will be "UDP 51000" port.

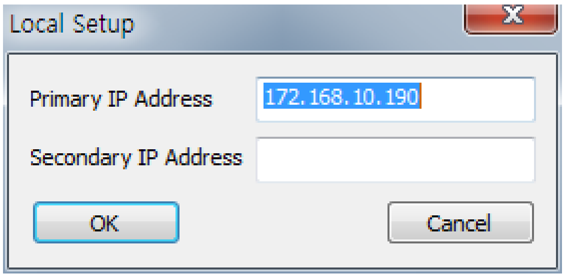
8. Set up "Time-Out"

19-4. CIMON-VIEW Connection Setting

1. Open “Cimon View” program.


Cimon View
Zoom In/Out
☐ Auto Sizing
Declutter
01/16/2014 18:23:4

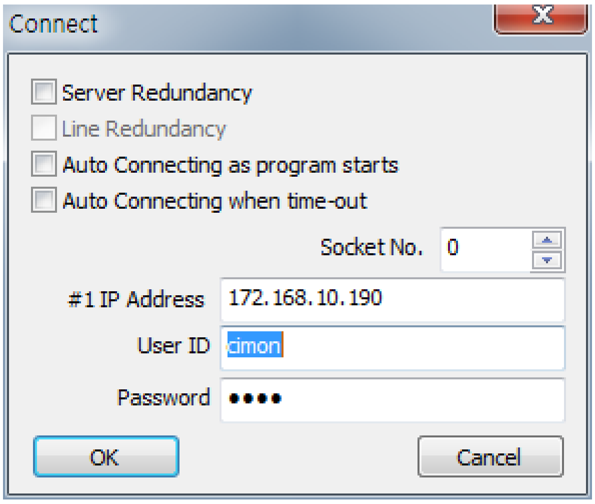
2. Click “Local Setup” and write LAN card IP Address of current PC at the “Primary IP Address”.


Local Setup

Primary IP Address: 172.168.10.190

Secondary IP Address:

3. Click “Connect” and set up connection options.



☐ Server Redundancy
☐ Line Redundancy
☐ Auto Connecting as program starts
☐ Auto Connecting when time-out

Socket No. 0
#1 IP Address 172.168.10.190
User ID cimon
Password ••••

4. Select "Server Redundancy" if it is Redundancy system. Write down Backup server's IP Address at the "2# IP Address". ("2# IP Address" appears when "Server Redundancy" is selected.)

5. If "Auto Connecting program starts" is selected, Cimon View remembers final connection setting and get started to connect server automatically.

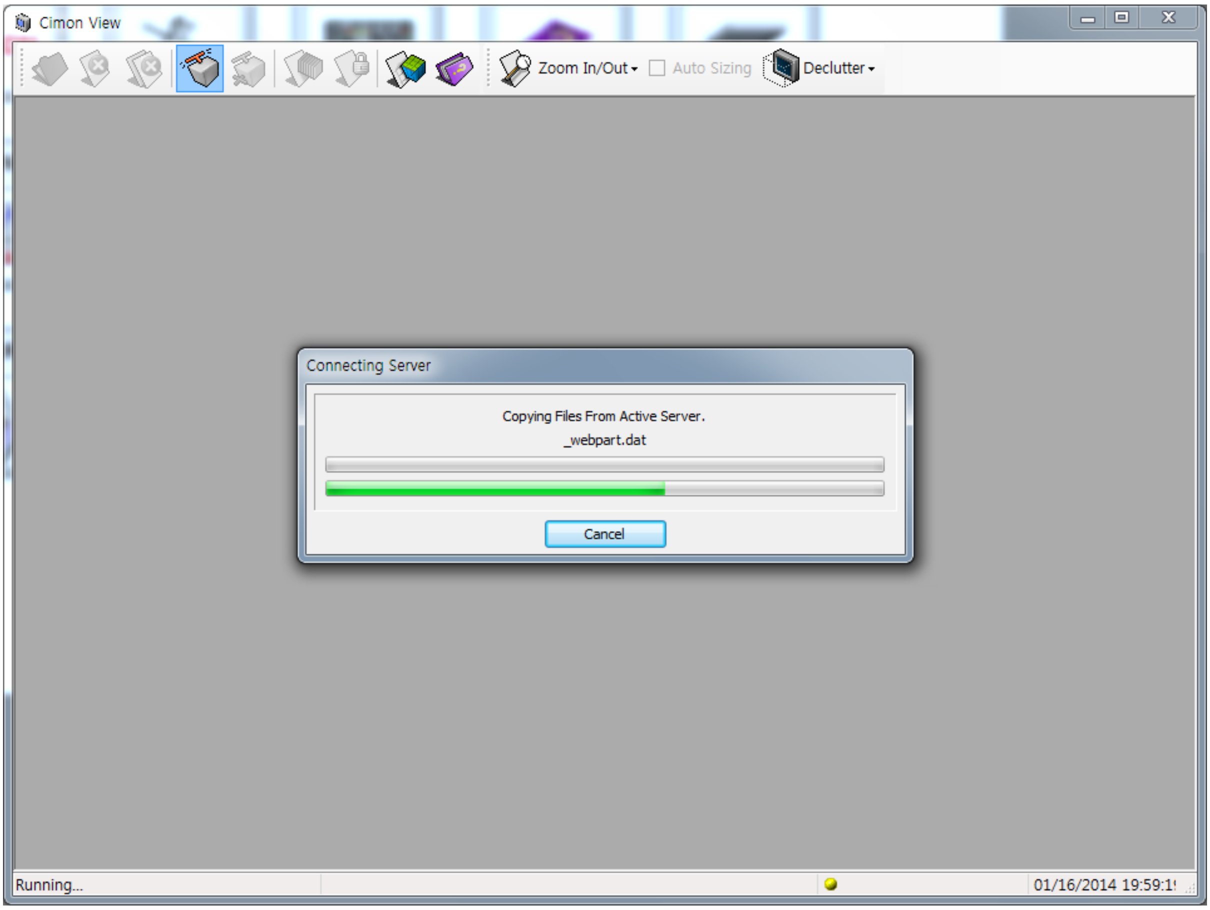
6. If "Auto Connecting when time-out" is selected, Cimon View reconnect to server automatically when Communication is disconnected (Time-out).

7. Select Service Port number of Sever at "Socket No." it must be the same Port number with COM port number of "Local Setup" in CimonD. (Main Server PC → CimonD → Tools → Network → "Local Setup") if it is Server Redundancy, both Service port number must be the same.

8. Write IP Address of Server PC at "#1 IP Address".

9. Write ID and Password that you already saved in Server project of CimonD.

10. Click "OK" to connect to Server.



Connecting Server

Copying Files From Active Server.
_webpart.dat

Running...

01/16/2014 19:59:1!

19-5. Restrictions on WEB SERVER function

There are some restrictions of function for Web Client that Web server does not display at the below functions.

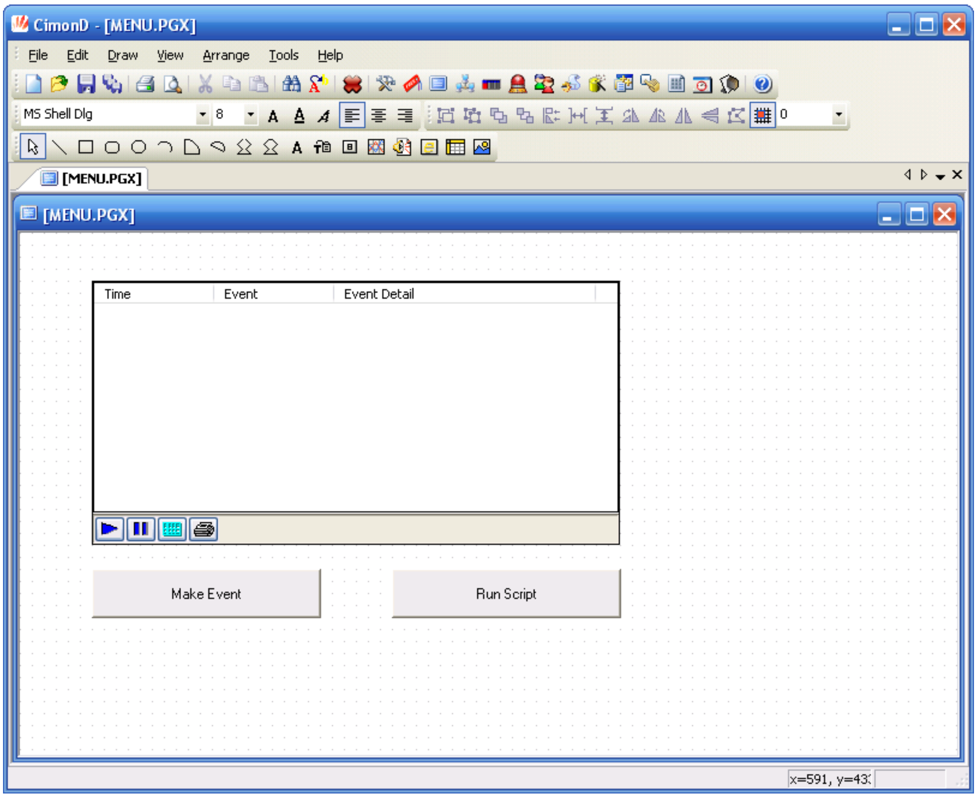
- Schedule
- Report, Event Report and Min Report
- Recipe
- RealtimeGraph and User Log DB
- ODBC
- Audio Player
- Short Key
- ActiveX
- Define Tag Action and Run Tag Action For Tag Value Change at Tag(Database) and Main Script

Chapter 20 User Event Logging

User Event Logging is use to understand an actual site situation more easily by generates a user specific event message. User event message are displayed in user event logging object.

20-1. User Event Logging Object

The User Event Logging Object is shown as follows. You can configurate the display components as your need. Selects a “User Event Logging” icon In draw toolbar or “User Event Logging” button of the Draw menu and then click mouse on page, user event logging object are created as follows.


CimonD - [MENU.PGX]
File
Edit
Draw
View
Arrange
Tools
Help
MS Shell Dlg
8
0
[MENU.PGX]
[MENU.PGX]
Time
Event
Event Detail
Make Event
Run Script
x=591, y=43

User event logging object displays a time, event type and event message.

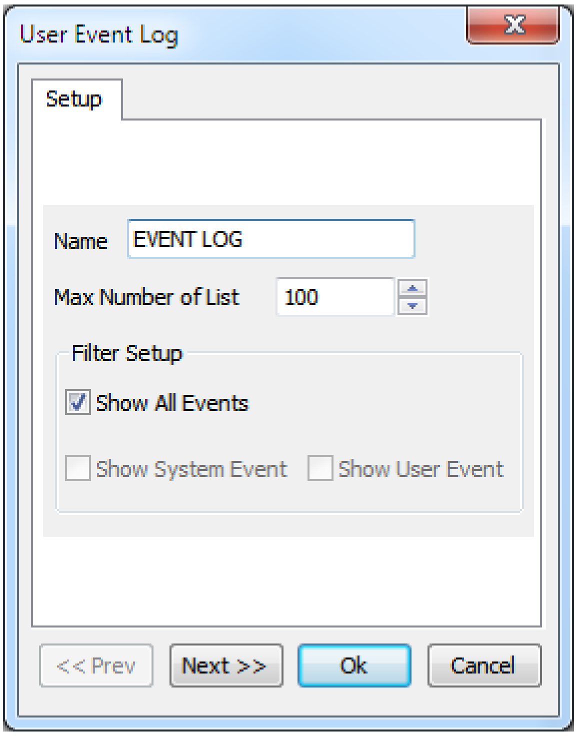
By default, user event logging object displays system events with user event.

Using toolbar, you can apply a filter and print.

User event logging setup dialog box are shown as follows.

- **Setup**

  Select the event to be displayed.



Name EVENT LOG

Max Number of List 100

Filter Setup

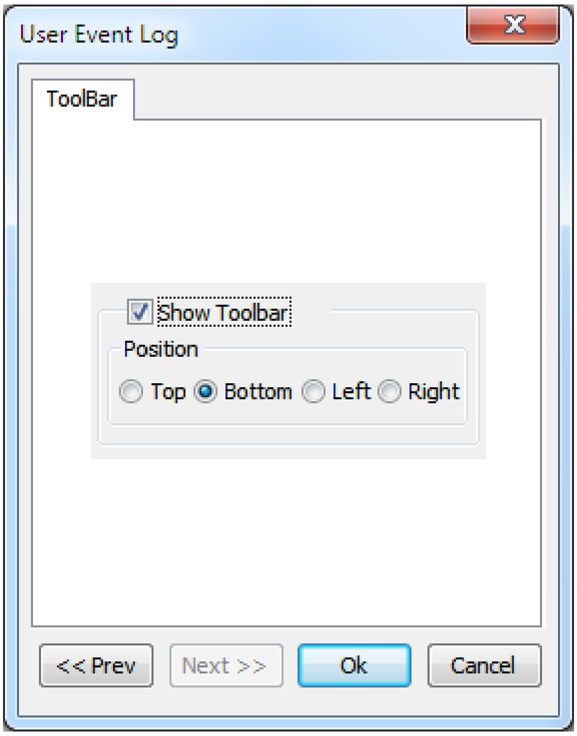
☑ Show All Events

☐ Show System Event ☐ Show User Event

Name	Specify a Object name.
Max Number of List	Specify a maximum display event number.
Filter Setup	Select the event type to be displayed. All Events/ System Events / User Event

- **ToolBar**

Select a toolbar display option and place.


User Event Log
ToolBar
<< Prev
Next >>
Ok
Cancel

☑ Show Toolbar

Position

○ Top ● Bottom ○ Left ○ Right

Show Toolbar	It designates the output yes or no of the tool button. Of the indication location object it could be located at top, bottom, left and right.

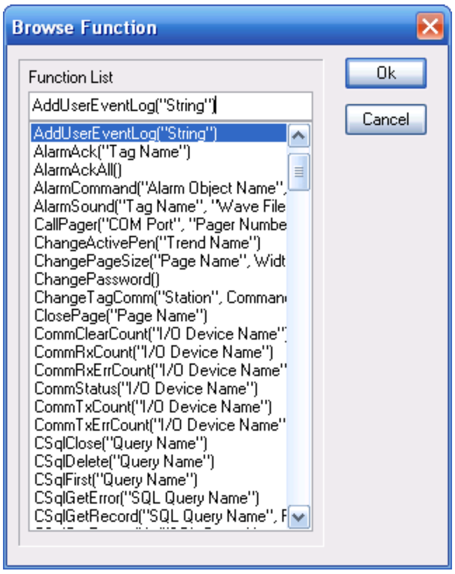
20-2. Using a User Event

With AddUserEventLog(“user message”) you can generates an user event.

User event messages are displayed in user event logging object.

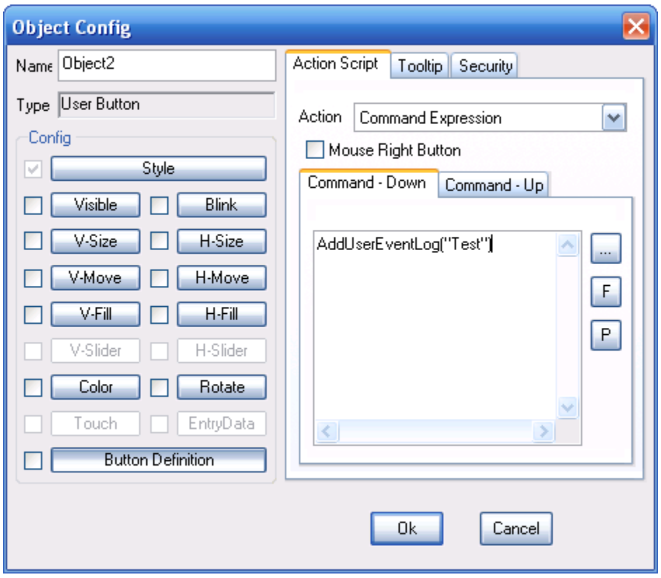
Application Example 1

1. Create button object.
2. Select action as Command Expresssion.
3. Input AddUserEventLog(“user message”) in Command-Down edit control. you can also select the function in “Browse Function” dialog box by clicking the “F” button.


Browse Function
Ok
Cancel

Function List: AddUserEventLog("String")

```
AddUserEventLog("String")
AlarmAck("Tag Name")
AlarmAckAll()
AlarmCommand("Alarm Object Name",
AlarmSound("Tag Name", "Wave File
CallPager("COM Port", "Pager Numbe
ChangeActivePen("Trend Name")
ChangePageSize("Page Name", Widt
ChangePassword()
ChangeTagComm("Station", Comman
ClosePage("Page Name")
CommClearCount("I/O Device Name")
CommRxCount("I/O Device Name")
CommRxErrCount("I/O Device Name"
CommStatus("I/O Device Name")
CommTxCount("I/O Device Name")
CommTxErrCount("I/O Device Name"
CSqlClose("Query Name")
CSqlDelete("Query Name")
CSqlFirst("Query Name")
CSqlGetError("SQL Query Name")
CSqlGetRecord("SQL Query Name", F
```


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Button Definition
Action Script
Tooltip
Security
Mouse Right Button
Command - Down
Command - Up
...
F
P
Ok
Cancel

Name: Object2

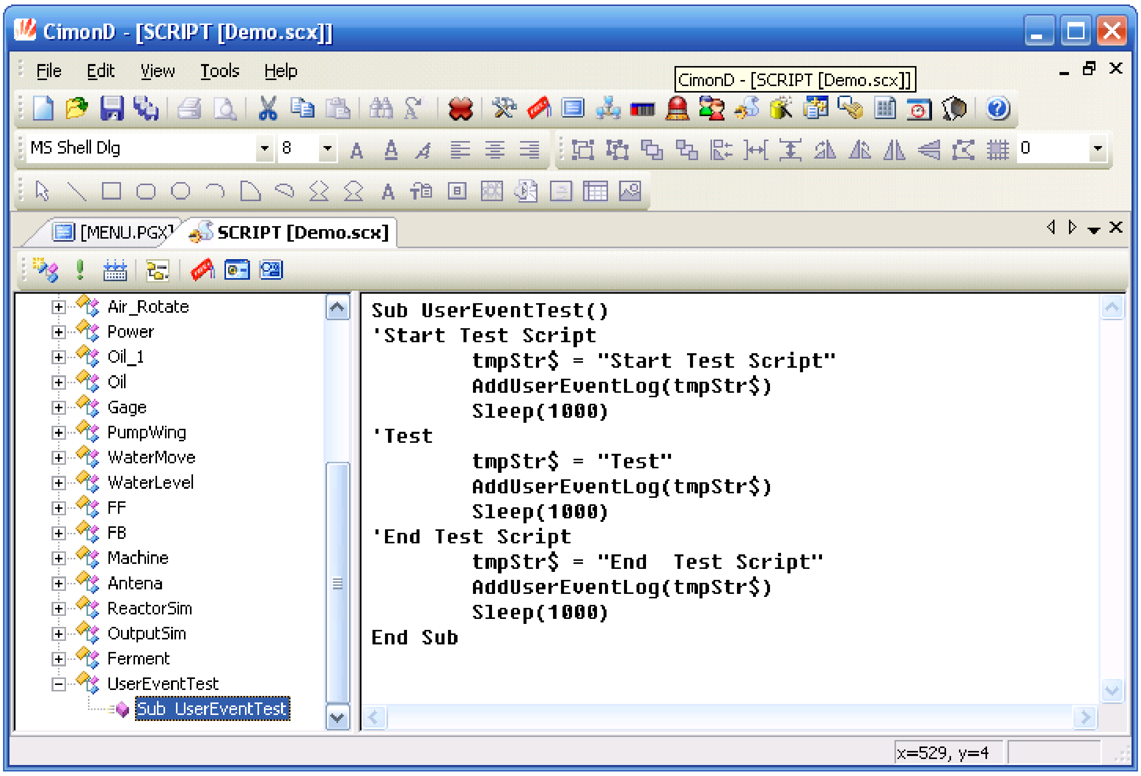
Type: User Button

Action: Command Expression

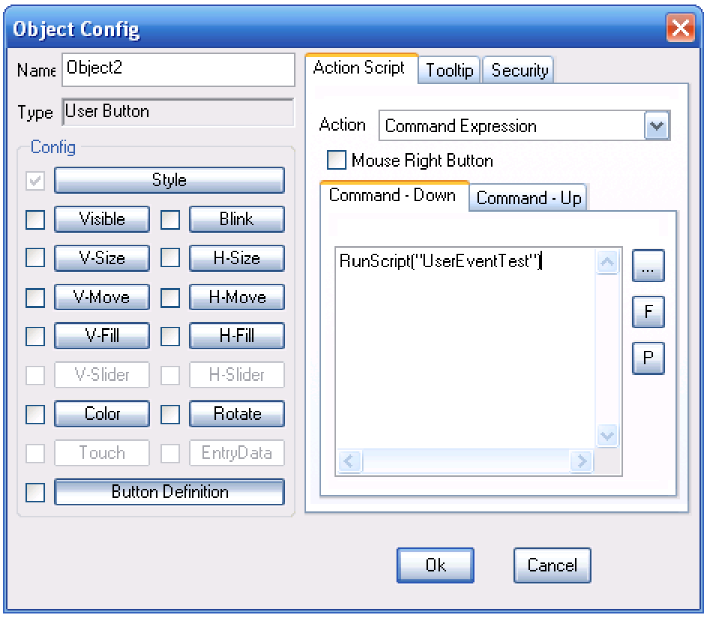
Command - Down: AddUserEventLog("Test")

Application Example 2

You can generate a user event in script as follows.


