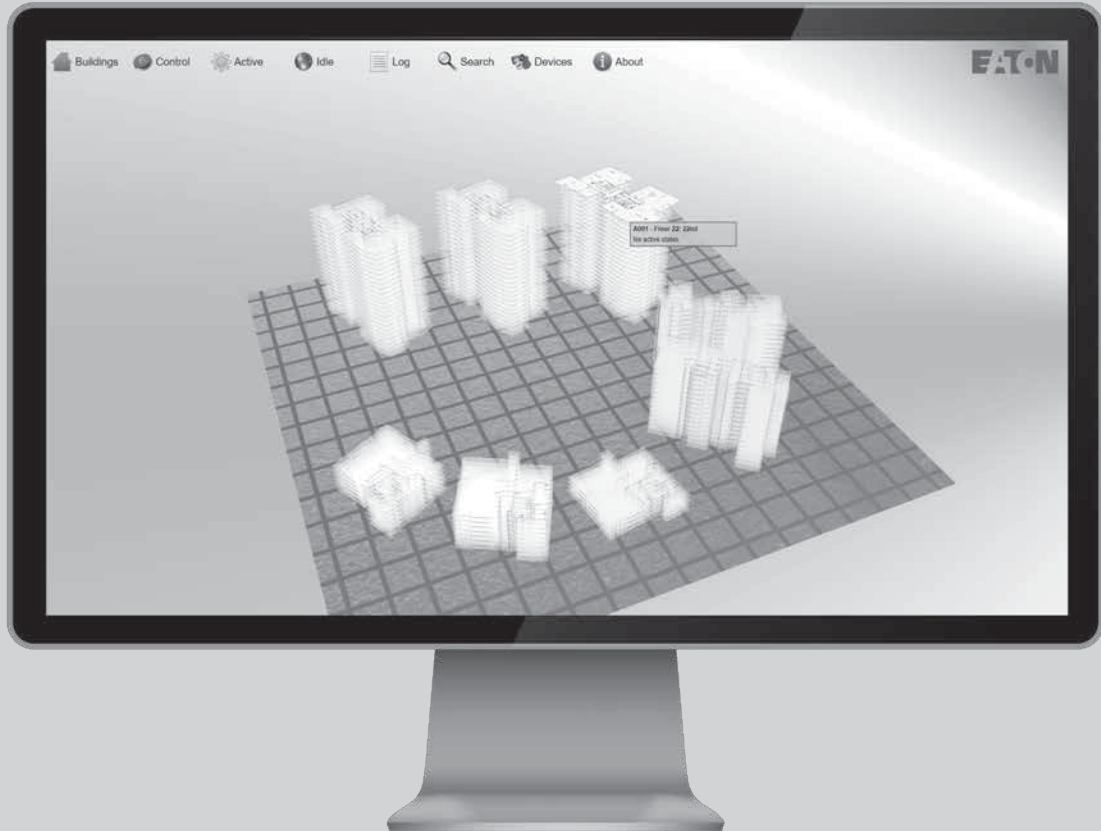


# Graphical visualisation software user manual



**EATON**

*Powering Business Worldwide*

## **DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY**

The information, recommendations, descriptions and safety notations in this document are based on Eaton Corporation's ("Eaton") experience and judgment and may not cover all contingencies. If further information is required, an Eaton sales office should be consulted. Sale of the product shown in this literature is subject to the terms and conditions outlined in appropriate Eaton selling policies or other contractual agreement between Eaton and the purchaser.

THERE ARE NO UNDERSTANDINGS, AGREEMENTS, WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, OTHER THAN THOSE SPECIFICALLY SET OUT IN ANY EXISTING CONTRACT BETWEEN THE PARTIES. ANY SUCH CONTRACT STATES THE ENTIRE OBLIGATION OF EATON. THE CONTENTS OF THIS DOCUMENT SHALL NOT BECOME PART OF OR MODIFY ANY CONTRACT BETWEEN THE PARTIES.

In no event will Eaton be responsible to the purchaser or user in contract, in tort (including negligence), strict liability or otherwise for any special, indirect, incidental or consequential damage or loss whatsoever, including but not limited to damage or loss of use of equipment, plant or power system, cost of capital, loss of power, additional expenses in the use of existing power facilities, or claims against the purchaser or user by its customers resulting from the use of the information, recommendations and descriptions contained herein. The information contained in this manual is subject to change without notice.

# Contents

<b>1</b>	<b>TABLE OF CONTENTS</b>	<b>3</b>
<b>2</b>	<b>INSTALLATION</b>	<b>6</b>
2.1	Components	6
2.1.1	Monitoring service	6
2.1.2	Site monitor viewer application	6
2.1.3	Graphical visualisation software viewer application	6
2.1.4	Graphical visualisation software designer application	6
2.1.5	Site monitor web system	6
2.2	Requirements	6
<b>3</b>	<b>GENERAL CONFIGURATION</b>	<b>6</b>
3.1	Starting the monitoring service	6
3.2	Configuring the monitoring service	7
3.3	Configuring the Graphical visualisation software viewer	7
<b>4</b>	<b>GRAPHICAL VISUALISATION SOFTWARE VIEWER</b>	<b>7</b>
4.1	General	7
4.2	Presentations	7
4.3	Page view	8
4.3.1	Devices	8
4.3.2	Other active pages	8
4.3.3	Zooming and moving the viewpoint	8
4.4	3D Idle view	8
4.4.1	Pages/Floors	8
4.4.2	Zooming and moving the viewpoint	9
4.5	Event logs	9
4.6	Searching for pages/floors/devices	9
4.7	Operation modes	9
4.7.1	Full user interactive	9
4.7.2	Full autonomous display	9
4.7.3	Mixed	9
<b>5</b>	<b>GRAPHICAL VISUALISATION SOFTWARE DESIGNER</b>	<b>9</b>
5.1	General	9
5.2	Toolboxes	10
5.2.1	Presentation explorer	10
5.2.2	Properties	10
5.2.3	Details	10
5.2.4	Imported devices	10
5.3	General properties	10
5.4	Buildings, pages and floors	11
5.4.1	Buildings	11
5.4.2	Page	11
5.4.3	Images	12
5.4.4	Devices	12
5.4.5	Positioning and sizing	13
5.4.6	Adjusting the view	13
5.4.7	Overlay	13
5.5	Overlays	13
5.5.1	Page overlay vs shared overlays	13
5.5.2	Predefined overlays	14
5.5.3	Overlay	14

5.5.4	Positioning and sizing	14
5.5.5	Frames	14
5.5.6	Buttons	15
5.5.7	Text boxes	16
5.5.8	Event logs	16
5.5.9	List box	17
5.5.10	Dynamically showing overlays	17
5.6	Device images	18
5.6.1	Status frames	18
5.6.2	Adding a device image	18
5.7	Context menus	19
5.7.1	Adding a context menu	19
5.7.2	Assigning a context menu	19
5.8	Automatic actions	19
5.8.1	Conditions	20
5.8.2	Actions	20
5.9	3D view and buildings	21
5.9.1	3D view and buildings	21
5.9.2	Building	21
5.9.3	Page / floor	21
5.9.4	Position, rotating and scaling buildings	21
5.9.5	Moving floors within a building	21
5.9.6	Adjusting the view	22
5.10	Background	22
5.11	Images	22
5.11.1	Editing images	22
5.11.2	Supported formats	22
5.12	Audio	22
5.12.1	Supported formats	22
5.13	Available actions	23
5.13.1	Skipping actions	24
5.14	Dynamic text (Auto replaced tags)	24
5.15	Adding packages	25
5.16	Importing from site installer	25
5.17	Setup wizards	26
5.17.1	Site setup wizard	26
5.17.2	Add buildings wizard	26
5.17.3	Add pages wizard	26
5.17.4	Add devices wizard	26
5.17.5	Menu generation wizard	26
5.17.6	Page/overlay wizard	26
5.17.7	Automatic actions wizard	26
5.18	Testing presentations	26
5.18.1	Creating test buttons	26
5.19	Optimising and performance	26
5.19.1	Enable optimisation features within the graphics designer	26
5.19.2	Use images with a lower resolution	27
5.19.3	Update your graphics card drivers	27
5.19.4	Use the primary graphics accelerator	27
5.19.5	Prevent 'Glitching' images with higher Z values	27

<b>Material code</b>	<b>Description</b>
EF-SITEMONITOR	Monitoring Software license without graphical visualisation maps including an EC0232 interface
EFGVS1-2	Graphical Visualisation Software license 1-2 panels including an EC0232 interface
EFGVS3-6	Graphical Visualisation Software license up to 6 panels including an EC0232 interface
EFGVS7-10	Graphical Visualisation Software license up to 10 panels including an EC0232 interface
EFGVS11-PLUS	Graphical Visualisation Software license above 10 panels including an EC0232 interface
EFGVS7-10-TCP/IP	Graphical Visualisation Software license up to 10panels with TCP/IP interlink
EFGVS11-PLUS-TCP/IP	Graphical Visualisation Software license above 10panels with TCP/IP interlink
EFGVS-DESIGN	Graphical Visualisation designer Software license - no panel connectivity
EFGVS-PREMIUMDESGN	Graphical Visualisation premium designer Software license including an EC0232 interface

## 2 Installation

### 2.1 Components

Graphical visualisation software version 6 is split into five distinct components. With suitable configuration, there is no requirement to install all components on the same PC, but the most common setups usually include all five (the Full option during installation).

#### 2.1.1 Monitoring service

This component runs as a pair of Windows services in the background whenever the PC is turned on (assuming the services are not modified from the default of automatic start-up). To change this behaviour please refer to the documentation for your version of Windows for further details on service administration. This component is responsible for providing the link from the PC to the panel network, event monitoring and the interface server to connecting clients.

#### 2.1.2 Site monitor viewer application

This is a Windows-based desktop client that can connect to the Monitoring Service. This client provides full access to all logged and real-time monitoring events, as well as the ability to perform commands such as Global Reset, Global Mute and many more. This viewer is important for the initial configuration of the Monitoring Service.

#### 2.1.3 Graphical visualisation software viewer application

Working in a similar way to the Site Monitor Viewer Application, this is also a Windows-based desktop client that can connect to the Monitoring Service. This client provides full access to all logged and real-time monitoring events, as well as the ability to perform commands such as Global Reset, Global Mute and many more. This application is designed to provide a geographical representation of a single site with rich graphics and a fully programmable interface.

