

Using ViewNet

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Using This Guide

- [Chapter 1, *What is ViewNet?*](#) to [Chapter 11, *Using Screen Controls*](#) are for reference; to introduce those new to ViewNet to the concepts, terms used and operation.
- [Chapter 12, *The ViewNet Module Builder*](#) to [Chapter 31, *System Requirements*](#) are more practical; aimed at the user who will be building ViewNet Screens and managing the ViewNet system.

TRY IT NOW sections are optional practical activities; designed to supplement the guide and to aid understanding.

-  Points of note, give extra information and tips. Always worth reading.
- If possible, have a working ViewNet system and client computer at your side as you read.

Licensing

The ViewNet system is composed of a number of hardware and software packages which are used by the customer under licence. Some elements of ViewNet referred to in this guide will not be available unless the appropriate licence is held:

- **V6001 The ViewNet Gateway** - This is the controlling hardware with a basic Operating System that is an interface between the user's computer and the Vistek modules. Third party control systems would also be able to use this gateway to access Vistek products.
- **VNSC The ViewNet Operator Client Software** - This is the software that runs on a client to give access to ViewNet Physical Screens and pre-defined Alarms
- **VNSMB The ViewNet Module Builder** - This software package allows the creation of user-defined Virtual Screens and the Virtual Domain.
- **V6002 The ViewNet Rack (frame) Licence** - A licence is held for each frame of modules to be managed by the ViewNet Module Builder.
- **VNSEV The ViewNet Event Manager** - This software package allows the creation of user-defined Custom Alarms and Global Script Events.

Chapter 1. What is ViewNet?

1.1. Control and Monitoring

ViewNet enables the control and monitoring of Vistek products such as interface modules, power supplies and equipment racks from any Java-enabled personal computer via standard TCP/IP. Using usual GUI methods - including touch-screen - equipment can be controlled via standard and user-designed control screens.

Standard screen sizes and layouts aid the user with placement, navigation and operation without compromising desktop access. Control screens can act dynamically to respond to signal conditions or options - automatically modifying themselves to suit their current operational status.

A system of logins and access levels ensures that users only have access to those parts designated.

1.2. ViewNet Module Builder

The flexibility of the ViewNet system is enhanced by the **ViewNet Module Builder** . The user is able to create **Virtual Screens** to their own design. These may include control elements from any number of different modules and controls to launch other screens and screen functions.

In order to access ViewNet screens, the user creates a **Virtual Domain** that presents all control screens needed for their system in a tree-like structure.

1.3. ViewNet Alarms and Events

To enhance the monitoring role of ViewNet, a system of pre-defined and user-defined events is available. Standard ViewNet Screens are supplied with pre-defined **Alarms** giving visual and audible indication of an alarm condition. A further software package is available allowing the user to define their own alarms and to write scripts that initiate user-defined **Events** .

Chapter 2. How ViewNet is connected to your system

The ViewNet control system is connected to the user's computer(s) or local network just like any other IT resource. The interface between the computer/network and the Vistek equipment is a server known as the **ViewNet Gateway** .

2.1. Software

The only software installed on the user's computer is a **Java VM**. This enables ViewNet screens and the Module Builder programme to operate using data from the ViewNet Gateway. All module and control data, and administration programmes reside remotely on the ViewNet Gateway.

2.2. LAN / WAN

The user's computer(s) may be located anywhere with TCP/IP network access of the ViewNet Gateway. This could be via a **LAN** to a hub or router that also serves the ViewNet Gateway, or it could be via a **WAN** that is connected to the local network.

 There is a minimum specification for the user's computer and network. See [Chapter 31, System Requirements](#)

2.3. ViewNet Gateway

The ViewNet Gateway is a 1U rack-mount server usually in close proximity to the Vistek equipment racks. Apart from AC mains, there are two connections; The **LAN** , ultimately connected to the controlling computer(s) and the **DARTnet** network connection to the equipment racks under control.

The ViewNet Gateway stores all ViewNet screen and programme data along with all module status and control data.

Figure 2.1. The ViewNet Gateway - rear view



2.4. DARTnet

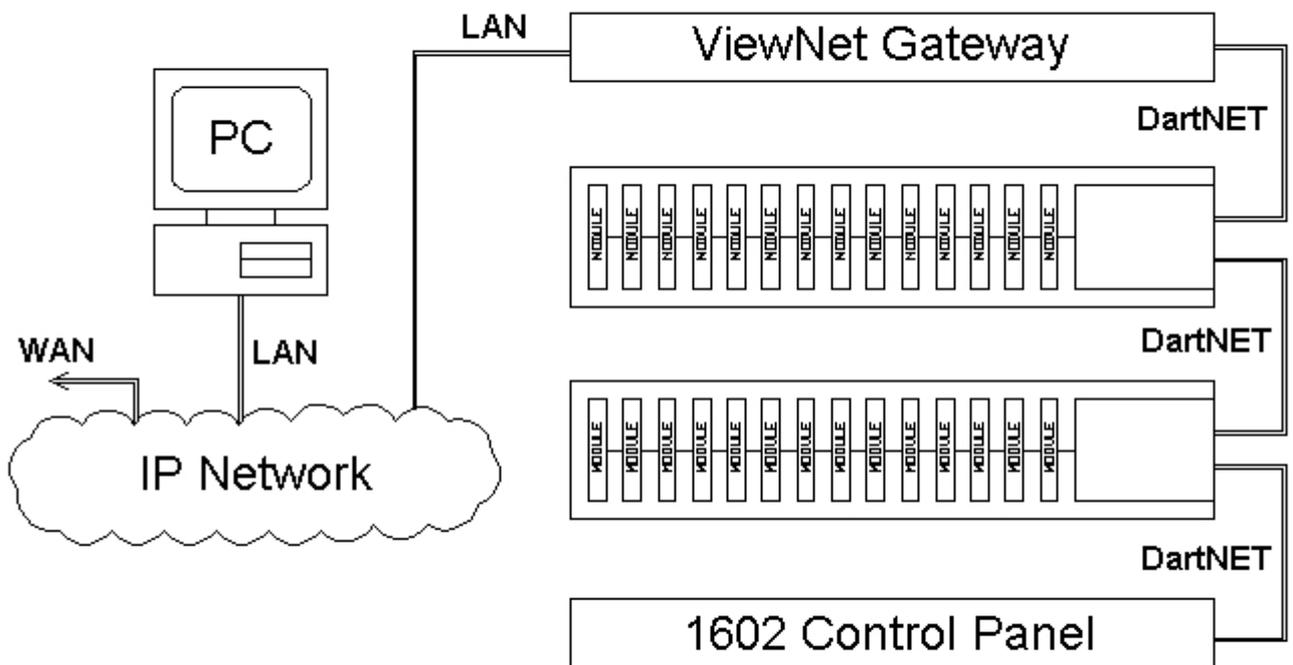
DARTnet is a specialised control protocol using standard RJ45 and UTP connection. It carries the control and status data between the ViewNet Gateway and the **rack controllers** within the equipment racks. The DARTnet network is looped from one equipment rack or frame to the next. Dependant on licensing, up to 62 racks or **nodes** may be connected to one ViewNet Gateway.

☞ Despite using the same connectors, the DARTnet system uses a significantly different electrical arrangement from the LAN connection. The two connections **must not be mixed up**.

2.5. Rack Controllers

Each equipment rack (or frame) contains a **rack controller** that provides the interface between DARTnet and the modules. The rack controller also provides status information about the rack itself such as power and fan condition.

Figure 2.2. A typical ViewNet arrangement (showing optional control panel)



☞ For further information see [Chapter 31, System Requirements](#)

Chapter 3. Vistek Module Nomenclature

Vistek Electronics Ltd describe every module with a unique identifier consisting of three elements.

3.1. Module Descriptions

Every module has a functional description, such as **Dual SDI Distribution Amplifier** or **Audio Multiplexer** . Standard terms are used throughout except special function modules such as **VALID** .

3.2. Module Idents

Every module is also given a unique four digit module number such as **1668** or **6151** . In general, number groups indicate particular function groups. Some modules may have additional letters indicating a particular operational version or option such as **1647F** .

3.3. FRS Numbers

The FRS number has a dual role, indicating both the **revision** status of the module and possibly the module **version** . An FRS number may be one, two or three digits, such as **3** , **11** or **200** .

 There may be a number of revisions or versions of a module resulting in **more than one FRS number for one type of module** .

3.4. ViewNet Identification

In terms of ViewNet, a network component (module, controller or node) is identified by a unique combination of its **ident** and **FRS number** .

Chapter 4. Starting up ViewNet on your Personal Computer

Access to the ViewNet system is via your web browser and links on a ViewNet Home Page generated by the ViewNet Gateway.

4.1. Accessing ViewNet on your computer

Your designated system administrator will have set up the ViewNet Gateway using the supplied instructions, and will have information to set up your computer to access the ViewNet Gateway. This may be done using a Vistek supplied CD or manually.

You will require the ViewNet Gateway's IP address to access the ViewNet Home Page.

- Type the ViewNet Gateway's IP address into your browser's address window
- Bookmark the page
- Create a shortcut to the page on your desktop

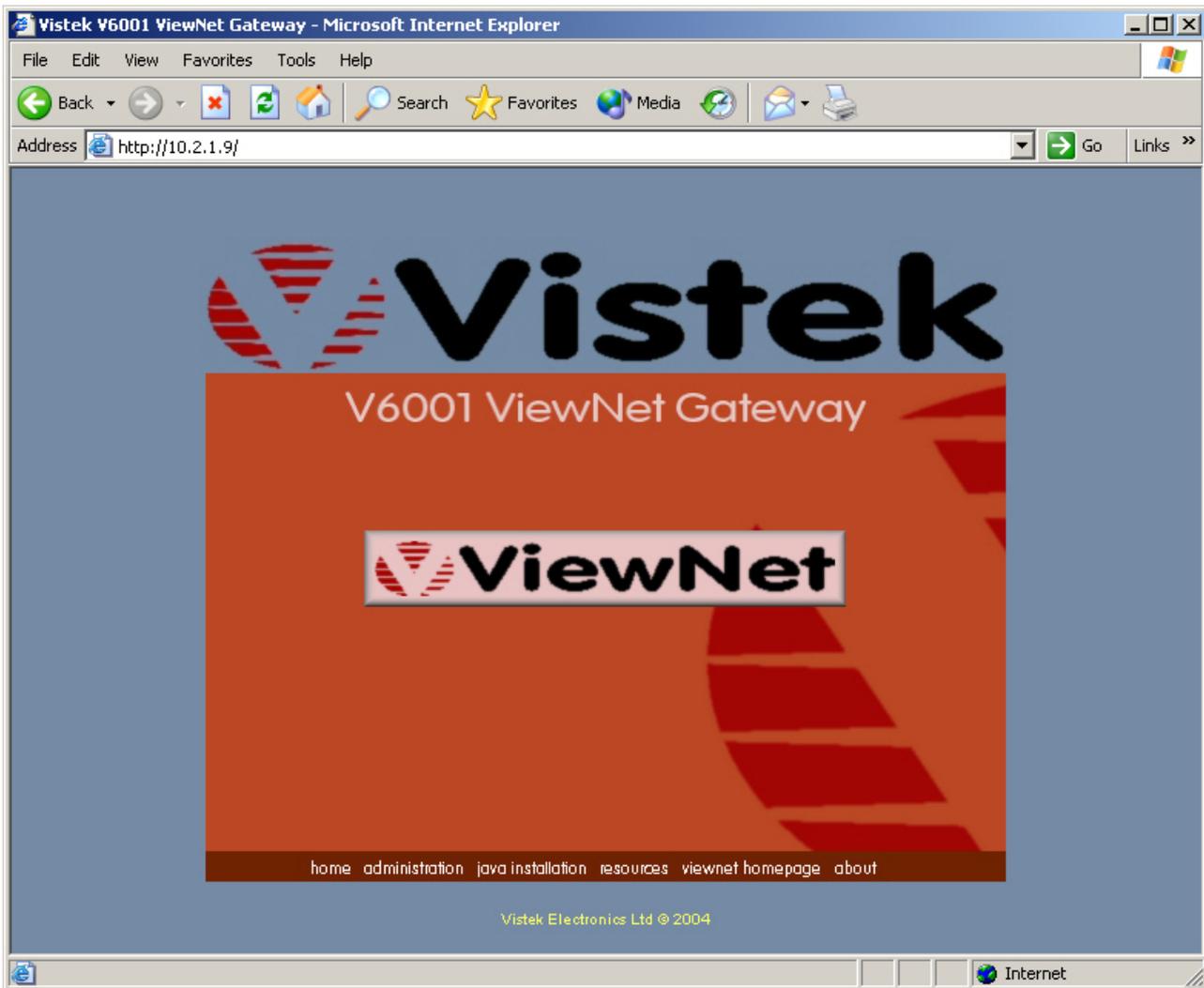


The Vistek supplied IP address may not be suitable for all networks. The system administrator may give the ViewNet Gateway a new IP address

4.2. The ViewNet Home Page

The home page gives you access, via links, to the ViewNet resources you require.

Figure 4.1. The ViewNet Home Page



4.2.1. ViewNet Button

Click on this button to access the **ViewNet Control System** and **ViewNet Module Builder**. If the Gateway does not have a license for the **ViewNet Operator Client Software**, this button will not function.



In a Windows environment it may be possible to create a shortcut to directly access the ViewNet Control System login.

4.2.2. Administration link

Click on this link for access to all ViewNet administrative services via the ViewNet Configuration page.

- User access
- Passwords
- Upgrades

-
- Image management
 - Logging
 - Server control

4.2.3. Java installation link

In order to use the **ViewNet Operator Client Software** a **Java Virtual Machine** is required on the user's computer. Click on this link to take to you the Java VM installation page. From there you will be able to install a Java VM direct from the ViewNet Gateway.

 It is recommended that you only use the supplied version of the Java VM to ensure compatibility.

4.2.4. Resources link

Click on this link to access additional software for use with the ViewNet Gateway, as well as additional documentation which may have been provided as part of any additional options that may have been installed.

4.2.5. ViewNet homepage link

Click on this link for direct access to the ViewNet product page. This site will provide access to the *ViewNet Community Forum*, support information, bug reporting, and additional product information.

4.2.6. Vistek logo

Click on this logo for a direct link to the **Vistek Electronics Ltd home page** . Module brochures and data-sheets are accessible from here. You may have to register online for more detailed information.

 Not all links are accessible without permission

TRY IT NOW

In your browser, select your ViewNet bookmark or type in the ViewNet Gateway's IP address to access the ViewNet Home Page. Try the links. You may not be able to access the Administration link unless you have permission.

Chapter 5. User Administration

Most ViewNet users will not need access to the Module Builder and other administrative services. They may also not need access to some ViewNet screens. This can be achieved by setting access groups via the **Administration** page. Every ViewNet user will be part of at least one group.

5.1. Group Membership

There are, by default, two groups of users who have access to ViewNet. Anyone with login permission may be a member of one or more groups.

5.1.1. Administrators group

Administrators can use the **ViewNet Control System** , they have access to the **ViewNet Module Builder** and may be able to access the **Server Administration** pages.

5.1.2. Users group

Users are only able to use the **ViewNet Control System** . They are not able to create or modify ViewNet screens or the Virtual Domain. They may not have access to all ViewNet screens.

 Access to screens is set via the **Virtual Domain Editor** using the **security** settings on individual screens when they are created or modified.

5.1.3. Additional groups

More groups may be set up in addition to or instead of the two default groups. See [Section 30.1.2, “Group creation”](#) for further details.

5.2. Webmin Modules

A selection of software modules known as **Webmin Modules** are available for routine administration purposes. Permission for users to access these modules is set via the **Access Control** pages of Server Administration.

No Webmin Module permissions are required to use the Module Builder. But permissions for **Profiles** and **Image Management** may be needed by some users.

5.3. Setting up Users and Administrators

Everyone who wants to login to ViewNet will need a valid **login** and **password** set via the **Server Administration** page.

There is a default login: **sysadmin** and password: **viewnet** . This gives access to all administrative services necessary to set up local users and administrators.

 Remember to change the default password as soon as possible.

- From the **ViewNet Home Page** , select **administration** , then **ViewNet Configuration**

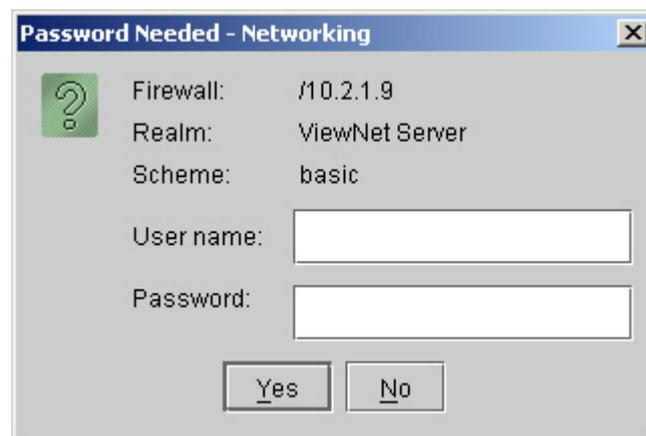
-
- Select **Access Control** , click **Add User**
 - Input **Name** , **Password** , **Group Membership**
 - Select **Webmin Permissions** only as necessary.
 - Select **Save User** and return to the ViewNet Home Page

☞ See [Chapter 30, Security Settings](#) for further configuration details

5.4. Logging In to ViewNet

- Click on the **ViewNet** button on the ViewNet Home Page. A login window appears.
- Or
- Double-click the **Control System shortcut** on your desktop (if available). A login window appears.
- Enter your **User name** and **Password** . Click **OK**

Figure 5.1. The ViewNet login window



☞ When logging in after a ViewNet Gateway upgrade or installation there may be a delay while the system updates and reconfigures. This will be indicated by the usual progress indicators. Once completed, all logins will be rapid as usual.

Chapter 6. ViewNet Terminology

In ViewNet, a number of terms are used to describe specific ViewNet elements or functions.