CimonD - [SCRIPT [Demo.scx]]
File
Edit
View
Tools
Help
MS Shell Dlg
8
[MENU.PGX]
SCRIPT [Demo.scx]
Air_Rotate
Power
Oil_1
Oil
Gage
PumpWing
WaterMove
WaterLevel
FF
FB
Machine
Antena
ReactorSim
OutputSim
Ferment
UserEventTest
Sub UserEventTest
x=529, y=4

```
Sub UserEventTest()
'Start Test Script
        tmpStr$ = "Start Test Script"
        AddUserEventLog(tmpStr$)
        Sleep(1000)
'Test
        tmpStr$ = "Test"
        AddUserEventLog(tmpStr$)
        Sleep(1000)
'End Test Script
        tmpStr$ = "End  Test Script"
        AddUserEventLog(tmpStr$)
        Sleep(1000)
End Sub
```


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Button Definition
Action Script
Tooltip
Security
Command - Down
Command - Up
...
F
P
Ok
Cancel

Name: Object2

Type: User Button

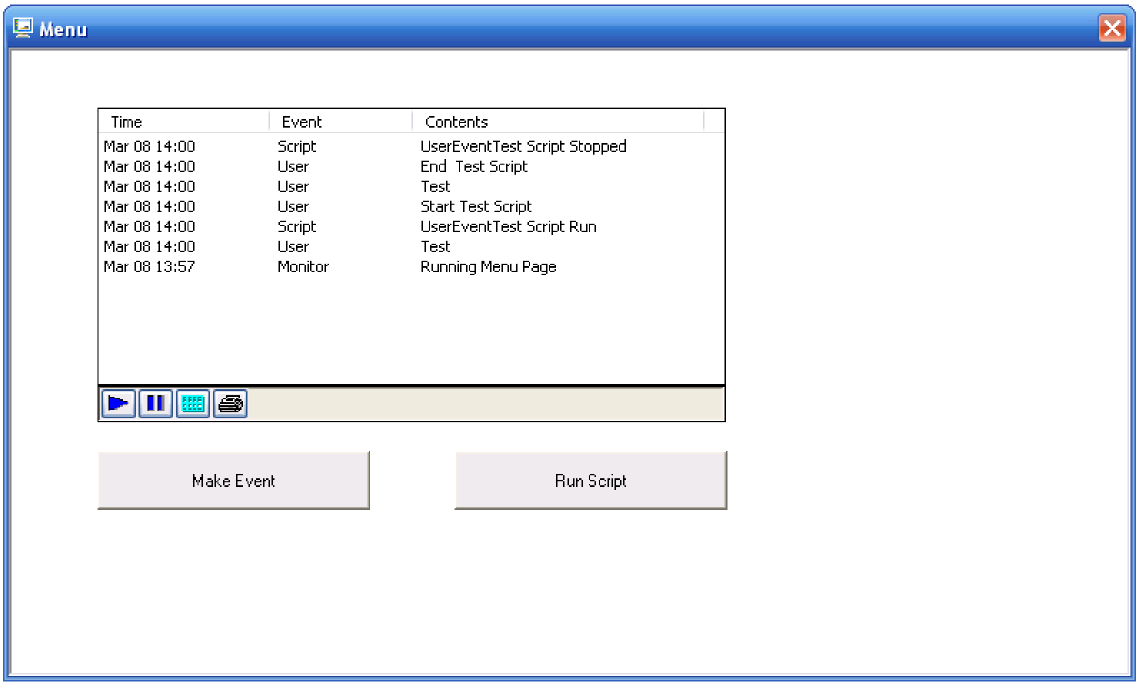
Action: Command Expression

☐ Mouse Right Button

```
RunScript("UserEventTest")
```

Execution screen

At CimonX the sample user event messages are displayed in user event logging object as follows.

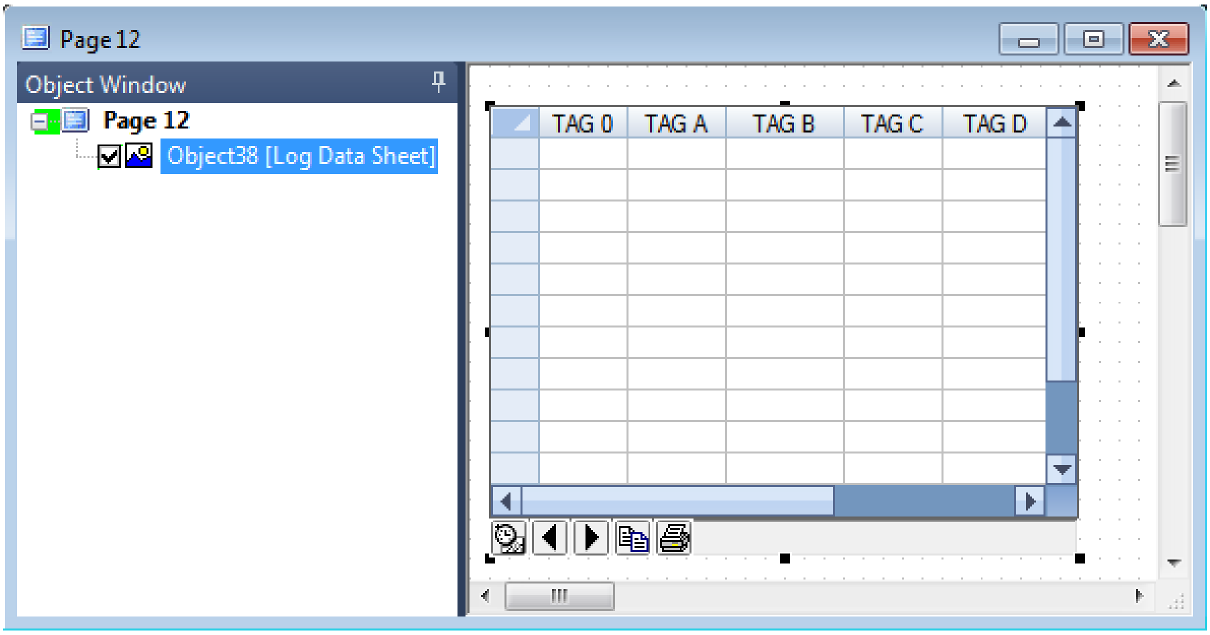


Time	Event	Contents
Mar 08 14:00	Script	UserEventTest Script Stopped
Mar 08 14:00	User	End Test Script
Mar 08 14:00	User	Test
Mar 08 14:00	User	Start Test Script
Mar 08 14:00	Script	UserEventTest Script Run
Mar 08 14:00	User	Test
Mar 08 13:57	Monitor	Running Menu Page

Chapter 21 Log Data Sheet

With Log Data Sheet Object, you can display a data from data logging model in grid type object. You can monitor a historical data and copy to clipboard for analysis.

21-1. Log Data sheet Object

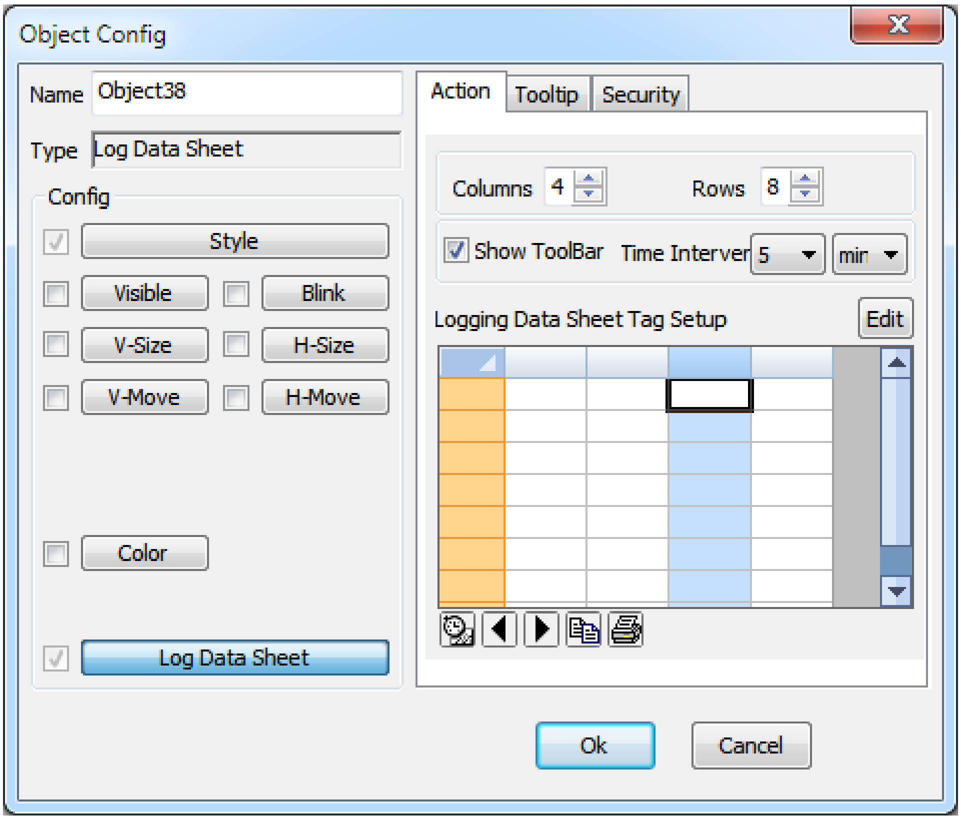

Page 12
Object Window
Page 12
Object38 [Log Data Sheet]
TAG 0
TAG A
TAG B
TAG C
TAG D

Log data sheet object is displayed as above. It has column header, time column at left, and toolbar at bottom.

Toolbar has a time config, barward, forward, copy to clipboard and print buttons.

21-2. Create a Data Sheet Object

Click Draw and select ‘**Log Data Sheet**’ and click on the page.



Object Config

Name Object38

Type Log Data Sheet

Columns 4

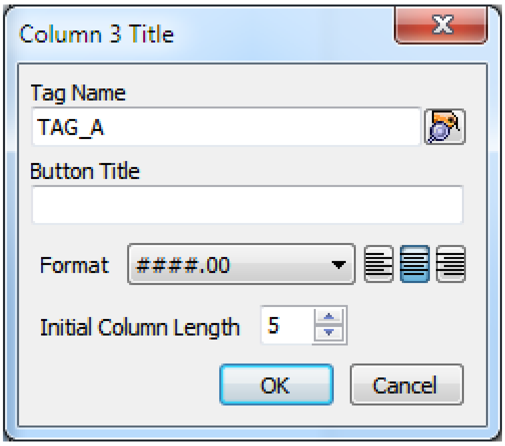
Rows 8

☑ Show ToolBar

Time Interver 5 min

Config
☑ Style
☐ Visible
☐ Blink
☐ V-Size
☐ H-Size
☐ V-Move
☐ H-Move
☐ Color
☑ Log Data Sheet
Action
Tooltip
Security
Logging Data Sheet Tag Setup
Edit
Ok
Cancel

If you double-click column, Edit box appears.



Column 3 Title

Tag Name TAG_A

Button Title

Format ####.00

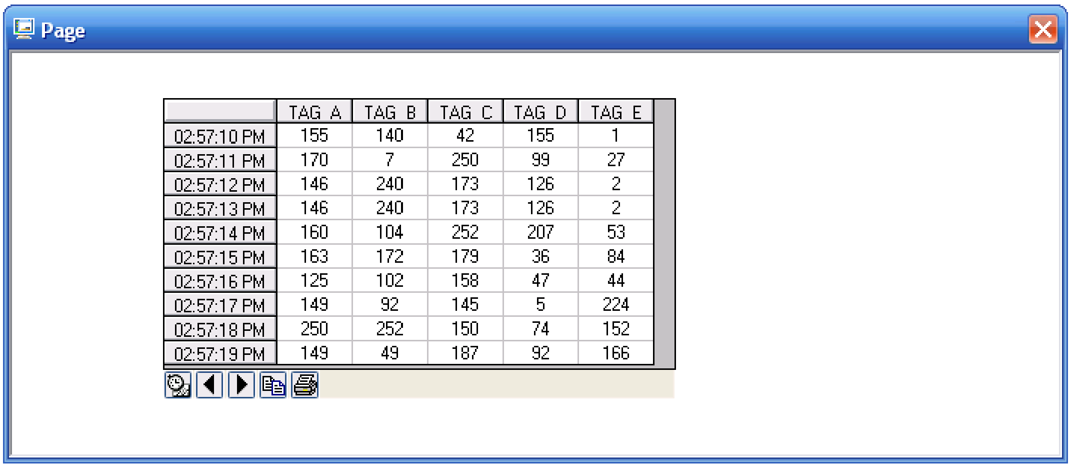
Initial Column Length 5

In column edit dialog box, you can set tagname, title, format and length.

First column(column 0) is for time. You can set time display format and length.

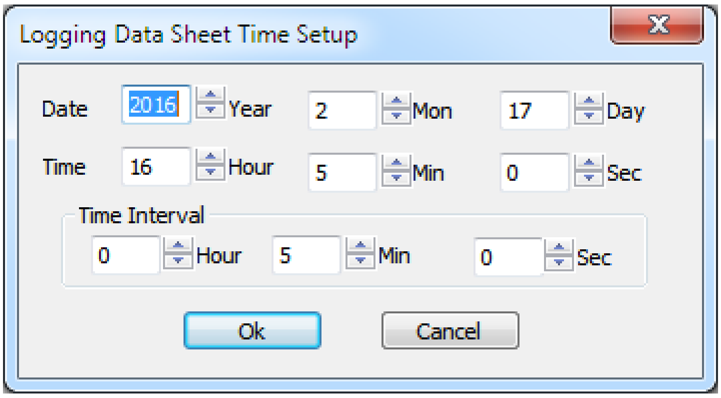
21-3. Examples of Data Sheet Object

In CimonX, data sheet object is displayed as follows.



	TAG A	TAG B	TAG C	TAG D	TAG E
02:57:10 PM	155	140	42	155	1
02:57:11 PM	170	7	250	99	27
02:57:12 PM	146	240	173	126	2
02:57:13 PM	146	240	173	126	2
02:57:14 PM	160	104	252	207	53
02:57:15 PM	163	172	179	36	84
02:57:16 PM	125	102	158	47	44
02:57:17 PM	149	92	145	5	224
02:57:18 PM	250	252	150	74	152
02:57:19 PM	149	49	187	92	166

Time Setup Setup start time and display time interval.



Date: 2016 Year, 2 Mon, 17 Day

Time: 16 Hour, 5 Min, 0 Sec

Time Interval: 0 Hour, 5 Min, 0 Sec

Backward	Displays backward data by page.
Forward	Displays forward data by page.
Copy	Copies data to clipboard. You can paste the data to Excel sheet.
Print	Prints data to system default print.

Chapter 22 User Menu

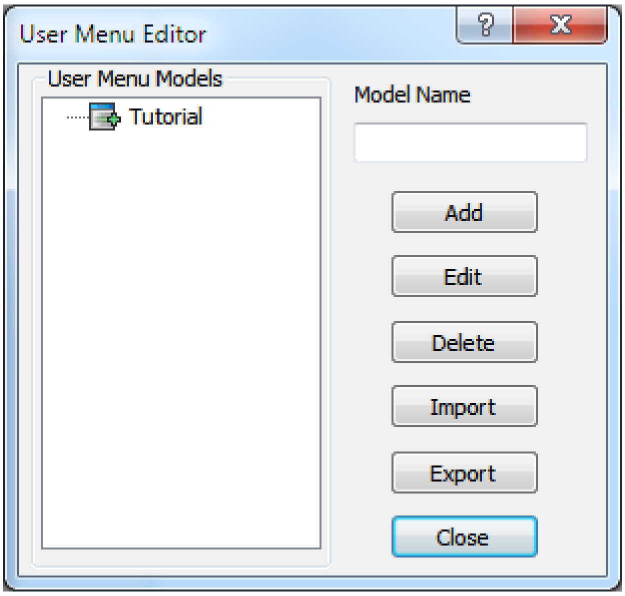
With this function user can create own menu and toolbar of CimonX environment.

As well as default menu item, user can create new menu item using command expression.

Only, default the menu button of the CimonX is not edited.(Elimination possibility)

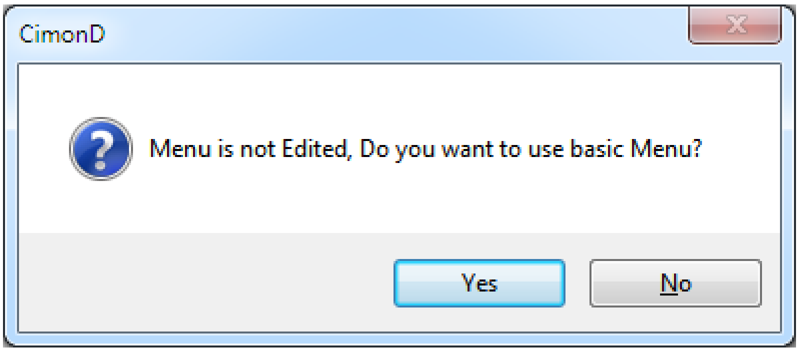
22-1. User Menu Editor

If you click Tools and select '**User Menu**, the "User Menu Editor" will appear as below.


User Menu Editor
User Menu Models
Tutorial
Model Name
Add
Edit
Delete
Import
Export
Close

- **Add**

  It is use to add a new menu model or change model name. If no model is selected in User Menu Models list, the following dialog box is displayed.


CimonD
Yes
No

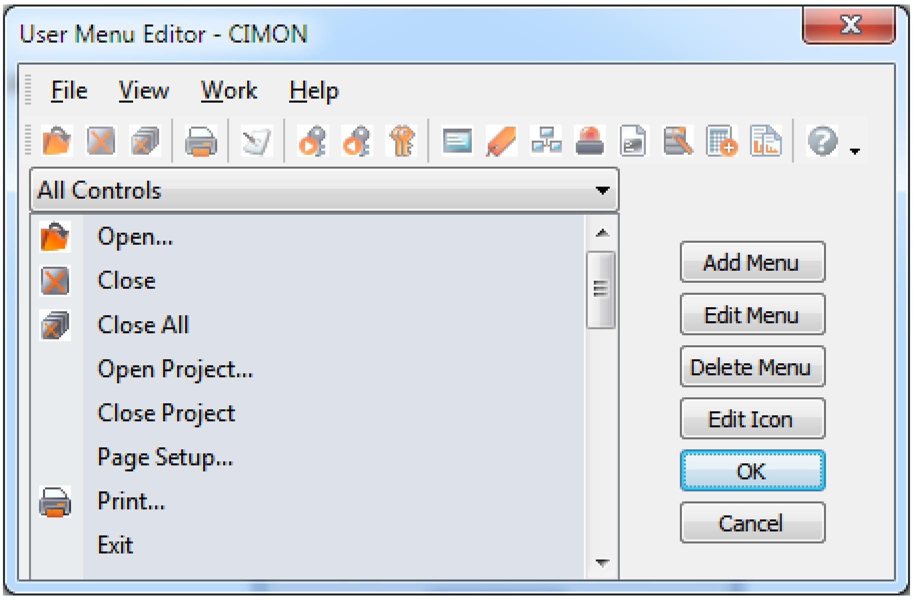
Menu is not Edited, Do you want to use basic Menu?

If you select "Yes" default system menu model is added, otherwise "User Menu Editor" is appeared.

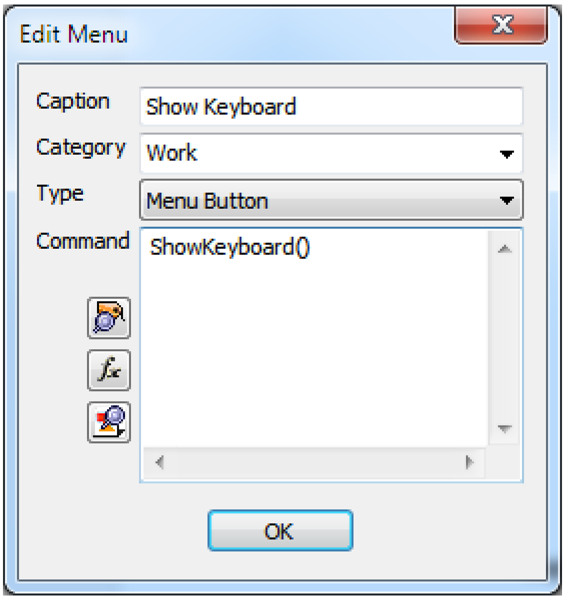
If you selected a old model in User Menu Model list, the name of model will be change.

- **Edit**

Shows User Menu Editor of the selected user menu model.


User Menu Editor - CIMON
File
View
Work
Help
All Controls
Open...
Close
Close All
Open Project...
Close Project
Page Setup...
Print...
Exit
Add Menu
Edit Menu
Delete Menu
Edit Icon
OK
Cancel

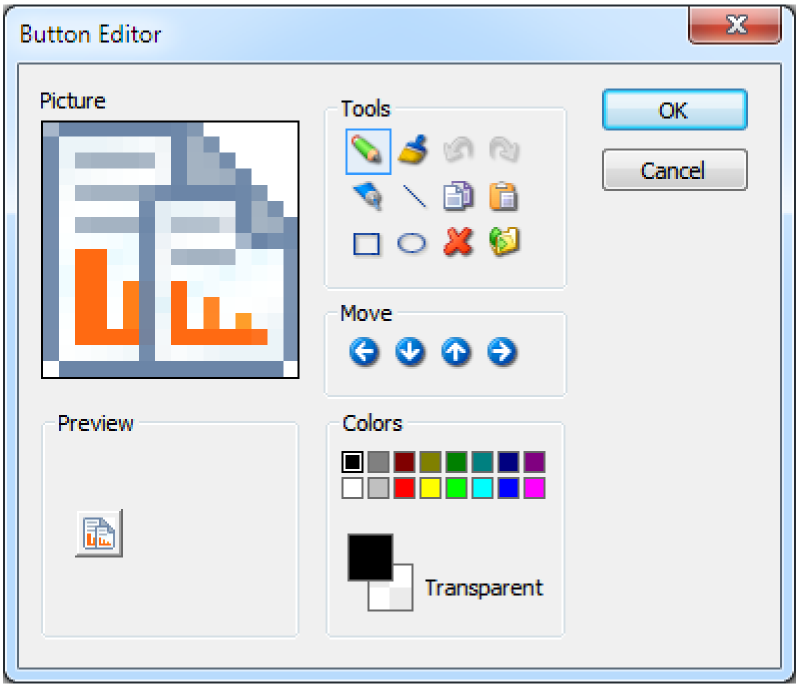
Add Menu Adds a sub menu or menu button.