#### 2.1.4 Graphical visualisation software designer application

This tool enables you to create and edit the presentations displayed in the Graphical visualisation software viewer application. The software includes commissioning import and wizard tools, and is designed to enable maximum flexibility while at the same time reducing development time of new presentations.

#### 2.1.5 Site monitor web system

Providing the same functionality as the Site Monitor Viewer Application, this ASPNET web application allows access via a web browser (such as Microsoft Edge, Firefox, Opera, Safari and Google Chrome). This gives the advantage of quick access from any location or computer without the need to install the desktop user interface client. To use this component, a suitable ASPNet enabled web server must be installed. It is also important to note that no web server is provided by the Graphical Visualisation Software package and the web user interface does not contain every feature found in the desktop user interface.

### 2.2 Requirements

All components require Microsoft .NET v4.6 (or compatible) to be installed. The Monitoring Service also requires Microsoft SQL Server Compact v4 or above and a Windows-based PC capable of running services (Microsoft Windows Vista and above, and with all the latest service packs installed). For the connection to a LON network, your PC will also require at least one available Serial or USB port. To use the Web System Interface, you must ensure a suitable ASP.NET enabled web server is installed.

#### System requirement

Minimum hardware requirements	Intel i3 or equivalent, 4GB RAM, 3D graphics card with 2 GB RAM, 4GB free disc space, 1 RS232 serialadapter, 100/1000 Mps LAN Port or wireless LAN card
Recommend hardware requirements	Intel i5 or equivalent, 16GB RAM, 3D graphics card with 2 GB RAM, 4GB free disc space, 1 RS232 serialadapter, 100/1000 Mps LAN Port or wireless LAN card
Platform	Windows Vista, Windows7, Windows8, Windows10
Display	High resolution 1024x768 or higher
Software libraries	Microsoft .NET 4.6 and Microsoft SQL Server Compact 4.0

**Note:** if the software is used for a very large and complex site, hardware requirements may need to be higher. Consult Eaton for guidance.

## 3 General configuration

### 3.1 Starting the monitoring service

By default, the service listens on port 60000 for incoming connections from clients. If however you do wish to change this, it can be configured by loading the Server Configuration application located within the Start Menu. If you would like to access this service from a remote location, such as from other locally networked computers or from across the Internet, then you will need to ensure you open port 60000 (or the port you have changed this value to) on any influential router or firewall.

**Note 1:** You must restart the service for any changes to take effect.

**Note 2:** You need to know this number when connecting from a client, see below for details.

**Note 3:** Remote access will require the configuration of any influential router or firewall, which is usually performed by your IT department.

If you do need to manually Start, Stop or Restart the service, then this can be done by clicking on the appropriate shortcut located within the Start Menu. Please note that Admin permissions are often required for this.

The following options are available in the Server Configuration tool:

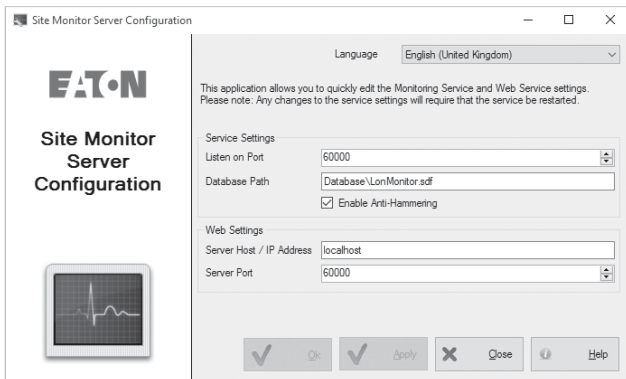
**Listen on port (Service):** This is the port value which the Monitoring Service will accept connections.

**Database path (Service):** The physical location of the Monitoring Service database.

**Enable Anti-Hammering (Service):** This option enables the built in password protection system. This means any user who fails to provide a valid username and password five times in row will be locked out for up to 10 minutes.

**Server host / IP address (Web):** This should be the host or IP address of the computer running the Monitoring Service. If both the web and service are running on the same computer, then 'localhost' will generally work fine.

**Port (Web):** This should be the port value of the computer running the Monitoring Service. If both the web and service are running on the same computer, then this value should match the 'Listen on Port' setting.



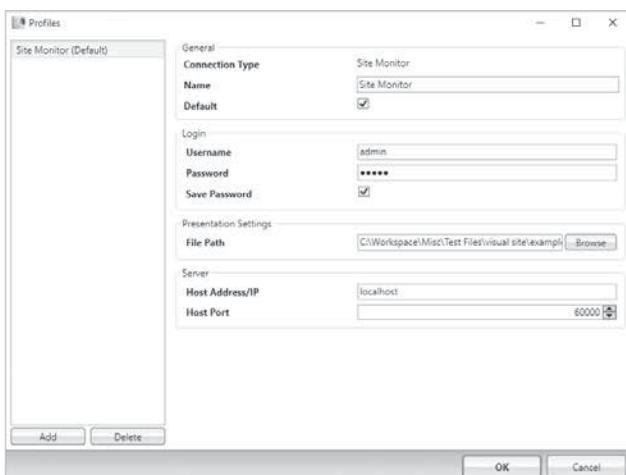
### 3.2 Configuring the monitoring service

As the Monitoring Service provides a storage point for events and device status, you will need to initially use the Site Monitor Viewer application to setup the service. This includes aspects such as the Ec0232 setup, panels, devices, text...etc. It should also be noted that the automated email notification system is configured exclusively through Site Monitor Viewer too. Generally the initial setup is straight forward and can be automated through importing Site Installer files or scanning of the network.

**For further details and options on how to achieve this, please refer to the Site Monitor User Manual.**

### 3.3 Configuring the graphical visualisation software viewer

Graphical visualisation software is designed to support various connection methods, and so to connect to Site Monitor you need to create a new profile. To access this, place your mouse pointer near the top of the window to reveal the hidden menu system, you can then select the **File** drop down menu and then click on Preferences. The popup window contains all the profiles on that computer, and by default this list will be empty. To connect to the **Site Monitor** Service, you can add a Site Monitor connection type and then fill in the connection details. It is important to note that the default connection details, when connecting to a locally running service, are the following (if all components are installed on the same computer):



**Username:** admin  
**Password:** admin  
**Host address:** localhost  
**Host port:** 60000

The file path field should be directed at your graphics presentation file, which will have been created using the included designer tool. For further information on how to create a graphics presentation, please refer to the later sections of this manual.

Once the connection details are complete, you can click **OK** to save this new profile and return to the previous screen. To connect, you can access the **File** drop down menu again and then click **Start**. Providing you entered the correct details, the presentation should load and become active.

## 4 Graphical Visualisation Software viewer

### 4.1 General

The software can be configured to access multiple sites, although only one site is permitted at a time (unlike Site Monitor which can access multiple sites at the same time). This is achieved by the Profile system as described above in the General Configuration section. Essentially you configure a profile per site, then upon loading Graphical Visualisation Software Viewer, you select a profile and connect.

As this is a graphical representation, we also recommend that any display that is dedicated to this application is put in full screen mode. To achieve this, you can click on the **Full Screen** option within the **View** drop down menu.

It should be noted that there is no limitation on the number of instances you have running of the Graphical visualisation software Viewer. So it is therefore possible to load the software multiple times, and with each instance running a different profile. The benefit to this kind of setup would be if a computer system was connected and monitoring various sites. Of course such a computer system would require higher performance hardware.

### 4.2 Presentations

The viewer application is designed only to run pre-made presentation files and is therefore very much a read-only media viewer. The presentation files are configured exclusively by the included Graphical Visualisation Software Designer tool. Presentations can include any of the following features:

- **Multiple graphic screens:** These are referred to as pages, and each page is designed primarily to display a single floor plan within a building. Pages can also be used to display non-floor plan imagery, such as navigation pages or informational screens.
- **Device status:** Each page can also include numerous devices, each positioned upon the floor plan in real geographical positions. Each device can display live status, text and provide control options.
- **3D idle view:** Intended as the default view when a user is not looking at a particular page, this mode shows all relevant pages in a truly 3D mode. Essentially all the 2D floor plan images of all buildings are stacked up in a

3D model. This view is fully interactive and allows users to view a floor's status and navigate a site with ease. Additionally, each floor will flash an appropriate colour if any of its devices are in an active state.

- **Audio:** Any event or user interaction can trigger the playing of audio files. These can be used to alert users to status changes, or provide audio information to users as they navigate the presentation.
- **Event log:** Presentations can display the network event history, which includes historical events as well as being updated with new events.
- **Buttons, text and imagery overlays:** Every page can include a customized variety of buttons, text or imagery that allows specialised user interaction. Each overlay element is highly customizable in terms of position, size, font, colour, border and content.
- **Popup menus (context menus):** All elements of a presentation can be configured with context menus. These are displayed when a user right clicks on an item and allows actions to be applied directly to certain areas of a presentation (i.e. device actions).
- **Network commands:** Any button, popup menu or mouse click can be configured to emit control commands to panel networks. This includes Global Reset, Evacuate, Silence, Mute, Enable, Disable...etc.
- **Programmability with automatic actions:** Preconfigured action sets can be assigned to automatically run when certain conditions are met. These action sets have the full capability equivalent to what a button press can achieve. Conditions include page changes, user actions, status changes and new events being received.

## 4.3 Page view

When the presentation is displaying a page, the floor plan imagery is shown in 2D with the device items placed around in their appropriate positions. Additionally, any overlays associated with the page will be displayed on screen. The following capabilities are available in this mode:

### 4.3.1 Devices

- Any device in an active state will react and animate appropriately, making it easy to spot.
- Clicking a device will execute any associated click actions.
- When the mouse is hovering over a device, a status box is shown that includes all appropriate live information.
- Clicking the right mouse button on a device will display the associated context menu, which can include general as well as device specific actions.



### 4.3.2 Other active pages

- If any other pages have devices in an active state, these will be stacked up and displayed in the bottom left corner of the screen.
- Clicking a stacked page will execute any associated click actions, which by default will display the page.
- When the mouse is hovering over a stacked page, a status box is shown that includes all appropriate live information.