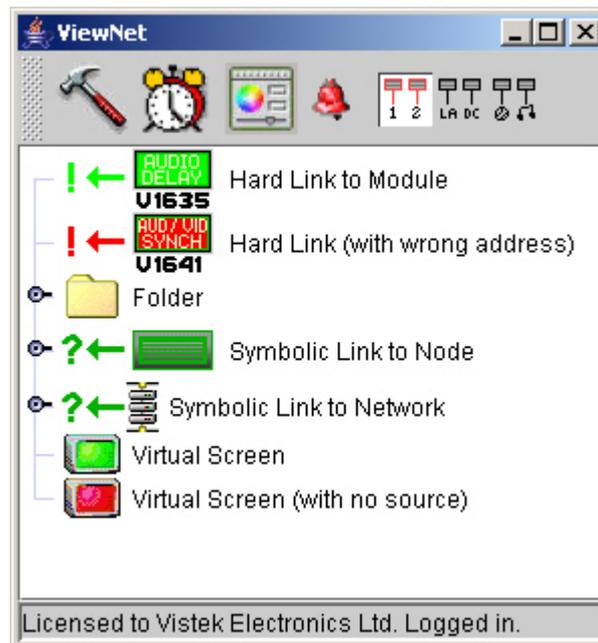
Address	
The location - used by ViewNet - of a hardware component is known as an address . In structure, the address is similar to a computer file location.	Section 9.1, “Physical Network Addresses”
Alarm	
Predetermined or user defined events that notify the user of a particular module or control status.	Chapter 25, Alarms
Alias	
A unique string substitute applied to controls and screens to enable control data or addresses to be passed or shared between ViewNet elements. A typical alias - %__ hardLink-2ce255 % .	Section 12.6, “Alias Panel”
All Controls	
The name given to the default set of controls that each module requires for full ViewNet operation. Every module will have a set of all controls for building purposes.	Section 12.3, “Physical Network Tree”
Control	
The name given to elements used on all ViewNet screens such as buttons, sliders, text boxes, status information etc. Some controls, like grouper controls may exist on the screen but be hidden from view.	Chapter 10, The ViewNet Screen Explained
Decoration	
The name given to special symbols used to indicate the operational status of ViewNet controls in screens.	Section 10.2.5, “Decoration icons”
Hard link	
An element in the Virtual Domain tree that directly relates to a component at a specific location. Usually a module.	Section 7.2.7, “Hard Link”
Page	
A ViewNet control screen may consist of one or more pages of controls accessible via named tabs.	Chapter 10, The ViewNet Screen Explained

Physical	
Implies that the environment - physical network tree , or control element - physical screen , is directly referred to a specific hardware location or module.	Figure 9.2, “A typical Physical Network Tree” Section 10.3, “ViewNet Physical Screens”
Physical Screen	
This is a set of pre-prepared pages of ViewNet controls that can be applied to a Virtual Domain hard link to control a single hardware module. A Physical Screen may consist of one or more pages.	Section 10.3, “ViewNet Physical Screens”
Symbolic link	
An element in the Virtual Domain that is used to point to locations in the Physical Network Tree. If recursive then children (sub folders or elements) of that location are accessible too.	Chapter 18, <i>Creating a Link to the Physical Network</i>
Tree	
The term used to describe the folder / file tree-type arrangements that are used to display screen , network and domain structures	Figure 9.2, “A typical Physical Network Tree”
Value	
Status information passed between control / ViewNet Gateway and module. Typically a numeric value 1, 2, 3 etc.	Section 12.4.11, “Values”
Virtual Domain	
A particular environment, in tree form, created by the user to their specific requirements.	Chapter 7, <i>The ViewNet Window</i>
Virtual Screen	
These are ViewNet screens of one or more pages, created by user, to their own design. They may have a mix of controls assigned to more than one module. A Virtual Screen is accessed via a link in the Virtual Domain.	Chapter 10, <i>The ViewNet Screen Explained</i>

Chapter 7. The ViewNet Window

Once logged in to ViewNet, this is the first window encountered. For a basic user it is the only window accessible and gives access to any control screens, folders or symbolic links featured in the **Virtual Domain** . For an administrator, dependant on licensing, access to the creative areas is allowed from here via the icons at the top of the screen.

Figure 7.1. A Virtual Domain showing types of icons



7.1. Toolbar Icons

The icon toolbar at the top of the window can be relocated as a separate window by dragging the left-hand drag bar. By right-clicking on the toolbar icons can be resized and can also have text titles. Greyed-out icons indicate that access is not allowed.

7.1.1. Module Builder



Clicking on the **hammer** icon starts the ViewNet **Module Builder** for the creation of virtual screens and the Virtual Domain.

7.1.2. Event Manager



Clicking on the **alarm clock** icon starts the ViewNet **Events Manager** for the management of **Alarms** and **Global Scripts** .

7.1.3. Stylesheet Editor



Clicking on the **stylesheet** icon starts the **Stylesheet Editor** for the setting of basic screen and controls styles.

7.1.4. Alarm Monitor



Clicking on the **bell** icon starts the **Alarm Monitor** for the visual and audible monitoring of ViewNet Alarm Events.

7.1.5. Network Component name options



Clicking on these icons displays **Physical** , **System** or **Content** names for any **Symbolic Link** component.

7.2. Virtual Domain Icons

Icons within the Virtual Domain tree come in a variety of types and colours:

7.2.1. Module



Large rectangular icons with module names and numbers. A descriptive title may also be attached. These icons represent actual individual hardware modules. Double-clicking opens up the ViewNet Physical Screen for that particular module. They can be one of three colours:

- **Green** - the module is present in the correct (expected) hardware location. The screen will open and operate if the module is online.
- **Red** - the module is **NOT in the correct (expected) hardware location** . It may have been **incorrectly addressed** . The screen will still open but will be offline and will not operate.
- **Orange** - the hard link representing this module has not yet been assigned an address which represents a module. The screen will not open.

7.2.2. Virtual screen



TV screen icons with an attached descriptive title. These icons represent Virtual Screens created by the administrative user. Double-clicking opens the Virtual Screen. Can be one of two colours:

- **Green** - The entry in the Virtual Domain has a valid Virtual Screen attached. The screen will open.
- **Red** - the entry in the Virtual Domain has **no screen attached** . The screen will not open.

7.2.3. Folder



Typical folder icon. Any type of Virtual Domain element may be stored within this folder.

Click the handle to open and reveal contents. May have a descriptive title attached.

7.2.4. Node



Small rectangular icon representing a **hardware node** - the **module frame or rack** . Double-clicking will open up the **rack controller screen** for that particular rack if it is a **hard link** .

- **Green** - the rack is present in the correct (expected) hardware location. The screen will open and operate if the controller is online.
- **Red** - the rack is **NOT in the correct (expected) hardware location** . It may have been **incorrectly addressed** . The controller screen will still open but will be offline and will not operate.
- **Orange** - the hard link representing this node / rack has not yet been assigned an address which represents a node. No screen will open.



If this element has been created as a **recursive symbolic link** it will open like a folder to reveal its contents.

7.2.5. Network



Stacked Nodes icon representing the **whole physical network** connected to this ViewNet Gateway. Normally applied to the Virtual Domain as a **recursive symbolic link** to reveal all nodes and modules within.

7.2.6. Handle



Small circle with arm icon - indicates that the attached element may be opened up to reveal further contents. Such as nodes or screens. Click once to open or close.



Tooltips - all major icons in the Virtual Domain can have tooltips applied via the Virtual Domain Editor to help identification or function.

7.2.7. Hard Link



Exclamation mark icon joining Virtual Domain components - indicates direct relationship to hardware at a specific location.

7.2.8. Symbolic Link



Question mark icon joining Virtual Domain components - indicates the access point to a part of the Physical Network.

Chapter 8. Quick Access to ViewNet Physical Screens

ViewNet Physical Screens ([Section 10.3, “ViewNet Physical Screens”](#)) are accessible via a link in the Virtual Domain. They are directly related to the Vistek modules that are installed.

- **Log in** to ViewNet. The main ViewNet window will open showing the Virtual Domain ([Figure 7.1, “A Virtual Domain showing types of icons”](#))
- Locate the Network icon - 
- **Click** on the handle -  - beside the Network icon to reveal the nodes -  - (racks / frames) on that network.
- **Click** on the handle beside the node icon that contains the modules you wish to access. All modules within that node are then revealed (including empty slots).
- **Double-click** on the required module icon -  (typical icon shown). The standard ViewNet Physical Screen for that module will be launched.

 There may be more than one Network icon in the Virtual Domain. Select the required network.

Greyed-out nodes or modules are **offline** . They may still be opened and screens launched, but the screens will not operate.

You may have more than one ViewNet Screen open at the same time.

Chapter 9. The Physical Network

All the hardware beyond the ViewNet Gateway is known as the **Physical Network**. Networks, nodes and modules are represented in a tree structure with icons and descriptions. The icons used are as described in [Section 7.2, “Virtual Domain Icons”](#) .

9.1. Physical Network Addresses

Every hardware module has an address that is used by ViewNet for assigning control screens and controls to those modules.

The address consists of the **Physical** Network location, **Node** (rack) location and **Module** position. This is enough to point to a specific module anywhere within access of the ViewNet control system.

//Physical00/Node02/Module03

In order to address a specific control the name of the control is added at the end.

//Physical00/Node02/Module03/videoStandardColour

 In some special cases an **alias** may replace the Physical/Node/Module part of the string

9.2. Physical Network access

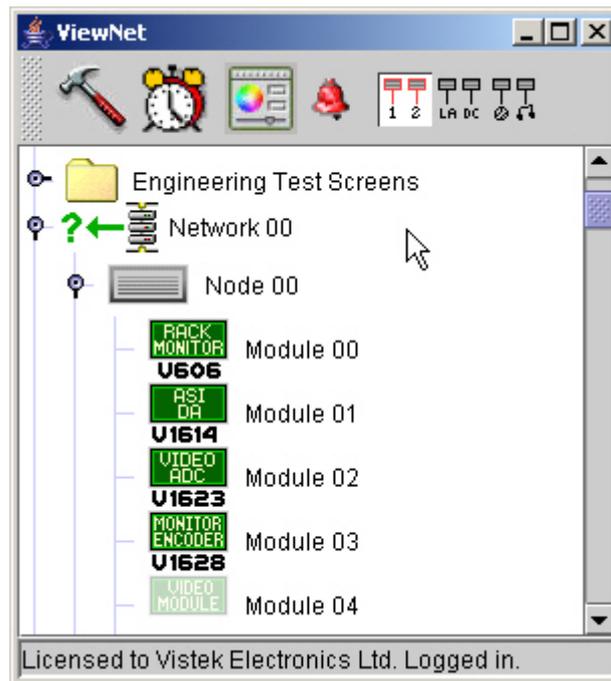
The Physical Network is accessible via two routes:

9.2.1. via the Virtual Domain

There will be a Network icon in the Virtual Domain tree. Clicking the handle beside the icon will open the network to show all possible nodes. Having access to the network here gives **direct access** to all available **hardware and physical screens** .

Double-clicking a dark green module icon will open the physical screen for that module.

Figure 9.1. A typical Virtual Domain Physical Tree



TRY IT NOW

Having logged in to ViewNet, click on the handle beside the **network** icon to open up the tree. Then click on the handle beside a **node** icon to display the module icons. Choose a dark green **module** icon and double-click it. Close the screen when happy.

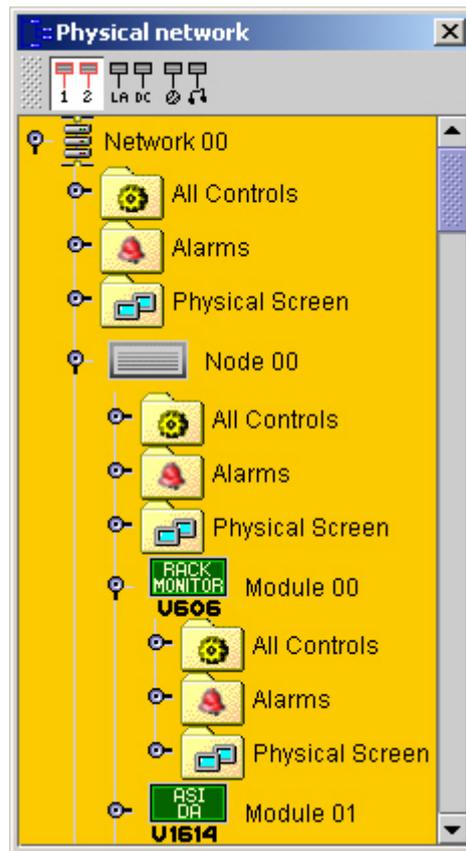
 If hardware has been installed and connected then icons representing those modules will be present. If they are greyed-out they are offline - switched off or not currently connected.

9.2.2. Via the Module Builder Physical Tree

Having access to the physical network in the Module Builder means that all elements - networks, nodes, screens, alarms and controls are available for **copying to Virtual Screens** and that they are **correctly addressed** .

Click on the **display physical network tree** icon in the ViewNet Module Builder window.

Figure 9.2. A typical Physical Network Tree



☞ Module Builder access is only possible with administrative permission and relevant licensing.

9.3. Greyed-out icons

Any greyed-out icon implies that the node or module is **offline** - switched off or not present.

9.4. Opening screens from a physical tree

Physical Screens can only be opened from the Virtual Domain.

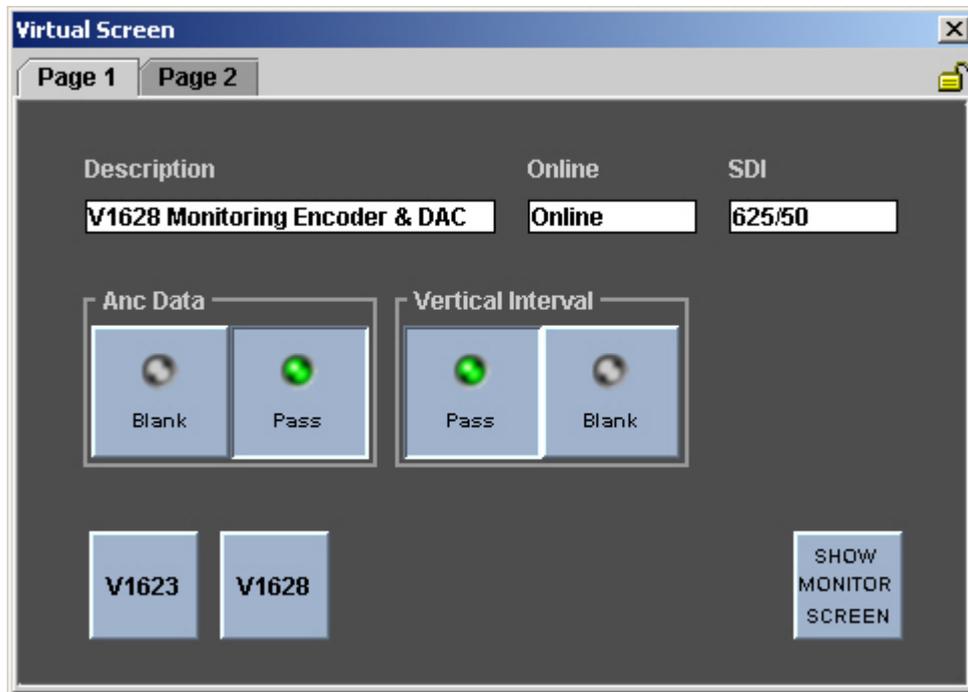
Having opened the tree to reveal the required module, **double-click the module icon** .

☞ Even offline, screens will open when double-clicked - but of course they will not operate.

Chapter 10. The ViewNet Screen Explained

Physical and Virtual ViewNet Screens operate in a very similar manner and use the same basic set of controls. These controls may have been modified in appearance and operation to suit each requirement.

Figure 10.1. A typical Virtual Screen



☞ Virtual screens may be created as close copies of Physical Screens or may vary significantly.

10.1. Opening and Closing ViewNet screens

- **Opening** - double click on the required **module** or **virtual screen** icon in the ViewNet window.
- Or
- **Opening** - In the ViewNet window, open up the physical network tree and node. Double-click on the required component icon
- **Closing** - click the **close icon** in the top right-hand corner of the screen window.

TRY IT NOW

Having logged in to ViewNet, locate the **virtual screen** icon called '**example**' in the ViewNet window. Double-click this icon to open the example screen. This screen may need to be loaded onto your system - check with your system administrator.

10.2. All ViewNet Screens

10.2.1. Name or Address bar

This appears by default and is located at the top of the screen:

- on Virtual Screens - shows the name of the screen
- on Physical Screens - shows the hardware address of the module

10.2.2. Page Tabs

Indicate the content of those pages. Click the tab to access the page. There may be only one page.

10.2.3. Padlock icon

Located in the top right-hand corner of the client area. Used to locally lock or unlock the whole screen. Click to operate. Screens may be set to open in locked mode.

10.2.4. Closing the Screen window

The means of closing the current ViewNet Screen window is dependent on the user's operating system. There will usually be a close icon or a menu option available.

10.2.5. Decoration icons

ViewNet screens have a feature to show the status of individual controls called **decoration** . These are small icons that appear at the top right-hand corner of the control when the status is other than normal.

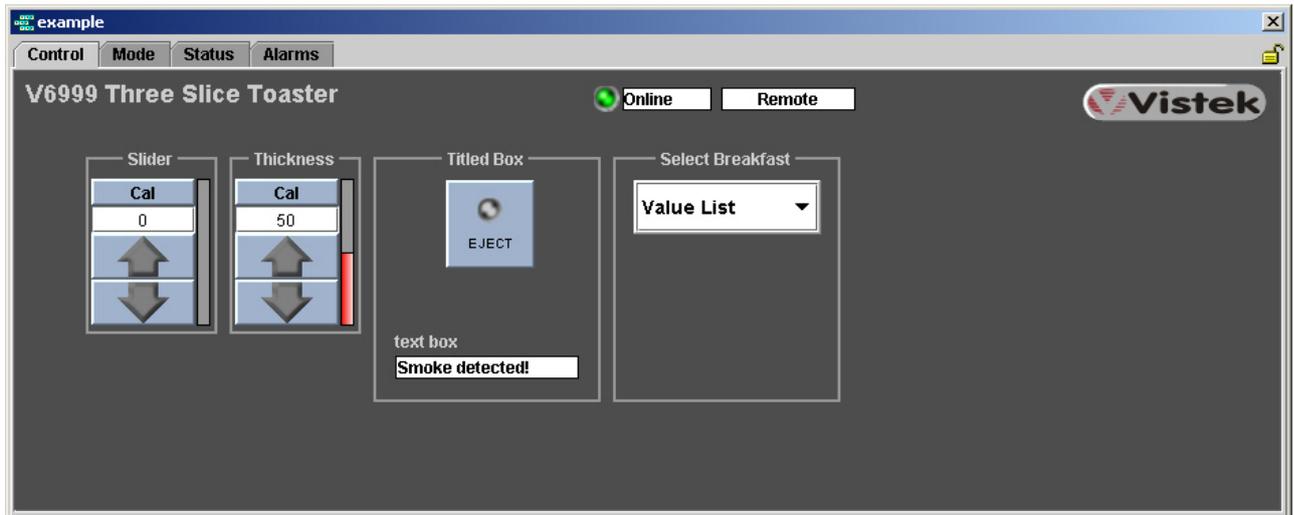
- **Disconnected red plug** -  - the control (module) is offline.
- **Red button with cross** -  - the control is unavailable.
- **Hand** -  - no remote control available.
- **Exclamation Mark** -  - the control has been incorrectly addressed or does not exist on that particular module.

 There is an option to hide decoration in the Display Option properties of every ViewNet control while using the Module Builder

10.3. ViewNet Physical Screens

There is an individual Physical Screen for most Vistek Controllers and Modules. Physical Screens are laid out to a standard format. They cannot be edited in the Module Builder. Wherever possible, between modules, similar controls will appear in similar positions.

Figure 10.2. ViewNet example Control page



10.3.1. Screen sizes

Physical Screens are one of three standard sizes:

- Small - 940 x 200 pixels
- Medium - 940 x 380 pixels
- Large - 940 x 520 pixels

10.3.2. Top Line Information

On Physical Screens every page has the same information in the top line, where applicable:

- **Description** - the module name and reference number
- **FRS** number (status page only)
- **Online / Offline** indicator
- **Remote / Local** indicator
- **Vistek logo** - an active link to specific Vistek information

10.3.3. Process Flow

Wherever possible, controls are laid out on pages to indicate a process flow of left to right.

10.3.4. Control Page(s)

Physical Screens may have one or more **control** pages. These pages contain the most common operational controls and indicators needed for regular use.