Edit Menu
OK

Caption: Show Keyboard
Category: Work
Type: Menu Button
Command: ShowKeyboard()

Caption	Displayed name of menu.
Category	Select position of new menu item.
Type	Select menu or menu button. menu : sub menu menu button : menu button item.
Command	In case type is menu button, input the action of menu button.

Edit Menu	Edit a selected menu item. System default menu item can't be modified.
Delete Menu	Deletes a selected menu item. System default menu item can't be deleted.
Edit Icon	Edits a selected icon.



Pencil tool : Draw a picture free style.

Fill tool: It fills with the color which it selects.

Undo, Redo tool

Pick Color tool : Extracts a color.

Line tool : It draws the line.

Copy and paste tool

Rectangle tool : It draws the rectangle.

Circle tool : It draws the circle.

Ellipse tool : It erases the picture.

Clear : Erase the picture

Import from File : import icon picture from other folder.

- **Import**

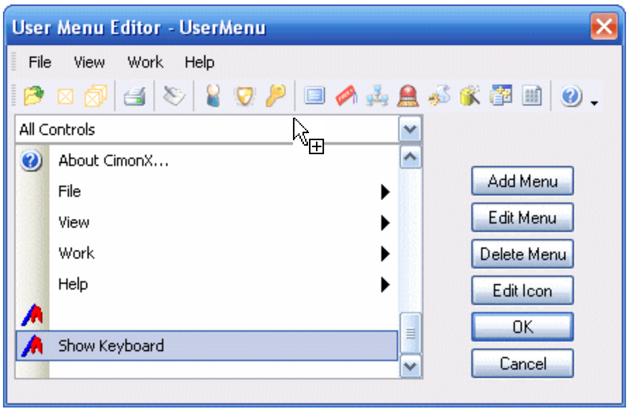
  Import user menu model from existing file.

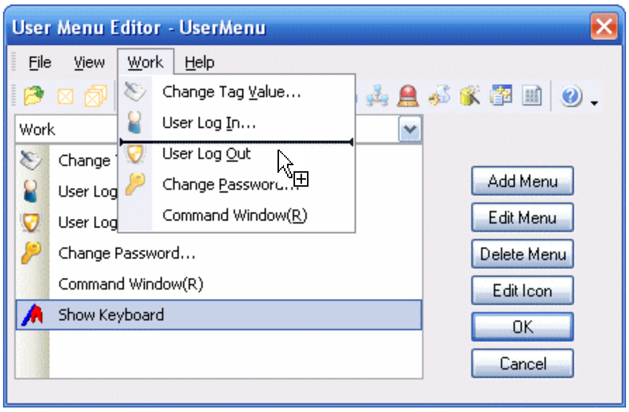
- **Export**

  Save a selected user menu model to file.

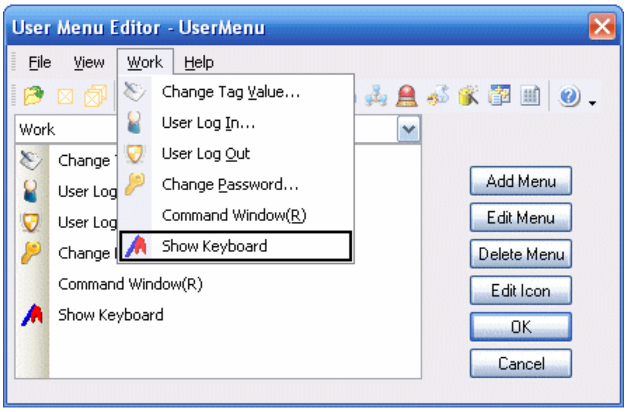
22-2. Editing a Menu and a Toolbar

When the menu button or menu is added, the added menu item is displayed in menu item list. You can add this menu item in user menu by drag and drop.

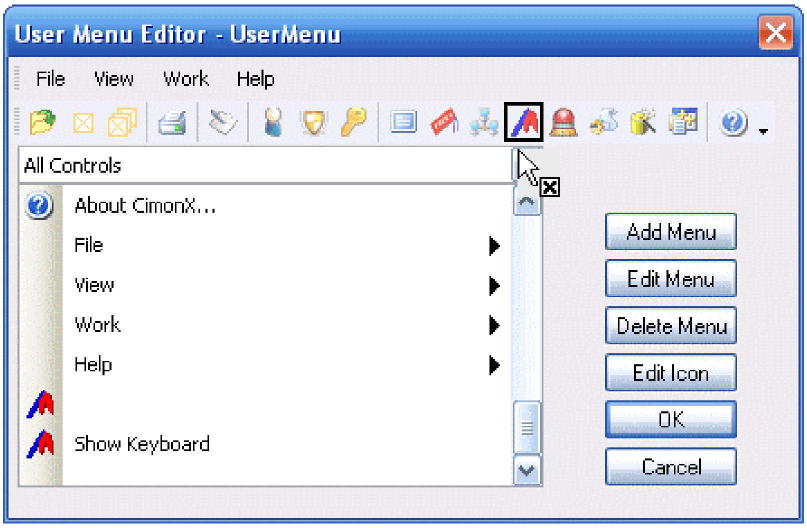

User Menu Editor - UserMenu
File View Work Help
All Controls
About CimonX...
File
View
Work
Help
Show Keyboard
Add Menu
Edit Menu
Delete Menu
Edit Icon
OK
Cancel


User Menu Editor - UserMenu
File View Work Help
Change Tag Value...
User Log In...
User Log Out
Change Password...
Command Window(R)
Work
Change
User Log
User Log
Change Password...
Command Window(R)
Show Keyboard
Add Menu
Edit Menu
Delete Menu
Edit Icon
OK
Cancel

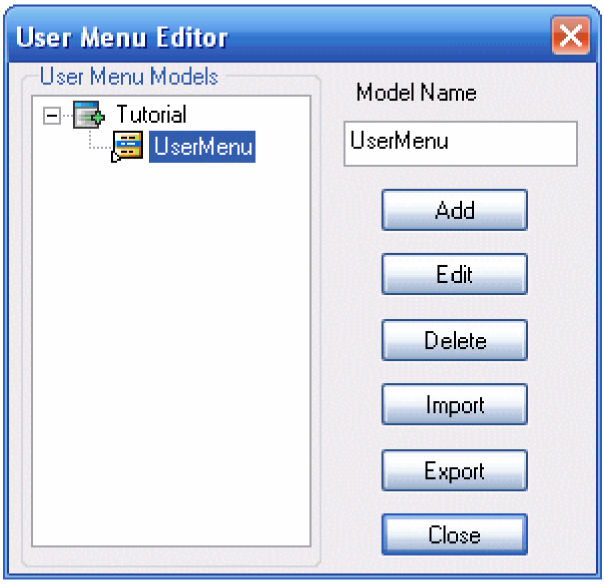
Select a added menu item and then drag to above menu and drop, the menu item is added as follows.


User Menu Editor - UserMenu
File View Work Help
Change Tag Value...
User Log In...
User Log Out
Change Password...
Command Window(R)
Show Keyboard
Work
Change
User Log
User Log
Change
Command Window(R)
Show Keyboard
Add Menu
Edit Menu
Delete Menu
Edit Icon
OK
Cancel

You can remove a menu item by drag the item to outside of menu and drop.


User Menu Editor - UserMenu
File
View
Work
Help
All Controls
About CimonX...
File
View
Work
Help
Show Keyboard
Add Menu
Edit Menu
Delete Menu
Edit Icon
OK
Cancel

Click ‘OK’ button to save a edited user menu model.


User Menu Editor
User Menu Models
Tutorial
UserMenu
Add
Edit
Delete
Import
Export
Close

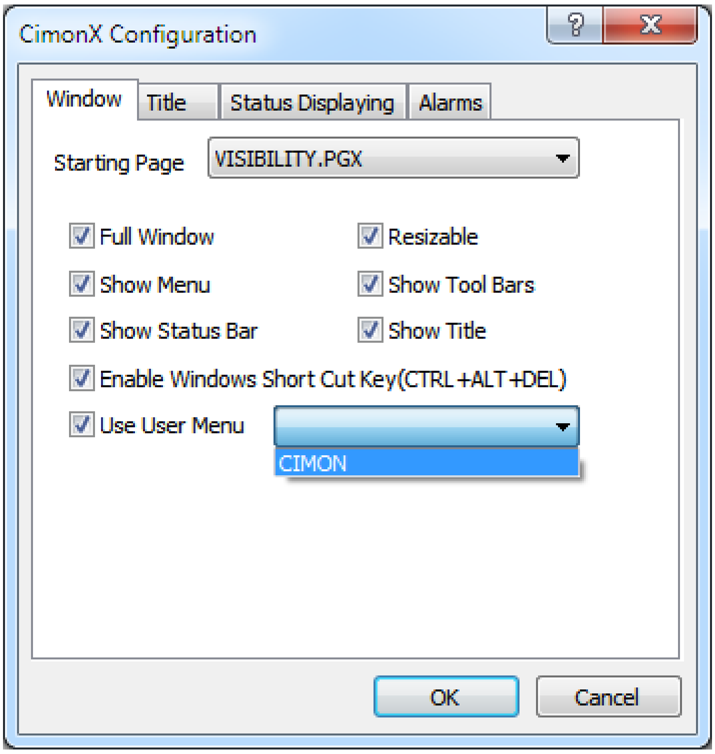
Model Name: UserMenu

22-3. The Application of User Menu

The user menu model may be applied at a system initial time and user login time.

System initial time

In “CimonX configuration” dialog box, check “Use User Menu” and select a registered user menu model in combo box.



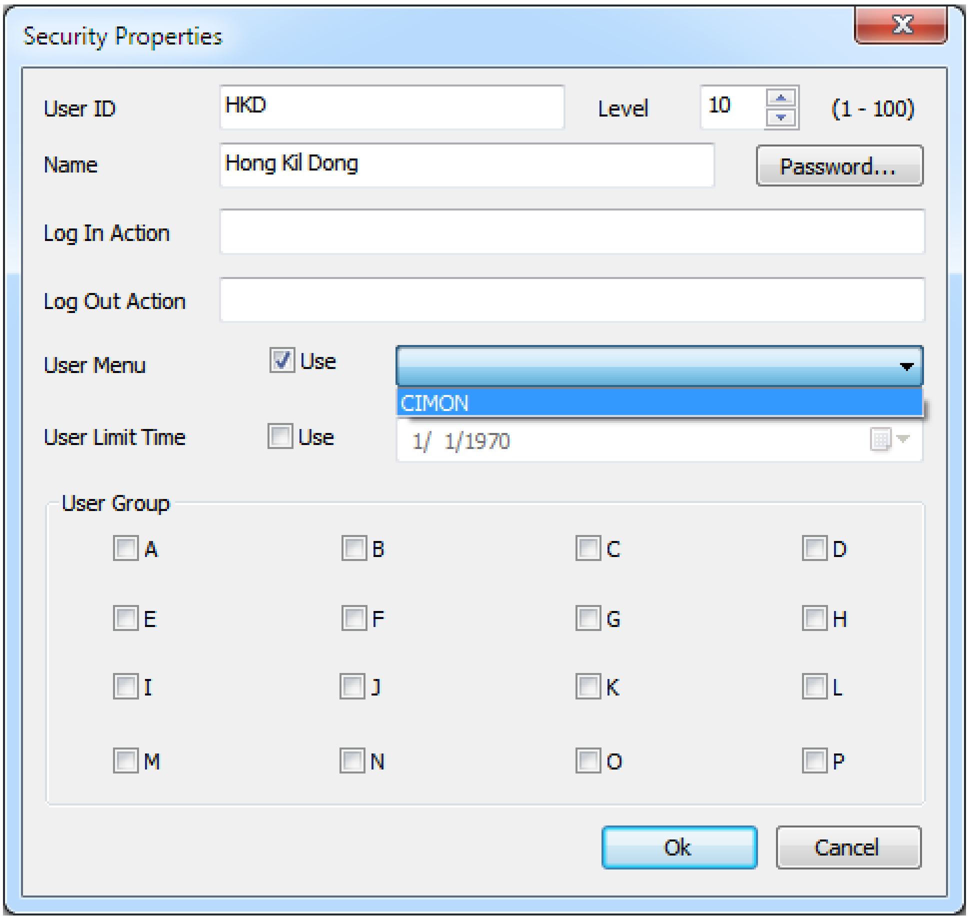
CimonX Configuration
Window
Title
Status Displaying
Alarms
OK
Cancel

Starting Page: VISIBILITY.PGX

☑ Full Window
☑ Resizable
☑ Show Menu
☑ Show Tool Bars
☑ Show Status Bar
☑ Show Title
☑ Enable Windows Short Cut Key(CTRL+ALT+DEL)
☑ Use User Menu: CIMON

User login time

In “Security Properties” page of user, check User Menu “use” and select a registered user menu model in pull-down menu.



Security Properties

User ID	HKD	Level	10 (1 - 100)
Name	Hong Kil Dong		
Log In Action			
Log Out Action			
User Menu	☑ Use	CIMON	
User Limit Time	☐ Use	1/ 1/1970	

User Group

☐ A	☐ B	☐ C	☐ D
☐ E	☐ F	☐ G	☐ H
☐ I	☐ J	☐ K	☐ L
☐ M	☐ N	☐ O	☐ P

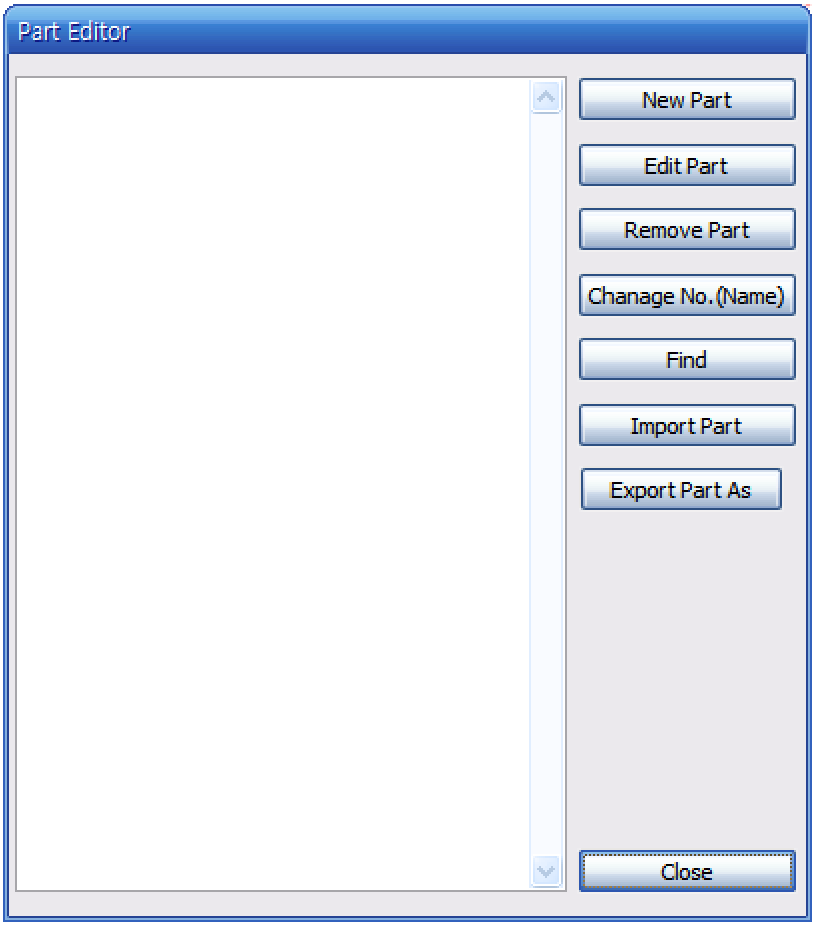
Chapter23 Part Editor

23-1. Part Editor

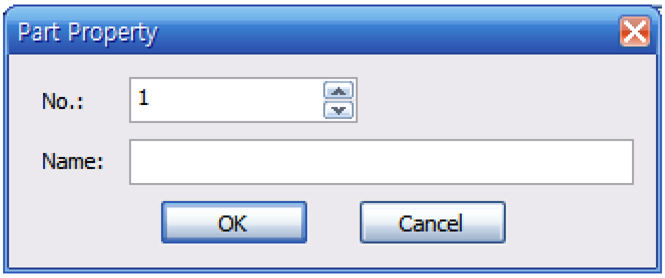
This function is used to make object and save it to library or use it as Switch/Lamp function.

Click Tools and select Part Editor.

Click [New Part] to make part object.


Part Editor
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As
Close

Select the number and write the name of part.

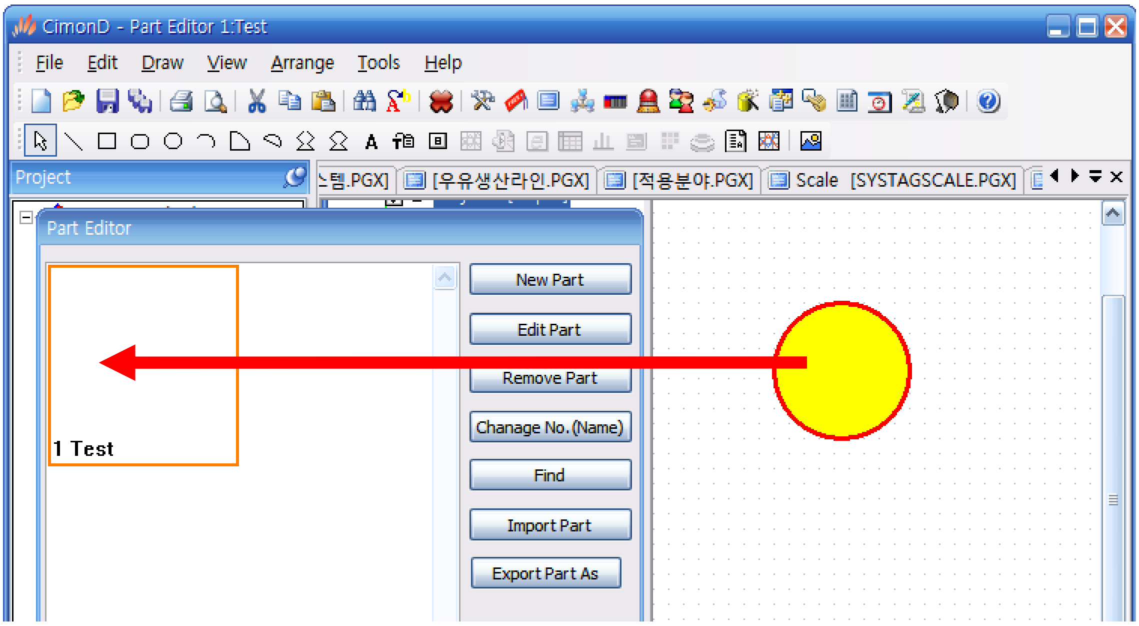

Part Property
OK
Cancel

No.: 1

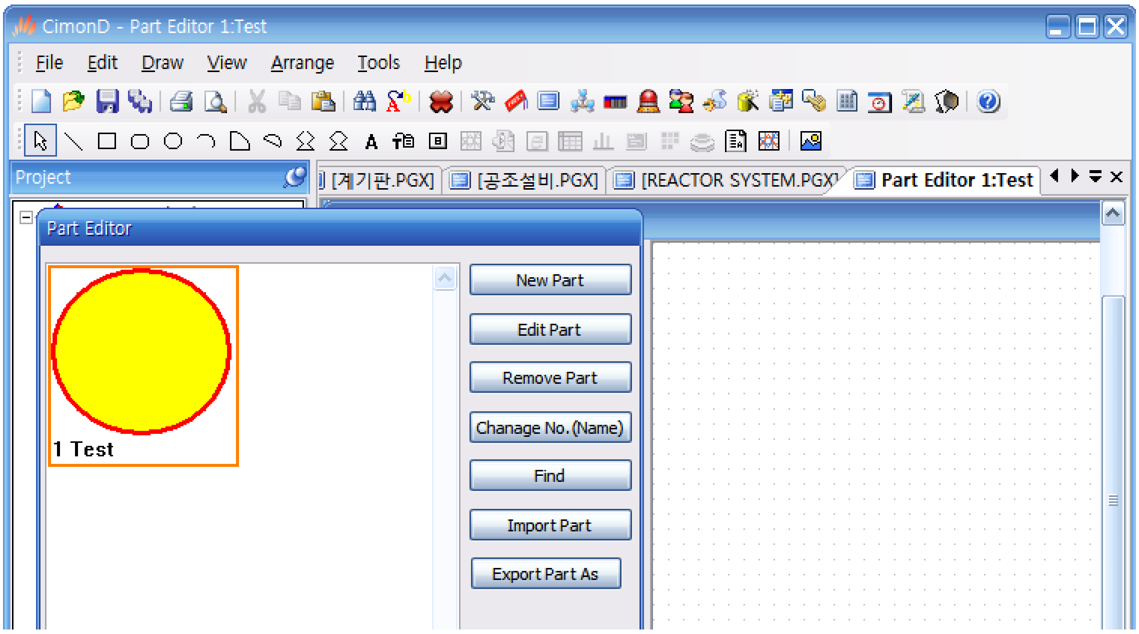
Name:

If you write Test at the name and click [OK] you can see the [Part Editor1: Test] page as below. Now, you can make any object you want on this page as below picture.

However, the objects such as Trend, Alarm and Chart are not available as Part object.


CimonD - Part Editor 1:Test
File
Edit
Draw
View
Arrange
Tools
Help
Project
Part Editor
1 Test
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As

After making object, click the object and drag it to [Part Editor] as below picture.