### 4.3.3 Zooming and moving the viewpoint

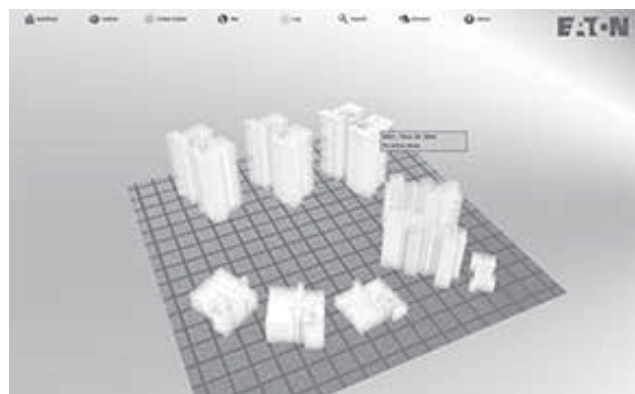
- Holding the left mouse button will allow you to move the imagery and devices around the screen. You can also achieve this using the arrow keys.
- Scrolling the mouse wheel will allow you to zoom in and out. You can also achieve this using the + and - keys.
- After a short period, the view will slowly revert back to its original state. You can trigger this yourself by pressing the HOME key.

## 4.4 3D Idle view

When the presentation is in idle mode, it will display a 3D view of the entire site. Within this view, each building will be displayed entirely, including each page/floor. To resemble a building, each floor plan image within a building is then stacked up into a 3D structure. This can provide the easiest way to navigate around a site, as well as the simplest way to view what areas are in what state.

### 4.4.1 Pages/Floors

- If any of the pages have devices in an active state, they will flash an appropriate colour to highlight their current status.
- Clicking a page will execute any associated click actions, which by default will display the page.
- When the mouse is hovering over a page, a status box is shown that includes all appropriate live information.
- If a page is programmed to automatically show on a specific state, then the presentation will perform an additional animation before displaying that page. This additional animation is intended to highlight the changing area to any observing user.





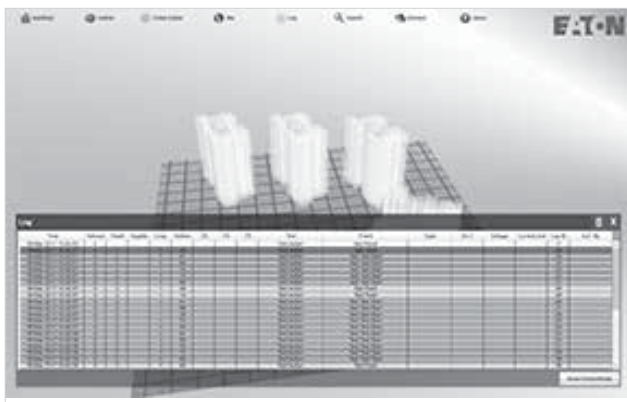
#### 4.4.2 Zooming and moving the viewpoint

- Holding the left mouse button will allow you to pan and rotate the 3D site plan. You can also achieve this using the arrow keys.
- Scrolling the mouse wheel will allow you to zoom in and out. You can also achieve this using the + and - keys.
- After a short period, the view will slowly revert back to its original state. You can trigger this yourself by pressing the HOME key.

#### 4.5 Event logs

Event logs contain recent network events that have been received by the Monitoring Service. The Graphical Visualisation Software Viewer includes an Event Log overlay element that can display this information. Of course as this is an overlay, the position, design and size of the event log is completely customizable, and can be displayed when and how the designer of the presentation choses.

An important aspect of event logs is that the user can select the log entries, either for copying to another application, or more commonly for acknowledging them. Performing an **acknowledge** action, which requires a button with the Acknowledge action, indicates to other users of the system that somebody has seen and acted (if required) upon the event. If there are multiple event log elements in a presentation, all user input will be mimicked across them. An example of when this is necessary is if the presentation provides a compact and large mode for viewing event logs – as shown in the default presentation configuration.



#### 4.6 Searching for pages/floors/devices

Searching for specific floors or devices can be achieved by adding a Search box to the presentation, which can be done easily by running the **Page/Overlay Wizard**. The search box works by taking a text string, and automatically populating a checkable list of found items. This list includes any page/floor and any page device location.

Checking an item will result in the selected item being displayed immediately. This behaviour can be prevented by adjusting the **Selected** option in the **Auto-Show Page** property list. Also, once an item is checked, it is then flagged as Selected and the page/floor/device will identify this with either an appropriate flashing colour or state border. It should be noted that any device in an active state will show the appropriate state border rather than the selected border. When selecting a device location, all devices that map to that location will also be selected.

### 4.7 Operation modes

The Graphical Visualisation Software Viewer is designed for three modes of operation; full user interactive, full autonomous display or a mix of both.

#### 4.7.1 Full user interactive

This kind of setup is when the presentation only displays what a user selects. This means that any state changes will never change the display. To achieve this, simply ensure that devices are not programmed to show the page on any state, and no Automatic Actions exist that can cause the view to change.

#### 4.7.2 Full autonomous display

This is the polar opposite of Full User Interactive, and is intended for displays where no user input is possible. This is ideal for informational displays in lobbies or other public viewing spaces. To achieve this, the presentation would be configured with no buttons, devices set to show pages on state changes and many Automatic Actions configured that alter the view as required.

#### 4.7.3 Mixed

This is the most common setup, in that pages will automatically show, but the presentation is still designed for easy interaction. This is the default setup.

## 5 Graphical Visualisation Software designer

### 5.1 General

The designer application is an all-purpose tool for creating and editing presentations, and comes with a selection of built in tools to help achieve this. The software is designed to accommodate various screen sizes, and so provides a flexible tool work space that can be adjusted by each user of the designer.

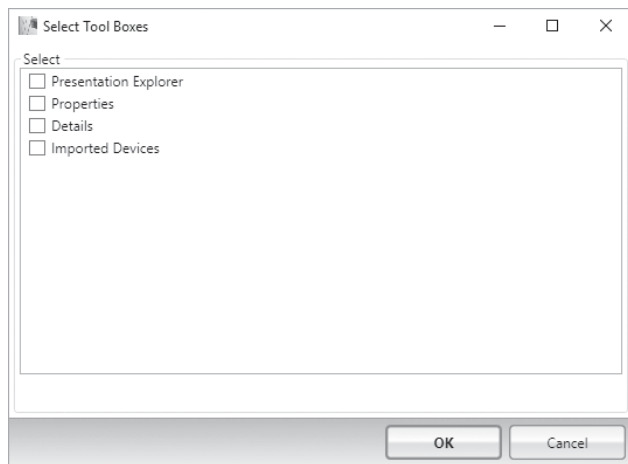
The first point to notice is that on the left and on the right are collapsible panels. These panels can be decorated with the various toolboxes that are used by all presentations (see the next section for further details). In the centre of the software is the main view, which displays the selected part of the presentation.

To open or save a presentation, you can use the **File** drop down menu. To view this help information, you can use the **Help** drop down menu or press the **F1** key.



## 5.2 Toolboxes

There are presently three toolboxes available. These toolboxes cover all important aspects of the software including navigation and properties. To add a toolbox to your presentation, open the **View** drop down menu and select **Add Toolboxes**. Once tool boxes are visible, you can then use your mouse to drag and drop the tool boxes the desired location on screen. To prevent accidental tool box manipulation, you can click the padlock icon to lock the tool box in place.



### 5.2.1 Presentation explorer

This toolbox allows you to quickly navigate around a presentation, by simply expanding and selecting items. Selecting an item in this list will alter the main view and update all other toolboxes.

### 5.2.2 Properties

Every item within a presentation has editable properties, and these are all accessed via the Properties toolbox. When an item is selected in either the Presentation Explorer toolbox, Details toolbox or in the main view, the Properties toolbox will update for that particular item. Common properties include text content, image selections, styling choices...etc. Each section of the property window can be collapsed or expanded, allowing you to hide away the properties that are of no use.

### 5.2.3 Details

Most items within the Presentation Explorer contain an extensive list of sub items, such as a page's devices or overlays various elements. The details toolbox will display these and provide more advanced options to edit these sub items (adding, deleting, moving...etc).

### 5.2.4 Imported devices

If you have used the **Import** option under the **Tool** drop down menu, then you can access the available devices using this toolbox. To browse the available devices, simply select an option from each box, then either double click on the required device or select the device and click **Add**. Please note this toolbox is only valid when you are viewing a page/floor.

## 5.3 General properties

If you select the root item in the Presentation Explorer, the view will display icons for all items within the presentation. Additionally, the Properties toolbox will show the general properties which cover general site information, the target screen resolution and other values.

### General

This is the general site information, that is purely informational and has no bearing of the operation of the presentation.

### Display

The screen resolution is important to the wizard setup tools as well as ensuring the screen optimisation mechanisms work as expected. You can also customise the colour scheme used for any item that is displaying a particular state.

### Miscellaneous

The View Reset Secs controls when the view will reset after a zoom or drag action by the user.

### Auto-show page when in idle

Pages can be configured to automatically show when a device enters a particular state while viewing the Idle mode (3D). As these options are at the General level, they will be applied to all pages and devices in the presentation.

### Auto-show page when on page

Pages can be configured to automatically show when a device enters a particular state while viewing a page. As these options are at the General level, they will be applied to all pages and devices in the presentation.

### Device status effects page status

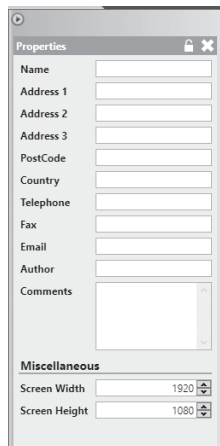
Pages will automatically highlight any important status by flashing an appropriate colour. This option allows you to select what status types have this effect on the page. As these options are at the General level, they will be applied to all pages and devices in the presentation.

### Active shortcut with device status

When the user is viewing a particular page, other pages with active status will be stacked in the bottom left corner of the presentation to draw the users attention. This option controls what status types have this effect on pages. As these options are at the General level, they will be applied to all pages and devices in the presentation.

### Apply mode

For each of the three sections above, you can control how enabling an option is applied. **Allowed** means ticking an option switches it on. **Disallowed** has the opposite effect, and is also higher significance, therefore overruling any **Allowed** configuration.



## 5.4 Buildings, pages and floors

Pages are the key component of all presentations, and at a basic level each one is a single graphics screen within a presentation. Each one of these screens can include its own images and devices, which is then overlaid with buttons and text. Normally pages represent individual floors within a building, but they can also be used as floor sub sections, informational screens, navigation hubs, welcome screens or pretty much anything a site requires.



### 5.4.1 Buildings

As with any real site, the site is almost certainly composed of at least one building, and within each building, there is at least one floor level. The graphics system mimics the real physical world and so allows you to define any number of buildings in a site, and then organise the pages/floors into those buildings. Eventually, this will be the foundation of the 3D designer view, where those buildings can be scaled, rotated and positioned within the 3D landscape.