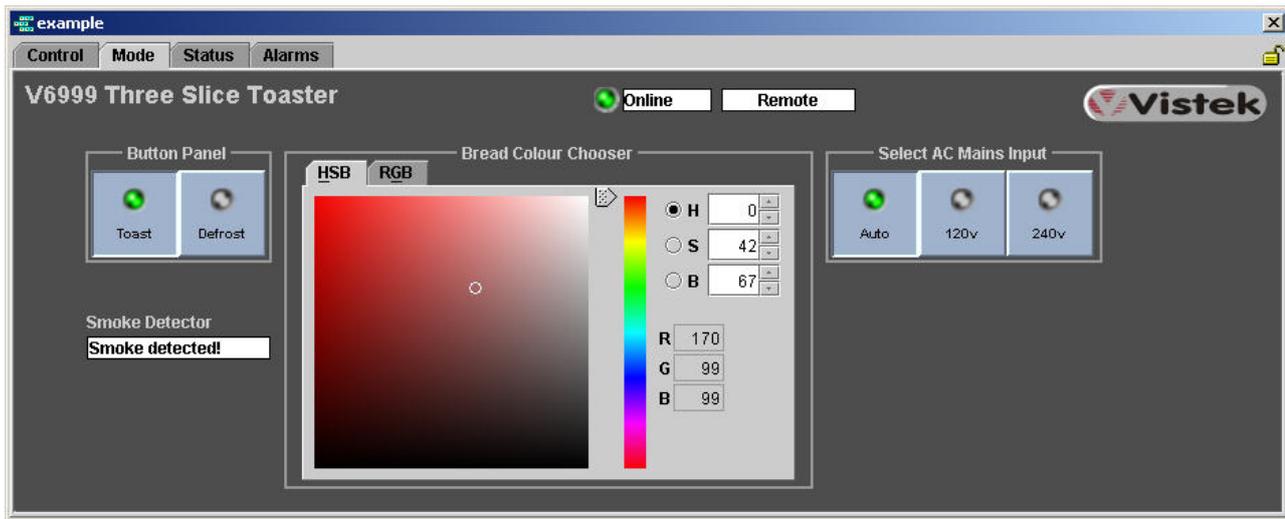
This type of page will be the **left-most tab** and **will appear on top of other pages when the screen is opened** .

☞ Some screens may not have any control pages

10.3.5. Mode Page(s)

Controls and indicators that usually do not need regular setting or adjustment are placed on the mode page.

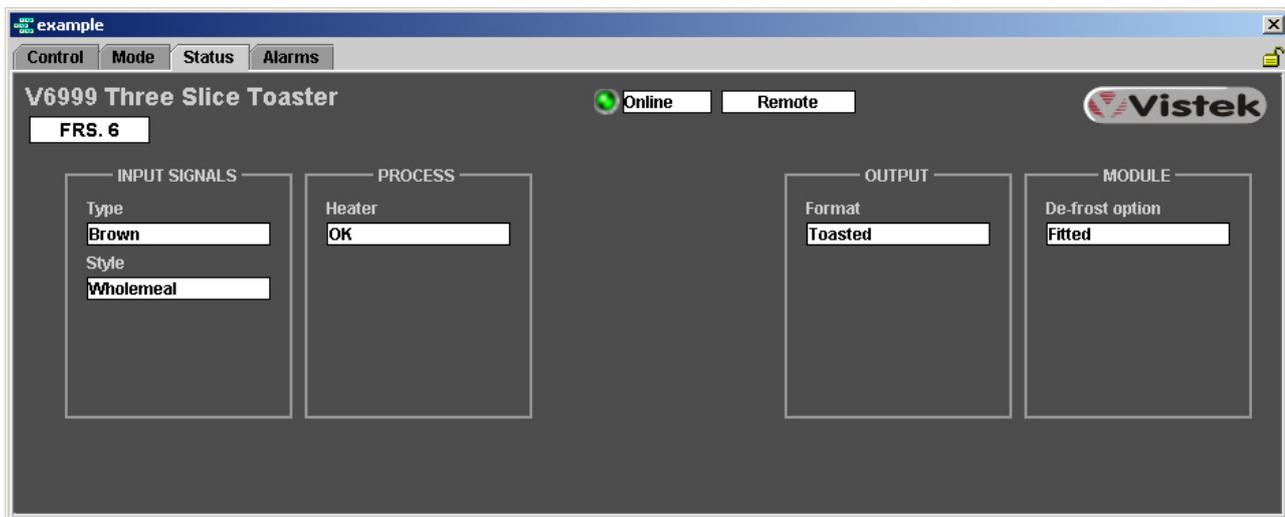
Figure 10.3. ViewNet example Mode page



10.3.6. Status Page

All Physical Screens will have a status page. This page contains all information controls available and may also have information text boxes derived from other screen controls.

Figure 10.4. ViewNet example Status page



☞ All Physical Screens will have a Status Page

10.3.7. Alarms page

All ViewNet Physical Screens have an Alarms page that shows all **Available Alarms** for that module and an **Alarm Log** listing all recent alarm events. See [Chapter 25, Alarms](#)

Figure 10.5. ViewNet Physical Screen Alarms Page - (alarm triggered)

The screenshot shows a web interface for a physical screen. The title bar reads '//Physical00/Node01/Module11/'. Below the title bar are tabs for 'Control', 'Mode', 'Status', and 'Alarms'. The 'Alarms' tab is active, displaying two sections: 'Available Alarms' and 'Alarm Log'.

Available Alarms

Alarm	Address	Descript...	Latched	Priority	Log	Notify	Default
audioref	//Events//Physical00/Node01/Module11/audioref		<input type="checkbox"/>	low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
trackingoff	//Events//Physical00/Node01/Module11/trackingoff		<input checked="" type="checkbox"/>	low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Alarm Log

Type	When	Alarm	Address	Latched	Priority	Description
	23 Jun 2004 13:53:44	trackingoff	//Physical00/Node01/Module11/	<input checked="" type="checkbox"/>	low	Tracking is disabled
	23 Jun 2004 13:53:44	trackingoff	//Physical00/Node01/Module11/	<input checked="" type="checkbox"/>	low	Tracking is disabled
	23 Jun 2004 13:53:38	trackingoff	//Physical00/Node01/Module11/	<input checked="" type="checkbox"/>	low	Tracking is disabled
	10 May 2004 12:32:27	audioref	//Physical00/Node01/Module11/	<input type="checkbox"/>	low	Goes off when no audio ref

Chapter 11. Using Screen Controls

ViewNet screen controls are designed to be operated and accessed by mouse and pointer, mouse wheel, keyboard and touch-screen.

Identical screen controls may be duplicated on different pages or screens. A duplicated control will follow the action (and display) of the control currently being operated.

11.1. Buttons

Button controls come in two types, but they have a number of similar attributes; they may have an LED to help indicate status. Buttons may have a latched or momentary action. Button tops are usually labelled to indicate function.

11.1.1. Single Button

The single button is generally used for ON / OFF type functions. Click on the button to operate.

 LED colours and images can be modified in the Module Builder.

11.1.2. Button Panel

The button panel is a set of at least two buttons generally passing a different value to the module for each button. Click on the buttons to operate.

11.2. Slider Panel

The slider panel is a variable control that passes a range of values to the module. Normal operation is by clicking and dragging the slider knob, clicking the up / down buttons or by operating the mouse wheel. The colour of the arrow image changes to show that the button is being operated.

Figure 11.1. A ViewNet Slider Panel



11.2.1. Slider knob

Click and drag the slider knob to set the required value.

 There is a Module Builder option to make the slider knob **invisible** . This is used in ViewNet physical screens to make the control more compact.

11.2.2. UP / DOWN buttons

Click and hold the UP / DOWN buttons to set the required value. Single clicking allows fine adjustment.

 The rate of change will accelerate as the button is held down.

11.2.3. Text box

This displays the value set by the slider controls.

You may also **type values directly into the box** . Just click in the box, delete the current value and type in a new value.

11.2.4. Top button

Click the Top button to set the slider to a predetermined value.

 This button is normally called CAL for calibrate, but it may be renamed in the Module Builder.

11.2.5. Bargraph display

This is the vertical coloured line that tracks the value of the slider control. It is especially useful when the slider knob is not present to give an indication relative value.

11.2.6. Mouse wheel operation

Point, no need to click, to any part of the slider control and operate the mouse wheel. The value will increase or decrease accordingly.

11.3. Colour Chooser

Enables a specific colour to be set or selected from an infinitely variable palette.

Figure 11.2. Colour Chooser HSB page

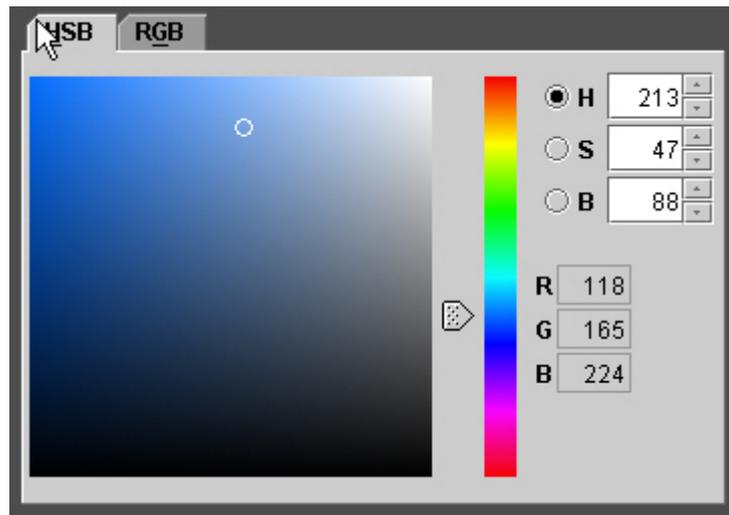
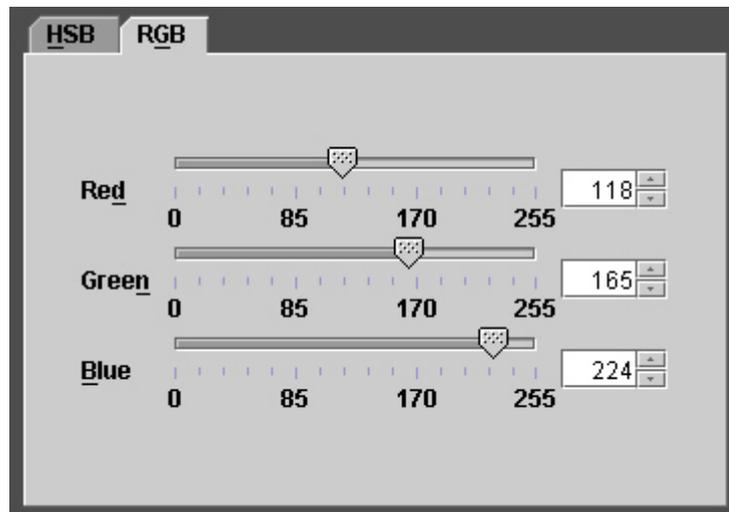


Figure 11.3. Colour Chooser RGB page



11.3.1. Selecting a colour by eye

Click the **HSB** (Hue, Saturation, Brightness) page tab and then click in the colour palette screen. A **small circle** will appear, this can be dragged to any colour position. Use the **vertical slider** to adjust the **hue** of the palette. The HSB values are displayed in the HSB boxes.

11.3.2. Typing HSB values

On the HSB page, HSB values can be directly typed into the HSB value boxes. Just click, delete and type.

11.3.3. RGB sliders

Click the RGB page tab. RGB (Red, Green, Blue) values can be set by clicking and dragging the three sliders. The RGB values are displayed in the RGB boxes.

11.3.4. Typing RGB values

RGB values can be directly typed into the RGB value boxes. Just click, delete and type.

 You cannot see the selected colour on the RGB page. But the HSB page will follow the RGB settings.

11.4. Value Lists

Value lists are like typical GUI **drop-down** lists. They are often used instead of button panels where there are many values or selections. Click on the down arrow to reveal the list of values. If the list is very long you may need to **scroll** down by clicking or using the mouse wheel.

11.5. Information Text Boxes

These are **read only** controls that report back a value or text from the module. Typically used to report back a signal status or option.

Information boxes may be **derived from other controls** - sliders or buttons - to display the selected value. Often found on status pages.

11.6. LED Tallies

These are **read only** controls that can be used to indicate one of two states. Typically used to indicate Bypass or Test Signal ON. They are likely to be derived from other controls.

11.7. Hyperlink controls

It is possible to make some controls act as **hyperlinks** . Clicking this control can open a browser window or launch a screen pointed to by the link address .

For example; a titled box with a background image can be used as a link to a web page, or a button is used to launch another screen.

11.8. Tooltips

All ViewNet controls have the facility for a tooltip. Point to the control and a tooltip will appear for a period of time. The tooltip window gives various information.

- **Control description** or address
- **Operational information**
- **Control status** - not available, offline etc.

Figure 11.4. A typical ViewNet Tooltip



TRY IT NOW

Experiment with the example screen. Try using all possible methods of operating the various controls. See the effect of 'closing' the padlock.

Feel free to click away - this is a virtual screen that is designed not affect any other equipment.

11.9. Greyed-out controls

Any ViewNet control that is **greyed-out** is either:

- **Not available** - determined by qualification
- **In local mode** - set by a front-panel switch on the module
- Or
- **Offline** - the module is not present or powered

11.10. Remote Operation

ViewNet screens operate with the hardware module in remote mode. Most modules have a **front panel local mode** switch. If the module is switched to local mode, by default the screen controls are disabled - they will be greyed-out and will not operate. It will still be possible to change screen pages and all controls will follow the local settings.

 When a module is switched back to remote mode, the module will adopt the values last set over the control system.

11.11. Display Options

Availability and Grouping are both means of dynamically hiding or disabling controls or pages when not required. Typically dependant on signal format or module options, controls or pages may disappear or change in appearance or function.

Chapter 12. The ViewNet Module Builder

The Module Builder is accessed by clicking on the **hammer icon** in the main ViewNet window. If this icon is greyed-out you do not have permission or you do not have the appropriate licence. Having clicked on this icon a number of Builder windows will be opened.

 All the following screens can be repositioned and resized for convenience. The system will remember the last position when shut down. They will open in that last position next time.

During System Building, a number of Builder windows and screens will be open simultaneously. A dual-monitor arrangement may be advantageous. See [Chapter 31, System Requirements](#)

12.1. ViewNet Module Builder

This window gives access to all other Builder windows and panels as required. Screens can be created and saved. The Module Builder is shut down from here.

Figure 12.1. The Module Builder window



12.1.1. Menu items

Many options are available from the menu drop-down lists

- **File** - **New** , **Close** and **Save** screens. **Exit** Builder
- **View** - **opens** selected Builder window. **Auto Arranges** windows to default positions
- **Window** - brings the selected screen to the front
- **Help** - (under development)

12.1.2. Icons

Icons can be clicked for various options. From left to right:

- **Create new Virtual Screen**
- Display **Physical Network Tree**
- Display **Properties Panel**
- Display **Screen Structure**
- Display **Alias Panel**

-
- Display **Controls Palette**
 - Display **Layout Tools Panel**
 - Display **Virtual Domain Editor**
 - Bring all **Builder windows to the front**

 Clicking twice on an already-open window or panel will bring that panel to the front - useful for finding a lost window!

TRY IT NOW

Having started up the Module Builder, click on the various icons in the Module Builder window and menu lists to test their function. Experiment with different window positions and sizes to suit the layout of your desktop.

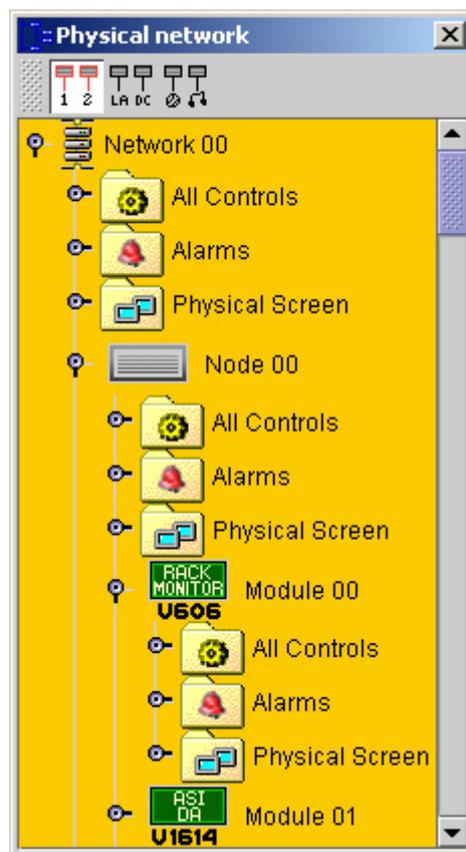
12.2. New Virtual Screen

A new, empty (no pages) Virtual Screen is created. See [Chapter 15, *Creating Virtual Screens*](#) .

12.3. Physical Network Tree

A window displaying the tree representation of the hardware network - networks, nodes (racks) and modules.

Figure 12.2. A typical Physical Network Tree



From here, **physical screens, controls and alarms** can be copied by dragging on to Virtual Screens. Any screen, page or control **dragged** from here will have a physical address.

Two types of the same control are available from here:

- **All Controls** - This is the full set of un-styled controls that are available for the current module.
- **Physical Screen Controls** - Opening the Physical Screen folder reveals folders representing the screen pages. Opening the page folder will reveal a list of controls used on that page. Controls listed here will be styled to suit the layout and operation of the module's Physical Screen.

☞ The same control may be used on more than one page, and may have different styling or operation to suit.

12.3.1. Network Component names

All Physical Network components have a default **Physical** name indicating their type and location. They may also be given **System** and **Content** names. These alternative names would be useful for identifying the component's function and use.

☞ There is no functional difference between System and Content names.

12.3.1.1. Component Name Display Options

The three icons at the top of the window select which component name to display:

- **Physical** names -  - the system default
- **System** names - 
- **Content** names - 

 Alternatively, **right-clicking** on the Physical Network Screen will open a name selector panel.

These name options also appear in the ViewNet window and in the Virtual Domain Editor window.

12.3.1.2. Modifying Physical Component names

Physical names can not be modified, but System and Content names may be:

- Click on the System or Content name icon as required
- **Double-click** the name beside the component icon
- The name can now be added or modified

12.3.1.3. Using Physical Component names as controls

Both System and Content names appear as **text box controls** in the All Controls list for all network components.

- From the All Controls list **drag** the systemname or contentname icon directly to a virtual screen to use as a label.
- Or
- From the All Controls list **drag** the icon to the relevant **label address** box in the control properties window.