CimonD - Part Editor 1:Test
File
Edit
Draw
View
Arrange
Tools
Help
Project
[REACTOR SYSTEM.PGX]
Part Editor 1:Test
Part Editor
1 Test
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As

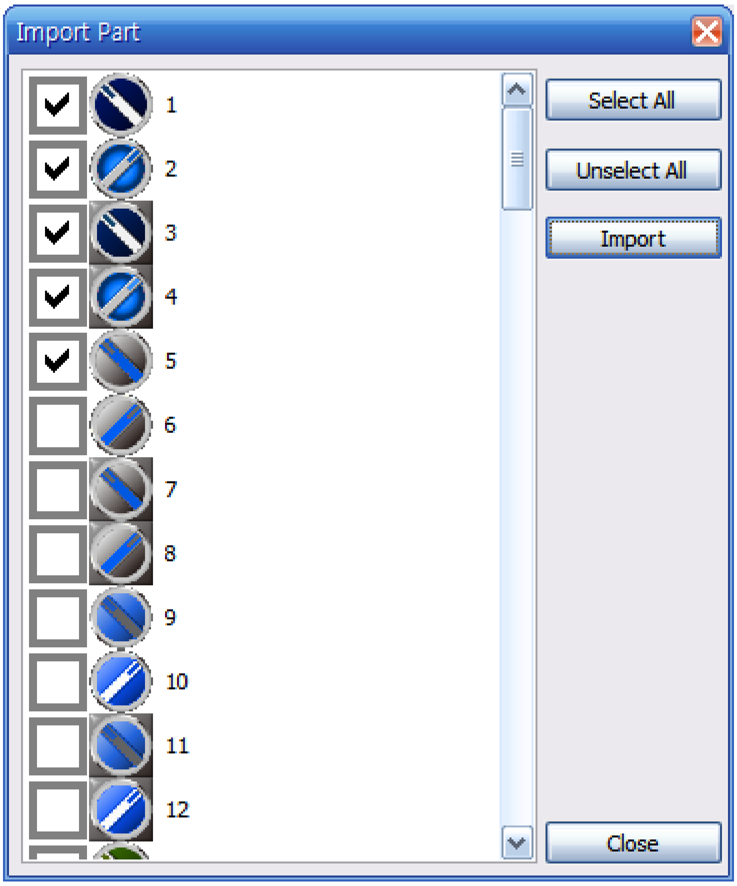
Edit Part: Edit the selected part object.

Remove Part: Delete the selected part object.

Change No.(Name): Edit the selected part property.

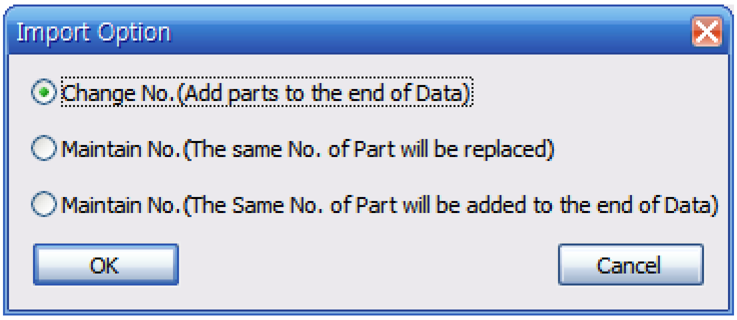
Find: Find out Part object through name or number.

Import Part: Bring the object part which is made by other project.


Import Part
1
2
3
4
5
6
7
8
9
10
11
12
Select All
Unselect All
Import
Close

After selecting object part, click the [Import].

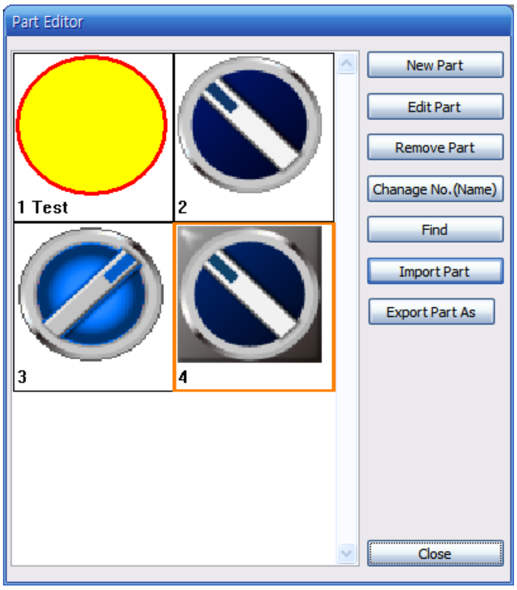
Then you can see the below [Import Option] windows and select one of options.


Import Option
● Change No.(Add parts to the end of Data)
○ Maintain No.(The same No. of Part will be replaced)
○ Maintain No.(The Same No. of Part will be added to the end of Data)
OK
Cancel

Change No.(Add parts to the end of Data)

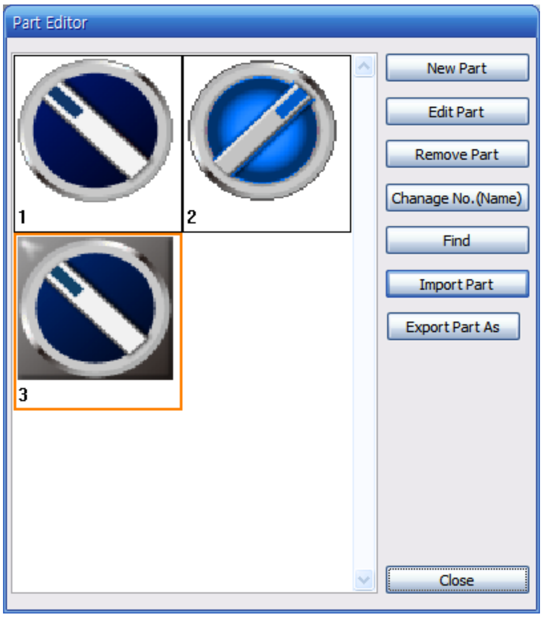
➔ If you select this, you can add selected Part objects from the existed part objects number. The number of imported part objects starts from 2.

Please see the below picture.


Part Editor
1 Test
2
3
4
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As
Close

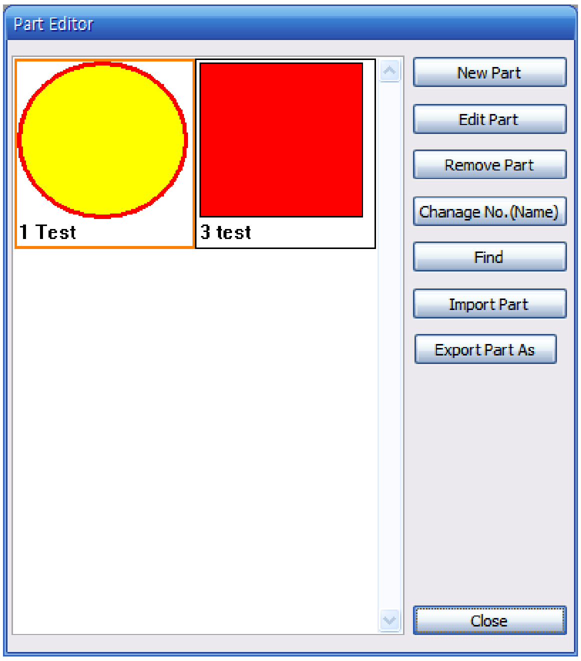
Maintain No. (The same No. of Part will be replaced)

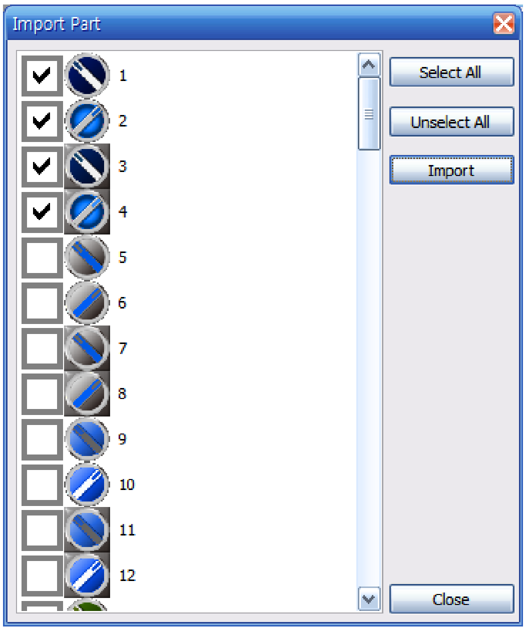
➔ If you select this, the existed Part object will be removed and imported Part object is saved. The number of imported part objects starts from 1.


Part Editor
1
2
3
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As
Close

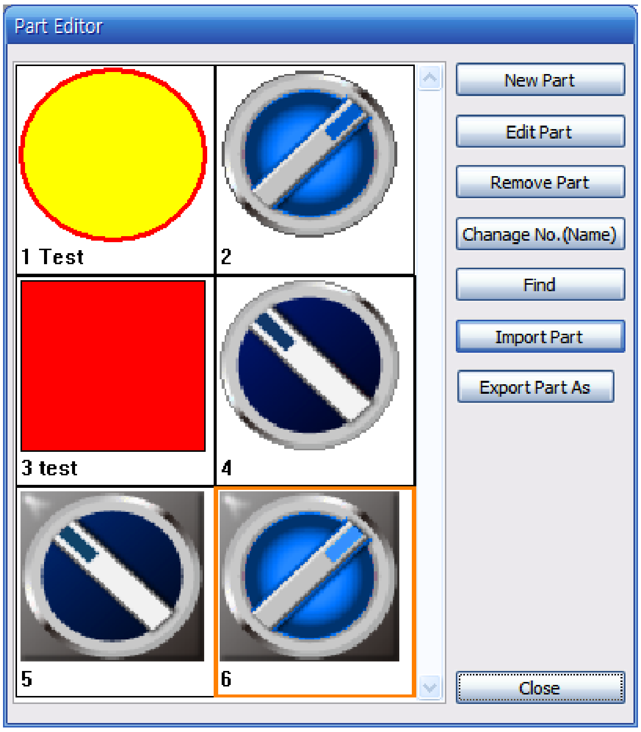
Maintain No. (The Same No. of Part will be added to the end of Data)

➔ If you select this, the selected part objects will be saved after number of existed part object number. For example, there are No.1 and No.3 part objects already and you will import 4 different part objects from other project as below picture.


Part Editor
1 Test
3 test
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As
Close


Import Part
☑ 1
☑ 2
☑ 3
☑ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12
Select All
Unselect All
Import
Close

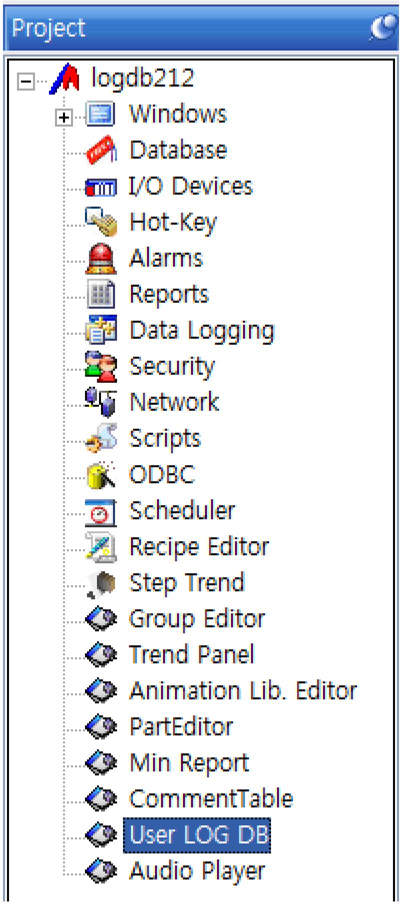
The result will be following picture.

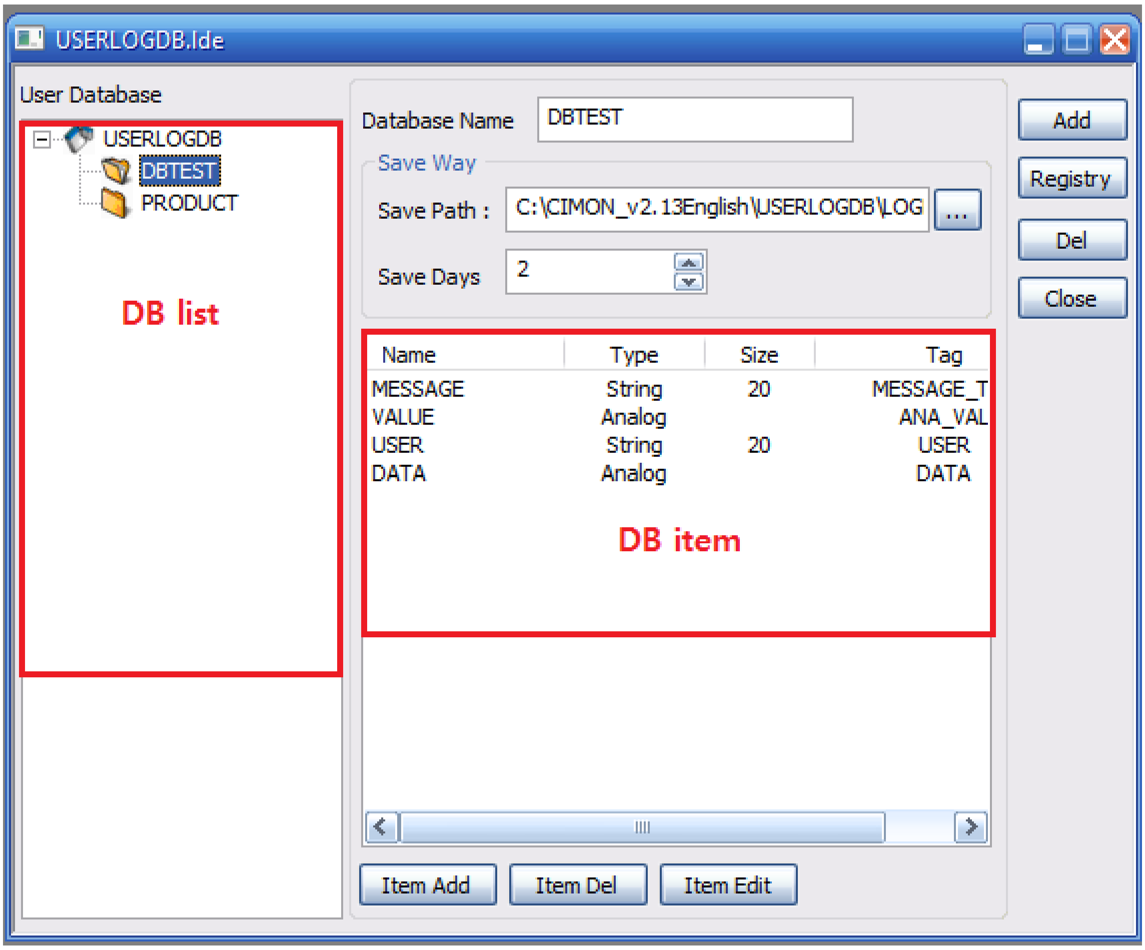

Part Editor
1 Test
2
3 test
4
5
6
New Part
Edit Part
Remove Part
Chanage No.(Name)
Find
Import Part
Export Part As
Close

Chapter24 USER LOG DB

1) USER LOG Database is used for simple data search or data insert in CIMON-SCADA instead of using commercial database.
2) The data will show on “List Control”
3) The data can be printed out as PDF or Excel format. Therefore, user cannot modify PDF format.
4) This manual is made under assuming that user is able to use CIMON-SCADA basic functions.

1) DB Model Editor


Project
logdb212
Windows
Database
I/O Devices
Hot-Key
Alarms
Reports
Data Logging
Security
Network
Scripts
ODBC
Scheduler
Recipe Editor
Step Trend
Group Editor
Trend Panel
Animation Lib. Editor
PartEditor
Min Report
CommentTable
User LOG DB
Audio Player



USERLOGDB.Ide
User Database
USERLOGDB
DBTEST
PRODUCT
DB list
Save Way
...
Add
Registry
Del
Close
DB item
Item Add
Item Del
Item Edit

Database Name: DBTEST

Save Path : C:\CIMON_v2.13English\USERLOGDB\LOG

Save Days: 2

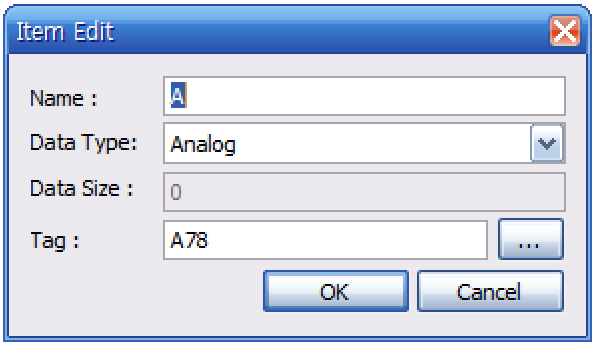
Name	Type	Size	Tag
MESSAGE	String	20	MESSAGE_T
VALUE	Analog		ANA_VAL
USER	String	20	USER
DATA	Analog		DATA

Open CimonD and click [Tools] → [User LOG DB]

[DB Model Editor]

①	Database Name	- Write DB model name
②	Save Path	- Select Save Path which Log Data file will be saved
③	Save Days	-Maximum days for data saving.
④	Add	-Add new DB model.
⑤	Registry	-Update property of DB model.
⑥	Delete	- Delete selected DB model
⑦	Close	- Close DB Model Editor
⑧	Item Add	- Add new Items in DB model.
⑨	Item Delete	- Delete Item in DB model.
⑩	Item Edit	- Edit selected item.

[Item Edit window]



Name : A
Data Type: Analog
Data Size : 0
Tag : A78

① Name - Write Item name

② Data Type - Select Data type of Item

③ Data Size - If “String” is selected as Data Type, you can assign string data size maximum 80 letters in case of English letter.

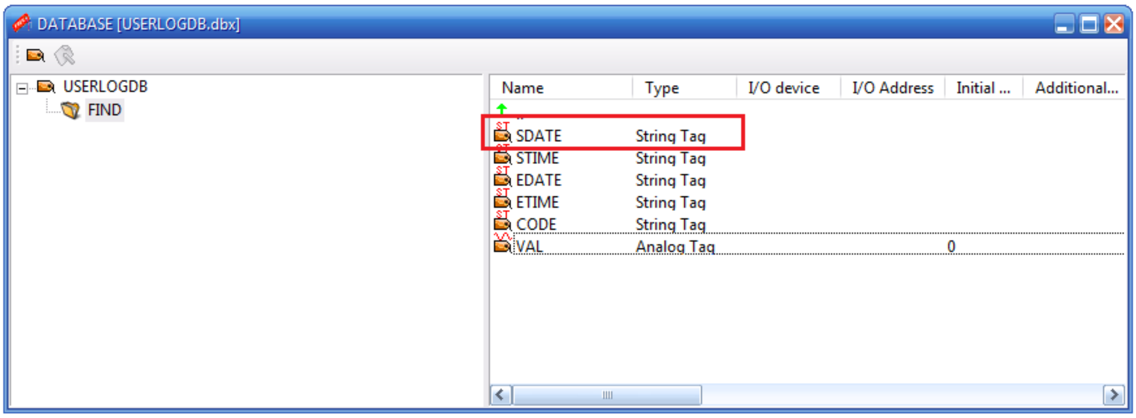
④ Tag - Select tag name which is designated to Item. Tag value is updated to this item.

2) Calendar setting

[Making Tag]

Make String tag which will receive date or time

This tag must be String and virtual tag.