#### Name

The name of the building (shown in the status popup and the screen title).

#### Is Page Directory

This option flags a building as a non-building. This is useful for managing non-floor pages, allowing you to group them together.

#### Colour

This places a colour filter on an entire building, which allows colour coding of buildings within a site. Any floor/page image that also sets a colour will override this setting for just that image.

### 5.4.2 Page

Once you have created a page (select **Pages and Floors** or a building and then click **Add**), you will be presented with a selection of properties relating to how the page is managed. The following list will help define how each one works.

#### Mouse Click

This is a configurable list of actions that will execute whenever a user clicks on the page (usually in Idle).

#### Menu

This is the context menu that will be displayed when a user right mouse clicks on the page.

#### Name

The name of the page (shown in the status popup and the screen title).

#### Building

The building in which this page is assigned to.

#### Floor number

The current floor number. This can be negative for below ground floor levels, 0 for ground floor level and positive for floors above ground level.

#### Location

Text describing where the floor is located. This is presently only used in the status popup and is optional.

#### Start Page

If enabled, this will be the page shown when the presentation loads. Presentations can include a welcome/landing page that is purely informational and a navigation hub.

#### Show in Idle

If enabled, the page will be drawn in the 3D idle mode. Any non-floor plan page should disable this option.

#### Display scaling

If enabled, page views scale to the current screen size when viewed.

#### Exclude from search

Enabling this option will ensure the page is never displayed in the search list.

#### Mouse hover

If enabled, the page will react when the mouse pointer is hovering over it.

## Optimise Gfx

To ensure smooth animation and good performance, all imagery must be optimised, which is essential for large sites.

**Note:** Do not optimise this page. This is not recommended unless the page is expected to be zoomed into. **Screen sized:** Use imagery that is scaled to fit the screen. **Idle only:** Use reduced quality images only in idle mode. **Full:** Use reduced quality images in idle mode and screen sized images in page view mode.

## Auto-show page when in idle

Pages can be configured to automatically show when a device enters a particular state while viewing the Idle mode (3D). As these options are at the page level, they will be applied to all devices on the page.

## Auto-show page when on page

Pages can be configured to automatically show when a device enters a particular state while viewing a page. As these options are at the page level, they will be applied to all devices on the page.

## Device status effects page status

Pages will automatically highlight any important status by flashing an appropriate colour. This option allows you to select what status types have this effect on the page. As these options are at the page level, they will be applied to all devices on the page.

## Active shortcut with device status

When the user is viewing a particular page, other pages with active status will be stacked in the bottom left corner of the presentation to draw the users attention. This option controls what status types have this effect on pages. As these options are at the page level, they will be applied to all devices on the page.

## Apply mode

For each of the three sections above, you can control how enabling an option is applied. **Allowed** means ticking an option switches it on. **Disallowed** has the opposite effect, and is also higher significance, therefore overruling any **Allowed** configuration.

## 5.4.3 Images

A page can include as many images as required, although usually only a single floor plan image is required. These images provide the base on which all devices can be placed. To add an image, simply click the Add Image option. The following properties are available for page images:

### Image

This sets the image file to display.

### Colour

This places a colour filter on an image, which allows colour coding of floors within a building if required.

### Scale

This sizes the image, usually used to ensure the image fits within the screen.

**X** Positions the image horizontally.

**Y** Positions the image vertically.

## 5.4.4 Devices

Each device added to a page usually represents a single product connected to a monitored system. Devices can be anything, including addressable detectors, sounders, manual call points, loops, panels, loops, zones, networks...etc. A device can also be used purely to provide information on a page, in the form of a popup text and audio. The following properties are available for devices:

### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the device.

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the device.

### Device text

The default device text of the page device (shown in the status popup and the title). This text is usually ignored when connected to a Monitoring Service, as that has its own version of the text.

### Image

The displayed device image, as configured in the separate **Device Images** area.

### Visible

Controls if the device is visible to the user.

### Filter logs

When enabled, the device's location information will be used to filter the event log. This is useful if a specific page/floor represents a panel/loop/zone, and you only want to view events from that panel/loop/zone.

### Is real

Controls if the device icon is designated as the single true representation of the physical location of the device. This option should be disabled on pages that are not intended as actual floor plans.

### Self state only

If enabled, this ensures the device will only represent its own direct status. If disabled, the device will represent its own status and that of any of sub connected items (e.g. a panel will show a fault if any of its devices are in fault).

**X** Positions the image horizontally.

**Y** Positions the image vertically.

### Network location

This controls what physical location/product the device will represent and track.

### Display text

This controls what text is displayed with the device when the page is presently being shown in 2D to the user.

### Horizontal and vertical

Positions the 2D display text within the element.

### Padding

Sets how far from the edge of the element the 2D display text will appear.

**Other text options**

The remaining options are the typical font controls for 2D display text, including colour, font, size and text effects.

**Background**

This sets the background colour for the 2D display text.

**Border**

This sets a border around the 2D display text, with options to control the colour and thickness.

**Enable info-icon mode**

If a device is not representing a physical location/product and is purely information instead, then these options allow you to control the popup box.

**Auto-show page when in idle**

Pages can be configured to automatically show when a device enters a particular state while viewing the Idle mode (3D). As these options are at the device level, they will only effect this device.

**Auto-show page when on page**

Pages can be configured to automatically show when a device enters a particular state while viewing a page. As these options are at the device level, they will only effect this device.

**Device status effects page status**

Pages will automatically highlight any important status by flashing an appropriate colour. This option allows you to select what status types have this effect on the page. As these options are at the device level, they will only effect this device.

**Active shortcut with device status**

When the user is viewing a particular page, other pages with active status will be stacked in the bottom left corner of the presentation to draw the users attention. This option controls what status types have this effect on pages. As these options are at the device level, they will only effect this device.

**Apply mode**

For each of the three sections above, you can control how enabling an option is applied. **Allowed** means ticking an option switches it on. **Disallowed** has the opposite effect, and is also higher significance, therefore overruling any Allowed configuration.

**5.4.5 Positioning and sizing**

Every image added to a page provides position and sizing options, devices can only be positioned. The images and devices can all be positioned using the mouse (and sized if it is an image), or via the properties.

**5.4.6 Adjusting the view**

The view's perspective is adjustable and can be zoomed and shifted. These controls have no bearing on the final presentation, but are provided as an aid to designing.

- Holding SHIFT and the left mouse button will allow you to shift the view around. You can also achieve this using the arrow keys.

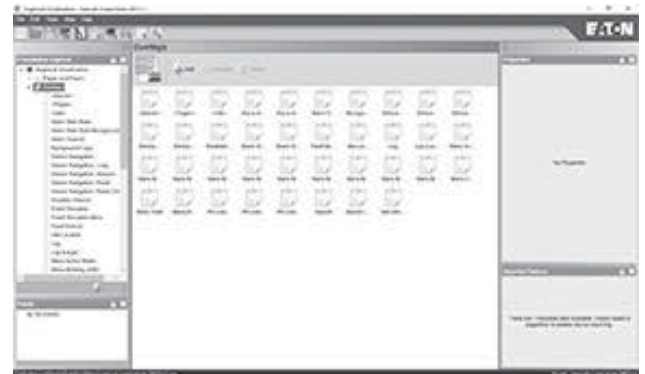
- Scrolling the mouse wheel will allow you to zoom in and out. You can also achieve this using the + and - keys.
- The HOME key will restore the view to normal.

**5.4.7 Overlay**

Each page has its own overlay, and this can be accessed by expanding the current page item within **Presentation explorer** and selecting the **Overlay** item. Any overlay elements created here will only effect this single page. For further information on how overlays work, please refer to the next section which controls the shared overlays.

**5.5 Overlays**

Presentations are made from two key components; the page graphics that are shown in both idle and page view modes, and a layer of overlay elements that provide static buttons, imagery and text. As the name suggests, overlay elements usually sit on top of page graphics.



**5.5.1 Page overlay vs shared overlays**

As most overlay content will be repeated across multiple pages, the Overlays area in Presentation Explorer allows you to define shared overlay content. The idea is that you can break up your overlay structure into small simple units, of which each perform a specific purpose. Individual pages can then pick and mix the appropriate overlay content. A good example is the event log which all pages need to display. By placing the event log in a shared overlay, it allows all pages to share it, and so any design changes you make will affect all pages.

## 5.5.2 Predefined overlays

There are presently three default overlays that are automatically displayed and that cannot be deleted. These allow you to quickly effect all pages with little configuration.

### <Master>

Every screen in graphics will include this overlay content, this includes page views and idle mode.

### <Pages>

Every page view will include this content.

### <Idle>

The idle view will always include this content.

## 5.5.3 Overlay

To create an overlay, navigate to **Overlays** within **Presentation Explorer** and click **Add**. The following properties are available for each overlay.

### Name

The display name of the overlay, which is only used within the designer.

### ID

The ID is used to identify an overlay, which is required for dynamically showing and hiding overlays. This value does not have to be unique, and so can allow you to hide or show groups of overlays with a single action.

### Draw order index

When multiple shared overlays are used by a page, this controls the layers of overlays. Higher value overlays will appear over the top of lower value overlays (e.g. allowing the event log to appear on top of other overlay content).

### Underlay

If you want overlay content to appear behind the page graphics or idle graphics, you can enable this option. A good use of this is dynamic background content based on status.

### Fade In (Secs.)

This controls how quickly the overlay will be displayed. Overlays that fade in, will generally result in a smoother graphics system. Low performance systems may want to disable this feature.

### Parent overlays

Adding references to other overlays in this list will ensure they are also displayed. Enabling the tick box means the overlay will show immediately. Unticking this option means the overlay will only show when a **Show Overlay** action is executed (likely from a button). You will notice that the **<Master>** overlay is always included.

## 5.5.4 Positioning and sizing

Every element added to an overlay provides position and sizing options. These allow a certain amount of flexibility with regards to different screen resolutions. Elements provide anchoring options, which means they can latch onto one or all sides of the screen. An element anchored to the top and left sides of the screen, will always be position relative to the top left corner at a fixed size. An element anchored to all sides of the screens will shrink and expand depending on the resolution, and will have no fixed size. Finally, an element that

is not anchored to any side will always sit in the middle of the screen at a fixed size. The elements can all be position and sized using the mouse, or via the properties.

## 5.5.5 Frames

A frame is a multi-purpose overlay element that can do two things. Its primary purpose is to house other elements, for example a frame could house a collection of buttons enabling easy movement of these buttons around the screen (they are essentially grouped together by the frame). Frames can also be nested inside other frames, allowing the creation of complex overlay structures. The secondary purpose of a frame is to display images and text, which could include a screen title, company logo, paragraphs of instructions...etc. The following properties are available for each frame.



### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the element.

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the element.

### Width and height

Providing you are not using full anchoring, these control the size of the element.

### Left, right, top and bottom

These options allow you to anchor an element to a particular side of the screen. This means the element can dynamically adjust depending on the current screen resolution. The values define how far the element will be placed from that side of the screen.

### Use grid

These options allow you to position the element within the parent element's grid, but only if the parent element has a grid enabled and configured. The Number values control what Row or Column is targeted and the Span values control how many columns and rows the control will occupy.

**Create grid**

These options allow you to define a grid that child elements can utilise. The format for Rows and Columns is the same, and some examples are:

- 50%;50% - Create two equally sized rows/columns.
- 25%;25%;25%;25% - Create four equally sized rows/columns.
- 60%;40%;100 – Create 3 rows/columns, the third is 100 pixels wide/high and the first and second use 60% and 40% respectively of the remaining available space.
- 25;30%;50;70% - Create 4 columns/rows, the first is 25 pixels wide/high, the third is 50 pixels wide/high and the second and fourth use 30% and 70% respectively of the remaining available space.

**Background**

This sets the background colour.

**Border**

This sets a border around the element, with options to control the colour and thickness.

**Image**

This places an image in the centre of the element. The provided options allow you to position, size and filter the colour of that image as required.

**Text**

This controls what text is displayed in the element.

**Horizontal and vertical**

Positions the text within the element.

**Padding**

Sets how far from the edge of the element the text will appear.

**Other text options**

The remaining options are the typical font controls for text, including colour, font, size and text effects.

**5.5.6 Buttons**

Buttons are essential for programming the graphics presentation, and allow the user to interact. The following properties are available for each frame.

**Mouse click**

This is a configurable list of actions that will execute whenever a user clicks on the element.

**Menu**

This is the context menu that will be displayed when a user right mouse clicks on the element.

**Width and height**

Providing you are not using full anchoring, these control the size of the element.

**Left, right, top and bottom**

These options allow you to anchor an element to a particular side of the screen. This means the element can dynamically adjust depending on the current screen resolution. The values define how far the element will be placed from that side of the screen.

**Use grid**

These options allow you to position the element within the parent element's grid, but only if the parent element has a grid enabled and configured. The Number values control what Row or Column is targeted and the Span values control how many columns and rows the control will occupy.

**Background**

This sets the background colour.

**Border**

This sets a border around the element, with options to control the colour and thickness.

**Image**

This places an image to the left of any text (or the centre if the button has no text). The provided options allow you to position, size and filter the colour of that image as required. It should be noted that if a value other than 0 is entered in either the X or Y properties, the image will be placed in the middle and then offset by these values.

**Style**

This allows you to select the general button styling (Flat or Normal).

**Text**

This controls what text is displayed in the element.

**Horizontal and vertical**

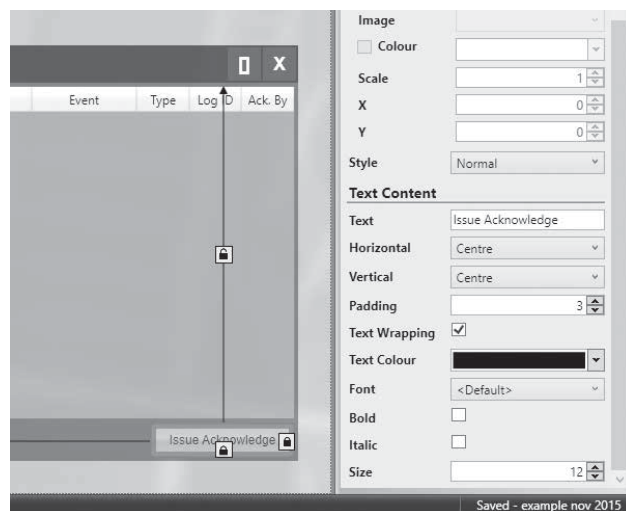
Positions the text within the element.

**Padding**

Sets how far from the edge of the element the text will appear.

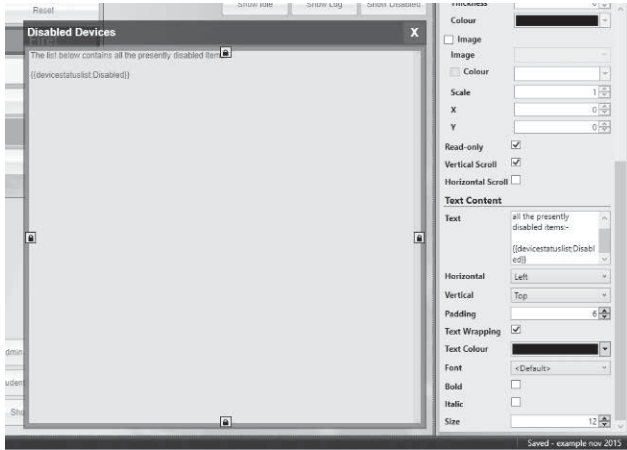
**Other text options**

The remaining options are the typical font controls for text, including colour, font, size and text effects.



## 5.5.7 Text boxes

Text boxes provide a more dedicated element for handling larger fields of text. Although these elements can be set to non-read-only, the user entering text has no bearing on presentations unless the text box is assigned a purpose. The following properties are available for each text box.



### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the element.

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the element.

### Purpose

Text boxes can be given pre-defined purposes.

**None:** The text box will have no special behaviour, and will simply contain text.

**Filter search list:** The text will contain search text queries. Any text entered here will result updating of search lists.

**Manual locations:** The text will contain a field of the manual location (Network, Panel, Loop...etc.)

### Width and height

Providing you are not using full anchoring, these control the size of the element.

### Left, right, top and bottom

These options allow you to anchor an element to a particular side of the screen. This means the element can dynamically adjust depending on the current screen resolution. The values define how far the element will be placed from that side of the screen.

### Use grid

These options allow you to position the element within the parent element's grid, but only if the parent element has a grid enabled and configured. The Number values control what Row or Column is targeted and the Span values control how many columns and rows the control will occupy.

### Create grid

These options allow you to define a grid that child elements can utilise. Please refer to Frames for further detail on how to define the size and number of rows and columns.

### Background

This sets the background colour.

### Border

This sets a border around the element, with options to control the colour and thickness.

### Image

This places an image in the centre of the element. The provided options allow you to position, size and filter the colour of that image as required.

### Read-only

If enabled, the text box will not permit the user to change the content of the text box.

### Vertical and horizontal scroll

These options control if the text box allows scroll bars.

### Text

This controls what text is displayed in the element.

### Horizontal and vertical

Positions the text within the element.

### Padding

Sets how far from the edge of the element the text will appear.

**Other text options** The remaining options are the typical font controls for text, including colour, font, size and text effects.

## 5.5.8 Event logs

These are the most specialised overlay element, and are only capable of displaying event log history from the physical networks. There is no special configuration to control this data, so all event logs will display the same data. Additionally, all user actions on event logs will be duplicated to other event logs, which are most visible with selections. To allow users to **Acknowledge** events, you can create a button anywhere on the screen that includes the Acknowledge action. This action will automatically process all selected event log rows. The following properties are available for each event log.

### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the element.

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the element.

### Width and height

Providing you are not using full anchoring, these control the size of the element.

### Left, right, top and bottom

These options allow you to anchor an element to a particular side of the screen. This means the element can dynamically adjust depending on the current screen resolution. The values define how far the element will be placed from that side of the screen.

### Use grid

These options allow you to position the element within the parent element's grid, but only if the parent element has a grid enabled and configured. The Number values control what



Row or Column is targeted and the Span values control how many columns and rows the control will occupy.

### Create grid

These options allow you define a grid that child elements can utilise. Please refer to Frames for more detail of how to define the size and number of rows and columns.

### Background

This sets the background colour.

### Border

This sets a border around the element, with options to control the colour and thickness.

### Image

This places an image in the centre of the element. The provided options allow you to position, size and filter the colour of that image as required.

## 5.5.9 List box

List boxes provide a facility to display dynamic lists of data. For list boxes to operate correctly, they need to be assigned an appropriate purpose.

### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the element.

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the element.

### Purpose

List boxers require a selected purpose.

**Search and select:** The contents of the list box will be populated with all the items that match the contents of a search text box, which are either a page/floor or a page device. Checking any item in the list will alter the state of the referenced item to be selected.

**Manual test event type:** The list box will convert into a combo box and allow the user to select an event type used in the manual test.

**Manual test event importance:** The list box will convert into a combo box and allow the user to select an importance level used in the manual test.

### Width and height

Providing you are not using full anchoring, these control the size of the element.

### Left, right, top and bottom

These options allow you to anchor an element to a particular side of the screen. This means the element can dynamically adjust depending on the current screen resolution. The values define how far the element will be placed from that side of the screen.

### Use grid

These options allow you to position the element within the parent element's grid, but only if the parent element has a grid enabled and configured. The Number values control what Row or Column is targeted and the Span values control how many columns and rows the control will occupy.

### Create grid

These options allow you define a grid that child elements can utilise. Please refer to Frames for further details on how to define the size and number of rows and columns.

### Background

This sets the background colour.

### Border

This sets a border around the element, with options to control the colour and thickness.

### Image

This places an image in the centre of the element. The provided options allow you to position, size and filter the colour of that image as required.

### Text

This controls what text is displayed in the element.

### Horizontal and vertical

Positions the list within the element.

### Padding

Sets the gap between items in the list.

### Other text options

The remaining options are the typical font controls for text, including colour, font, size and text effects.

## 5.5.10 Dynamically showing overlays

As hinted earlier, overlays can be dynamically shown depending on user actions. This means it's possible to create a button that hides or shows certain overlays. You can achieve this by following these steps:

1. Place the dynamic overlay content within its own unique overlay.
2. Assign an ID to that overlay.
3. Ensure that the required pages (or overlays) include the new overlay in the Parent Overlays list. You can modify the **<Master>** overlay to include it on all pages and idle mode.
4. To show the overlay, add a **Show overlay** action to any element's **Click actions** (most likely a button), using the assigned ID.
5. To hide an overlay, add a **Hide overlay** action instead.
6. You can also toggle showing and hiding with the **Toggle overlay** action.

It should be noted that any dynamically shown or hidden overlay will remain as is through page and view transitions. However, dynamically shown overlays will only be displayed if a page/overlay has it referenced in the **Parent overlays** list. If it isn't referenced, it will never show.