12.4. Properties Panel

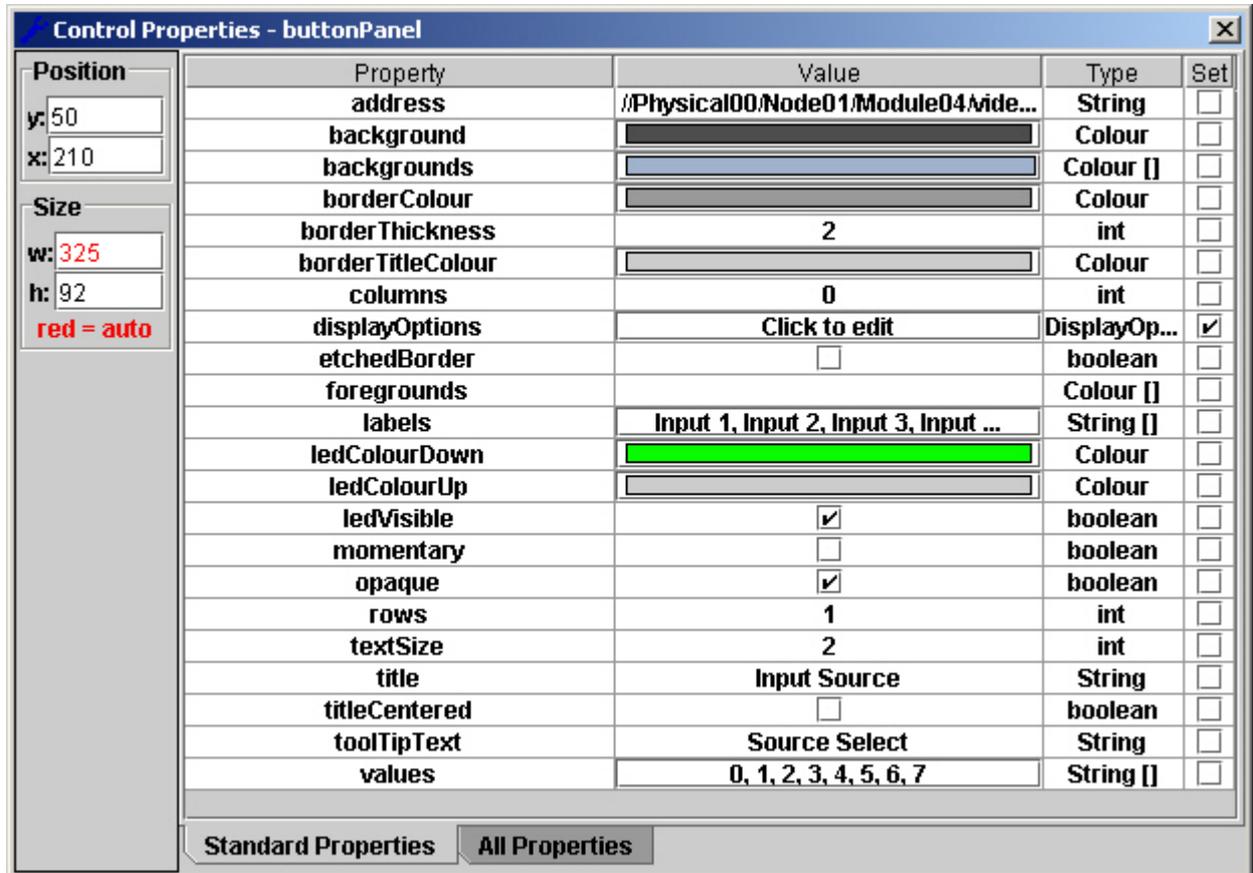
Every **screen** , **page** and **control** has a set of properties controlling how the element looks and behaves. The properties panel always displays the properties of the **currently selected item** .

There are two pages of properties, click on the tab at the bottom to access:

- **Standard Properties** - only shows the common, most useful properties for that type of control or page. Most likely to be used during screen building.
- **All Properties** - shows every property possessed by that element.

If a **multiple selection** of controls has been made the properties panel **only displays those properties common to all controls selected** . This function is very useful for modifying a property such as Display Options.

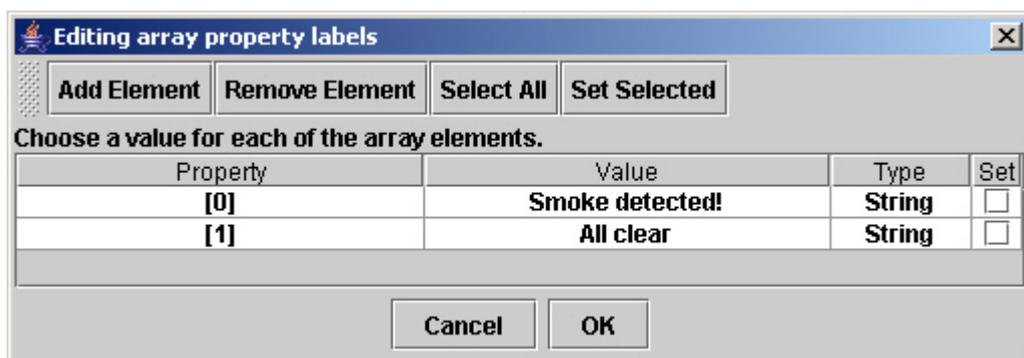
Figure 12.3. A typical Properties Panel



☞ The properties list is in alphabetical order not in groups. Properties listed will vary between types of element.

- **Data entry** is direct typing or pasting. Click on the **property value** to access.
- **Value array** - when clicked, an **editing array property values** window will open for some properties.

Figure 12.4. A typical Editing Array window



-
- **Check-boxes** - Click to select.
 - **Colours** - may open a **colour chooser** directly or via an **array editor** for colours derived from **values** .

If a property has been **modified** the **set** check-box will be ticked. To revert to the **default** setting or value **click the set box** to clear it.

This is a selection of some of the more common properties:

12.4.1. Position

Indicates and sets the position of the **top left-hand corner** of the screen window in your display, or the control in the screen page. Values in pixels.

12.4.2. Size

Indicates and sets the size of the screen or control. If **not modified** will show, in **red** , the automatically determined size. Values in pixels.

12.4.3. Address

Indicates and sets the **control address** to which this element has been assigned. **Type** , **paste** or **drag** addresses in here. The address will determine the values displayed or passed by the screen control.

In some cases this value may contain an **alias** or the address of another control used to control the display as in **grouping** or **launching** .

12.4.4. Border

Sets the appearance or not, of the border surrounding a control.

- A typical **thickness** value is 2 (pixels).
- Setting the thickness to **0** will turn the **border off** .

 Removing a border will modify the size of the control within that border.

12.4.5. Display Options

Clicking **click to edit** in display options will open the **display options window** . Here one can set how a control or page behaves - **do nothing** , **disable** or **hide** , under certain conditions.

- When **not available** - the control or sub-module is not available for use in this mode
- When **remote control disabled** - the module is switched to local control
- When **offline** - the module has been removed or the rack is switched off

This window is also used to include the control or page in a **grouping** group. Click **add** then type in the **group name** . See [Chapter 23, Grouping](#) for further details.

12.4.6. Labels

String (text) values placed on **buttons, button panels, sliders , text boxes** and **LEDs** to indicate a specific function, status or value. Labels are selected by **values** sent to the ViewNet control

- **Text size** can be set. Size **2** or **3** is typical
- For a **single label** the text is typed directly into the property value box
- For **multiple labels** the text is entered via an **editing array** window as the labels will be related to a **selection of values** via the **label value** property. The number of labels will match the number of values. There may only be one value.

 Too much text on a button label will push a button LED out of position. Keep button labels short!

12.4.7. LED Visible

A **check box** to **remove** or **show** (default) an LED on a button or button panel.

Button LEDs are useful help indicate which button has been pushed but may be unnecessary in some circumstances.

 LED position may alter depending on the label length.

12.4.8. Slider Visible

A check-box to **remove** or **show** (default) the slider part of the slider panel control

12.4.9. Title

Descriptive text is placed just above the control in the control border.

- Text **size** can be set. Size **2** or **3** is typical
- Title may be **centred** via a check-box. The **default** is **left justified** .

 Removing a title will modify the size of the border - if present.

12.4.10. Tooltip Text

Type text directly into the box to add or modify the tooltip. All controls in the **all controls** list will have a default tooltip.

12.4.11. Values

A **value** is the **data** passed, via the ViewNet Gateway, from the control **to** the module or **from** the module to the control. Values are mapped directly to other control properties affecting labelling and function.

- **Values** is a list of discrete values presented as an **array** . Use the **editing array** window to modify or create an array of values
- **Down / Up** values and states dictate what value is sent when a button is **pressed** or **released**
- Value **formulae** convert values to text or numerals for display on the control

Controls from the **all controls** list will have a set or range of **values already determined** .

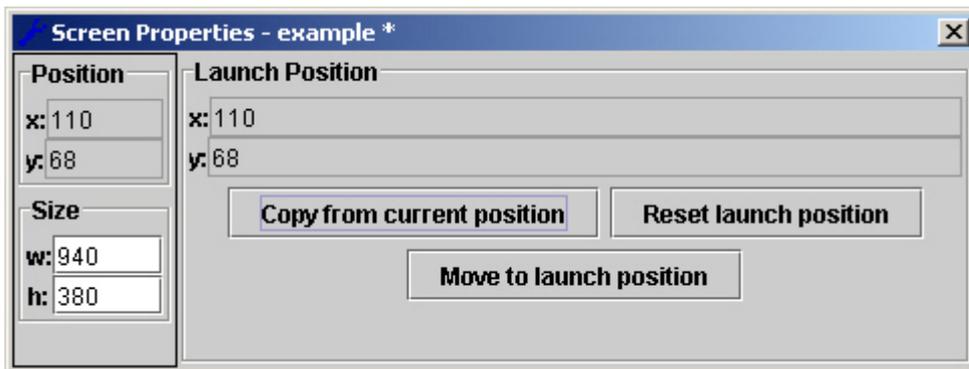
☞ Modifying values may result in incorrect operation

12.4.12. Launch Position

Only available by clicking the **client area** of the ViewNet screen. Sets the position at which the ViewNet screen will open. Very useful when building multiple screens that you want to come up in different places.

- **Reset launch position** - resets the position to default.
- **Copy from current position** - Move screen to desired launch position and click this option
- **Move to launch position** - enables you to test the set launch position.

Figure 12.5. Screen Properties - Launch Position

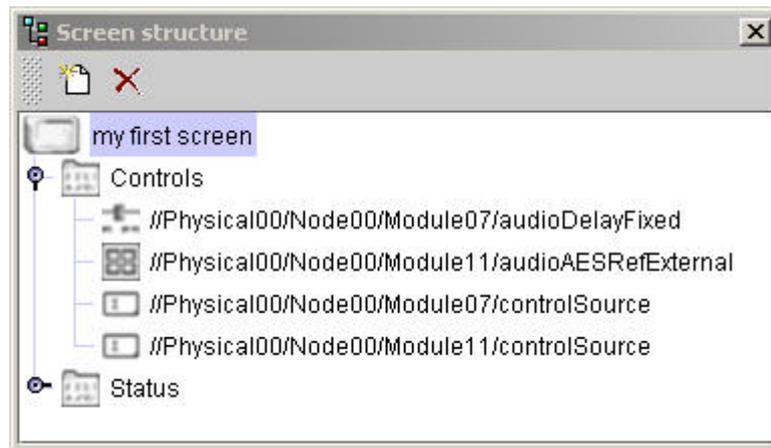


12.5. Screen Structure

This window displays the structure and contents of the currently open screen in tree form. Names and addressing information is displayed for each element.

The tree may be expanded or collapsed in the usual manner. This window is very useful for selecting, copying and modifying screen elements.

Figure 12.6. A typical Screen Structure window



☞ Selecting a control from here rather than clicking on the actual ViewNet page removes the risk of accidentally moving the control on the screen

12.5.1. Top icons

- **new page icon** - Add Page to Screen - creates an additional ViewNet page with a default title, for that screen. The same function as right-clicking on the ViewNet screen client area and selecting append page.
- **cross icon** - Remove Selected Component - deletes the **currently selected** item - page or control. The same function as using the keyboard **delete** key

12.5.2. Copying and Pasting elements

- To copy a **whole page** - select the page icon and use keyboard **ctrl-c** to copy
- To copy a **control** - select and keyboard **ctrl-c** to copy
- To copy a **selection of pages or controls** - use **ctrl+click** or **shift+click** to select and then **ctrl-c** to copy
- To **paste the selection** onto a page - select the destination page by clicking on the page or the page icon in the tree. Then **right-click on the page** or **ctrl-v** .

☞ Pasted controls will appear in **exactly the same position** as they were on the original page.

12.5.3. Element Names and Addressing

Text is displayed beside each element in the tree. For **screens** and **pages** this is their **title** . For **controls** it will be **direct, alias** or **link addressing** details.

- Any text may be modified by **triple-clicking** directly on the text
- Type in new details - the screen or page properties will be updated

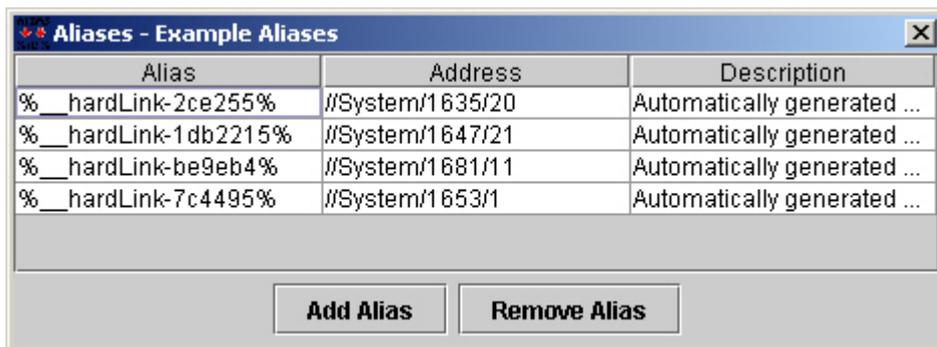
-
- **Save** the screen.

12.6. Alias Panel

An **alias** is a unique identifier that is used to pass control **values** or other **parameters** between controls and screens. The ViewNet system monitors all aliases that are in use and applies their data to controls and screens as they are implemented by virtual screens, **launch parameters** etc.

The alias panel lists all aliases related to the active screen or page.

Figure 12.7. A typical Screen Alias Panel



Alias	Address	Description
%_hardLink-2ce255%	//System/1635/20	Automatically generated ...
%_hardLink-1db2215%	//System/1647/21	Automatically generated ...
%_hardLink-be9eb4%	//System/1681/11	Automatically generated ...
%_hardLink-7c4495%	//System/1653/1	Automatically generated ...

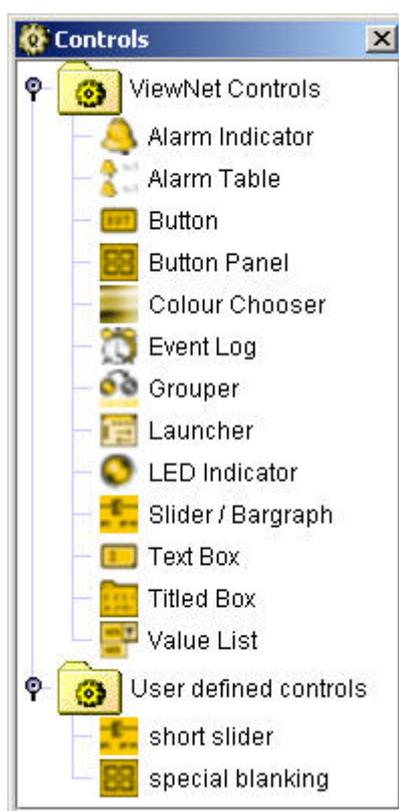
Buttons: Add Alias, Remove Alias

- Click on the screen **client area** to list **screen aliases**
- Click on the **page area** to list **page aliases**

12.7. Controls Palette

The Controls Palette is a source of **unassigned ViewNet screen controls** for use when building Virtual Screens.

Figure 12.8. The Controls Palette, showing two User-defined controls



12.7.1. Standard Controls

This is the full set of ViewNet screen controls in **default** state as set by the Stylesheet. This includes **grouper** and **launcher** controls that may be present on the page to perform a particular task but will not show on the working screen.

- Click and drag the required control to the virtual page
- **Address** the control as required.

12.7.2. User Defined Controls

It is likely that, while building a series of Virtual Screens, certain types of modified controls will be used many times. To save having to modify every similar control, a modified standard control can be created and saved. This can then be used as a template for module controls as they are placed on a Virtual Page.

 It is the **modifications** that are retained as user defined

To **create** a User Defined Control:

- Having modified a control to suit, **right-click** the control on the page
- Select **add custom control** .

-
- Type in a **unique name** for your control. Click **OK**
 - This modified control will be added to the User Defined Control list.
 - **Update** a control by using the **same name** again
 - **Delete** a control from the list by **selecting** it and using keyboard **delete**

To **use** a User Defined Control:

- **Click and drag** the control onto the Virtual Page
- **Type** or **paste** the required control **address** into the **properties address** box. The control will then assume all required attributes.
- Or
- Select the required control from the Physical Network Tree
- **Click and drag** this control and **drop** it onto the already placed **User Defined Control**
 - ☞ This will not work when controls are in clickable mode.
- Or
- **Drop** the same control into the **properties address box**
- The control will then assume all required attributes

☞ Although you can drag a control from the Virtual Domain it **may not be correctly addressed**

12.8. Layout Tools Panel

The Layout Tools Panel enables you to control how Virtual Pages **look** and **handle** during building and also enables you to manipulate controls' **size** and **position** on a page.

The panel has four pages.

Figure 12.9. The ViewNet Tools Panel - Options page



12.8.1. Grid

Sets the **default placement** and positioning

- **Snap to grid** - causes controls, when dropped or dragged, to sit on a predetermined grid. Click to set. Useful for alignment
- **Draw grid** - draws the snap to grid. **Click to set** .
- **X-Y grid** - Sets the grid **spacing** in pixels. Default is 10 pixels. Click and type values.

 Snap and Draw options are also available by right-clicking on the current Virtual page

12.8.2. Options

Defines the **look** and **operation** of controls on a page.

- **Draw drag borders** - click to remove the striped border from around every control on the current page. Borders are useful for alignment during building.
- **Decoration** - click to remove the decoration symbols from controls while you build. Useful for a less cluttered look.
- **Controls clickable** - click to enable the controls to be **operated** - clicked, slid, dropped etc. In this mode values are not passed to the module and controls can be repositioned **ONLY** by dragging the border around the control.
- **Live controls** - Click this option to allow **control values** to be passed between control (if correctly addressed) and the **live module** , via the ViewNet Gateway.

 All options are also available by right-clicking on the current Virtual page

12.8.3. Size

Allows controls to be resized.

- **Lock top left** - click to enable or disable
- **Width / Height** - click the + or - buttons to set the control size
- **Auto** - click to **resize** the control **to fit** titles etc.
- **Pixels** - sets the resize **steps** . Click and type values.

 A useful alternative to dragging control border corners or setting properties.

12.8.4. Move

Allows controls to be moved about the page by precise amounts.

- **Direction** - click the arrows to move the selected control by a set amount of pixels
- **Pixels** - sets the move step distance. Default is 10 pixels.



The **move** function will operate on **multiple** selections. Very useful for moving lots of controls by the same amount.

Chapter 13. The Virtual Domain Editor

Operational access to ViewNet screens is not possible without the Virtual Domain. Screen, Tree and Folder elements are placed in the Virtual Domain to the user's own requirements. The Virtual Domain Editor is used to create the Virtual Domain tree and to manage the Virtual Screens within it.

 This section gives an overview of the Virtual Domain Editor contents and use. Further specific details are given in [Chapter 14, *Applying Physical Screens to Modules*](#) onwards.

The Virtual Domain Editor window has two pages.

TRY IT NOW

Having started up the Module Builder, the Virtual Domain Tree page should show the same contents as the ViewNet window. Click on the Virtual Screens tab at the bottom of the Editor to list any existing screens.

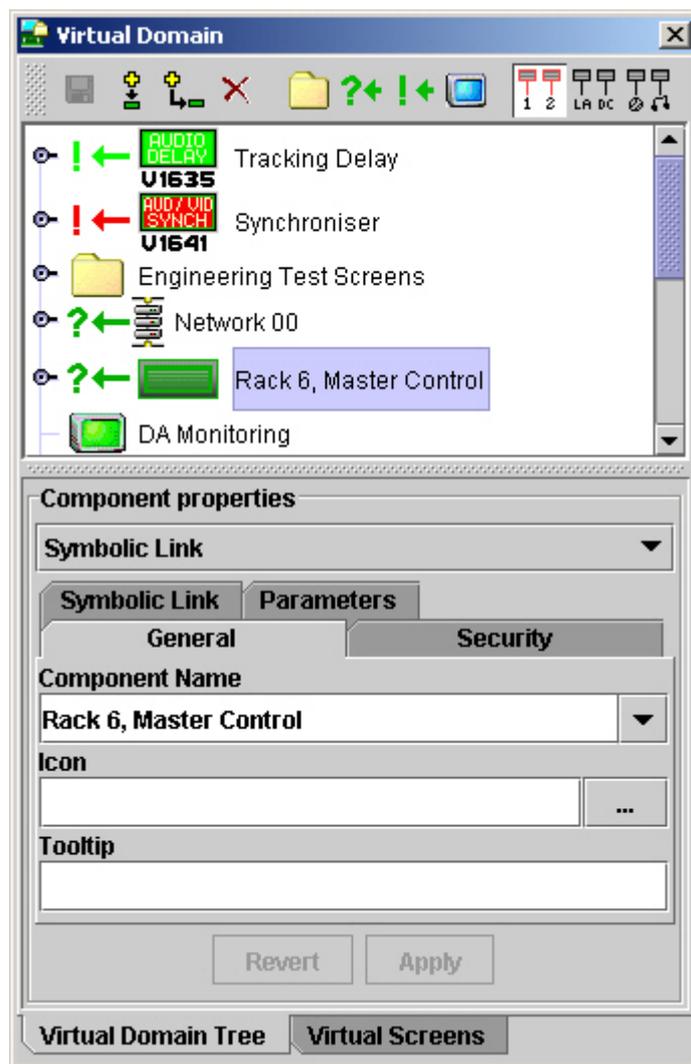
13.1. Virtual Domain Tree

This page shows the structure of the Virtual Domain as seen in the ViewNet window but with extra handles to enable the contents to be examined.