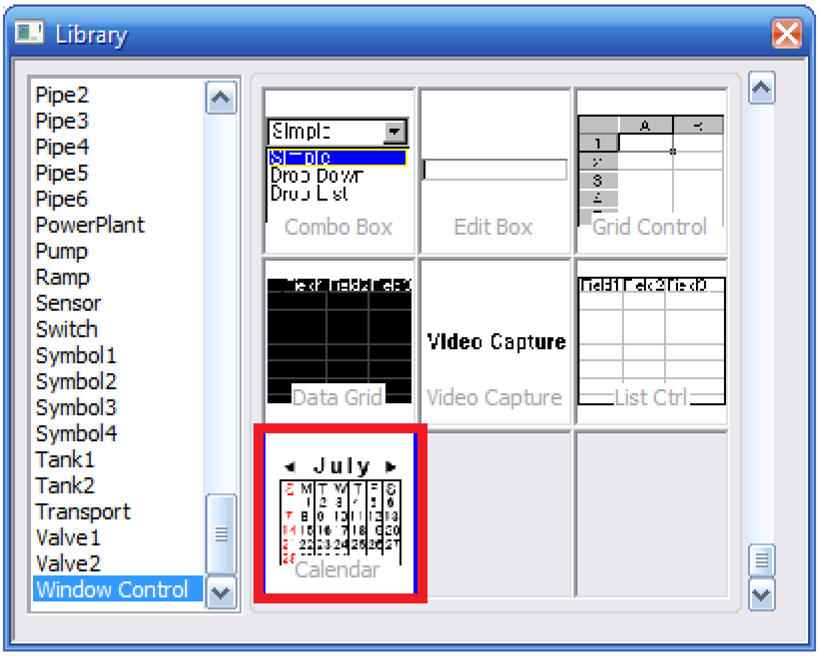


Name	Type	I/O device	I/O Address	Initial ...	Additional...
SDATE	String Tag				
STIME	String Tag				
EDATE	String Tag				
ETIME	String Tag				
CODE	String Tag				
VAL	Analog Tag			0	

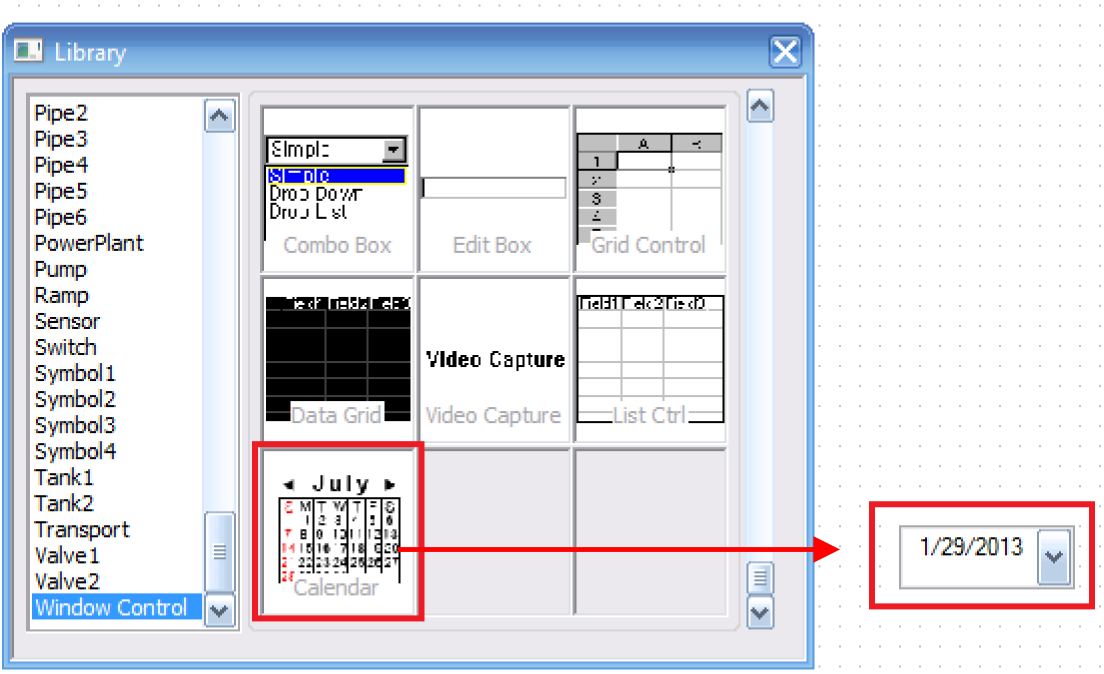
[Making Calendar on the page]

Make page and click [Draw] → [Library]

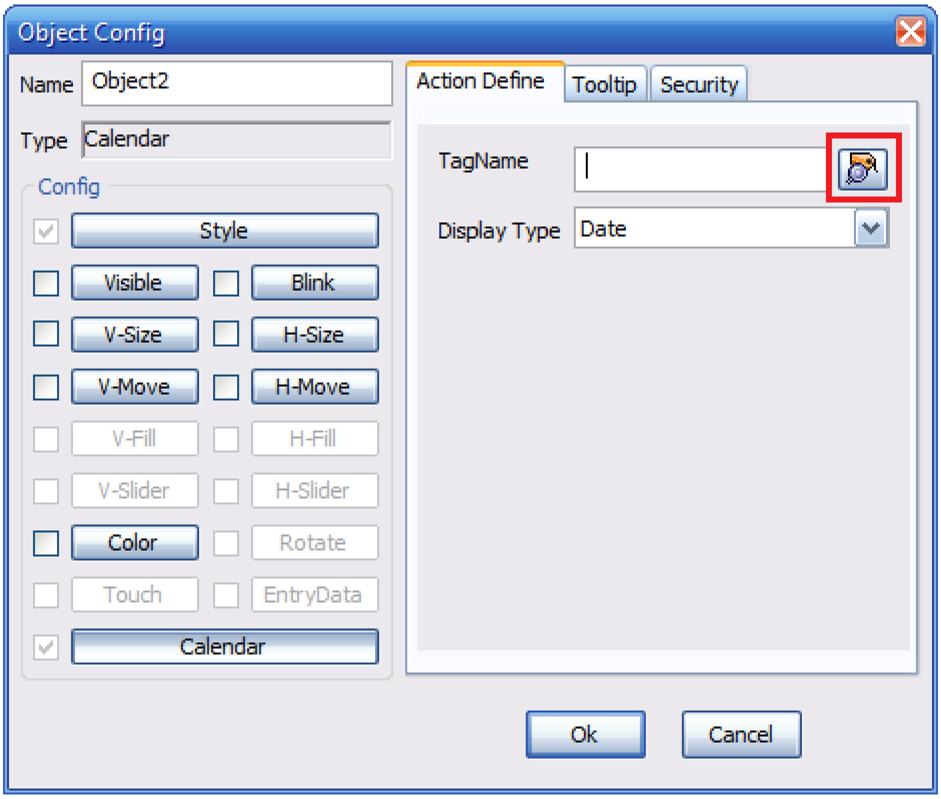
Select Window Control and click the Calendar.


Library
Pipe2
Pipe3
Pipe4
Pipe5
Pipe6
PowerPlant
Pump
Ramp
Sensor
Switch
Symbol1
Symbol2
Symbol3
Symbol4
Tank1
Tank2
Transport
Valve1
Valve2
Window Control
Combo Box
Edit Box
Grid Control
Data Grid
Video Capture
List Ctrl
July
Calendar

Drag the Calendar to the page and double click “Calendar control”


Library
Pipe2
Pipe3
Pipe4
Pipe5
Pipe6
PowerPlant
Pump
Ramp
Sensor
Switch
Symbol1
Symbol2
Symbol3
Symbol4
Tank1
Tank2
Transport
Valve1
Valve2
Window Control
Combo Box
Edit Box
Grid Control
Data Grid
Video Capture
List Ctrl
July
Calendar
1/29/2013

Write the String tag name or select string tag after click “Finder”


Object Config
Action Define
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Calendar
Ok
Cancel

Name: Object2
Type: Calendar
TagName:
Display Type: Date

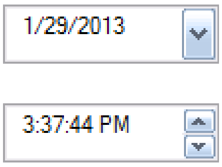
If you select “Date” at [Display Type], February 20, 2013 will be saved at tag as 20130220.

If you select “Time” at [Display Type], 1:36:27PM will be saved at tag as 133627.

[Check Calendar operation]

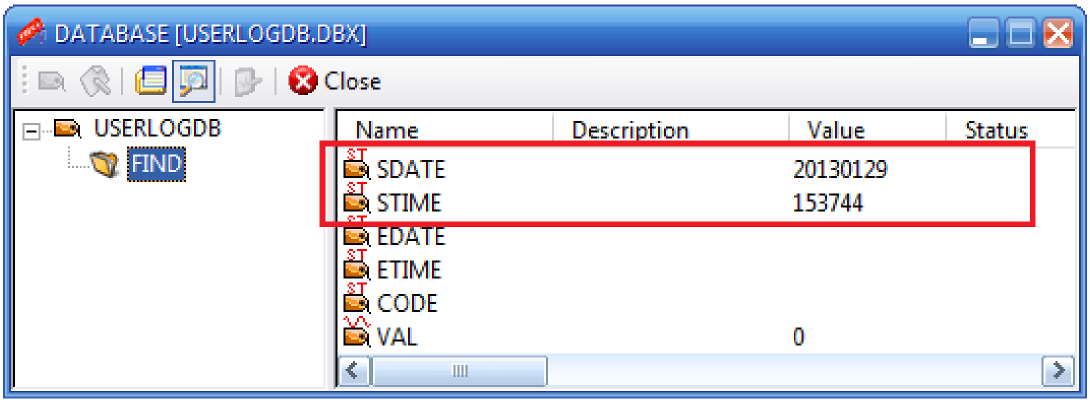
Run “CimonX” and click [View] → [Database].

Check the tag value when you change calendar value.



1/29/2013

3:37:44 PM


DATABASE [USERLOGDB.DBX]
Close
USERLOGDB
FIND

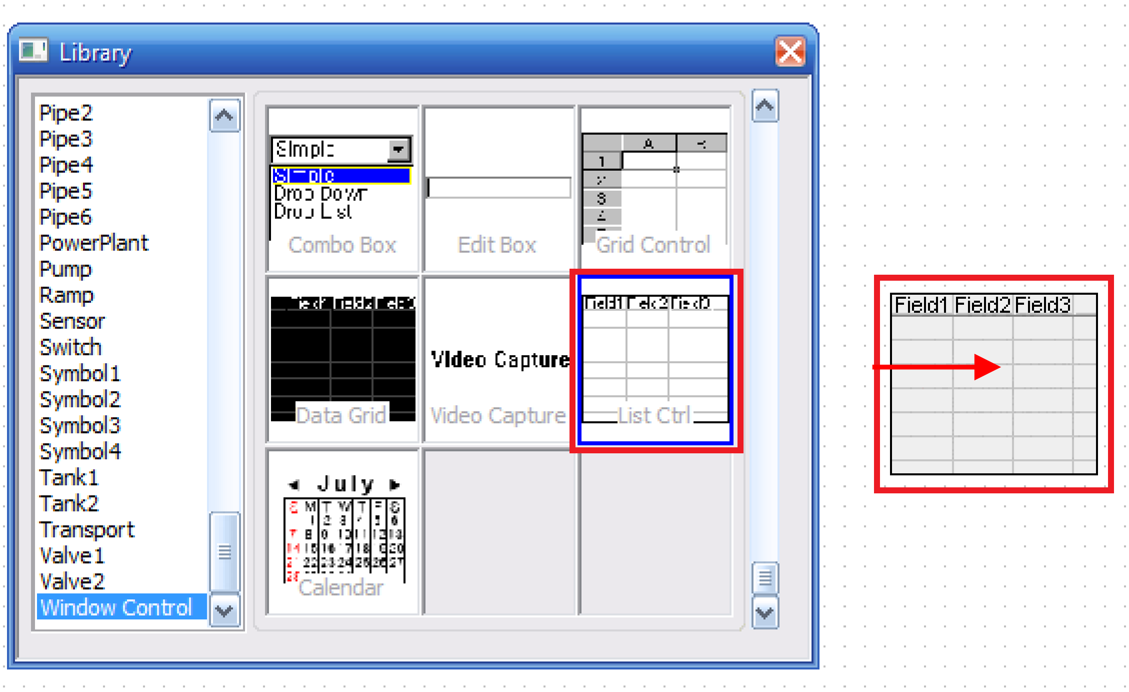
Name	Description	Value	Status
SDATE		20130129	
STIME		153744	
EDATE			
ETIME			
CODE			
VAL		0	

This Database shows Data and Time tag values when Calendar is changed.

3) List Control Setting

[Making List Control on the page]

Click [Draw] → [Library] → [Window Control]

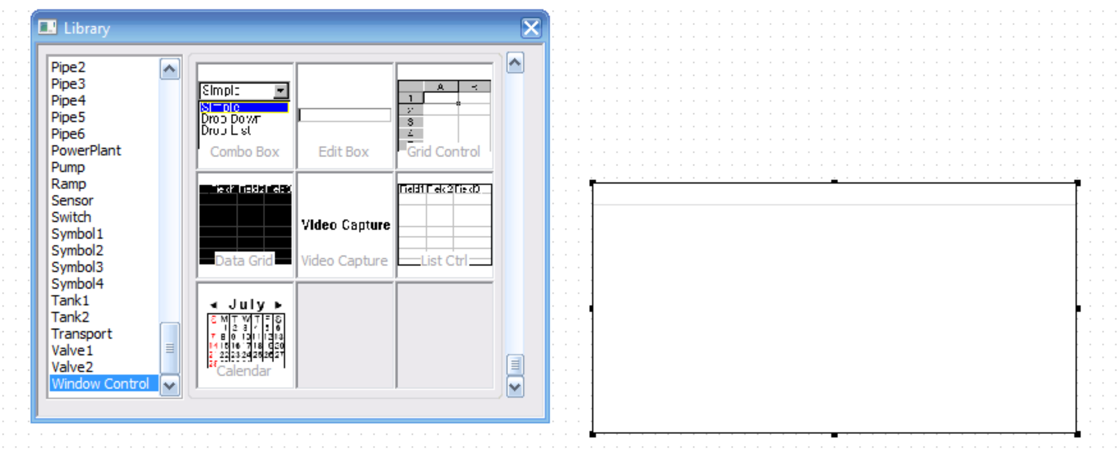

Library
Pipe2
Pipe3
Pipe4
Pipe5
Pipe6
PowerPlant
Pump
Ramp
Sensor
Switch
Symbol1
Symbol2
Symbol3
Symbol4
Tank1
Tank2
Transport
Valve1
Valve2
Window Control
Combo Box
Edit Box
Grid Control
Data Grid
Video Capture
List Ctrl
Calendar
Field1
Field2
Field3

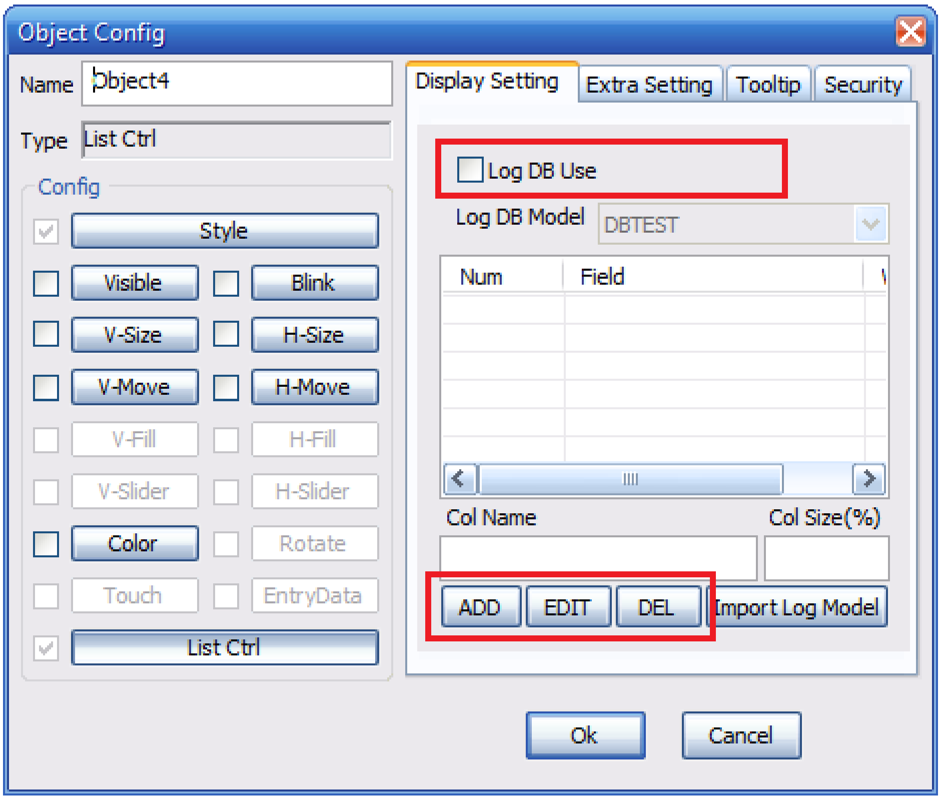
"List Control" shows Log DB value.

In order to operate Log DB, Script must be used.

[Display Setting]

Double click "List Control" on the page.


Library
Pipe2
Pipe3
Pipe4
Pipe5
Pipe6
PowerPlant
Pump
Ramp
Sensor
Switch
Symbol1
Symbol2
Symbol3
Symbol4
Tank1
Tank2
Transport
Valve1
Valve2
Window Control
Combo Box
Edit Box
Grid Control
Data Grid
Video Capture
List Ctrl
Calendar


Object Config
Name
Object4
Type
List Ctrl
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Display Setting
Extra Setting
Tooltip
Security
Log DB Use
Log DB Model
DBTEST
Num
Field
Col Name
Col Size(%)
ADD
EDIT
DEL
Import Log Model
Ok
Cancel

① Log DB Use - In order to make column name and size on "List Control",
do not select "Log DB Use".
In order to make column by "Import Log Model" automatically,
click "Log DB Use"

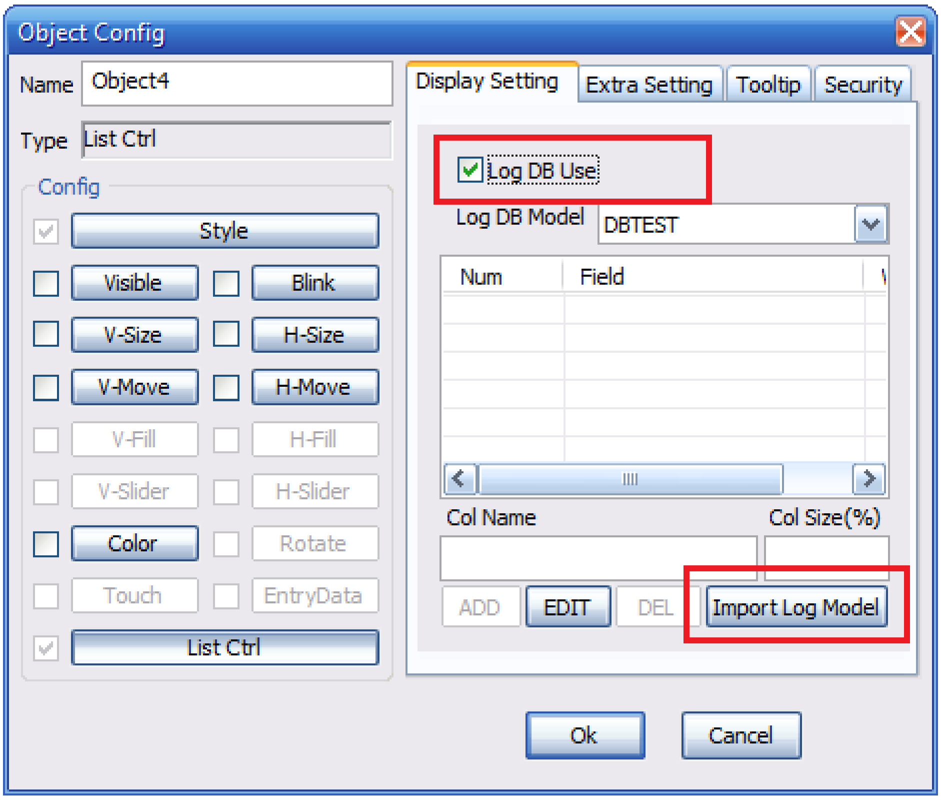
② ADD - It is used to add Column name and Column size on the "List Control"

③ EDIT - It is used to edit the added column name and size.

④ DEL - It is used to delete the added column name and size.

[Import Log Model]

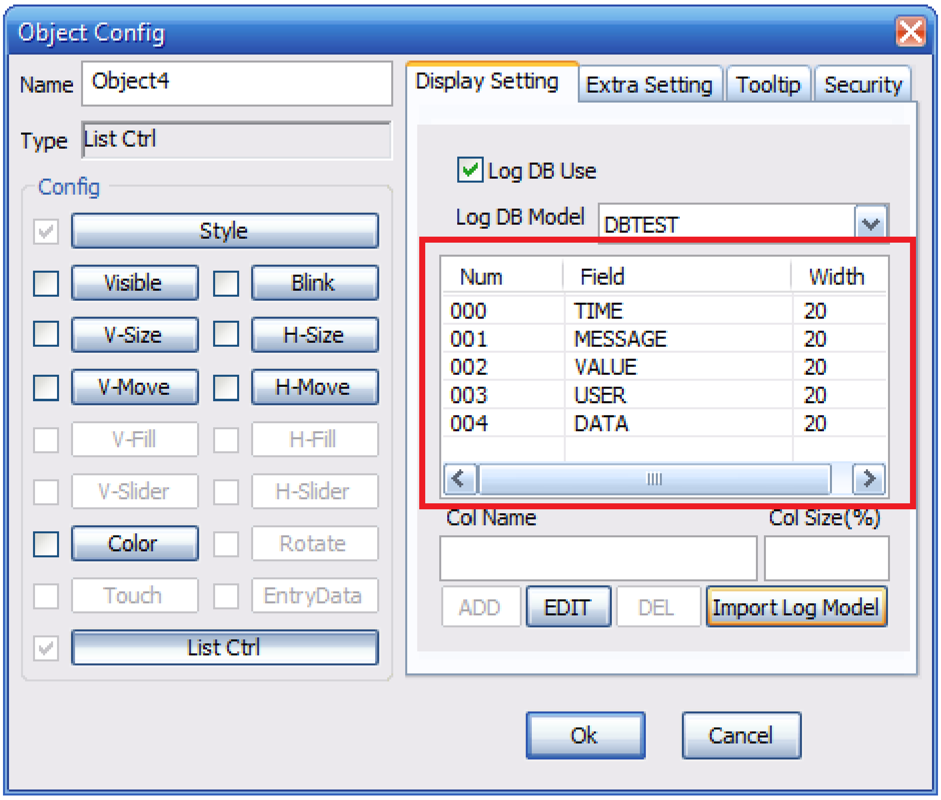
Double click "List Control" on the page.


Object Config
Name
Object4
Type
List Ctrl
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Display Setting
Extra Setting
Tooltip
Security
Log DB Use
Log DB Model
DBTEST
Num
Field
Col Name
Col Size(%)
ADD
EDIT
DEL
Import Log Model
Ok
Cancel

① Log DB Use – If you already made "Log DB Model" at the first step and want to import Log Model, select "Log DB Use"

② Log DB Model – Select one of Log DB Models that you already made.