## 5.6 Device images

This area of the presentation controls purely how devices are displayed, and how they react to state changes. These devices can then be consumed by pages, who place devices on floor plan images and associate them with real physical products.

### 5.6.1 Status frames

Within the Device Images section of Presentation Explorer, you will notice several predefined entries. Each one of these controls the alterations made to devices when they enter a particular state. The following properties are available for state frame.

#### Background

This sets the background colour.

#### Border

This sets a border around the device, with options to control the colour and thickness.

#### Scale

This sizes the status frame, but does not affect the actual device image.

#### Shape sides

This shapes the border and allows any shape configuration. High values will effectively make the border appear round.

#### Animate

When a state frame is active, the border also supports animation which is intended to be eye catching. This option provides an extended list of varied animations, most of which come in slow and quick varieties.

### 5.6.2 Adding a device image

Once you have added a device image, you will be presented with the following properties.



#### Menu

This is the context menu that will be displayed when a user right mouse clicks on the device.

#### Name

This is the display name of the device, used only internally by the designer.

#### Width and height

This controls the display size of the device.

#### Appearance: Background

This sets the background colour of the OK state frame.

#### Appearance: Border

This sets the border of the OK state frame, with options to control the colour and thickness.

#### Appearance: Scale

This sizes the OK state frame, but does not affect the actual device image.

#### Appearance: Shape sides

This shapes the border of the OK state frame and allows any shape configuration. High values will effectively make the border appear round.

#### Image

This sets the default image for the device. The provided options allow you to position, size and filter the colour of that image as required.

#### Other option images

For each available state, you can configure a unique image configuration. If not enabled, each state will use the default image configuration.

#### Auto-show page when in idle

Pages can be configured to automatically show when a device enters a particular state while viewing the Idle mode (3D). As these options are at the device image level, they will affect any device that references this device image.

#### Auto-show page when on page

Pages can be configured to automatically show when a device enters a particular state while viewing a page. As these options are at the device image level, they will affect any device that references this device image.

#### Device status effects page status

Pages will automatically highlight any important status by flashing an appropriate colour. This option allows you to select what status types have this effect on the page. As these options are at the device image level, they will affect any device that references this device image.

#### Active shortcut with device status

When the user is viewing a particular page, other pages with active status will be stacked in the bottom left corner of the presentation to draw the users attention. This option controls what status types have this effect on pages. As these options are at the device image level, they will affect any device that references this device image.

#### Apply mode

For each of the three sections above, you can control how enabling an option is applied. **Allowed** means ticking an option switches it on. **Disallowed** has the opposite effect, and is also higher significance, therefore overruling any **Allowed** configuration.

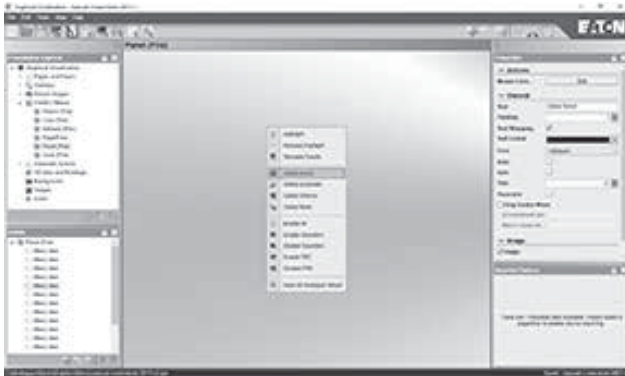
## 5.7 Context menus

Most items within a presentation, such as pages, device images, overlay elements and the background, allow you to assign a Context Menu. These menus are displayed when a user clicks the right mouse button on an item.

The menus are designed to provide context specific options to items in the presentation. A good example would be disabling and enabling a device, or resetting a panel. However, any action is possible using context menus, and so they have same capability has a button.

### 5.7.1 Adding a context menu

To add a new context menu, navigate to the **Context Menu** area of **Presentation Explorer** and select **Add**. This will create a new empty menu. To add your first option in this menu, click the new **Add** icon. For each option within a menu, you will find the following properties.



#### Mouse click

This is a configurable list of actions that will execute whenever a user clicks on the menu option.

#### Text

This controls what text is displayed in the menu option.

#### Padding

Sets how far from the edge of the element the text will appear.

#### Other text options

The remaining options are the typical font controls for text, including colour, font, size and text effects.

#### Separator

If enabled, the menu option will be non-clickable and will instead appear as a separator bar. This should be used to organise groups of menu items.

#### Image

This assigns a small image to the menu option.

### 5.7.2 Assigning a context menu

To assign a Context Menu, simply navigate to the appropriate page, device or overlay element and edit the **Menu** property. No further configuration is required.

## 5.8 Automatic actions

All the visible elements within the presentation support clickable action sets, which allow a strong level of programmability in the graphics interface. However, a user creating a presentation may want some actions to be automated, such as when the software is running purely autonomously or if they want to display certain information when a particular event occurs. This is where Automatic Actions can help, as they allow the creation of action sets that execute when particular criteria are met. To create an Automatic Action, select **Automatic actions** in **Presentation Explorer** and click **Add**.



The following properties are available for automatic actions.

#### Enable

This controls only if the automatic action is live and processing conditions in respect to events. This is always ignored by the action **Execute Automatic Action**.

#### Name

This is the name of the automatic action, but is only ever displayed in the designer.

#### Exe. Order index

This controls the execution order of automatic actions, with lower values being executed first. This is important when multiple automatic actions are triggered by certain conditions.

## 5.8.1 Conditions

This part of the configuration manages when the automatic action will execute, and this list allows you to list all the required conditions. The logic is similar to that of IF statement within a spreadsheet. For the action set to execute, generally all conditions must evaluate true (e.g. if you had three conditions, only when all three conditions are true will the action set be processed). If you want to break

conditions down into sets of OR logic (e.g. execute only when condition A, B and C are true, OR if condition D and E is true) then you can insert the **OR...** condition between conditions. Finally, if you want to execute on a condition not being true, you can enable the **NOT Mode (Inverse)** option on those specific conditions. These are the available conditions:

Condition	Detail / Target	Comments
Or...		Acts as a divider between sequences of AND logic. E.g. if this was the 3rd condition in a list of 4, either condition 1 and 2 must both be true, or condition 4 must be true.
Presentation loaded		An event that is triggered when the presentation is first loaded.
Background clicked		An event that is triggered when the user left mouse clicks on the background.
Is test mode		True when you are testing a presentation. Useful for hiding or showing test elements within a presentation.
Is idle active		True if the presentation is in Idle/3D mode.
Idle shown		An event that is triggered when Idle/3D mode is shown.
Is page active	Page	True if a particular page is currently actively displayed.
Page shown	Page	An event that is triggered when a page is shown.
Page clicked	Page	An event that is triggered when a page is clicked.
Is any page active		True if any page is currently displayed (i.e. not in idle mode).
Any page shown		An event that is triggered when any page is shown.
Any page clicked		An event that is triggered when any page is clicked.
Is page in building active	Building	True if a particular page, that is in the selected building, is currently actively displayed.
Page in building shown	Building	An event that is triggered when a page in the selected building is shown.
Page in building clicked	Building	An event that is triggered when a page in the selected building is clicked.
Does environment variable exist	Environment variable	True if the provided environment variable has been set.
Does environment variable match	Environment variable and value	True if the provided environment variable matches the value. The value supports * based matching, e.g. <b>*le</b> will match any value that ends with <b>le</b> .
Device clicked	Device	An event that is triggered when a device is clicked. The device selected refers to the device image, i.e. the items listed under <b>Device Images</b> in <b>Presentation Explorer</b> .
Any device clicked		An event that is triggered when any device is clicked.
Event importance received	Event importance	An event that is triggered whenever a new event log entry is received. Importance values are: <b>Passive:</b> Log entries that have low importance information (Clock syncs, AV requests). <b>Important:</b> Log entries that are deemed important to network state (enablenents, disablements). <b>Critical:</b> Log entries that have a large impact on the network status (Resets, Fires...etc.)
Event type received	Event type	An event that is triggered when a new event log entry is received. The event types range from status changes to resets.
Overall status changed to	Status	An event that is triggered if the general status changes. Status refers to the typical OK, Fault, Alarm...etc.
Overall status changed from	Status	An event that is triggered if the general status reverts. Status refers to the typical OK, Fault, Alarm...etc.
Key pressed	Key	An event that is triggered when a key is pressed down.
Key released	Key	An event that is triggered when a key is released.
Is key pressed	Key	True if a particular key is being pressed. Useful for detecting key combinations (e.g. SHIFT+BACKSPACE).

## 5.8.2 Actions

The actions available here are exactly the same as the actions available from click actions. For a list of actions, please refer to the Available Actions section later in this document.

## 5.9 3D view and buildings

When the presentation is in an idle state, and no page is presently shown, then the default behaviour is to display all the buildings and floors in a slowly rotating 3D view. Most of the configuration for this mode is automated, but it is still essential for the buildings to be arranged in real physical locations, ensuring the 3D view is as realistic as possible. This area of the designer allows you to quickly achieve this without any complicated 3D manipulation.

### 5.9.1 3D view and buildings

The following properties are available:

#### Menu

This is the context menu that will be displayed when a user right mouse clicks on the background when in Idle.

#### Camera scale

Factors and adjusts the 3D camera distance from the centre of the 3D view. By default the camera will place itself at an optimum position to allow the view of all content. This offsets that position.

#### Rotation secs.

This is the time (in seconds) that controls how long it takes for the whole 3D view mode to complete a full rotation. A lower value will speed up the rotation.

#### Floor load speed

This option allows you to adjust the speed in which the floors are loaded into idle mode. E.g. 1 = normal, 0.5 = take half the time, 2 = take double the time.

#### Show Dev. on mouse

When the user interacts with pages in 3D mode, the default behaviour is to display and animate all the devices present. In large presentations, this can cause a reduction in animation frame rates. Enabling this option switches this feature off and can improve performance.

#### HD Images on mouse

When the user interacts with pages in 3D mode, pages will show the floor plan in a higher resolution. In large presentations, this can cause a reduction in animation frame rates. Enabling this option switches this feature off and can improve performance.

### 5.9.2 Building

The following properties are available:

#### Allow layout changes

Disabling this option will prevent accidental modifications to all layout properties of the building. Please note the layout properties are always applied.

#### X, Y and Z

The co-ordinates of a building within the 3D view.

#### Scale

The size of a building.