Where possible, screens and controls may be copied into Virtual screens by dragging.

The lower portion displays the selected component's properties.

Figure 13.1. The Virtual Domain Editor - Virtual Domain Tree page



13.1.1. Top icons

- **Save current Virtual Domain** - if the icon is greyed-out there have been no modifications to save. If you try to exit the Module Builder without saving here you will be prompted to save then.
- **Add new sibling** - click to create a new component, by default a folder, at the bottom of the tree
- **Add new child** - click to create a new sub-folder of the currently selected component
- **Remove selected component** - click to delete highlighted component. You are NOT asked to confirm this deletion.

☞ If in doubt do not save the Virtual Domain. Exit the Builder and reload.

- **Convert to folder / symbolic link / hard link / virtual screen** - click here to convert any type of component to any other type. This function is duplicated by the **drop-down** list in the **component properties** section.



Converting a previously created component will remove any settings or attributes the previous component may have had!

- **Display as Physical / System / Content component names** - click to display the alternative component names for symbolic link elements. See [Section 12.3.1, “Network Component names”](#)

13.1.2. Tree Display

Displays the Virtual Domain as seen in the ViewNet window.

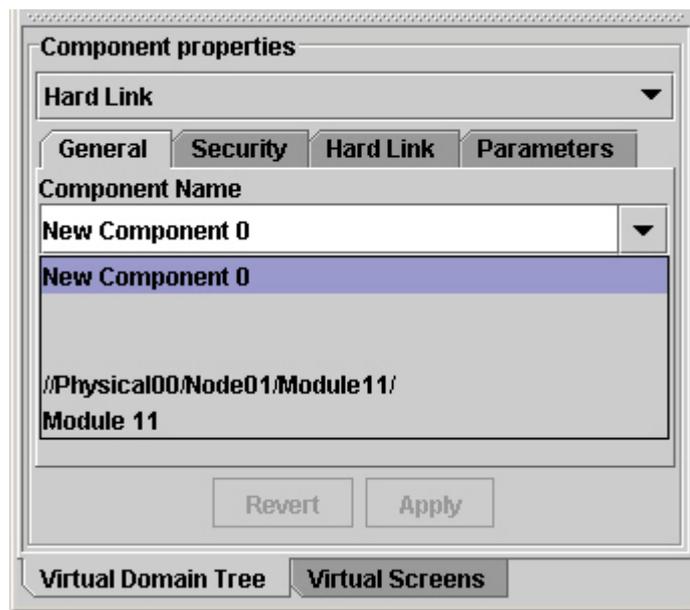
Icons and link styles represent different components and their colours will indicate address or operational status:

- **Green** - the component is correctly assigned or the module is present in the correct (expected) hardware location. Screens will open and operate if the module is online.
- **Red** - the component has not been correctly assigned or module is NOT in the correct (expected) hardware location.
- **Orange** - the hard link representing this module has not (yet) been addressed. The screen will not open.

Basic Tree operations:

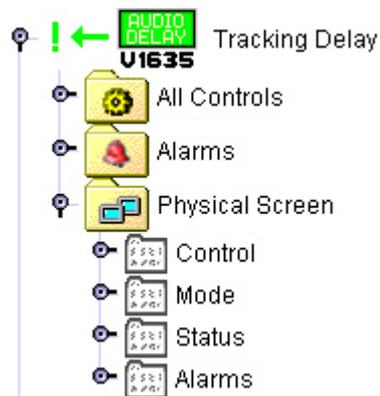
- **Adding a new component** - click on add new sibling or child icons. The default title will be 'New Component - 0' etc.
- **Repositioning a component** - click and drag the icon. A **horizontal grey line** will appear as you move the icon. Use this line to point to the desired position in the tree. If the line points directly at a component, the moved component will become a child of that existing component.
- **Renaming a component** - under the general component properties tab, either highlight and re-type the component name or, a **drop-down** list gives a selection of related default titles. Click **apply**.

Figure 13.2. A typical Component name drop-down list



- **Adding a tooltip** - under the general component properties tab, type the tooltip into the tooltip box. Click **apply** .
- **Expanding components** - (where possible) - click the handle icon or double-click the component icon. Click the handle again to close.

Figure 13.3. A partially expanded Virtual Domain component



☞ Screens cannot be opened from this tree

☞ Don't forget to **apply** and **save** your modifications!

13.1.3. Hard Link and Network component contents

Where applicable, the Virtual Domain hard-link or network component may be expanded right down to the controls listed on an individual screen. Click on the handle to expand the component.

-
- **All Controls** - is the default set of controls designated for the selected module.

These controls may be copied to virtual pages by dragging.

- **Alarms** - lists any alarms designated for the selected module
- **Physical Screen** - lists the standard pages for the selected module. Expanding further reveals the controls for each page.

Whole pages and individual controls may be copied to Virtual pages by dragging.

13.1.4. Component Properties

The lower portion of the Editor window displays the properties possessed by the selected component and allows those properties to be modified.

The **drop-down list** at the top of this section duplicates the **convert to** icons at the top of the window and also indicates the type of element currently selected.

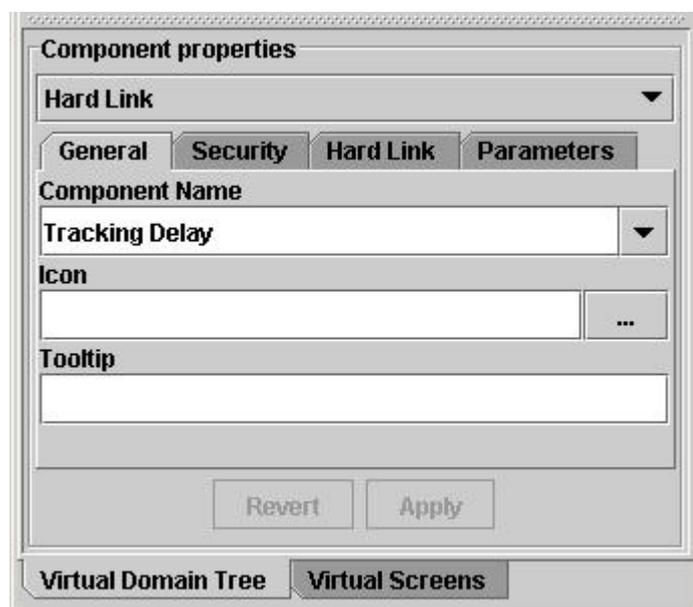
- Click on the **down arrow** to reveal the component type list - select as required.

There are two or three pages of properties for each component.

Every component has at least two pages:

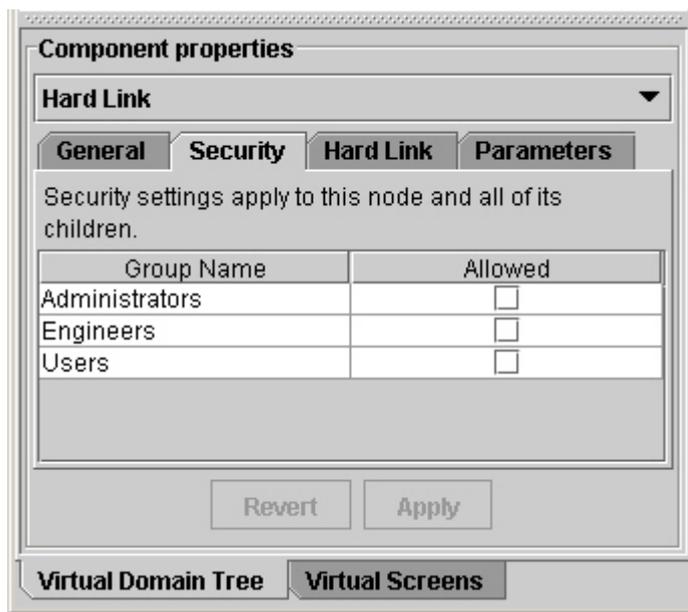
- **General** - The component's name, icon and tooltip are displayed and can be modified.

Figure 13.4. Editor Component Properties - General page



- **Security** - Default settings allow components to be accessed by all users. Selecting one setting limits access to that level only.

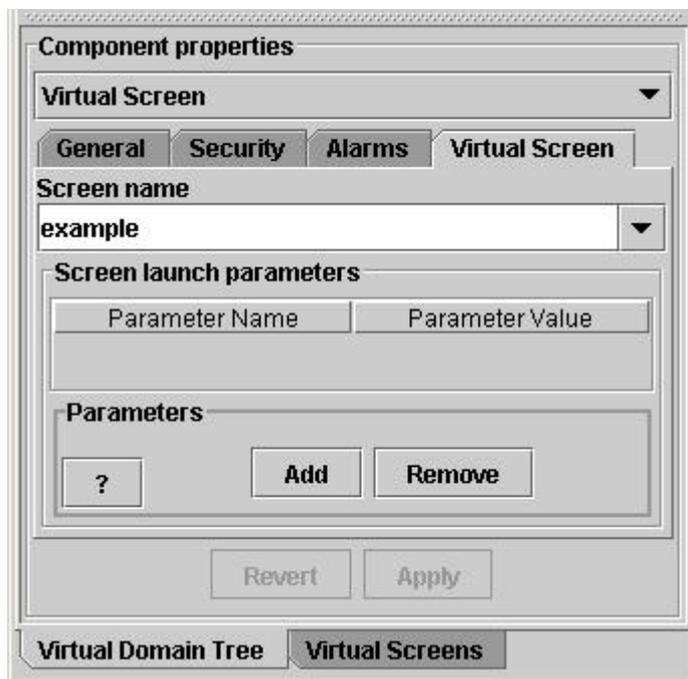
Figure 13.5. Editor Component Properties - Security page



Virtual Screens, Hard Links and Symbolic Links all have four pages of properties:

- **Virtual Screen**

Figure 13.6. The Editor Component Properties - Virtual Screen page

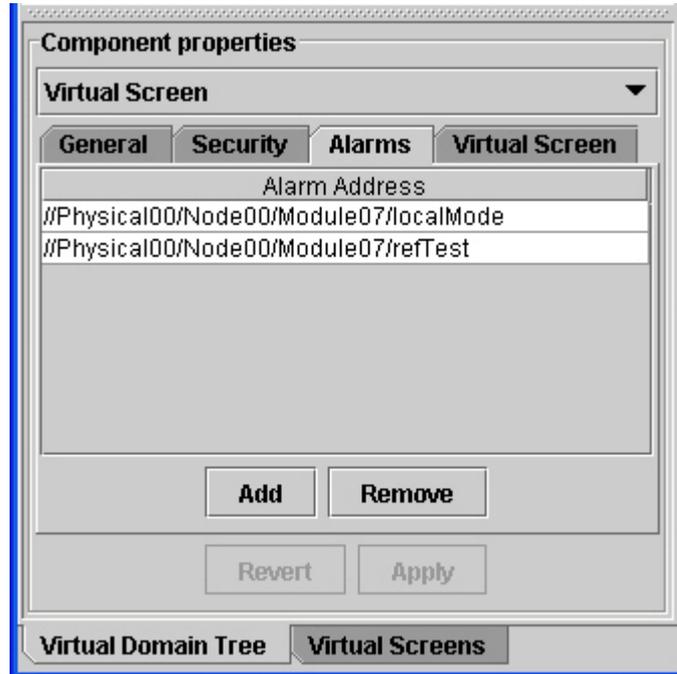


Screen Name - Select from the drop-down list the Virtual screen you wish to apply to this component. It is possible to type in a different screen name if it does not currently exist.

Screen Launch Parameters - using aliases, and parameters such as screen title, screens may be opened in a particular mode. See [Chapter 24, Launching](#) for further details.

- **Alarms**

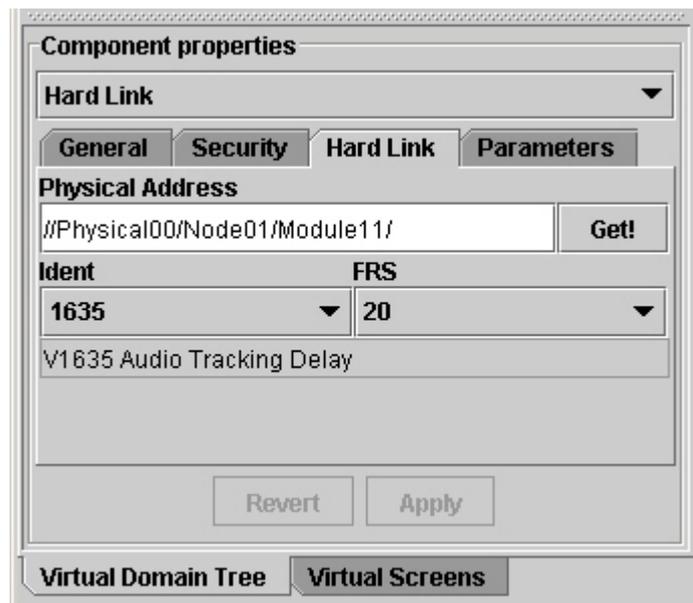
Figure 13.7. Editor Component Properties - Alarms page



Add any alarms you that you would like to associate with the screen. When the alarm is activated the Virtual Domain tree will display an alarm bell next to the screens icon. These alarms will also be monitored by the Alarm Monitor. See [Chapter 25, Alarms](#) for further details.

- **Hard Link**

Figure 13.8. Editor Component Properties - Hard Link page



Physical Address - Type in the hardware address of the module to be controlled or drag the address from the Physical Tree into the box.

Get! - If the exact type of module present is not known, type or drag its address and click **get** . The builder will **automatically load** details of the correct physical screen for that module.

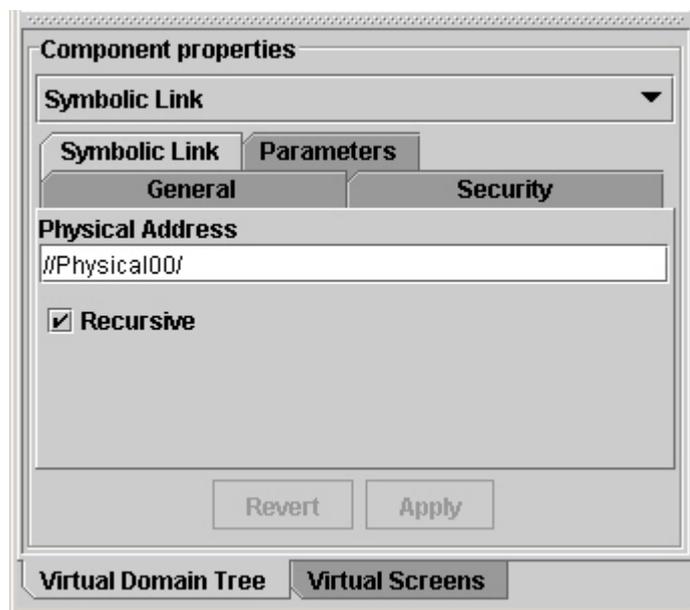
Ident - A drop-down list of all available modules. Click the down-arrow and select.

FRS - A drop-down list of all FRS numbers applicable to the selected ident. There may only be one FRS number available.

- **Symbolic Link**

A Symbolic link is a **pointer** to a particular hardware address. It may be used to include a section of a physical network in the Virtual Domain.

Figure 13.9. Editor Component properties - Symbolic Link page



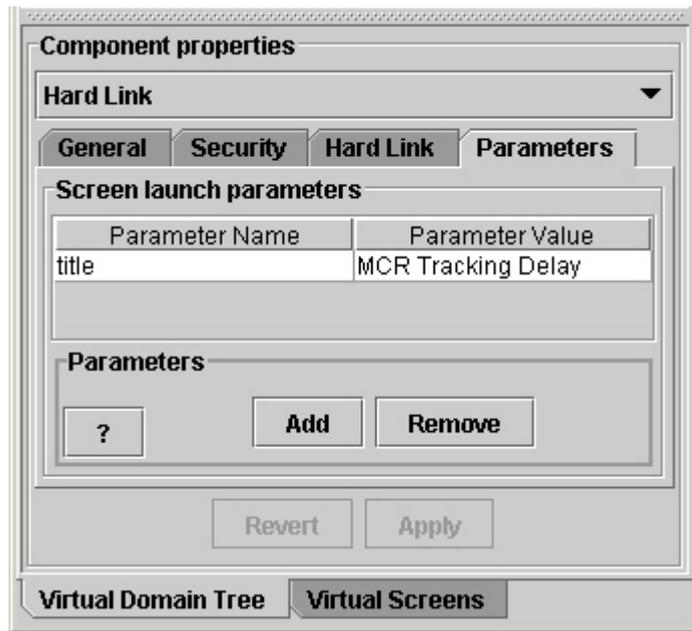
Physical Address - Type, or drag from the physical network, the address of the Physical Tree element that you want represented here.

Recursive - If not checked only that component itself will be displayed. If checked, the component may be expanded to reveal all child components.

- **Parameters**

Screen Launch Parameters - using aliases, and parameters such as screen title, screens may be opened in a particular mode. See [Chapter 24, Launching](#) for further details.

Figure 13.10. Editor Component Launch Parameters

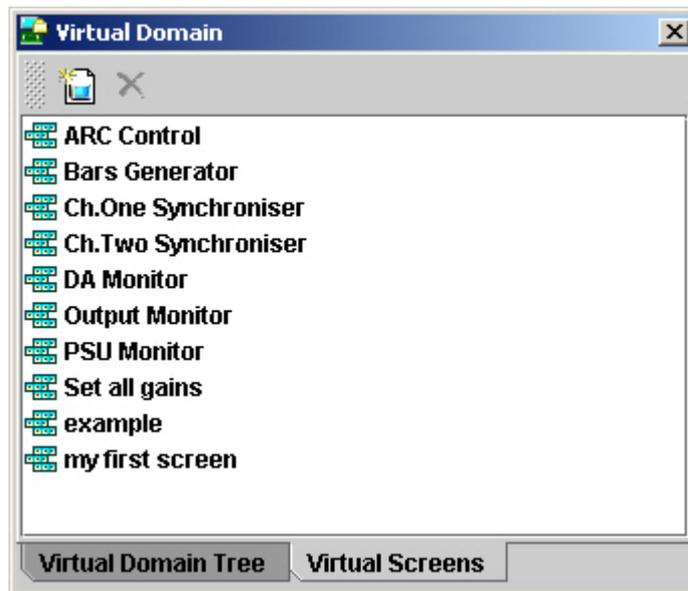


Any **modification** to Virtual Domain components is only applied when **apply** is clicked and when the **save** icon is clicked and confirmed.