③ Import Log Model – After select DB model, click it to import log models to show on the "List Control"



Object Config
Display Setting
Extra Setting
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Col Name
Col Size(%)
ADD
EDIT
DEL
Import Log Model
Ok
Cancel

Name: Object4

Type: List Ctrl

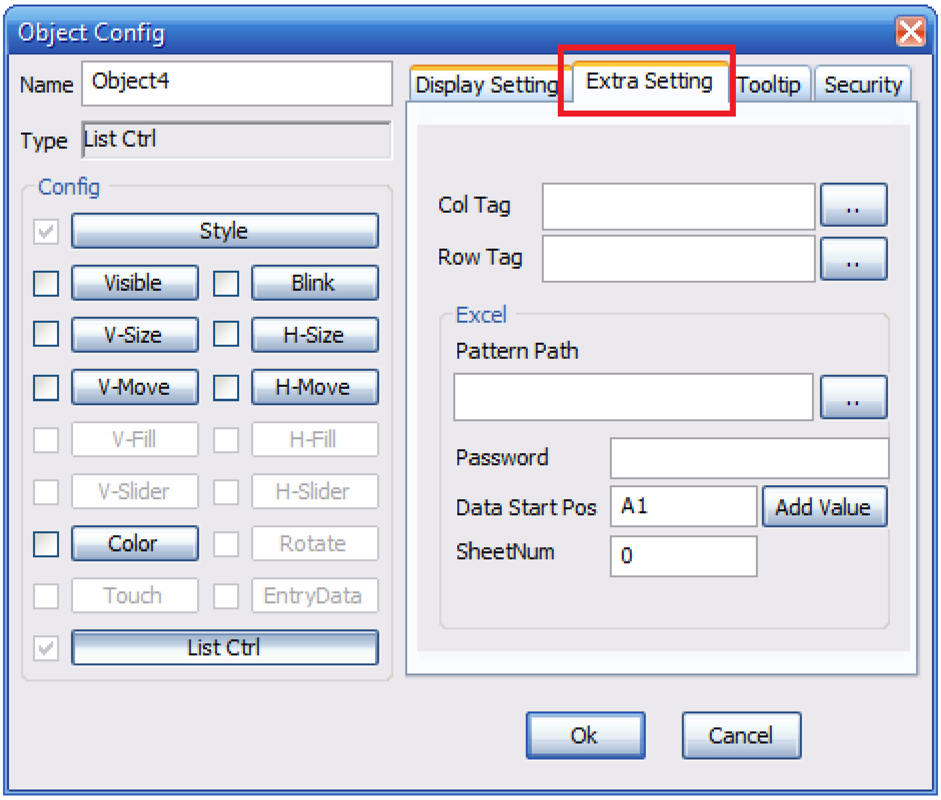
☑ Log DB Use

Log DB Model: DBTEST

Num	Field	Width
000	TIME	20
001	MESSAGE	20
002	VALUE	20
003	USER	20
004	DATA	20

After importing Log Models, you can only edit column name and size.

[Extra Setting]



Object Config
Display Setting
Extra Setting
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
..
Excel
Add Value
Ok
Cancel

Name: Object4

Type: List Ctrl

Col Tag:

Row Tag:

Pattern Path:

Password:

Data Start Pos: A1

SheetNum: 0

① Col Tag – It is used to save column’s location when you click items on the “List Control”. Select Analog tag here.

② Row Tag - It is used to save row’s location when you click items on the “List Control”. Select Analog tag here.

③ Pattern Path –Make Excel form in folder. List Control data will be saved in this format and print out to Excel or PDF format.

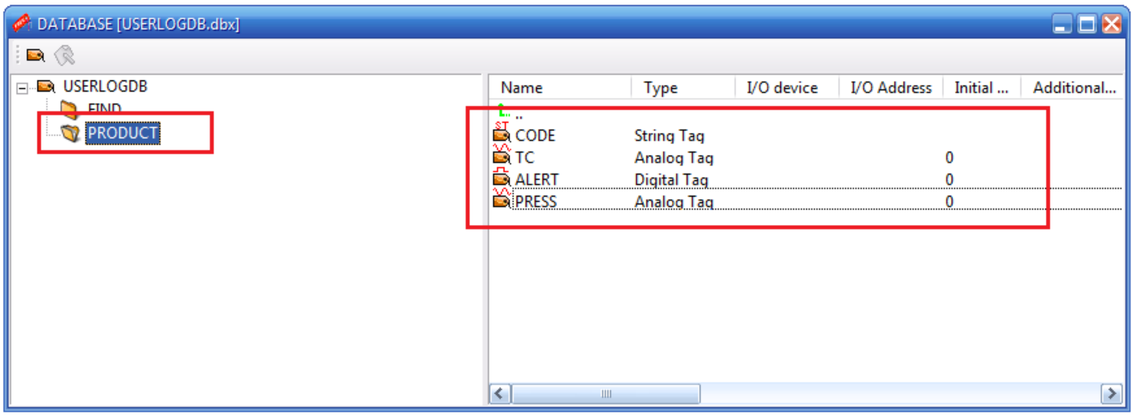
④ Password - It is used to make password on Excel file.

⑤ Data Start Pos - Assign the column and row which data will be saved from this position.

⑥ Sheet Num - Assign sheet number which data will be saved. Sheet number starts from 0.

4) Summary for Sample project

- There are Basic sample and Advanced sample projects.
- If Product (String tag) value is changed, related TC, ALERT and PRESS’ value is saved.
- First of all, make tags as following picture.



DATABASE [USERLOGDB.dbx]

USERLOGDB
  FIND
  PRODUCT

Name	Type	I/O device	I/O Address	Initial ...	Additional...
..					
CODE	String Tag				
TC	Analog Tag			0	
ALERT	Digital Tag			0	
PRESS	Analog Tag			0	

Make “PRODUCT” Group and 4 virtual tags as below.

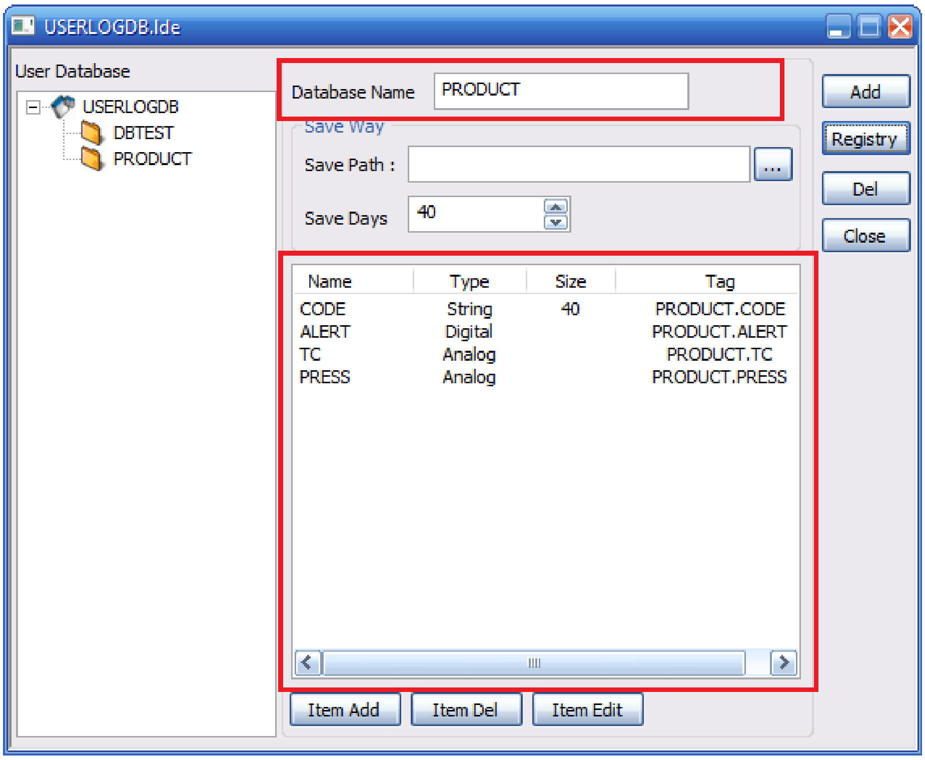
CODE - Product Code (String tag)

TC - Temperature value (Analog tag)

ALERT - Alarm tag (Digital tag)

PRESS - Pressure value (Analog tag)

- Make Log DB Model as below.

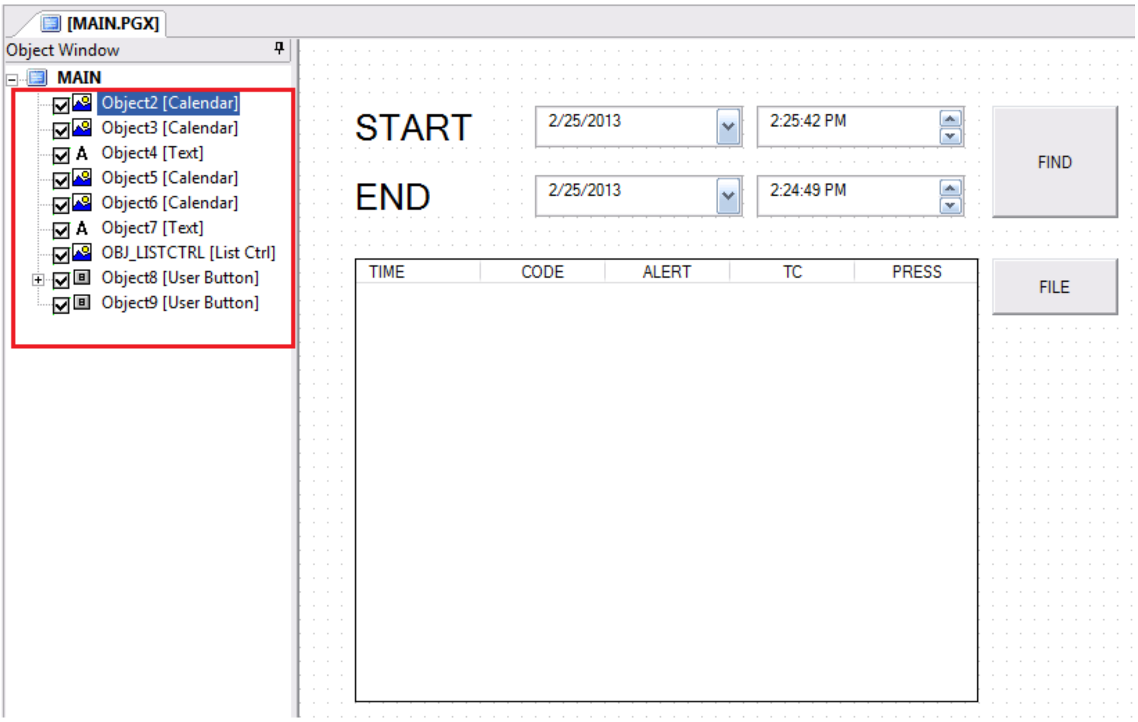

USERLOGDB.lde
User Database
USERLOGDB
DBTEST
PRODUCT
Save Way
Save Path :
...
Add
Registry
Del
Close
Item Add
Item Del
Item Edit

Database Name: PRODUCT

Save Days: 40

Name	Type	Size	Tag
CODE	String	40	PRODUCT.CODE
ALERT	Digital		PRODUCT.ALERT
TC	Analog		PRODUCT.TC
PRESS	Analog		PRODUCT.PRESS

- Make the page as below.


[MAIN.PGX]
Object Window
MAIN
FIND
FILE

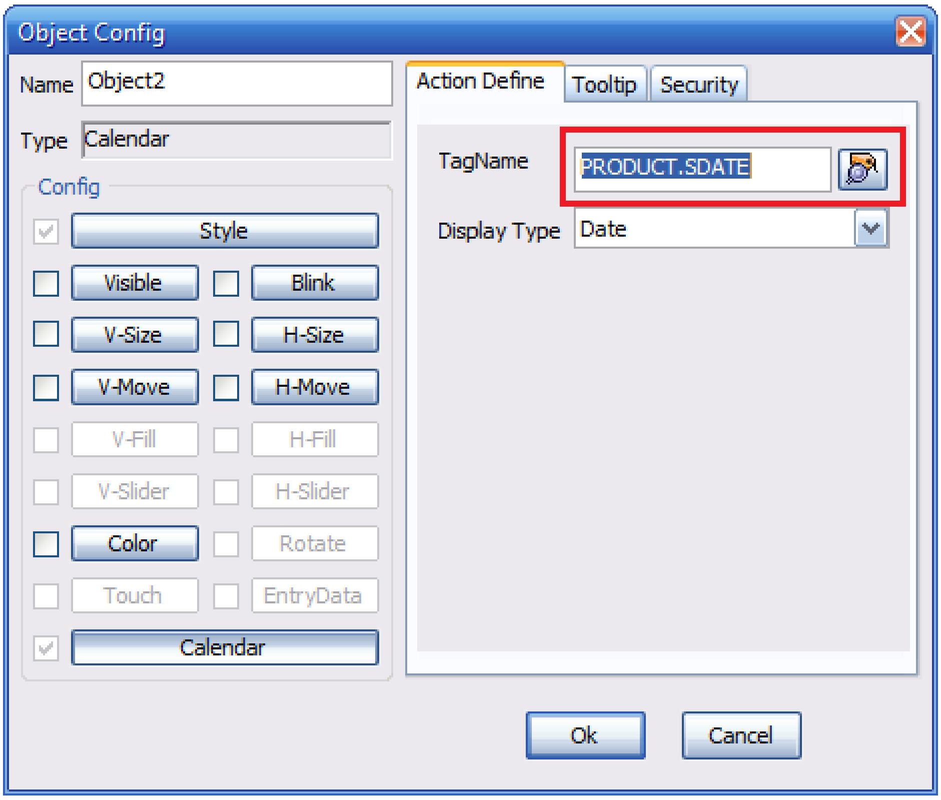
☑ Object2 [Calendar]
☑ Object3 [Calendar]
☑ Object4 [Text]
☑ Object5 [Calendar]
☑ Object6 [Calendar]
☑ Object7 [Text]
☑ OBJ_LISTCTRL [List Ctrl]
☑ Object8 [User Button]
☑ Object9 [User Button]

START 2/25/2013 2:25:42 PM

END 2/25/2013 2:24:49 PM

TIME	CODE	ALERT	TC	PRESS

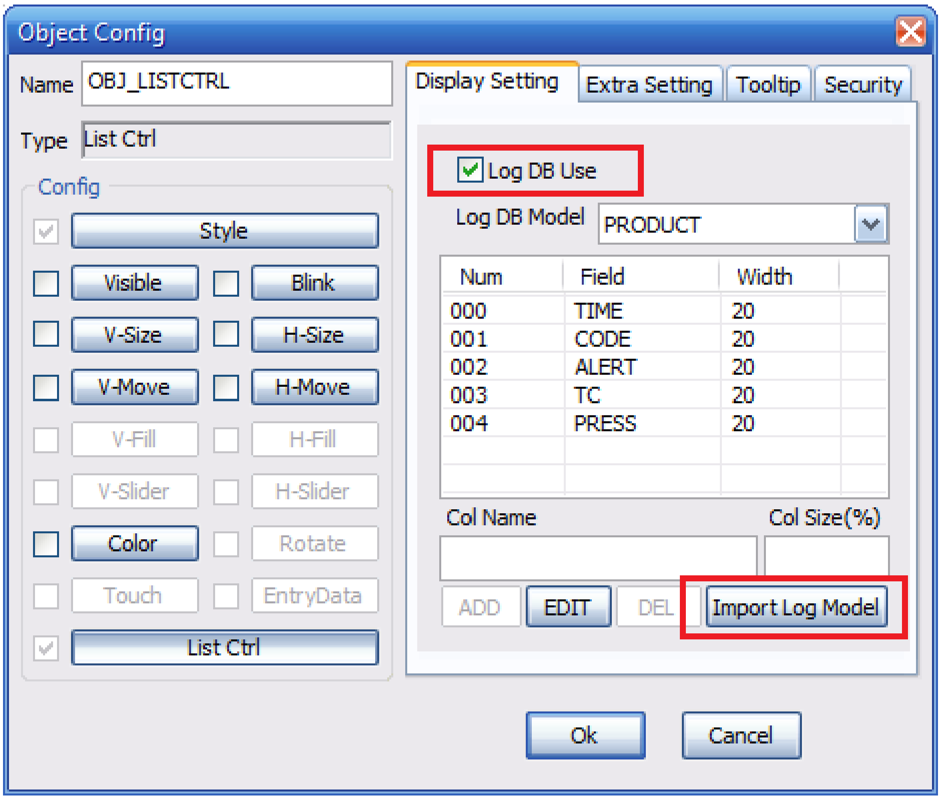
- Make 2 Calendars as Date Types and 2 Time Types as above.
-


Object Config
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
Calendar
Action Define
Tooltip
Security
Ok
Cancel

Name: Object2
Type: Calendar
TagName: PRODUCT.SDATE
Display Type: Date

Make 4 String tags as SDATE, STIME, EDATE and ETIME under PRODUCT group. Match those tags to Calendar date and time.

- Set up "List Control" as below.


Object Config
Display Setting
Extra Setting
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Col Name
Col Size(%)
ADD
EDIT
DEL
Import Log Model
Ok
Cancel

Name: OBJ_LISTCTRL

Type: List Ctrl

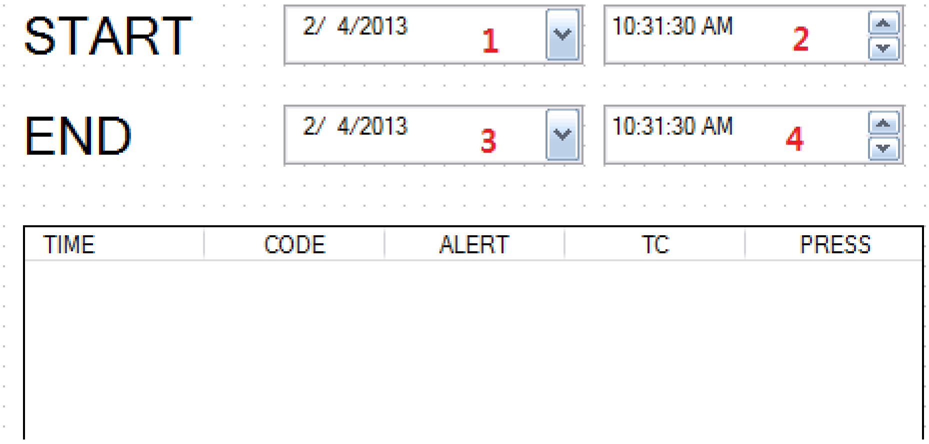
☑ Log DB Use

Log DB Model: PRODUCT

Num	Field	Width
000	TIME	20
001	CODE	20
002	ALERT	20
003	TC	20
004	PRESS	20

Click "Log DB Use" and select Log DB Model. After click "Import Log Model", change the Column size and then Click "EDIT".

- The final result is as below.



START 2/ 4/2013 10:31:30 AM

END 2/ 4/2013 10:31:30 AM

TIME	CODE	ALERT	TC	PRESS

1. Tag name : PRODUCT.SDATE, Display Type : Date
2. Tag name : PRODUCT.STIME, Display Type : Time
3. Tag name : PRODUCT.EDATE, Display Type : Date
4. Tag name : PRODUCT.ETIME, Display Type : Time

5) Script for Basic sample

- **Data Insert**

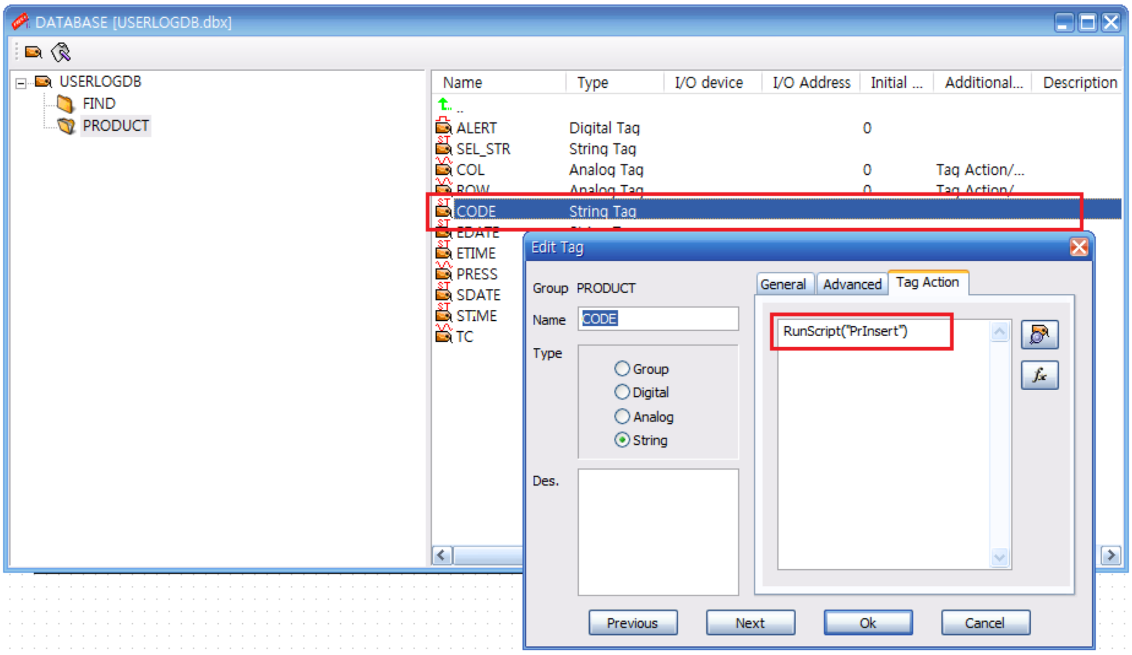
① Use DbInsert("LogDB model name") for adding data.

② Make script as below.

```
Sub PrInsert()
      Return_value = DbInsert("PRODUCT")
      'If Return_value is 0, it is success and others are fail.
End Sub
```

③ Click "Database" and select PRODUCT.CODE. Select "Run Tag Action for tag value change" in General and write below script at Tag Action.

RunScript("PrInsert")


DATABASE [USERLOGDB.dbx]
USERLOGDB
FIND
PRODUCT
Edit Tag
General
Advanced
Tag Action
Previous
Next
Ok
Cancel

Name	Type	I/O device	I/O Address	Initial ...	Additional...	Description
..						
ALERT	Digital Tag			0		
SEL_STR	String Tag					
COL	Analog Tag			0	Tag Action/...	
ROW	Analog Tag			0	Tag Action/	
CODE	String Tag					
EDATE						
ETIME						
PRESS						
SDATE						
STIME						
TC						

Group PRODUCT

Name CODE

Type ○ Group ○ Digital ○ Analog ● String

Des.