#### Angle

The orientation of a building in degrees (-360 to 360).

#### Floor Gap (Z)

This allows the automated control of the Z position of floors. The Z value determines how high a floor is from the ground. If disabled, each page will need to be manually positioned directly by editing of the page's Z value.

### 5.9.3 Page / floor

The properties displayed are mostly similar to the properties available when editing a page. However, some additional properties are available.

#### Allow layout changes

Disabling this option will prevent accidental modifications to all layout properties of the page/floor. Please note the layout properties are always applied.

#### X, Y and Z

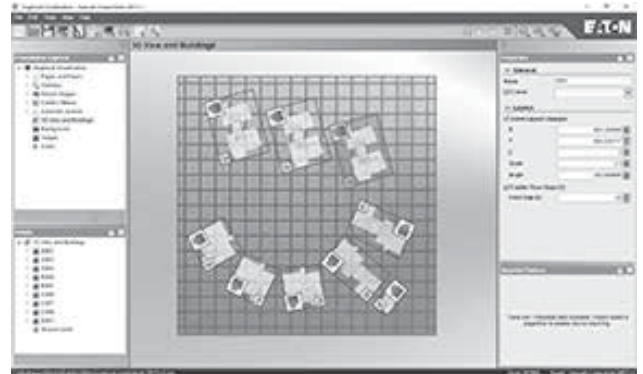
The co-ordinates of a page/floor within the 3D view.

#### Idle opacity

Allows you to make a page/floor appear transparent.

### 5.9.4 Position, rotating and scaling buildings.

The starting position of buildings will be in the centre of the screen. You can move buildings around by holding the left mouse button over the blue building icon in the top right of each building, then dragging the building to position. To adjust the size of a building, you can position the mouse at the edge of a building and then holding the left mouse button, drag the edge of the building until the size is correct. Finally, to rotate a building, hold the left mouse button over the spinning arrow icon and rotate as required. All of these actions can be achieved by manually editing the property values.



### 5.9.5 Moving floors within a building

If the floors are not aligned as expected within a single building, you can also manually position floors in respect to the building centre (using the mouse interaction or editing the properties). You may notice that the bounding building box adjusts size too. The bounding box is important as it identifies the range of the building and always encompasses all floor imagery.

## 5.9.6 Adjusting the view

The view's perspective is adjustable and can be zoomed and shifted. These controls have no bearing on the final presentation, but are provided as an aid to designing.

- Holding SHIFT and the left mouse button will allow you to shift the view around. You can also achieve this using the arrow keys.
- Scrolling the mouse wheel will allow you to zoom in and out. You can also achieve this using the + and - keys.
- The HOME key will restore the view to normal.

## 5.10 Background

The entire presentation allows you to control the background colour or background image. This will always be visible which ever screen the presentation is displaying. The following properties are available:

### Menu

This is the context menu that will be displayed when a user right mouse clicks on the background when in a page view.

### Colour

This sets the default background colour if no background image is supplied.

### Image

This is the image that will be used as the background. This will size appropriately so the entire background is covered. We recommend you use a high resolution image that ideally matches target monitor screen resolution.

## 5.11 Images

Before you start creating any content in a presentation, it is important that you pre-load all the required imagery into this list. Selecting an image will provide you with a preview and some basic stats of the file. It is important to note that these images will be embedded in the presentation file (ZPV format) upon saving, and so once an image is added, there is never a need to ever provide the original separate image file.

### 5.11.1 Editing images

The designer tool provides a few basic image-editing options, that aid commonly required tasks. When adding a new image, you are automatically prompted to edit an image. However, to edit an image that was previously added, you can double click the image, or select it then click the **Edit** button. You can also setup the designer to use a third party external image editing application. To configure this, please access the **Options** item within the **View** drop down menu.

#### Rotate clockwise

This will rotate the entire image 90 degrees clockwise.

#### Rotate anti-clockwise

This will rotate the entire image 90 degrees anti-clockwise.

#### Crop

This will crop the image down to the selected area, converting any image content outside of the selected area to a transparent colour. To select an area, simply use left and right mouse clicks and drop a loop of lines.

### Remove background

This will detect the background colour of an image and then automatically crop the image. The detection threshold is used to control how aggressive this behaviour is.

### Blend/soften edges

This will allow you to quickly soften the edge between opaque and transparent areas, which can result from any cropping and background removal.

Once you have finished editing, you must click **save changes** to update the image in the presentation, otherwise all your changes will be discarded. Please note the original file used to import the image is not affected by any edits, as the changes are only applied to the local copy stored within the presentation.

### 5.11.2 Supported formats

You can import the following image formats:

- BMP
- GIF
- TIFF/TIF
- PNG
- JPG/JPEG
- PDF

## 5.12 Audio

Audio files can be used in various aspects of a presentation, as they can be played during certain states and also used within a button or automatic action set. It is important to note that all of these audio files will be embedded in the presentation file (ZPV format) upon saving, and so once an audio file is added, there is never a need to provide the original separate audio file.

### 5.12.1 Supported formats

You can import the following audio formats:

- WAV
- MP3
- WMA

### 5.13 Available actions

In various parts of this manual you will have encountered references to actions and action sets. Any button or element allows the programming of click actions to be executed whenever the user mouse clicks on the element.

Also, Automatic Actions allow the execution of actions when certain conditions are met. All of these share a set a basic actions which are described in the table below.

Condition	Detail / Target	Comments
Show page	Page	Show a particular page.
Show this page		Show the page that this element is associated with.
Show idle		Show the Idle/3D mode.
Show previous screen		Re-show the previous graphics screen, which could be a page or idle mode.
Show next screen		Only valid if a <b>Show Previous Screen</b> action was executed and no new screens have been shown since. This will show the screen that was displayed before <b>Show Previous Screen</b> was executed.
Show message	Message content	Display a message box. Please note this should be used with caution as the presentation will not process any new events until the message is closed.
Show question	Question content	Displays a question, and allows actions to be skipped in response to the user's response. Please note this should be used with caution as the presentation will not process any new events until the question has been answered.
Skip actions	Value	Skips a set number of following actions. Useful when combined with the <b>Show Question</b> action.
Device location override	Enable/disable	Controls the location override mode. When this mode is enabled, any actions that are associated with a page device (i.e. a device placed upon a floor), the location information for that page device will override any locations stored within all actions. A common use of this is a shared context menu that is consumed by a device, which can issue network commands targeted at the actual page device location.
Manual location override	Enable/disable	Behaves in the same way to Device Location Override, except this enforces the manually entered location instead. This is often used in overlay popups that take location information and execute some kind of network action.
Delete environment variable	Environment variable	Deletes an environment variable.
Set environment variable	Environment variable and value	Sets the value of an environment variable.
Skip actions on environment variable	Environment variable and value	Skips a set number of following actions if the provided environment variable matches the value. The value supports * based matching, e.g. <b>wh*</b> will match any value that starts with <b>wh</b> .
Play audio	Audio file	Simply plays an audio file once.
Execute auto action	Auto action	Execute all the actions in an Automatic Action. This still occurs even if the Automatic Action is disabled.
Clear all selections		This will clear any page or device that is in a selected state.
Select all in search list	Select/unselect	This will select or unselect all items found within the selection list.
Select self	Select/unselect	This allows a page or device to select or unselect itself. This is useful when used in a context menu or a click action.
Reset manual location		Resets the manually entered location fields.
Reset manual test event		Resets the manually entered test event fields.
Set manual location	Location	Sets the manual location to particular value. Useful when combined with Device Location Override.
Issue global mute	Location	Issues a Global Mute on to a network, providing the targeted network supports this command.
Issue global silence	Location	Issues a Global Silence on to a network, providing the targeted network supports this command.
Issue global reset	Location	Issues a Global Reset on to a network, providing the targeted network supports this command.
Issue global evacuate	Location	Issues a Global Evacuate on to a network, providing the targeted network supports this command.
Enable	Location	Issues an appropriate enable command to a network, providing the network supports this command and for this location.
Disable	Location	Issues an appropriate disable command to a network, providing the network supports this command and for this location.
Enable IO	Location	Issues an enable IO command to a network, providing the network supports this command and for this location.
Disable IO	Location	Issues a disable IO command to a network, providing the network supports this command and for this location.
Enable sounders	Location	Issues an enable sounders command to a network, providing the network supports this command and for this location.
Disable sounders	Location	Issues a disable sounders command to a network, providing the network supports this command and for this location.

Condition	Detail / Target	Comments
Enable outputs	Location	Issues an enable outputs command to a network, providing the network supports this command and for this location.
Disable outputs	Location	Issues a disable outputs command to a network, providing the network supports this command and for this location.
Scan analogue values	Location	Issues an appropriate analogue value scan command on to a network, providing the network supports this command and for this location.
Run test – ok	Location	This emulates a fake OK status from the provided location.
Run test – alarm	Location	This emulates a fake Alarm status from the provided location.
Run test – fault	Location	This emulates a fake Fault status from the provided location.
Run test – disabled	Location	This emulates a fake Disabled status from the provided location.
Run test – pre-alarm	Location	This emulates a fake Pre-Alarm status from the provided location.
Run test – test	Location	This emulates a fake test started status from the provided location.
Run test – mute	Location	This emulates a fake Global Mute command from the provided location.
Run test – reset	Location	This emulates a fake Global Reset status from the provided location.
Run test – manual		This emulates a fake event using the user edited manual location and test event fields.
Issue acknowledge		This will attempt to modify any selected event log entries, and update them to an acknowledged state.
Show overlay	Overlay ID	Shows the provided overlay, if the current page/idle mode has it listed in the <b>Parent Overlays</b> list.
Hide overlay	Overlay ID	Hides the provided overlay.
Toggle overlay	Overlay ID	Toggles between show and hide for the provided overlay id, if the current page/idle mode has it listed in the <b>Parent Overlays</b> list.
Reset overlay	Overlay ID	Resets the provided overlay to its default view state (i.e. if it was hidden originally, then any shown overlay will revert to hidden).

## 5.13.1 Skipping actions

As the table identifies, some actions allow you to skip further actions. This effectively allows you to create complex action sets that can branch their behaviour based on user input. For example, clicking a button could result in a popup that asks the user a question. Then using action skipping, two sequences of actions could potentially be executed depending on the user's choice. Also, skip actions with a large number are an effective way to prevent any further processing of actions in that set.

## 5.14 Dynamic text (Auto replaced tags)

Every text property field, on almost any overlay element (button, text box, frame...etc.) can be enriched with dynamic text tags. These tags will then automatically get replaced with the relevant information on a per screen basis. The table below defines the available dynamic tags.