13.2. Virtual Screens

This is the master list of all Virtual Screens currently available to the Module Builder and Virtual Domain.

Figure 13.11. Virtual Domain Editor - Virtual Screens page



Screens may be included in this list that have not been used in the Virtual Domain.

13.2.1. Top icons

- **Create New Virtual Screen** - when clicked, a new Virtual Screen will open up. It will not appear in the list until it is saved. This function is duplicated by the same icon, and a menu item, in the Module Builder window.
- **Remove Selected Virtual Screen** - cross icon - click to **delete** . You are NOT asked to confirm this deletion.

13.2.2. Virtual Screens list

- **Opening existing Virtual Screens for building** - double-click the entry.

 There is no other way of opening existing Virtual Screens in the Module Builder

TRY IT NOW

Having started-up the Module Builder, click on the Virtual Screens page tab on the Editor window. Note the list of Virtual Screens. Click the **Create New Virtual Screen** icon. By right-clicking on this new screen select **save as** and enter a unique name. Click **OK** . Your new screen - albeit empty - will appear in the Virtual Screens list.

Close your new screen with the **close icon** or by right-clicking on the screen. Open it up again by **double-clicking** the entry in the Virtual Screens list.

Chapter 14. Applying Physical Screens to Modules

Standard Physical Screens can be used to directly control modules. However, they are fixed and cannot be modified. They are a very useful way of getting started with a new system and discovering about the ViewNet controls that are available for each module.

Like all ViewNet controls and screens, Physical Screens may be used at the same time as any other duplicate screen or control.

The process of applying a Physical Screen to a module involves creating an **entry in the Virtual Domain** and assigning it to the required hardware. It does not involve Virtual Screens.

14.1. Online and Offline, with hardware installed

With module hardware installed and the ViewNet system connected, the ViewNet Gateway will have downloaded all module types and locations. So hardware addresses are easily available by dragging.

- **Start the ViewNet Module Builder** , ensure the Virtual Domain Editor window is open.
- Select any entry. Click **add new sibling** . A new folder is added to the bottom of the tree with a default title like 'New Component - 1'
- Click the **convert to hard link** icon, or select hard link from the properties drop-down list. The folder will change to a hard link symbol
- **Obtain hardware address of the module** - Open the Physical Tree window (if not open). Expand the network, expand the appropriate node to reveal the module icons in their slots.

 If the icon is greyed-out, the module is offline. Don't worry, its address is still accessible.

- Click and drag the required module icon across to the address window and release. The module's address will appear in the address box.
- Click **Get!** - The Module Builder will automatically load the correct Ident and FRS data into the properties. The module description will also be shown.
- Click **apply** . The tree icon will change to the correct module icon.
- **Rename the component** . Click the **general** page tab, highlight and delete the default **component name** and replace it with the title you wish to be displayed in the Virtual Domain. A **drop-down** list gives a selection of related default names.
- Add a **tooltip** if required. Type directly into the tooltip box.
- Click **apply** - the new title will now be displayed.
- Click the **save current Virtual Domain** icon, confirm **OK** . The new entry will appear in the ViewNet window.



You cannot preview the physical screens in the builder. They can only be opened via the ViewNet window.

14.2. Offline without hardware installed

If hardware has not yet been installed or connected to the ViewNet System, the ViewNet Gateway will not have downloaded module locations.

However, in a planned system, each module's exact location will be known, so the module's address can be worked out and entered into the Virtual Domain component's properties:

- **Start the ViewNet Module Builder** , ensure the Virtual Domain Editor window is open.
- Select any entry. Click **add new sibling** . A new folder is added to the bottom of the tree with a default title like 'New Component - 1'
- **Convert to a hard link** . Click the **convert to hard link** icon, or select hard link from the properties drop-down list. The folder will change to a hard link symbol
- Click the hard link page tab
- **Type in the physical address** of the module to be controlled in to the **physical address** box
- Select the module **ident** from the drop-down list
- Select the module **FRS** number from the drop-down list
- Click **apply** . The tree icon will change to the correct module icon.



At this stage, the icon will be **red** because the module is not yet connected in that position. The icon will turn **green** when the module is online and in the **correct position** .

- **Rename the component** . Click the **general** page tab, highlight and delete the default **component name** and replace it with the title you wish to be displayed in the Virtual Domain.
- Click **apply** - the new title will now be displayed.
- Click the **save** current Virtual Domain icon, confirm **OK** . The new entry will appear in the ViewNet window.



You cannot preview the physical screens in the builder. They can only be opened via the ViewNet window.

If, at this stage, the address is **not known** , the address box can be left blank. The icon will be **orange** indicating that the component has not yet been addressed.

TRY IT NOW

Try the above procedures.

Create a hard link component in the Virtual Domain.

Practice dragging the module address from the Physical Network.

Try typing an address into the editor address box. See what happens if you get the address wrong.

See what happens if you select the wrong type of module from the drop-down list.

When finished, carefully **remove the selected component** . Do not save the Virtual Domain unless you mean to!

For more information on Physical addressing see [Chapter 9, *The Physical Network*](#)

Chapter 15. Creating Virtual Screens

A Virtual Screen is like a blank canvas upon which you can place any ViewNet control chosen from any selection of modules, in any position, any number of times, in a number of different forms.

Once constructed, an entry can then be created in the Virtual Domain to access your Virtual Screen.

Depending on the status of your hardware installation, the procedure to create a Virtual Screen may vary.

15.1. Preparation

In advance of creating a Virtual Screens, note the following items:

15.1.1. Creating a new Virtual Screen

There are three means:

- Click the **new Virtual Screen icon** in the Module Builder window
- Select **file/new Virtual Screen** in the Module Builder window
- Click the **create a new Virtual Screen icon** on the Virtual Screens page of the ViewNet Editor

This produces a blank screen with **no pages** called **Untitled - #** .

15.1.2. Resizing screens

Two methods:

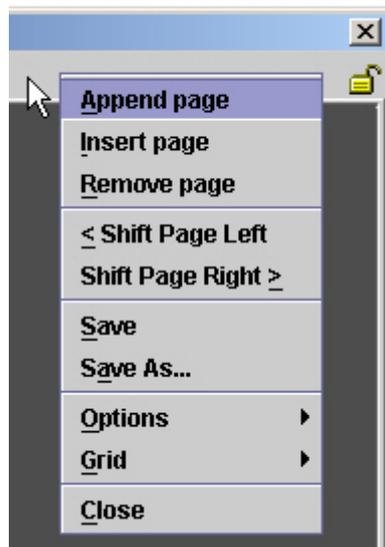
- Click and drag any **edge** or **corner** of the new Virtual Screen
- Type exact dimensions into the **size boxes** in the **Screen Properties** window.

 If the **Screen Properties** window is not already open or is hidden, click the **blue spanner** icon in the Module Builder window.

15.1.3. Right-clicking screens

Right-clicking in the client area at the top of the Virtual Screen produces a number of very useful and often-used options:

Figure 15.1. Virtual Screen (client area) Right-click Menu



- **Append page** - adds first page to the screen or subsequent pages to the right of others. Default titles will be Page 1 etc.
- **Insert page** - adds a page to the left of the currently selected page
- **Remove page** - removes the currently selected page
 - ☞ Be careful - there is no UNDO!
- **Shift page left / right** - moves the current page once place to the left or right. Useful for reordering pages once created.
- **Save** - saves the Virtual screen to the Virtual Screens list (accessible via the Editor window).
- **Save As** - allows a new name to be entered. Saves to the Virtual Screens list (accessible via the Editor window).
- **Options** - gives access to useful Layout Tool options. **Drag Borders** , **Decoration** , **Clickable** and **Live** . See [Section 12.8, “Layout Tools Panel”](#) for further details
- **Grid** - gives access to Layout Tool Grid options. **Snap to grid** and **Draw grid** . See [Section 12.8, “Layout Tools Panel”](#) for further details
- **Close** - closes the current Virtual Screen. You will be prompted if you need to save first.

☞ Right-clicking on a **page** will only produce a **paste** option. This is used when pasting copied controls.

15.1.4. Right-clicking controls

Right-clicking a ViewNet control on a page also gives a number of useful options:

Figure 15.2. ViewNet Control Right-click

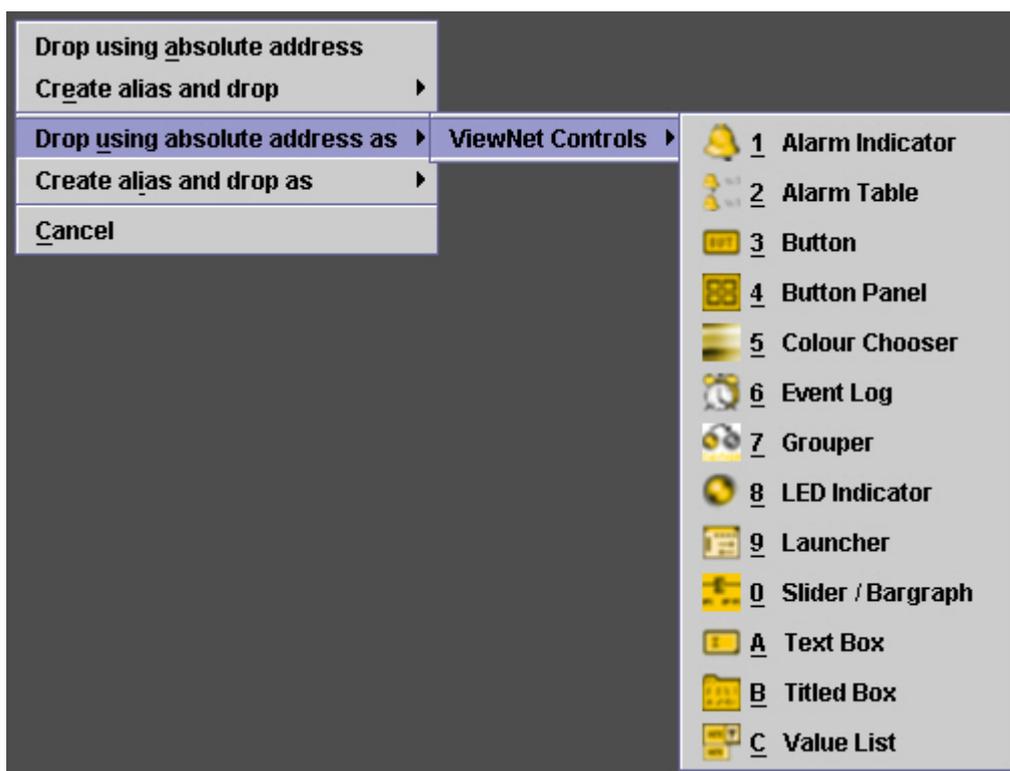


- **Cut / Copy** - useful for relocating or duplicating controls on pages. Same as **ctrl-x** and **ctrl-v**
- **Auto resize** - will modify the control's size to fit titles and labels.
- **Set as Default** - makes all controls of this type take on the modifications just set for this control
 ☞ Be careful - this option has a widespread effect!
- **Add custom control** - used to add a modified control to the list of **User Defined Controls** available for building.
- **Remove control** - removes this control. Same as using the keyboard **delete** key.

15.1.5. Dropping As

This is a very useful function where a control, for example; a **button panel** , can be **dropped as a text box** . All relevant properties are transferred to the new type of control and it follows and displays the **original control's values** . In this instance the text box would display the current button panel selection.

Figure 15.3. The Drop As menu



- **RIGHT-click** and drag a control to a page to invoke the drop as options.
- Select **Drop using an absolute address as** . A controls list will appear.
- Select the type of control required.

 There are other options offered in this menu. See [Section 24.3.3, “Using Physical Controls as destination controls”](#)

15.1.6. Renaming Pages

Default page names are Page 1, Page 2 etc. They may be renamed by **double-clicking** on the **page tab** . Enter a new name and click **OK** .

15.2. Online, with hardware installed

With module hardware installed and the ViewNet system connected, the ViewNet Gateway will have downloaded all module types and locations. So all relevant ViewNet controls, correctly addressed, are available by dragging.

Using the following instructions you will create:

- A ViewNet Screen called **my first screen** . Size 500 x 500 pixels
- Two pages named **Panel** and **Info**
- The pages will have a **mix** of ViewNet controls from two **different** modules

-
- The screen will have **copies** of some controls on both pages
 - You will also create some info controls that **follow** the action of other ViewNet controls using the **drop as** function

The following assumes you are logged into ViewNet and have the Module Builder running with most builder windows open, and that you have a selection of Vistek modules installed and connected to your ViewNet system.

- Create a **new Virtual Screen** by clicking the icon in the **Module Builder** window
- **Resize** the screen by typing 500 (w) and 500 (h) in the **screen properties size** boxes
- **Add two pages** by right-clicking in the screen client area and selecting **append page** twice
- **Rename** the pages **Panel** and **Info** by **double-clicking the tabs** and entering the new names in the **change page name** dialogue box.
- **Save** your screen as **my first screen** by right-clicking the screen client area, selecting **save as** and entering the new screen name.
- Choose **two** Vistek modules that have slider controls or button panels by **expanding the Physical Network** to reveal the **All Controls** lists for both modules.

 You may have to scroll between these two parts of the tree to inspect them

- Bring the Panel page to the front by clicking the Panel page tab once.
- Select a slider or button panel control from the **All Controls** list of the first module. (Let's call this **control A**)
- **Place control A on the page** by clicking and dragging it to the **Panel** page. Notice how the drag border is red and the control properties shows details of that control.
- Find and select the **controlSource** - a text box - for that same module. Click and drag it over to the Panel page.
- Select a slider or button panel from the All Controls list of the **second** module. (Let's call this **control B**)
- **Add control B** by clicking and dragging it to the **Panel** page.
- Repeat the process for the **controlSource** control - a **text box** - for the second module.
- **Save** your screen by right-clicking the client area and selecting save.

You now have a Virtual Screen with four ViewNet controls on one page and nothing on the other page.

- On the **Panel** page select, by clicking once, the **controlSource** control. Its drag border will go red. Notice it is probably titled Control.

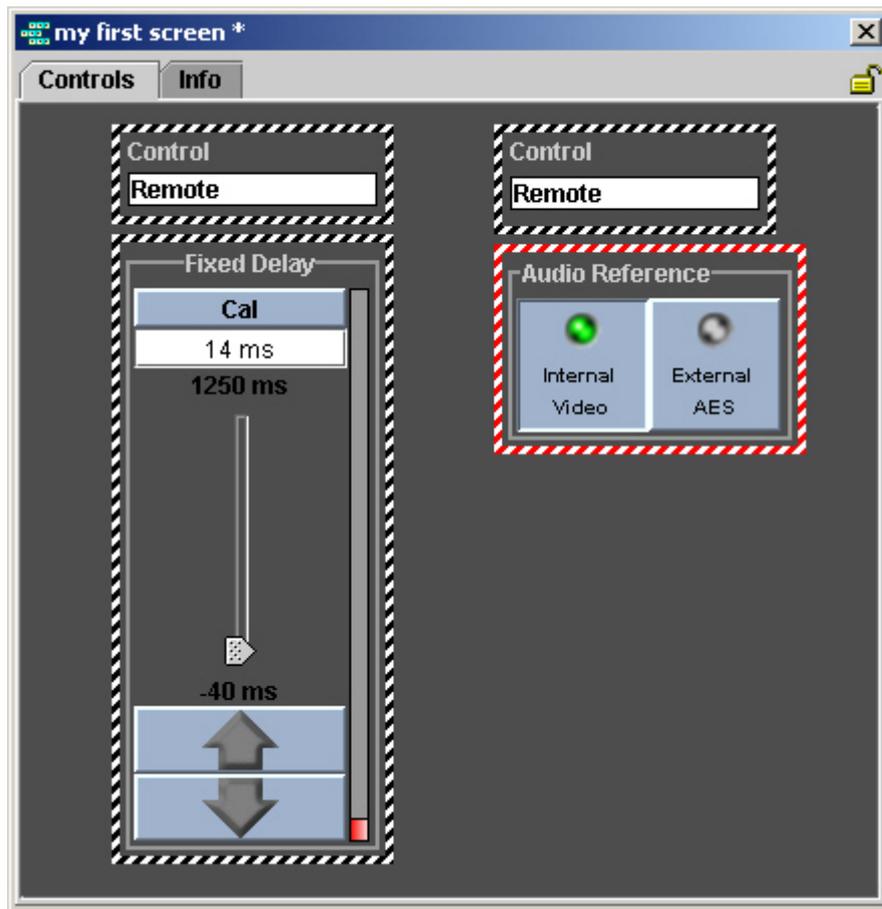
-
- **Copy** it by **right-clicking** on it and selecting copy.
 - Change to the screen **Info** page by clicking the Info tab
 - Right-click on this blank page and select the (only) **paste** option. The copied control - a text box - will appear on the page in exactly the same position as it was on the other page.
 - Repeat the copy and paste process for the second module's **controlSource** .
 - **Save** your screen by right-clicking the client area and selecting **save** .

Now, both pages have control source indication on them.

You are now going to copy the same sliders or button panels as different types of controls to the Info page using the **Drop As** function:

- Ensure the Info page is still showing.
- Select **control A** in the **All Controls** list.
- **RIGHT-CLICK and drag** control A over to the Info page. When you let go a **menu** will appear.
- Select **drop using an absolute address as** and then select **text** . This will drop control A as a **text box** .
- Repeat this procedure for **control B** , dropping it as a text box on the Info page.
- **Save** your screen by right-clicking the client area and selecting **save** .
- **Reposition** all these controls to your satisfaction by clicking and dragging them, and **resize** them by dragging their corners. Don't forget to **Save** .

Figure 15.4. My first screen may look like this



☞ You may have noticed an asterisk - * - appearing beside the screen name. This implies that the screen has been modified and will need saving.

☞ Your Virtual Screen is not yet accessible via the Virtual Domain. See [Chapter 16, Placing Screens in the Virtual Domain](#)

15.2.1. Testing your new Virtual Screen

Because you have working hardware installed it is possible to test your screen while still working in the Module Builder:

- Bring the **Layout Tools Panel** to the front, if necessary click on the Layout Tools Panel icon on the Module Builder Window.
- Click the **Options** page tab.
- Select both **Controls Clickable** and **Live Controls** . The offline icon will disappear from the corner of the control.

☞ In this mode, Live Controls means that the ViewNet controls are communicating with the ViewNet Gateway and hardware. So make sure it is safe to remotely control these modules!

- Return to the Virtual Screen

-
- Operate the sliders or buttons on the Panel page using the mouse click or wheel.
 -  If the module(s) is not in remote mode, the **Control** text box will read **Local** , and the controls will not stay set at their set position.

- Click the Info page tab and see that the **Dropped As text boxes** are displaying the values (maybe text) as set on the Panel page.

 When in clickable mode, screen controls can only be repositioned by clicking and dragging the drag border itself, rather than anywhere within the border.

15.3. Offline, with hardware installed

Despite being currently unavailable, if module hardware has been installed and the ViewNet system connected, the ViewNet Gateway will have downloaded all module types and locations. So all relevant ViewNet controls, correctly addressed, will still be available by dragging.

The same procedure as outlined in [Section 15.2, “Online, with hardware installed”](#) can be followed, but note the following differences:

- Network, Node and Module icons will be **greyed-out** in the Physical Tree. They may still be expanded and their contents accessed.
- When dragged across to a Virtual Screen, all controls will display the **offline (disconnected plug) icon** .
- The screen may still be tested using clickable and live control settings, but the hardware will not be affected.
- Some controls will not stay at their set position.

15.4. Offline, without hardware installed

Without hardware installed, there is no Physical Network with lists of controls to copy to screens, or addresses to copy. However, ViewNet use of automatically generated **aliases** enables screens to be built at this stage with only minimum input needed to get them working once hardware is installed.