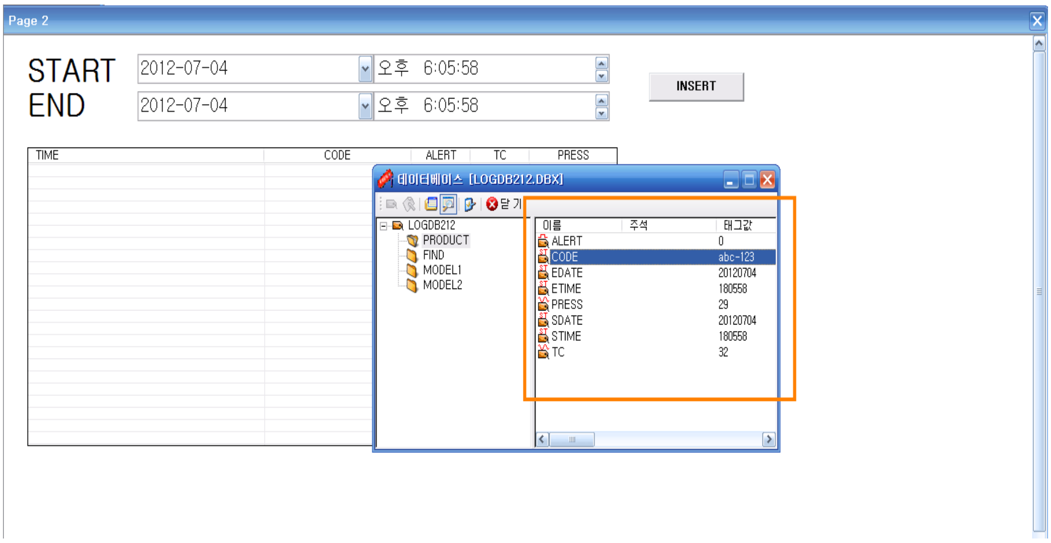
RunScript("PrInsert")

If PRODUCT.CODE is changed, tag value is save at Log DB Model.

④ Run CimonX

⑤ Open Database and write value to PRODUCT.TC , PRODUCT.PRESS, PRODUCT.ALERT and then change the value of PRODUCT.CODE.

As value is changed, PrInsert runs and data is saved at Log DB.


Page 2
INSERT
TIME
CODE
ALERT
TC
PRESS
닫기

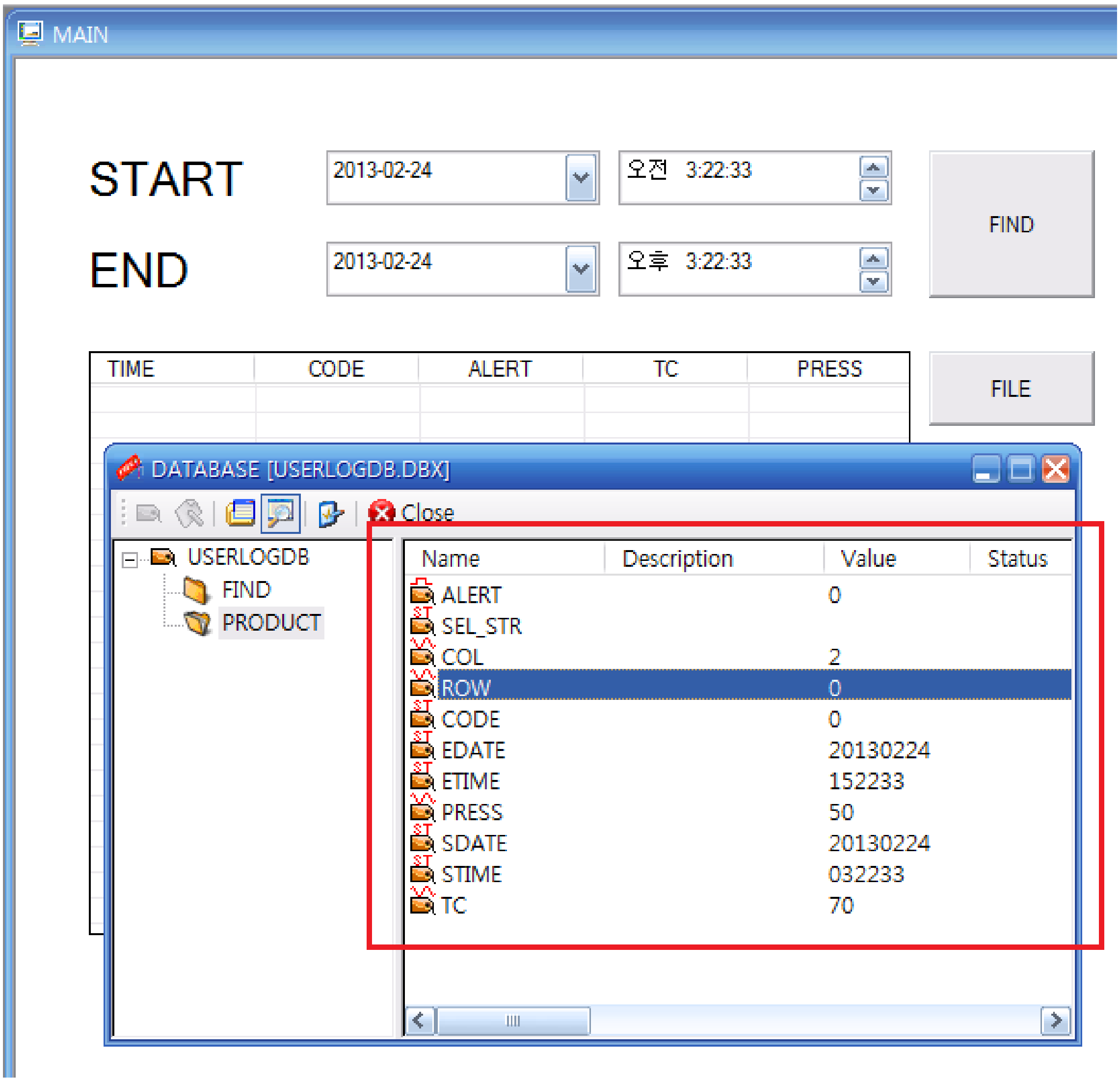
START 2012-07-04 오후 6:05:58

END 2012-07-04 오후 6:05:58

데이터베이스 [LOGDB212.DBX]

- LOGDB212
  - PRODUCT
  - FIND
  - MODEL1
  - MODEL2

이름	주석	태그값
ALERT		0
CODE		abc-123
EDATE		20120704
ETIME		180558
PRESS		29
SDATE		20120704
STIME		180558
TC		32


MAIN
FIND
FILE
TIME
CODE
ALERT
TC
PRESS
Close

START 2013-02-24 오전 3:22:33

END 2013-02-24 오후 3:22:33

DATABASE [USERLOGDB.DBX]

- USERLOGDB
  - FIND
  - PRODUCT

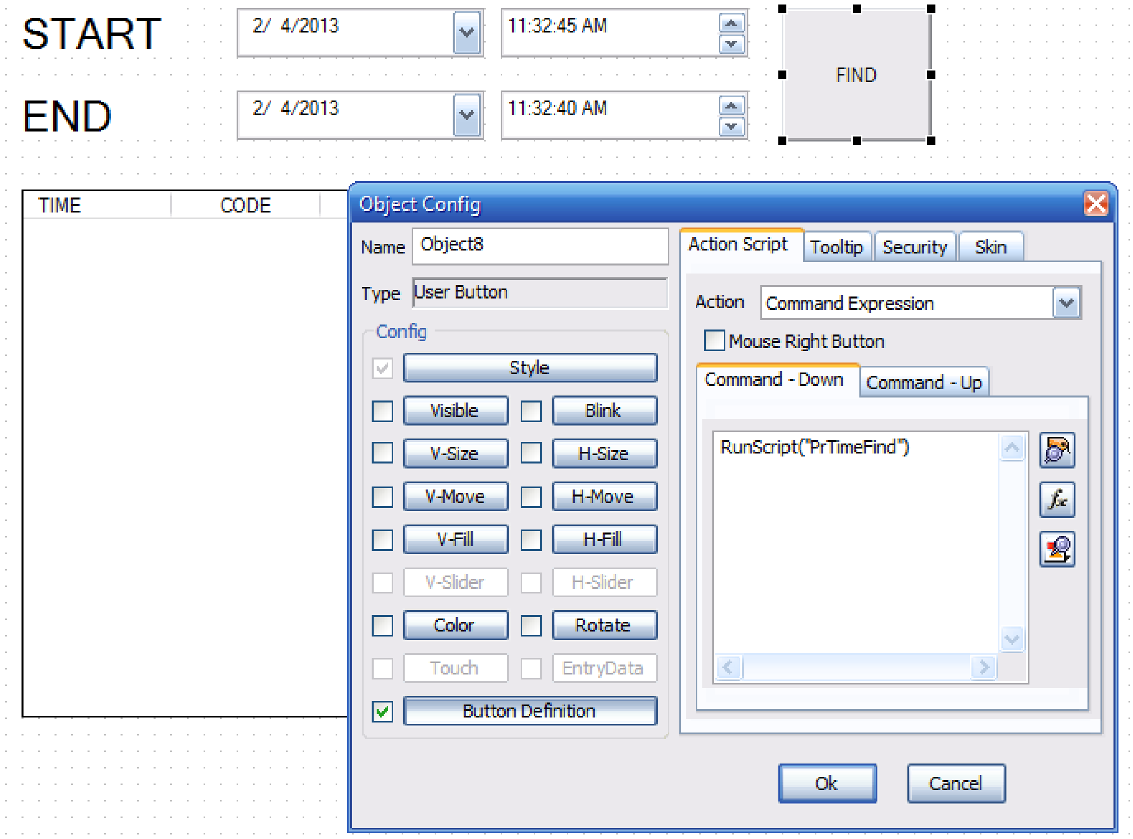
Name	Description	Value	Status
ALERT		0	
SEL_STR			
COL		2	
ROW		0	
CODE		0	
EDATE		20130224	
ETIME		152233	
PRESS		50	
SDATE		20130224	
STIME		032233	
TC		70	

- **Data Finder**

① Make script as below.

```
Sub PrTimeFind()
    sDate$ = GetTagVal ("PRODUCT.SDATE")
    sTime$ = GetTagVal ("PRODUCT.STIME")
    ' Bring the Starting date and time for Finder from tags which are related with Calendar Control.
    eDate$ = GetTagVal ("PRODUCT.EDATE")
    eTime$ = GetTagVal ("PRODUCT.ETIME")
    ' Bring the Finishing date and time for Finder from tags which are related with Calendar Control.
    DbSetFindTimeStr "PRODUCT",sDate$+sTime$,eDate$+eTime$
  ' Set up searching time at “PRODUCT” Log DB model.
    n = DbFindRun("PRODUCT")
    ' Run Finder script.
    wcGridCommand "OBJ_LISTCTRL",102,0,0
    ' OBJ_LISTCTRL is List Control we made before and 102 is command to print out the result of Log DB model.

End Sub
```

Make “FIND” button and write script as below.



START 2/ 4/2013 11:32:45 AM

END 2/ 4/2013 11:32:40 AM

Object Config

Name: Object8

Type: User Button

Action: Command Expression

☐ Mouse Right Button

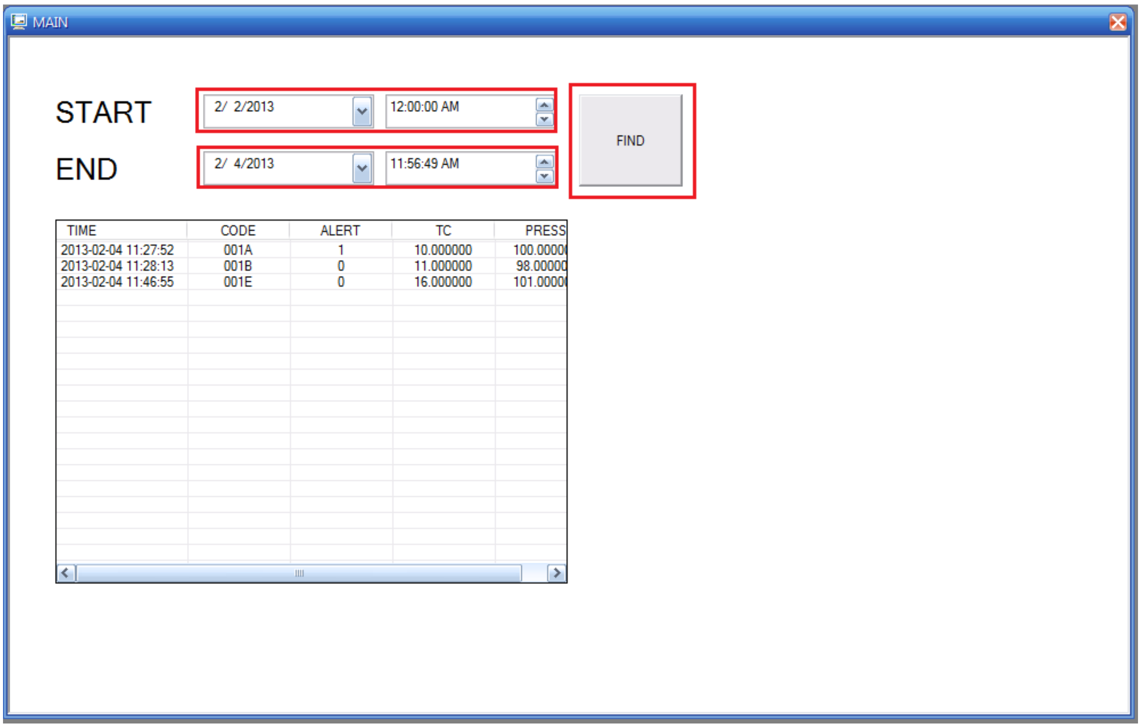
Command - Down:

```
RunScript("PrTimeFind")
```

FIND
TIME
CODE
Config
☑ Style
☐ Visible
☐ Blink
☐ V-Size
☐ H-Size
☐ V-Move
☐ H-Move
☐ V-Fill
☐ H-Fill
☐ V-Slider
☐ H-Slider
☐ Color
☐ Rotate
☐ Touch
☐ EntryData
☑ Button Definition
Action Script
Tooltip
Security
Skin
Command - Down
Command - Up
Ok
Cancel

Script is RunScript(“PrTimeFind”)

② Run CimonX and set up the date and time and then click “FIND”



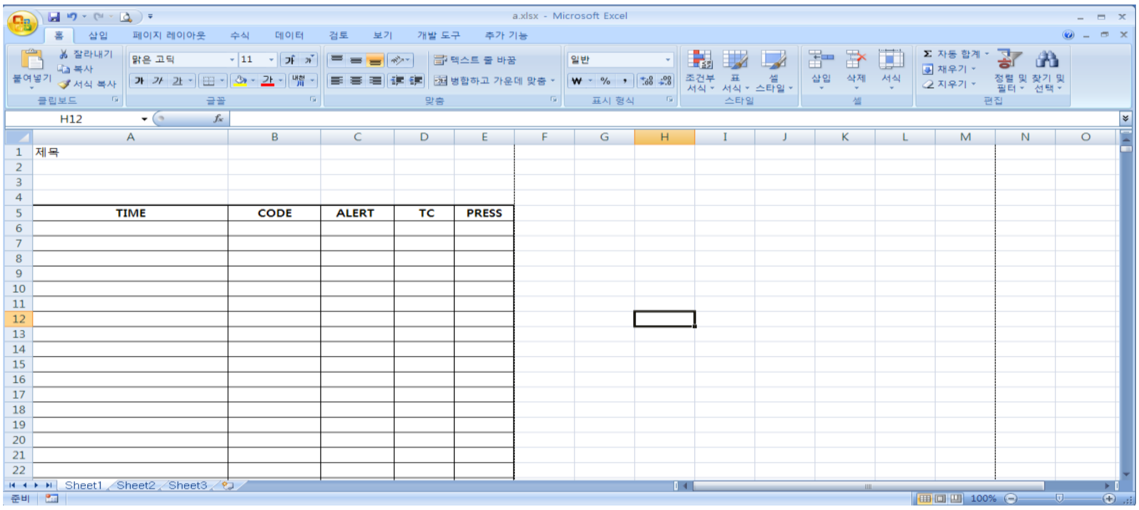
START 2/ 2/2013 12:00:00 AM

END 2/ 4/2013 11:56:49 AM

TIME	CODE	ALERT	TC	PRESS
2013-02-04 11:27:52	001A	1	10.000000	100.0000
2013-02-04 11:28:13	001B	0	11.000000	98.00000
2013-02-04 11:46:55	001E	0	16.000000	101.0000

- **Data Print**

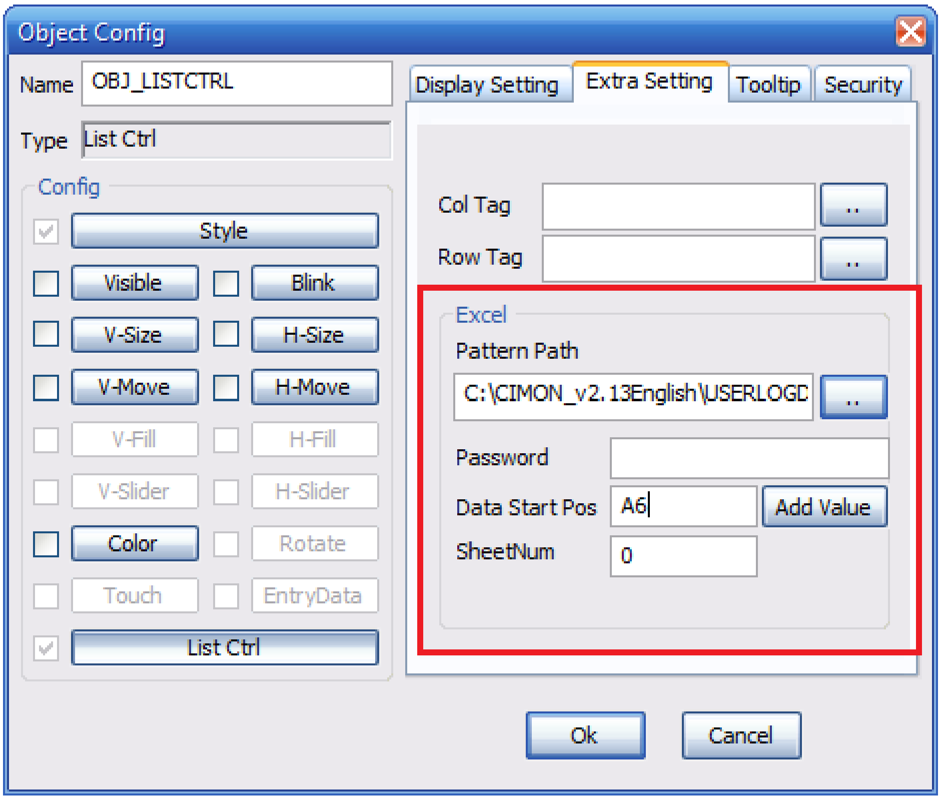
① Make Excel file and below and save it in folder.


a.xlsx - Microsoft Excel
H12
Sheet1
Sheet2
Sheet3
100%

제목

TIME	CODE	ALERT	TC	PRESS

② Double click “List Control” in CimonD.


Object Config
Display Setting
Extra Setting
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Col Tag
Row Tag
Excel
Add Value
Ok
Cancel

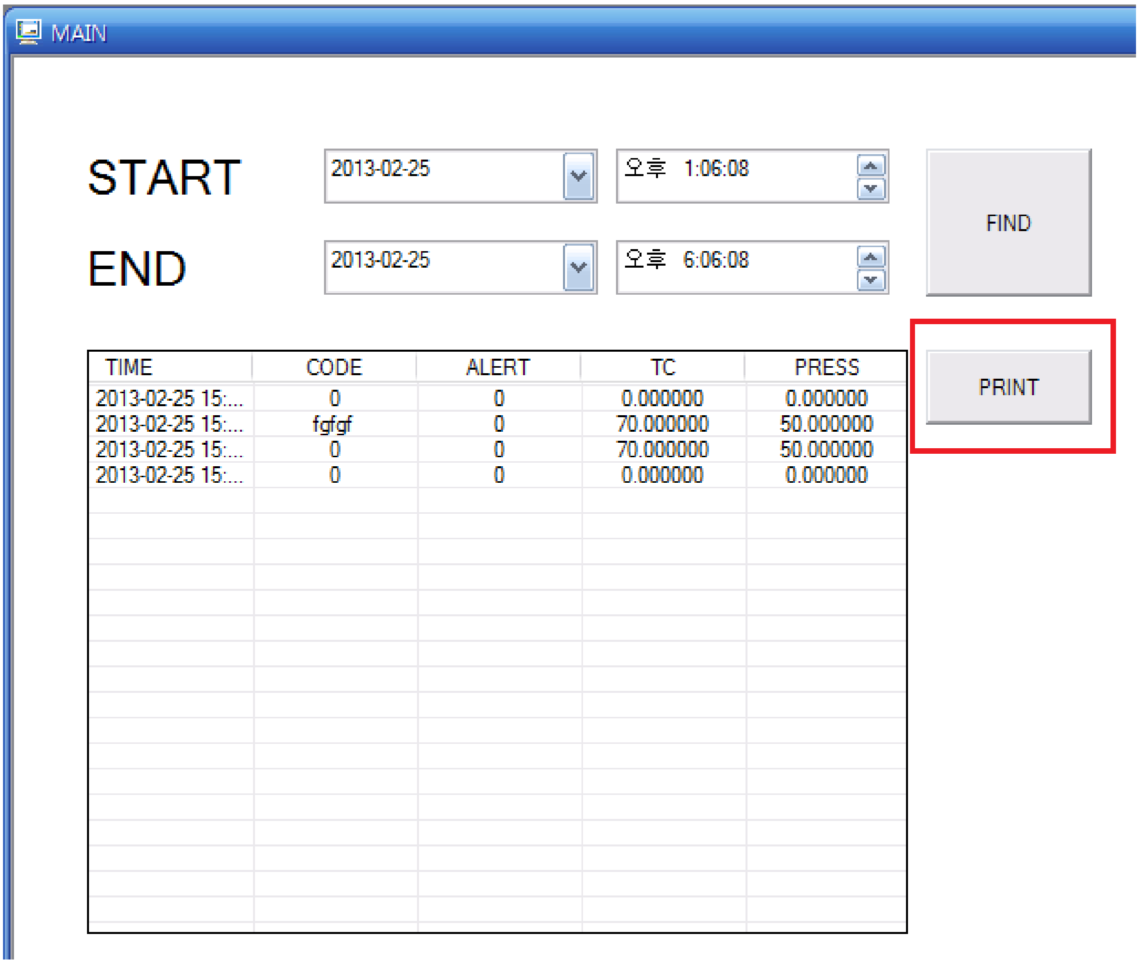
Name: OBJ_LISTCTRL
Type: List Ctrl
☑ Style
☑ List Ctrl
Pattern Path: C:\CIMON_v2.13English\USERLOGD
Password:
Data Start Pos: A6
SheetNum: 0

③ Make script as below.

```
Sub PrOutput()


     wcSaveList "OBJ_KISTCTRL","D:\Z-Excel\a.csv"
     ' Print out OBJ_LISTCTRL data to pattern Path as file.
     wcSaveList " OBJ_KISTCTRL ","D:\Z-Excel\a.xlsx"
     ' Copy Excel form and print out as Excel file.
     wcSaveList " OBJ_KISTCTRL ","D:\Z-Excel\a.pdf"
     ' Copy Excel form and print out as PDF file.


End Sub
```

④ In order to run script, make a button and write RunScript(“PrOutput”) as Command.