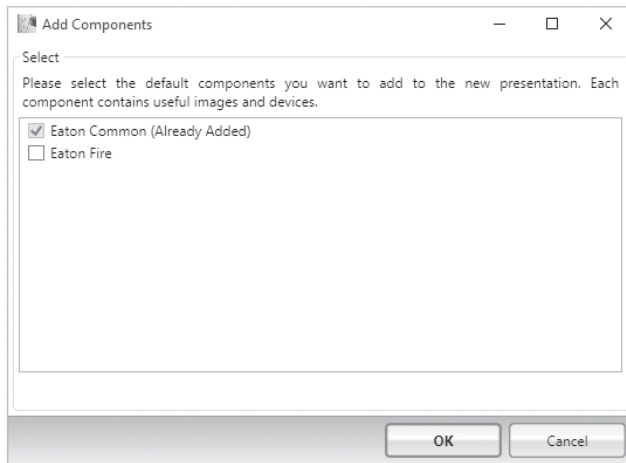
Tag	Comments
{{pagename}}	Displays the name of the current page.
{{pagenamefull}}	Displays the full name of the current page. This includes the building name and also the floor number.
{{devicestatuslist;STATE}}	Displays a list of devices that are in the provided state. Valid values for STATE are: <ul style="list-style-type: none"> <li>• OK</li> <li>• Test</li> <li>• Activated</li> <li>• Disabled</li> <li>• Fault</li> <li>• PreAlarm</li> <li>• Alarm</li> </ul>
{{sitename}}	Displays the name of the site.
{{timedatenowsmall}}	Displays the current time in the format: 23:59:59 - 02 May 2016
{{timedatenowlarge}}	Displays the current time in the format: 23:59:59 - Monday, 02 May 2016
{{editablelocation}}	Displays the currently entered editable location.
{{searchtext}}	Displays the current search term.
{{devicetext}}	Displays the device text of the current device.
{{devicelocationshort}}	Displays the full location of the current device.
{{devicelocationlong}}	Displays the short hand location of the current device.
{{devicestate}}	Displays the state of the current device.
{{devicestatecounts}}	Displays the status counts of just the current device.
{{devicechildstatecounts}}	Displays the status counts of the current device and its child/descendants.
{{devicestateevent}}	Displays the event text that caused the current state of the current device.



Tag	Comments
{{devicestatetime}}	Displays the date-time of the event that caused the current state of the current device.
{{devicestatedetailed}}	Displays a detailed state message of the current device.
{{devicevalues}}	Displays any values (analogue values, current, voltage...etc) of the current device.
{{devicetype}}	Displays the device type of the current device.

### 5.15 Adding packages

Graphical visualisation software is designed for almost any network type, but as it is primarily used with Eaton products, the software includes a selection of packages that can be added to a presentation. These packages/components contain various images, audio files and items such as device images and context menus, that are pre-configured for a presentation. Adding a package will reduce the time required to create a presentation for Eaton product families. To add any of the packages, access the Tools drop down menu and select **Add packages**.

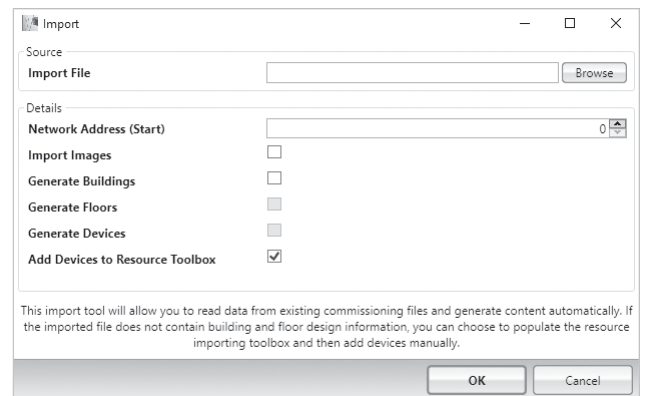


### 5.16 Importing from site installer

If the site you are working on has used Site Installer 3 to commission the panels, then you can import this data directly into Graphical visualisation software. This can vastly simplify the creation of a presentation, as some or most of the work may have already been completed within Site Installer. To import from Site Installer, access the **Tools** drop down menu and select **Import**.

To begin, first select the required commissioning file using the **Browse** button. The **Network address (Start)** field is only required if you are creating a multi-network presentation. The next step is to select what you want to import. If your commissioning file contains floor design data, then you likely want to import everything. However, if you are only interested in adding contents to the **Imported devices** toolbox, then please only select the option **Add devices to imported toolbox**. Clicking **OK** will run the import, which may take several seconds depending on the size of the commissioning file.

If you are manually adding imported devices to floors / pages, you can now navigate to any page and add items from the **Imported devices** toolbox.



## 5.17 Setup wizards

If you're creating a presentation from scratch, you can speed up the initial configuration by using one of the many wizards provided in the software. These wizards take basic information and generate content, usually much more quickly than is possible manually. To run a wizard, simply select the area where you want to generate content (or select the root **Presentation** item in **Presentation explorer**) and then access the Tools drop down menu and select Setup Wizard.

### 5.17.1 Site setup wizard

This wizard runs automatically when you create a new graphics presentation, but it can also be run when you have selected the root item in the Presentation Explorer (which is defaulted to 'Presentation'). This wizard will guide you through a complete configuration of the presentation, and is capable of filling in the important site information as well as generating all the required buildings, floors, devices and overlays.

### 5.17.2 Add buildings wizard

This wizard becomes available when you select **Pages and Floors** in the Presentation Explorer. This simplified wizard focuses on purely generating new buildings, floors and devices. It should be noted that buildings will still require user input on the 3D View and Buildings area, to place them in the correct position.

### 5.17.3 Add pages wizard

This wizard becomes available when you select a building in the Presentation Explorer. This simplified wizard focuses on purely generating new floors and devices.

### 5.17.4 Add devices wizard

This wizard becomes available when you select a page in the Presentation Explorer. This simplified wizard focuses on purely generating new devices. It should be noted that the devices will still require user input to place them in the correct position.

### 5.17.5 Menu generation wizard

This wizard allows you to generate a comprehensive menu system for the presentation, this includes mapping buttons to all floors, control commands, significant pages and status windows.

### 5.17.6 Page/overlay wizard

To help expand the features of your presentation and simplify many routine configuration tasks, you can run this wizard multiple times and add various generic components to the presentation. This includes log views, active status lists, testing buttons, welcome/about screen, ground level imagery, device navigation screens, event simulator and more.

### 5.17.7 Automatic actions wizard

The Automatic Actions feature of presentations can be difficult for some to understand, and so to allow your presentation to leverage the powerful nature of this feature, you can use this wizard to add various commonly used action sets. This includes handling mouse input, keyboard input, automatic log viewing and converting your presentation into autonomous mode.

## 5.18 Testing presentations

Because presentations can be complex and large, it is important that you test them in a non-live environment. Graphical visualisation software includes this has a standard feature and is accessible at any time by pressing the F5 key (or by selecting the **Test** button). When this occurs, it will launch an instance of the presentation that emulates the Monitor Service. This means any actions that attempt to broadcast a command onto a network have no effect.

### 5.18.1 Creating test buttons

Because there are several actions that exist that can generate fake network events (the test actions), we recommend you create a selection of buttons that can be used to drive the test mode. Ideally, these can be added using the built Test Buttons wizard which is part of the Pages/Overlays wizard.

## 5.19 Optimising and performance

When dealing with large and complex sites, it's important that the graphics presentation is optimised and the PC is configured correctly. The following sections help clarify what you can do to ensure the animations operate smoothly and the user's experience when interacting with the viewer are reasonable and run at a high frame rate. It should be noted that the majority of presentations will run as is without any special configuration, it is generally only the large presentations with hundreds of pages/floors that require any special attention.

### 5.19.1 Enable optimisation features within the graphics designer

When using the designer, you have several ways in which you can improve the performance. These options either reduce image quality or disable specific features, each of which releases processing power and increases animation quality.

#### Page image quality

The option **"Optimise Gfx"** on each page enables you to reduce image quality.

#### Show Devices in 3D/Idle Mode

The **"Show Dev. on Mouse"** option available on the 3D View and Buildings section allows you to improve performance by disabling device displaying when a user hovers the mouse over a page in 3D mode.

### Show HD Imagery in 3D/Idle Mode

The **"HD Images on Mouse"** option available on the 3D View and Buildings section allows you to improve performance by disabling high resolution floor plan displaying when a user hovers the mouse over a page in 3D mode.

#### 5.19.2 Use images with a lower resolution

Every image you load into the Graphics system consumes computer and graphics hardware memory, and increases the burden on the CPU. Although the graphics system automatically reduces the quality of extra-large imagery, these overly large images can still have an impact on performance. Generally, we recommend you don't use images larger than the screen resolution, as the extra resolution will usually not be required. The exception to this rule is if you expect users to be frequently zooming into imagery. If you find that your pages/floors require the floor plan to be scaled down, then it is usually an indicator that the imagery is too large.

For large graphics systems, where you find performance is poor, we suggest you reduce image quality even further, aiming to strike a balance between performance and the desired minimum quality. Generally, the lower the image quality, the less memory required by the presentation and the higher the frame rate.

#### 5.19.3 Update your graphics card drivers

Developers of graphics hardware often release updates that improve stability and enhance performance. We recommend you ensure that your graphics driver is always up to date. The same applies to Windows updates.

#### 5.19.4 Use the primary graphics accelerator

Many computers now come with multiple graphics accelerator options; the high-performing dedicated hardware and often a lower-performing integrated feature within the CPU. To ensure that your presentation runs smoothly, we suggest you ensure that the high-performing dedicated graphics hardware is used while rendering. These options can normally be found in your graphics settings. Some computers even include the option to disable the low-performing graphics system.

The impact of not using correct graphics hardware is that large presentations will vastly underperform and may not even run at all!

#### 5.19.5 Prevent 'Glitching' images with higher Z values

If you find that imagery in 3D mode seems to 'glitch', looks torn or flickers between two different images, the likelihood is that two images are occupying the same Z vertical space. The Z value is used in the Graphics Designer to define how high an image/page/floor appears in 3D mode.

The solution is to ensure that floor gaps are set high enough in the building settings, and that buildings (and pages not in a building) are all set to high enough Z values to lift them away from each other. The larger the site is, and the further out the 3D view camera has to extend, the resulting effect value will be higher. Therefore larger sites will generally use higher Z values.