A list of controls may be obtained by **creating a hard link** to each type of module involved.

 Once used, this hard link must remain in the Virtual Domain tree for the Virtual Screen controls to operate.

15.4.1. Creating a Hard Link to a module

This only applies to those modules that will be controlled via a Virtual Screen

- In the Virtual Domain Editor, select any tree entry. Click **add new sibling** . A new folder is added to the bottom of the tree with a default title like 'New Component - 1'
- Click the **convert to hard link** icon, or select hard link from the properties drop-down list. The folder will change to a hard link symbol

-
- Click the hard link page tab
 - Select the module **ident** from the drop-down list
 - Select the module **FRS** number from the drop-down list
 - Click **apply** . The tree icon will change to the correct module icon.

 At this stage, the icon will be **orange** because the module is not yet addressed.

- **Rename the component** . Click the **general** page tab, highlight and delete the default **component name** and replace it with the title you wish to be displayed in the Virtual Domain.
- Click **apply** - the new title will now be displayed.
- Click the **save** current Virtual Domain icon, confirm **OK** . The new entry will appear in the ViewNet window.

 You cannot preview the physical screens in the builder. They can only be opened via the ViewNet window.

This hard link, and any others created, can now be **expanded** to reveal the **All Controls** list for that type of module.

15.4.2. Creating the Virtual Screen using the Hard Link controls list

Using the following instructions you will create:

- A ViewNet Screen called **my first screen** . Size 500 x 500 pixels
- Two pages named **Panel** and **Info**
- The pages will have a **mix** of ViewNet controls from two **different** modules
- The screen will have **copies** of some controls on both pages
- You will also create some info controls that **follow** the action of other ViewNet controls using the **drop as** function

The following assumes that you have created hard link entries in the Virtual Domain for the modules you wish to control via this Virtual Screen

- Create a **new Virtual Screen** by clicking the icon in the **Module Builder** window
- **Resize** the screen by typing 500 (w) and 500 (h) in the **screen properties size** boxes
- **Add two pages** by right-clicking in the screen client area and selecting **append page** twice
- **Rename** the pages **Panel** and **Info** by **double-clicking the tabs** and entering the new names in the **change page name** dialogue box.

-
- **Save** your screen as **my other screen** by right-clicking the screen client area, selecting **save as** and entering the new screen name.
 - Choose **two** Vistek modules that have slider controls or button panels by **expanding the (Editor) Virtual Domain** to reveal the **All Controls** lists for both modules.

 You may have to scroll between these two parts of the tree to inspect them

- Bring the Panel page to the front by clicking the Panel page tab once.
- Select a slider or button panel control from the **All Controls** list of the first module. (Let's call this **control A**)
- **Place control A on the page** by clicking and dragging it to the **Panel** page.

 Notice how the drag border is red and the control properties shows details of that control.

Also, the control's address is replaced by an **alias** .

- Find and select the **controlSource** - a text box - for that same module. Click and drag it over to the Panel page.
- Select a slider or button panel from the All Controls list of the **second** module. (Let's call this **control B**)
- **Add control B** by clicking and dragging it to the **Panel** page.
- Repeat the process for the **controlSource** control - a **text box** - for the second module.
- **Save** your screen by right-clicking the client area and selecting save.

You now have a Virtual Screen with four ViewNet controls on one page and nothing on the other page.

- On the **Panel** page select, by clicking once, the **controlSource** control. Its drag border will go red. It may be titled Control or Control Source.
- **Copy** it by **right-clicking** on it and selecting copy.
- Change to the screen **Info** page by clicking the Info tab
- Right-click on this blank page and select the (only) **paste** option. The copied control - a text box - will appear on the page in exactly the same position as it was on the other page.
- Repeat the copy and paste process for the second module's **controlSource** .
- **Save** your screen by right-clicking the client area and selecting **save** .

Now, both pages have control source indication on them.

You are now going to copy the same sliders or button panels as different types of controls to the Info page using the **Drop As** function:

-
- Ensure the Info page is still showing.
 - Select **control A** in the **All Controls** list.
 - **RIGHT-CLICK and drag** control A over to the Info page. When you let go a **menu** will appear.
 - Select **drop using an absolute address as** and then select **text** . This will drop control A as a **text box** .
 - Repeat this procedure for **control B** , dropping it as a text box on the Info page.
 - **Save** your screen by right-clicking the client area and selecting **save** .
 - **Reposition** all these controls to your satisfaction by clicking and dragging them, and **resize** them by dragging their corners. Don't forget to **Save** .

 You may have noticed an asterisk - * - appearing beside the screen name. This implies that the screen has been modified and will need saving.

 Your Virtual Screen is not yet accessible via the Virtual Domain. See [Chapter 16, Placing Screens in the Virtual Domain](#)

15.4.3. Addressing Virtual Screens created without hardware installed

At this stage, the screen just created - **my other screen** , and the related hard links, have no addressing information. **Aliases** will take care of the individual control addressing via the hard link, but the **hard links** will need to be **correctly addressed** for all screens to eventually work.

- If **intended module addresses are known** : Select the module hard link in the Virtual Domain tree, select the **Hard Link page** . Enter the **module address** in the address box. Click **apply** for each module. Then **save** the Virtual Domain.

 If the module is not yet installed, the hard link icon will be **red** .

- If hardware has finally been installed: Expand the **Physical Network Tree** , Locate the relevant modules. **Drag** their addresses to the (Editor) hard link address box. Click **apply** for each module. Then **save** the Virtual Domain.
- If, at some point, a module moves position, the new address can be dragged or typed into the hard link address box.

 If all modules are eventually correctly located, their hard link icons will be **green** .

If modules are out of position, their hard link icons will be **red**

15.4.4. Testing Virtual Screens created without hardware installed

Without active hardware to process control values, screen controls will be offline and will not operate.

- **Clickable** mode will work as normal. Control values will reset after a short delay.

-
- **Live controls** mode will have no effect.
 - Once placed in the Virtual Domain, the Virtual Screen can be opened , but all controls will be **greyed-out** and **offline**
 - Incorrectly addressed controls will be **not available** when a Virtual Screen is opened in the Virtual Domain

Chapter 16. Placing Screens in the Virtual Domain

[Chapter 15, *Creating Virtual Screens*](#) deals with creating basic Virtual Screens and saving them in the Virtual Screens list. However, they are not accessible for operational use until they have been placed in the Virtual Domain when they will appear in the ViewNet window.

16.1. Create a new component in the tree

- In the Virtual Domain Editor tree, click once on any component (that is not part of an expanded component) to select it.
- Click **add a new sibling component** . A folder will appear at the bottom of the tree. It will be titled **New Component - 1** (numeral may vary)
- Click on the **convert to Virtual Screen** icon, or select **Virtual Screen** from the **component properties** drop-down list. The folder will turn into a **red TV** icon.
- Select the **Virtual Screen page** tab.
- From the **Screen name** drop-down list select the Virtual Screen you wish to apply. Click **apply** . The TV icon will turn **green** .

 This is the name of the Virtual Screen, **not** the name of the Virtual Domain component

- Click the **save** icon.

 **Applying** properties to a component does not place it in the ViewNet Virtual Domain, or update it, until it has been **saved** .

16.2. Renaming a Virtual Domain Component

Generally, the name of the Virtual Domain component should be the same as, or similar to, the Virtual Screen to which it has been applied. This saves possible confusion when many similar default names remain in the tree.

- Select the component to be renamed in the Editor Virtual Domain tree.
- Click the **General** page tab (If not already showing). The **Component name** box will show the current name.
- Click the **drop-down arrow** to reveal a list of possible default names.

 One default name offered is the applied Virtual Screen name - this is a good choice.

- Select the desired name from this list or **type** in a new name straight into the box
- Add a **tooltip** if required. Type directly into the tooltip box.
- Click **apply** .

-
- Click the **save** icon.

 Reminder - this is the **naming** the component, **not** applying a screen to it!

16.3. Choosing a position in the tree

New components do not have to remain at the bottom of the tree.

The virtual screen may be directly accessible or may be within a folder:

16.3.1. Directly accessible

- Click and drag the icon. A **horizontal grey line** will appear as you move the icon.
- Use this line to point to the desired position in the tree. Release the mouse button. The icon will be placed in that position.
- Click the **save** icon.
- Once confirmed, the newly positioned icon will appear in the ViewNet window.

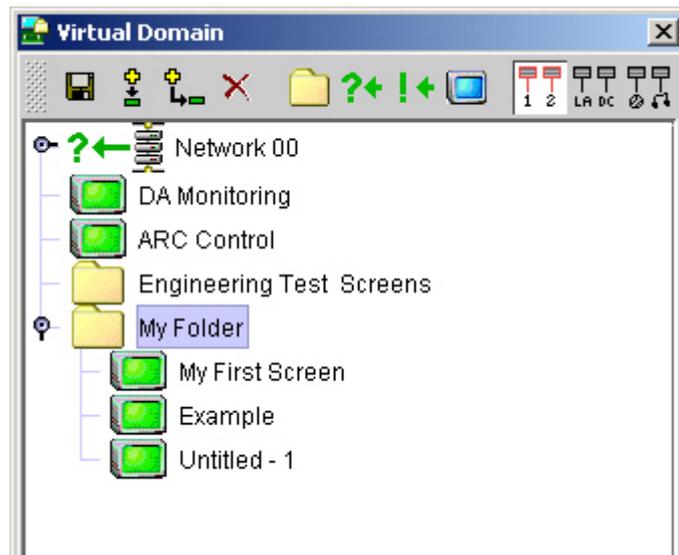
 This process can be applied to any component in the Virtual Domain

16.3.2. Within a folder

A number of virtual screens may be placed within a folder to keep the Virtual Domain tidy or to control access. Components can either be moved into, or created within, this folder .

- Use **add new sibling component** to create a new folder at the bottom of the tree.
- **Rename** this folder as required. **General page, Component name, Apply** .
- **Drag and drop** existing Virtual Domain components, as required, into this folder
- Or
- Create a new entry by clicking the **add new child component** icon. This new component can then be converted to whatever type of component or link is required.
- Click the **save** icon.

Figure 16.1. A Virtual Domain tree showing directly accessible Virtual Screens and within a folder



Chapter 17. Opening existing Virtual Screens for building

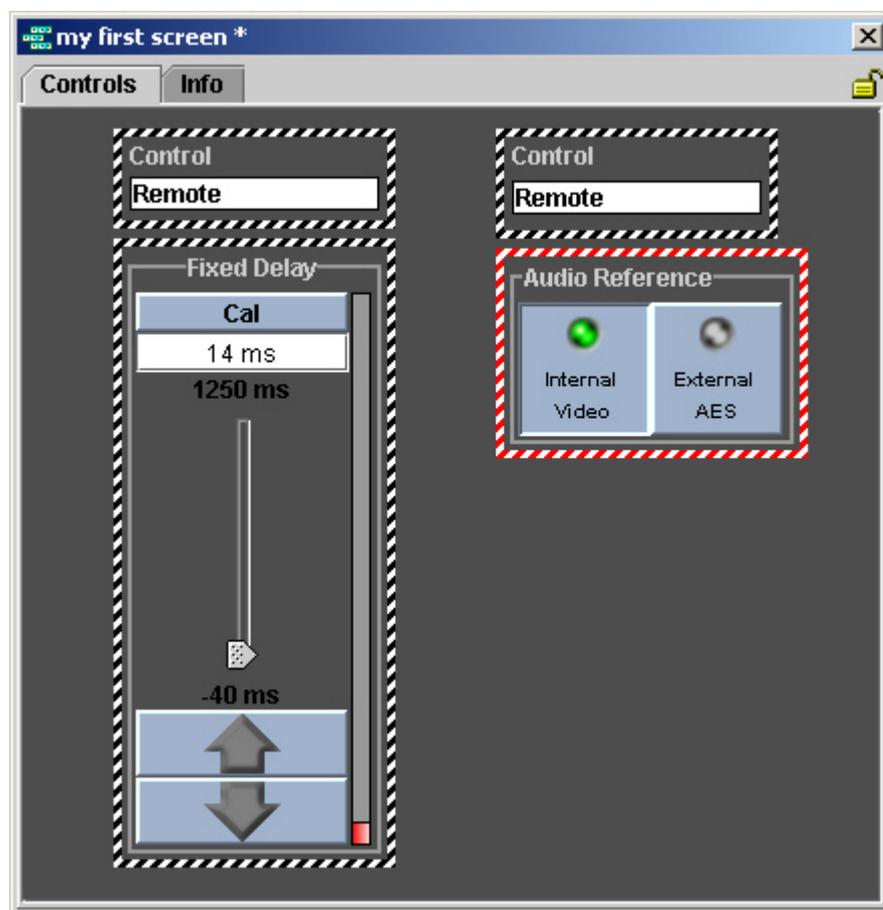
Existing Virtual Screens may be modified or updated at any time.

Virtual Screen can only be opened for building via the Virtual Domain Editor window, Virtual Screens page.

- Click on the **Virtual Screens** page tab. A list of all Virtual Screens will be presented.
- **Double-click** on the required screen. This screen will load with **drag borders** around all controls. The Screen Properties window will show the screen properties - **size** , **position** and operational **launch** position.

 Physical Screens cannot be edited. But you may copy Physical pages onto Virtual Screens.

Figure 17.1. A Virtual Screen in Builder mode



Chapter 18. Creating a Link to the Physical Network

Once the ViewNet system is running and Vistek hardware is installed, the quickest way to access individual modules for control is via a **symbolic link** to the Physical Network in the Virtual Domain.

18.1. Creating symbolic link to a Network

A Network link will create an icon representing the whole network of nodes (racks or frames) connected to the ViewNet Gateway.

- In the Virtual Domain Editor tree, click once on any component (that is not part of an expanded component) to select it.
- Click **add a new sibling component** . A folder will appear at the bottom of the tree. It will be titled **New Component - 1** (numeral may vary)
- Click the **convert to Symbolic Link** icon or select **Symbolic Link** from the **properties drop-down** list. A **red** symbolic link will replace the folder icon
- Click the **Symbolic Link page** tab
- If not already showing, open the **Physical Network window** from the Module Builder.
- **Click and drag** the Network icon to the Editor properties **Physical Address box** .

 In some installations there may be more than one network. They will be numbered 0,1,2 etc.

- If the network (hardware) has not yet been installed, type the expected address into the box.

A typical address will be **//Physical00/**

- Click the **recursive** check-box. This enables the user to **expand** the link to reveal other components.
- Click the general page tab. Rename the link by using the default names from the drop-down list or by typing in a new name.

 The default names offered may not be very helpful to the user. Creating a more descriptive name might be beneficial.

- Add a **tooltip** if required. Type directly into the **tooltip box** .
- Click **apply** .
- Click the **save** icon. Confirm **OK** .

TRY IT NOW

If there isn't already a link to the physical network in the Virtual Domain, it's very useful to have one.

You don't have to create any pages or type any addresses - you are just adding a pointer to something that already exists.

Create the symbolic link, drag the network address from the Physical Tree, apply and save.

See what difference the **recursive** option makes. Experiment with names and tooltips.

If you don't want regular users to have access, set the security level. See [Section 30.2, "Virtual Domain Security"](#)

18.2. Creating symbolic link to a Node

As **Nodes** represent the **actual frames of modules**, it might be operationally better to have Symbolic Links directly to a number of nodes all suitably named. The process is very similar to that used in [Section 18.1, "Creating symbolic link to a Network"](#). It will need to be done for each node required on the Virtual Domain.

- In the Virtual Domain Editor tree, click once on any component (that is not part of an expanded component) to select it.
- Click **add a new sibling component**.
- Click the **convert to Symbolic Link** icon or select **Symbolic Link** from the **properties drop-down** list. A **red** symbolic link will replace the folder icon
- Click the **Symbolic Link page** tab
- If not already showing, open the **Physical Network window** from the Module Builder.
- **Expand** the Network icon to reveal the **Node** icons
- **Click and drag** the required Node icon to the Editor properties Physical Address box.
- If the network (hardware) has not yet been installed, type the expected address into the box.

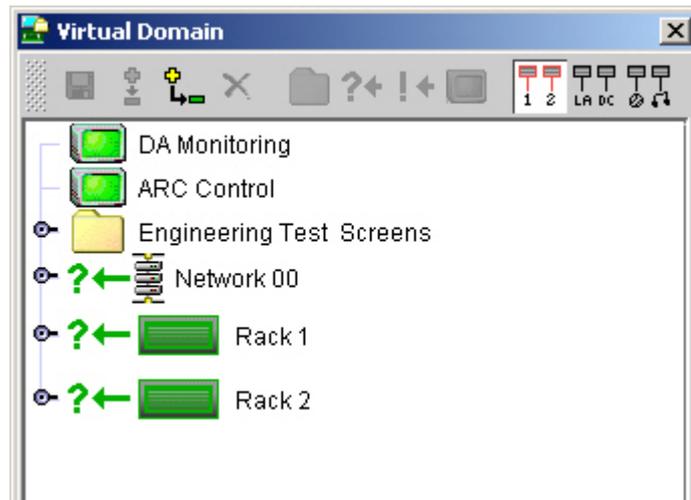
A typical address might be `//Physical00/Node05/`

- Click the **recursive** check-box.
- Click the general page tab. Rename the link by using the default names from the drop-down list or by typing in a new name.

☞ The default names offered may not be very helpful to the user. Creating a more descriptive name might be beneficial.

- Add a **tooltip** if required. Type directly into the **tooltip box** .
- Click **apply** .
- Click the **save** icon. Confirm **OK** .

Figure 18.1. A Virtual Domain tree showing Symbolic Network and Node links



Chapter 19. Removing Virtual Domain components

Any components may be removed from the Virtual Domain. Source screens - Virtual and Physical - will still be available for creating new components when necessary. Virtual Screens will still be available in the Virtual Screens list and Physical Screens will be re-loaded when a new hard link is created.

- Select the component to be removed in the Virtual Domain Editor tree. It will be **highlighted in blue** .
- Click the **Remove selected component** icon (a cross).
- If in doubt, do not save the Virtual Domain. Close down the Module Builder without saving. Start the Module Builder up again. This will re-load the previously saved Virtual Domain.
- Do not remove hard links that have been used as sources of controls for Virtual Screens.

See [Section 15.4, “Offline, without hardware installed”](#)



Removing some Hard Links may remove associated aliases.

Chapter 20. Customising Controls

The look and operation of a ViewNet control can be changed by modifying that control's properties. This can be for appearance or operational reasons.

[Section 12.4.1, “Position”](#) to [Section 12.4.12, “Launch Position”](#) highlight the more common properties available for modifying appearance and labelling. However, there are other control properties that can significantly change operational status.

For example; Button and Slider Panels can be modified to give limited selections or ranges. Text-box labels can be modified for greater understanding. LED colours can be changed for better recognition.

 For any modification, to **revert** to the previous property setting **un-check** the relevant **set** box by clicking it.

20.1. Button Panels

20.1.1. Values and Labels

The number of values and labels assigned to a button panel dictate how many push-buttons are shown. If no labels are assigned then a default numeral is inserted. Normally, a button panel control will have a set number of associated values and an equivalent number of labels for the buttons.

For example; if a button panel normally has 4 values representing 4 different selections, but a special version of that button panel on a Virtual Screen only requires the first 3 selections:

- In **Control Properties** , click on **labels** . This opens the **editing array** showing all 4 **button labels** assigned to the above values.
- Remove the unwanted label item 4 by clicking once in the property section to highlight it all in green. Click **Remove element** . Click **OK** . Note the label index number in brackets (in this case index 3).
- Click on **values** again. Select the unwanted value item 4 (that corresponds to the unwanted label index) and click **Remove element** . Click **OK** .
- The button panel will change to a 3 button panel showing only the first 3 selections. Notice how the buttons grow to fit the same space.