⑤ After Click FIND, click FILE to print out.



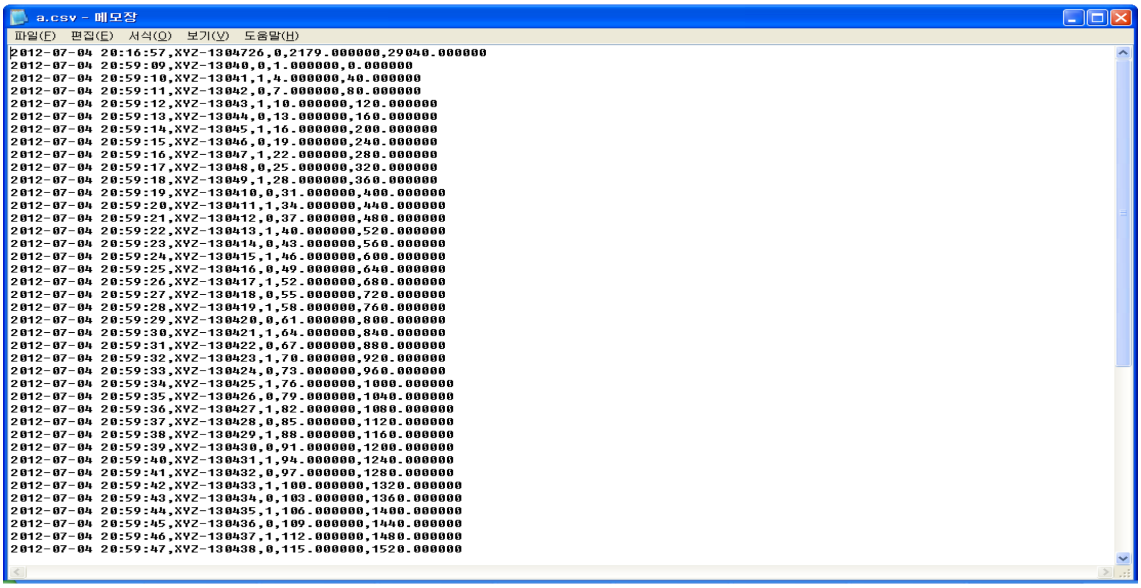
START 2013-02-25 오후 1:06:08

END 2013-02-25 오후 6:06:08

TIME	CODE	ALERT	TC	PRESS
2013-02-25 15:...	0	0	0.000000	0.000000
2013-02-25 15:...	fgfgf	0	70.000000	50.000000
2013-02-25 15:...	0	0	70.000000	50.000000
2013-02-25 15:...	0	0	0.000000	0.000000

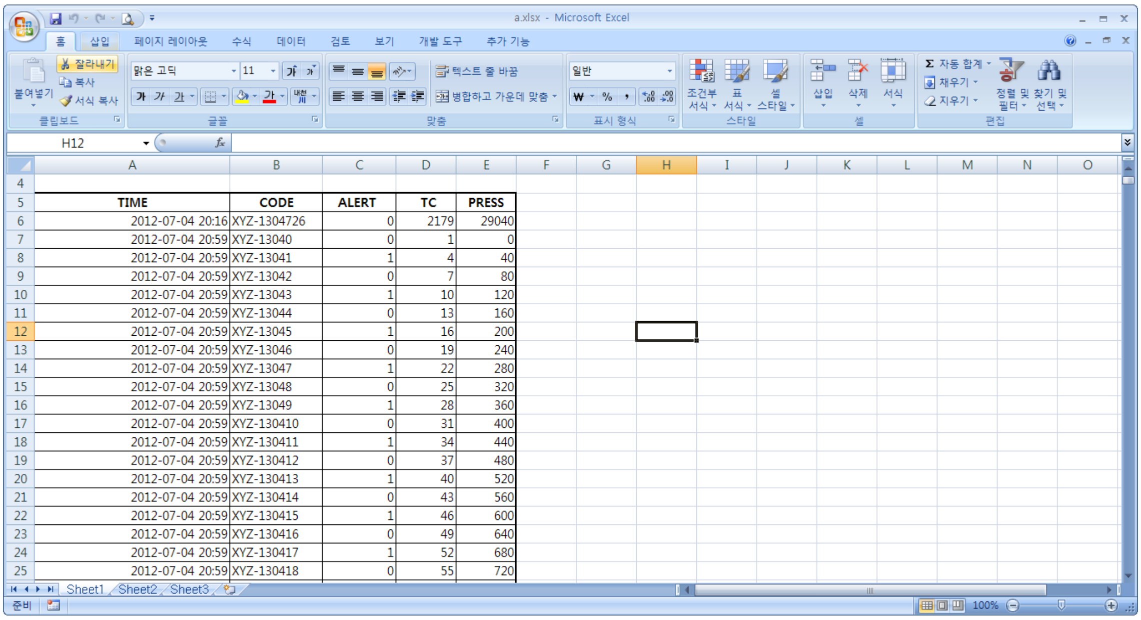
⑥ If you check Pattern path folder, you can find out excel or PDF file that you assigned.

<CSV file format>



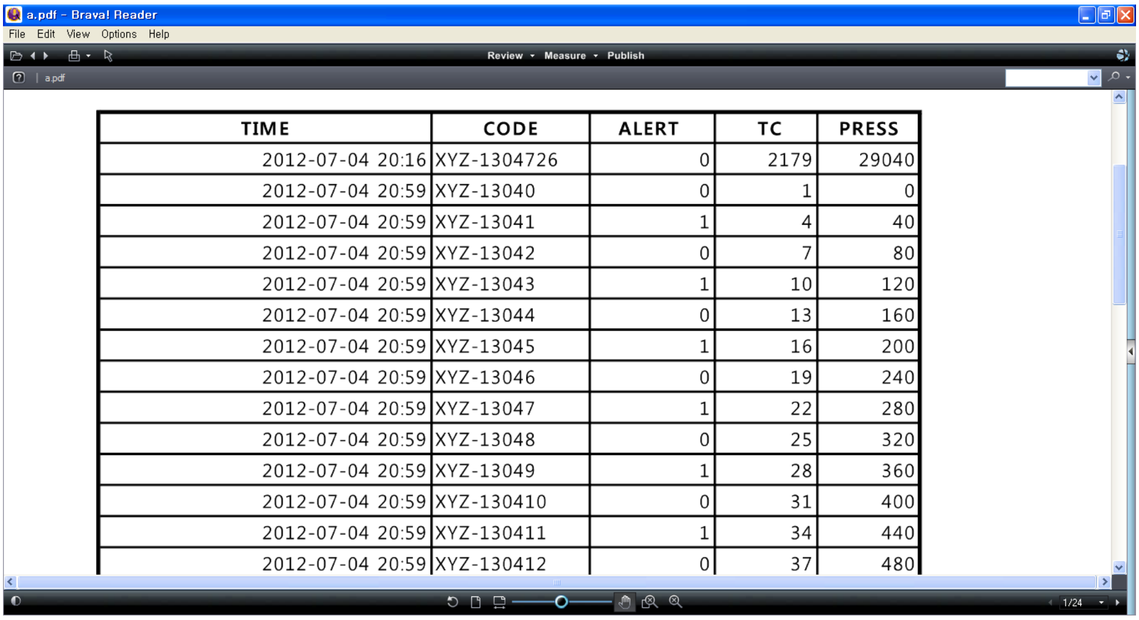
```
2012-07-04 20:16:57,XYZ-1304726,0,2179.000000,29040.000000
2012-07-04 20:59:09,XYZ-13040,0,1.000000,0.000000
2012-07-04 20:59:10,XYZ-13041,1,4.000000,40.000000
2012-07-04 20:59:11,XYZ-13042,0,7.000000,80.000000
2012-07-04 20:59:12,XYZ-13043,1,10.000000,120.000000
2012-07-04 20:59:13,XYZ-13044,0,13.000000,160.000000
2012-07-04 20:59:14,XYZ-13045,1,16.000000,200.000000
2012-07-04 20:59:15,XYZ-13046,0,19.000000,240.000000
2012-07-04 20:59:16,XYZ-13047,1,22.000000,280.000000
2012-07-04 20:59:17,XYZ-13048,0,25.000000,320.000000
2012-07-04 20:59:18,XYZ-13049,1,28.000000,360.000000
2012-07-04 20:59:19,XYZ-130410,0,31.000000,400.000000
2012-07-04 20:59:20,XYZ-130411,1,34.000000,440.000000
2012-07-04 20:59:21,XYZ-130412,0,37.000000,480.000000
2012-07-04 20:59:22,XYZ-130413,1,40.000000,520.000000
2012-07-04 20:59:23,XYZ-130414,0,43.000000,560.000000
2012-07-04 20:59:24,XYZ-130415,1,46.000000,600.000000
2012-07-04 20:59:25,XYZ-130416,0,49.000000,640.000000
2012-07-04 20:59:26,XYZ-130417,1,52.000000,680.000000
2012-07-04 20:59:27,XYZ-130418,0,55.000000,720.000000
2012-07-04 20:59:28,XYZ-130419,1,58.000000,760.000000
2012-07-04 20:59:29,XYZ-130420,0,61.000000,800.000000
2012-07-04 20:59:30,XYZ-130421,1,64.000000,840.000000
2012-07-04 20:59:31,XYZ-130422,0,67.000000,880.000000
2012-07-04 20:59:32,XYZ-130423,1,70.000000,920.000000
2012-07-04 20:59:33,XYZ-130424,0,73.000000,960.000000
2012-07-04 20:59:34,XYZ-130425,1,76.000000,1000.000000
2012-07-04 20:59:35,XYZ-130426,0,79.000000,1040.000000
2012-07-04 20:59:36,XYZ-130427,1,82.000000,1080.000000
2012-07-04 20:59:37,XYZ-130428,0,85.000000,1120.000000
2012-07-04 20:59:38,XYZ-130429,1,88.000000,1160.000000
2012-07-04 20:59:39,XYZ-130430,0,91.000000,1200.000000
2012-07-04 20:59:40,XYZ-130431,1,94.000000,1240.000000
2012-07-04 20:59:41,XYZ-130432,0,97.000000,1280.000000
2012-07-04 20:59:42,XYZ-130433,1,100.000000,1320.000000
2012-07-04 20:59:43,XYZ-130434,0,103.000000,1360.000000
2012-07-04 20:59:44,XYZ-130435,1,106.000000,1400.000000
2012-07-04 20:59:45,XYZ-130436,0,109.000000,1440.000000
2012-07-04 20:59:46,XYZ-130437,1,112.000000,1480.000000
2012-07-04 20:59:47,XYZ-130438,0,115.000000,1520.000000
```

<Excel format>



TIME	CODE	ALERT	TC	PRESS
2012-07-04 20:16	XYZ-1304726	0	2179	29040
2012-07-04 20:59	XYZ-13040	0	1	0
2012-07-04 20:59	XYZ-13041	1	4	40
2012-07-04 20:59	XYZ-13042	0	7	80
2012-07-04 20:59	XYZ-13043	1	10	120
2012-07-04 20:59	XYZ-13044	0	13	160
2012-07-04 20:59	XYZ-13045	1	16	200
2012-07-04 20:59	XYZ-13046	0	19	240
2012-07-04 20:59	XYZ-13047	1	22	280
2012-07-04 20:59	XYZ-13048	0	25	320
2012-07-04 20:59	XYZ-13049	1	28	360
2012-07-04 20:59	XYZ-130410	0	31	400
2012-07-04 20:59	XYZ-130411	1	34	440
2012-07-04 20:59	XYZ-130412	0	37	480
2012-07-04 20:59	XYZ-130413	1	40	520
2012-07-04 20:59	XYZ-130414	0	43	560
2012-07-04 20:59	XYZ-130415	1	46	600
2012-07-04 20:59	XYZ-130416	0	49	640
2012-07-04 20:59	XYZ-130417	1	52	680
2012-07-04 20:59	XYZ-130418	0	55	720

<PDF format>

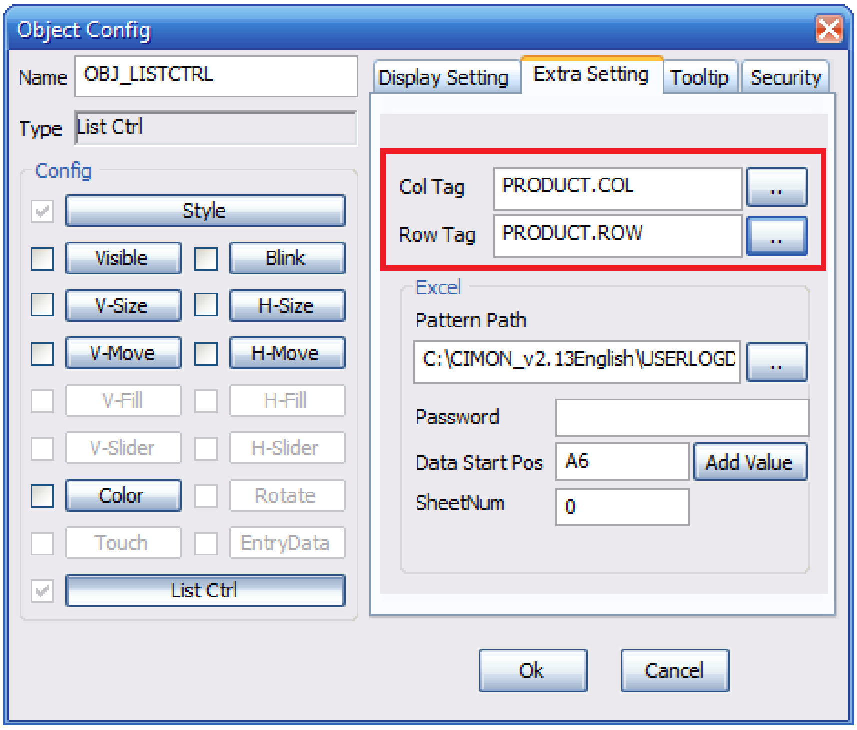

a.pdf - Brava! Reader
File Edit View Options Help
Review Measure Publish
a.pdf
1/24

TIME	CODE	ALERT	TC	PRESS
2012-07-04 20:16	XYZ-1304726	0	2179	29040
2012-07-04 20:59	XYZ-13040	0	1	0
2012-07-04 20:59	XYZ-13041	1	4	40
2012-07-04 20:59	XYZ-13042	0	7	80
2012-07-04 20:59	XYZ-13043	1	10	120
2012-07-04 20:59	XYZ-13044	0	13	160
2012-07-04 20:59	XYZ-13045	1	16	200
2012-07-04 20:59	XYZ-13046	0	19	240
2012-07-04 20:59	XYZ-13047	1	22	280
2012-07-04 20:59	XYZ-13048	0	25	320
2012-07-04 20:59	XYZ-13049	1	28	360
2012-07-04 20:59	XYZ-130410	0	31	400
2012-07-04 20:59	XYZ-130411	1	34	440
2012-07-04 20:59	XYZ-130412	0	37	480

- List Control Event

① Make two Analog tags (COL and ROW) in PRODUCT Group.

② Double click List Control in CimonD and select Col Tag and Row Tag as below.


Object Config
Display Setting
Extra Setting
Tooltip
Security
Config
Style
Visible
Blink
V-Size
H-Size
V-Move
H-Move
V-Fill
H-Fill
V-Slider
H-Slider
Color
Rotate
Touch
EntryData
List Ctrl
Excel
Add Value
Ok
Cancel

Name OBJ_LISTCTRL
Type List Ctrl
☑ Style
☑ List Ctrl
Col Tag PRODUCT.COL
Row Tag PRODUCT.ROW
Pattern Path C:\CIMON_v2.13English\USERLOGD
Password
Data Start Pos A6
SheetNum 0

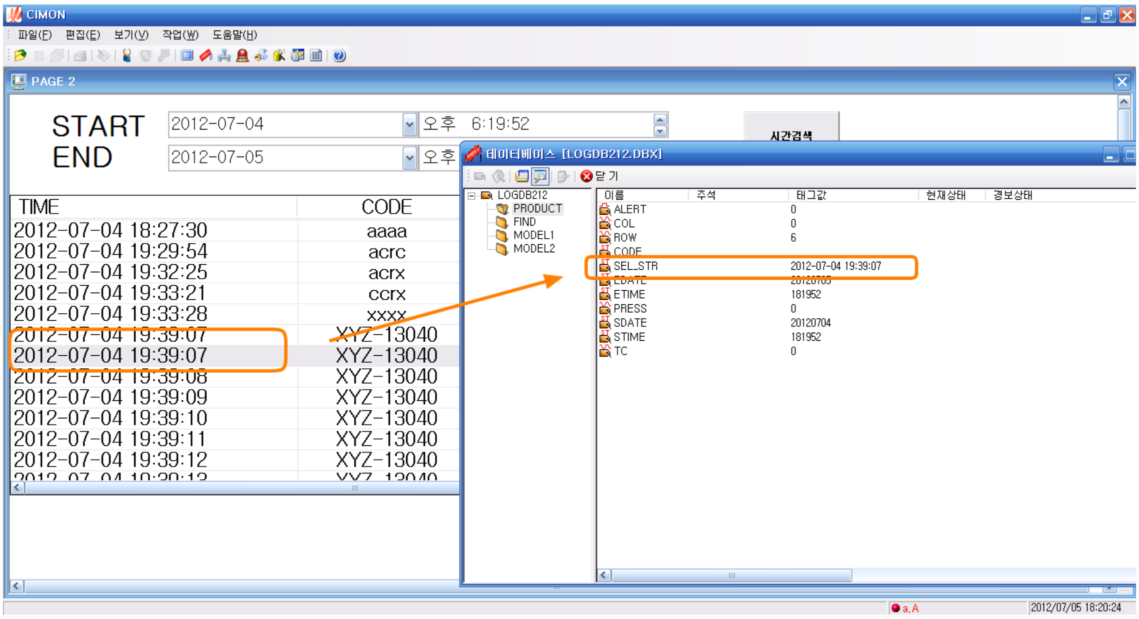
③ Make String Tag(SEL_STR) in PRODUCK Group.

④ Make the script as below.

```
Sub PrListChange()


    nRow = GetTagVal("PRODUCT.ROW")
    ' Read row position of List Control.
    nCol = GetTagVal("PRODUCT.COL")
    ' Read column position of List Control.
    strData$ = wcGridGetData("그림 3", nCol, nRow)
    ' Read data value from row and column.
    SetTagVal "PRODUCT.SEL_STR", strData$
    ' Write data value to tag.


End Sub
```

⑤ As row and column are changed, RunScript(“PrListChange”) runs automatically.

⑥ If you click different rows and columns after running CimonX, the tag value of PRODUCT.SEL_STR is changing.


CIMON
파일(F) 편집(E) 보기(V) 작업(W) 도움말(H)
PAGE 2
시간검색
데이터베이스 [LOGDB212.DBX]
닫기
LOGDB212
PRODUCT
FIND
MODEL1
MODEL2
a, A

START 2012-07-04 오후 6:19:52
END 2012-07-05 오후

TIME	CODE
2012-07-04 18:27:30	aaaa
2012-07-04 19:29:54	acrc
2012-07-04 19:32:25	acrx
2012-07-04 19:33:21	ccrx
2012-07-04 19:33:28	xxxx
2012-07-04 19:39:07	XYZ-13040
2012-07-04 19:39:07	XYZ-13040
2012-07-04 19:39:08	XYZ-13040
2012-07-04 19:39:09	XYZ-13040
2012-07-04 19:39:10	XYZ-13040
2012-07-04 19:39:11	XYZ-13040
2012-07-04 19:39:12	XYZ-13040

이름	주석	태그값	현재상태	경보상태
ALERT		0		
COL		0		
ROW		6		
CODE				
SEL_STR		2012-07-04 19:39:07		
EDATE		20120705		
ETIME		181952		
PRESS		0		
SDATE		20120704		
STIME		181952		
TC		0		

2012/07/05 18:20:24

CIMON CO.,LTD.

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