TRY IT NOW

Create a Virtual Screen with one page and drag a button panel on to it from the Standard Controls List.

Make the panel bigger by resizing. At this stage it will be empty.

Via the Control Properties create 4 values and 4 labels.

Experiment with removing or adding buttons.

See what happens when the number of values does not match the number of labels.

20.1.2. Rows and Columns

By default, a button panel is a horizontal row of buttons. The default settings are **rows 1** , **columns 0** .

To make a **vertical column** of buttons:

- Click in control properties **columns** . Change the value to **1** .
- Click in control properties **rows** . Change the value to **0** .
- You will need to **resize** the control to make the panel look sensible!

20.1.3. Momentary or Latching Buttons

By default, ViewNet buttons are **latching** - they stay down when pushed. For a function like Reset, buttons would be better in momentary mode.

- Click the Screen Properties **momentary** check-box to make buttons momentary action.



All buttons on that button panel would become momentary

This property also applies to single buttons.

20.1.4. LED Colour

By default, LEDs in buttons are **grey** when the button is **up** (off) and **green** when **down** (on). Some important button functions may require a red LED, or an LED that changes colour.

To change the colour of an LED:

- Click in control properties **ledColourUp** or **ledColourDown** . A **colour chooser** panel will open.
- The **current** colour will be shown in the **preview** section. Select a new colour from the **swatches page** by clicking on the relevant tile. Notice how the **colour value** pops up as you point at the tile.

-
- The selected colour is displayed against the previous colour in the preview section.
 - Click **OK** to accept or **Reset** to reject.

 For consistency, use the colour swatches and note the colour values selected.

Grey is a better colour for **off** LEDs, rather than white.

20.1.5. Colours

Button panel **background** , **border** and **title** colours can all be modified.

- Click on the relevant control **colour properties** , a **colour chooser** will open directly or via an editing array.
- Select from **swatches** , or set via **HSB** or **RGB** .
- The selected colour is displayed against the previous colour in the preview section.
- Click **OK** to accept or **Reset** to reject.

 If an overall colour scheme is being created, it would be better to use **Style Sheets** , see [Chapter 27. Styles](#) , or **User Defined Controls** , see [Section 12.7. "Controls Palette"](#) . This would save a lot of repetitive modifications.

20.2. Sliders

Slider panels are composed of many significant elements: Slider, Up/Down buttons, Top button, Bar graph and Text box. All of these items can be modified to produce a unique slider.

20.2.1. Element Visibility

The following elements can be made **invisible** by clicking the relevant **check-box** :

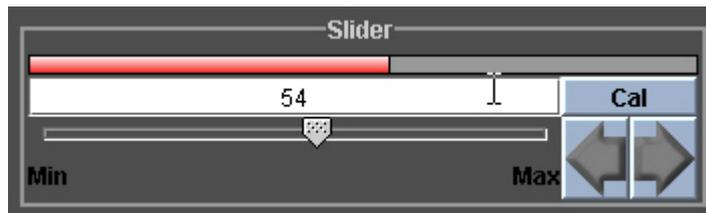
- **Bar graph** - this is a range-aid and is often used when the slider is not visible.
- **Slider** - in many situations a slider is necessary. Removing the slider element allows a more compact, space saving control.
- **Text Box** - this is the display that shows the slider value, and values can be typed into the box. Generally left in place.
- **Top Button** - by default is called the CAL (calibrate) button. Could be removed if there is no preset function required.
- **Up / Down Buttons** - most commonly used method of adjustment. Might not be needed if slider control was preferred.

20.2.2. Slider Horizontal

By default the slider is vertical, but a horizontal slider would suit a few operational requirements and fit some spaces.

- Click the slider horizontal check-box.
- Resize the slider panel to display all slider elements properly.

Figure 20.1. A Horizontal ViewNet Slider Panel



20.2.3. Top Button

By Default, this button is designated CAL for calibrate. But it may be renamed and given any value:

- Rename by changing **topButtonName** from CAL to your choice
- Revalue by changing the value in **topButtonValue**

☞ The topButtonValue must be within the slider range of values.

This value represents the value sent by the control, not necessarily the text value displayed by the text box.

20.2.4. Value Formulae

The values passed between the Slider Panel and the ViewNet Gateway are generally predetermined, but for many slider controls the operational unit, such as **lines** or **microseconds** , needs to be derived from the ViewNet values or needs converting to the ViewNet values.

- **Value / text formulae** - control the conversion of values for displaying in the slider text-box
- **value / range formulae** - control the conversion between slider positions and control values.

☞ By default, the range is 0-100, and conversion is 1:1 with no formulae present

TRY IT NOW

Drag a slider onto a new Virtual Screen page and enable Controls Clickable.

See how slider horizontal makes a significant difference to the appearance.

Experiment with different topButtonValues.

Type **val*2** into the value to Text formula property. See how the text box now displays twice the set value.

Examine the properties of some Physical Screen sliders (dragged from All Controls lists to a Virtual Screen) to see how conversion formulae are used.

20.2.5. Range

If a **limited adjustment range** is required, the slider's range can be modified and thus the range of values generated:

- **maximum** - sets the highest value possible. Standard control default is 100
- **minimum** - set the lowest value possible. Standard control default is 0

20.2.6. Colours

Slider panel **backgrounds** , **foreground** , **button image up / down** , **bar graph** , **border** and **title** colours can all be modified.

- Click on the relevant control **colour properties** , a **colour chooser** will open directly or via an editing array.
- Select from **swatches** , or set via **HSB** or **RGB** .
- The selected colour is displayed against the previous colour in the preview section.
- Click **OK** to accept or **Reset** to reject.



If an overall colour scheme is being created, it would be better to use **Style Sheets** , see [Chapter 27. Styles](#) , or **User Defined Controls** , see [Section 12.7. "Controls Palette"](#) . This would save a lot of repetitive modifications.

20.2.7. Text Format

Displayed values can be formatted for precision and clarity using the **textFieldFormat** property:

- **Decimal** adjustment - for example **##.##** will give two digits before and after the decimal point.
- **Units** suffix - **##.##'ms'** will add the units **ms** to the end of the numerical display. The **quote marks** delimit the text to be added.

20.3. Text Boxes

Text Boxes are used for displaying values received from modules as numerical or text Values derived from other ViewNet controls like sliders or button panels can also be displayed.

20.3.1. Values

Text box values can either be part of an array of values, such as from a status indicator or button panel, or a continuously variable value, such as a level or timing control.

- Array of values - via the editing array window - can be modified to exclude specific values from display if necessary
- Variable values - will by default be directly displayed in the text box. They can be formatted.

20.3.2. Labels

A **label** array is used to display text that relates directly to the incoming values.

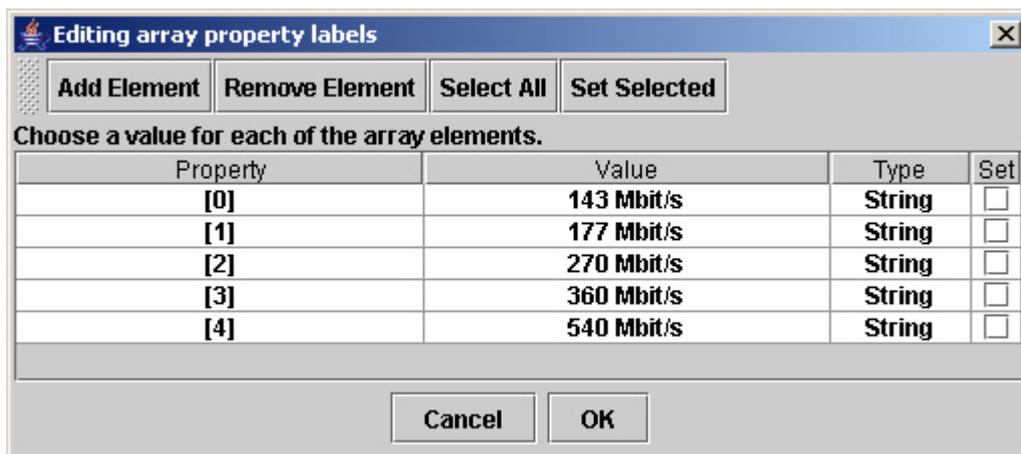
(**labelValues** is an array that by default is the same as the values array.)

- Clicking the **label** property will open the **editing label array** window
- Labels can be changed, copied, pasted and deleted as required. Click **OK**

☞ When modifying label arrays make sure that labels and values correspond correctly.

This process is similar to customising button panels in [Section 20.1.1, “Values and Labels”](#)

Figure 20.2. A typical Editing Array for labels



20.3.3. Text Box Size

By default, text boxes will be a set size. They may not be big enough for long strings of text or to properly display the box title. If the text string is too long for the width of the box, the box will **automatically enlarge** vertically to display two or more lines of text.

-
- For **long** text strings - increase the **properties size h** (height). Notice how the box title moves further above the box as the vertical size increases.
 - For **short** text strings or simple numerals - reduce the **properties size w** (width). This will save wasted space, but make sure there is still room for the title above the box.

 Box size needs to be set to cope with the **longest** string or value that will be displayed. An array may have a mix of long and short strings.

20.3.4. Colours and Text

Text Box colours and text size can be modified but **legibility** is most important!

20.3.5. Text Format

Directly displayed numerical values can be formatted for precision and clarity using the **textFieldFormat** property:

- **Decimal** adjustment - for example **##.##** will give two digits before and after the decimal point.
- **Units** suffix - **##.##'ms'** will add the unit **ms** to the end of the numerical display. The **quote marks** delimit the text to be added.

Chapter 21. Copying Pages and Screens

[Chapter 15, *Creating Virtual Screens*](#) deals with copying discrete controls to pages by dragging them from All Controls lists to Virtual Screens. The same method can be applied to whole Physical pages or screens. In this way all controls are copied in place and then can be removed or modified to suit.

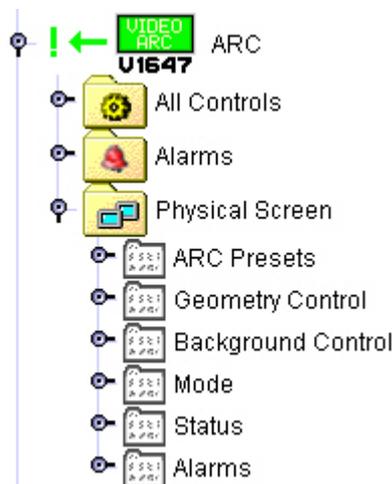
21.1. Preparation

Copying can be done pre-hardware or post-hardware installation but there are some differences.

- Create a **new Virtual Screen** using the Module Builder window icon or the Editor Virtual Screens icon.
- **Do not append any pages**
- **Resize** the screen to suit the incoming set of controls. Default Physical Screens are 940x200, 940x380 and 940x520 pixels.
- **Pre-hardware** installation - **hard links** to physical modules are **required** . If already created, locate the relevant hard-link in the Virtual Domain Editor tree and **expand** the hard link to reveal the contents of the Physical Screen folder.

If a hard link has not yet been created see [Section 15.4.1, “Creating a Hard Link to a module”](#)

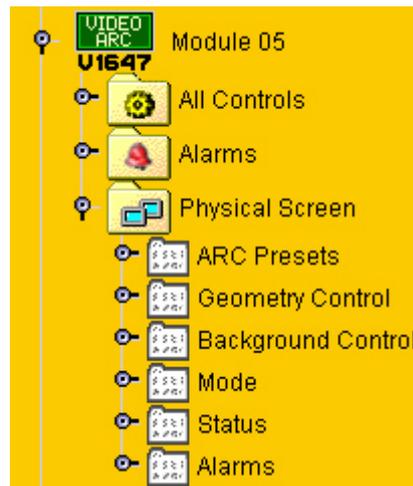
Figure 21.1. An expanded Hard Link



- **Post-hardware** installation - The **Physical Network** tree can also be used as a source of screens and pages. Open the Physical Network window, **expand** the tree to reveal the relevant module Physical Screen folder and its contents.

 Virtual Domain Hard Links can be used post-hardware installation. All controls copied will be **alias addressed** back to the hard-links. Therefore the hard links must remain in the Virtual Domain

Figure 21.2. An expanded Physical Network module



21.2. Copying Physical Pages

Pages can be copied from either the Virtual Domain **hard-link** or from the **Physical Network** if available.

- Select the page required - **click and drag** the page to the Virtual Screen's client area. A **greyed-out page tab** will appear.
- **Drop** the page. An exact copy of the page will be loaded onto the Virtual Screen.
- If the page is dropped onto an **existing** Virtual page, all controls will be copied but the page name will not change.

21.3. Copying Physical Screens

Physical Screens are complete sets of pages. They can **only** be copied from the **Physical Network** .

- Select the **Physical Screen** required, **expand** the Screen folder to reveal the **pages** .
- **Click and drag** the screen to the Virtual Screen's client area. A **greyed-out screen folder** will appear.
- **Drop** the screen. An exact copy of the screen will be loaded into the blank Virtual Screen.
- If the screen is dropped into an **already-populated** Virtual Screen, a complete set of new pages will be added.

21.4. Using the Screen Structure window to help

Copying whole pages or screens is a quick way of getting lots of module controls onto a Virtual Screen. However, selecting and working with these controls may be difficult when relying on the screen layouts only. The **Screen Structure** window, which shows the **contents** of the currently open screen, can be very useful in listing the whole screen's contents in an orderly fashion.

The Screen Structure window also allows **multiple** selections to be made. This makes mass deletion and modification much easier and quicker.

- **Multiple selection** - using normal GUI **ctrl** and **shift** techniques while **selecting** , blocks of controls can be simultaneously selected.
- The **control properties** window will show all **common** properties of those selected.

Chapter 22. Availability

Some Vistek modules have various hardware options or are able to operate under varying signal conditions. These options or conditions may require screen controls or pages of controls to change in operation depending on the circumstances.

Availability is built into the control data that is stored on the ViewNet Gateway for each control and is used to affect controls and pages on screens. Typically, controls or pages can be set to **hide** or be **disabled** .

For example:

- 525 and 625 Timing Controls - only one version of control is needed at any one time. Both controls are available on the ViewNet screen and they are layered, one on top of the other. Their availability properties are set so that they hide if not 525 or not 625. Therefore, only one control will show at any one time.
- Module Options - A Video Encoder may have a Frame Synchroniser option. If the option is not fitted to the customer's module, the relevant ViewNet pages are not required. Availability will ensure that those pages are hidden if the option is not fitted.

While availability data is fixed for each module, the resulting action taken is decided by the ViewNet Module Builder:

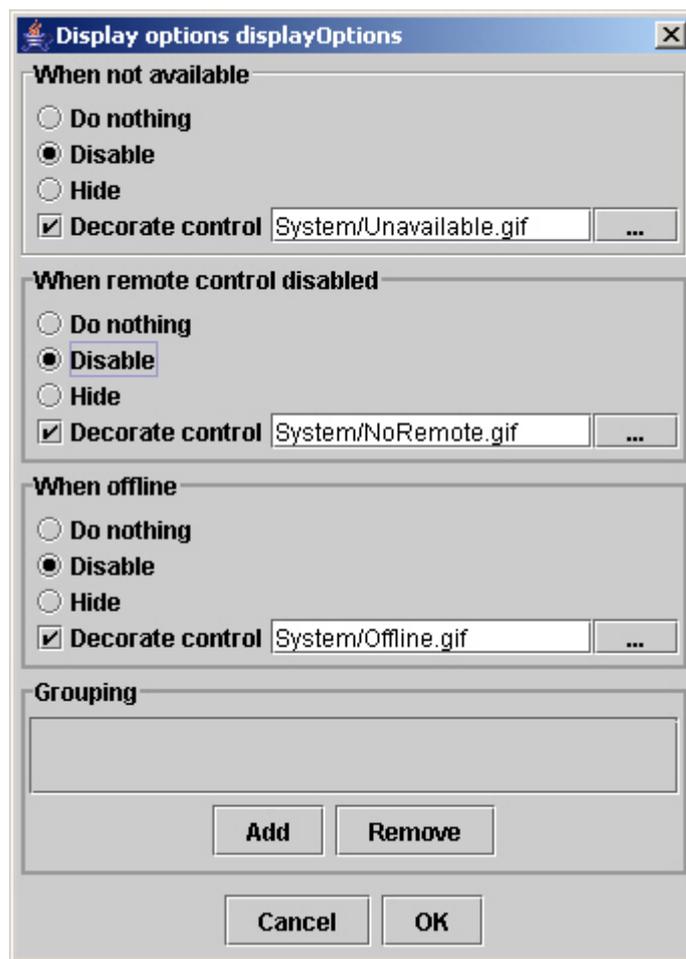
22.1. Setting individual control Display Options

Once a control has been identified as possibly affected by availability and has been placed on a Virtual Screen:

- **Select** the control by clicking on it on the page or by selecting it in the Screen Structure window.
- In **control properties** - click on **displayOptions** . The display options window will open.
- In the **when not available** section, click the required action - **do nothing** / **disable** / **hide** . The default is **disable** .
- If **decoration** ([Section 10.2.5, “Decoration icons”](#)) is not required, **un-check** the decoration check-box.
- Click **OK** . Then **save** the Virtual Screen.

 ALL controls are visible in Module Builder mode. They will only hide or disable when operational in the Virtual Domain.

Figure 22.1. The Display Options window



22.2. Hiding Pages under Availability

Virtual Screen pages do not normally have an address assigned. In order for a page to be affected by Availability it has to be assigned the address of a control on that page that will be affected by Availability.

- On the page to be hidden, select a control whose Availability you wish to follow.
- **Copy** that control's address from the **Control Properties address** box.
- Click on a **blank** part of the page. The page's properties will be displayed.
- Type or **paste** the control's address into the page's address box
- Click on **display options** . The display options window will open.
- In the **when not available** section, click **hide** .
- Click **OK** . Then **save** the Virtual Screen.

 This page will remain visible under the Module Builder.

22.3. Hiding Titled Boxes under Availability

Like pages, Titled boxes do not normally have associated addresses, but they are very useful for grouping controls together on the page. So if the controls are likely to hide then the box should hide too.

- Within the box to be hidden, select a control whose Availability you wish to follow.
- **Copy** that control's address from the **Control Properties address** box.
- Click on the titled box to select it. The box's properties will be displayed.
- Type or **paste** the control's address into the box's address box
- Click on **display options** . The display options window will open.
- In the **when not available** section, click **hide** .
- Click **OK** . Then **save** the Virtual Screen.

 This box will remain visible under the Module Builder.

Chapter 23. Grouping

Whereas Availability ([Chapter 22, Availability](#)) is governed by control data from the module file on the ViewNet Gateway, Grouping is a **local** display control option set up by the ViewNet user. Grouping uses **values** returned by one control to **modify** the display properties of one or more other controls or pages.

Typical uses might be; to disable a manual position control when another control is set to auto position, or a page of controls is hidden when a particular operational mode is selected.

There are three elements to take into account when grouping:

- The control that **causes the effect**
- The controls that are **affected**
- The grouper control that **coordinates and determines** the grouping effect.

The grouper control is available from the **standard controls** list and is hidden in normal operation on a Virtual Page.

23.1. The affecting control

This control **causes** the grouping effect, it is likely to be a button panel with a set array of values. It does not need to be modified, but its address and values are needed:

- Open the screen containing this control in the Module Builder.
- From the control's **properties** , copy its **address**
- Note down its **values** from the **values editing array** .

 It is also possible to drag the address from the Physical Network window

23.2. Setting up the affected control(s)

These are the controls that will be **affected** by the grouping action. They need to be included in the grouping effect.

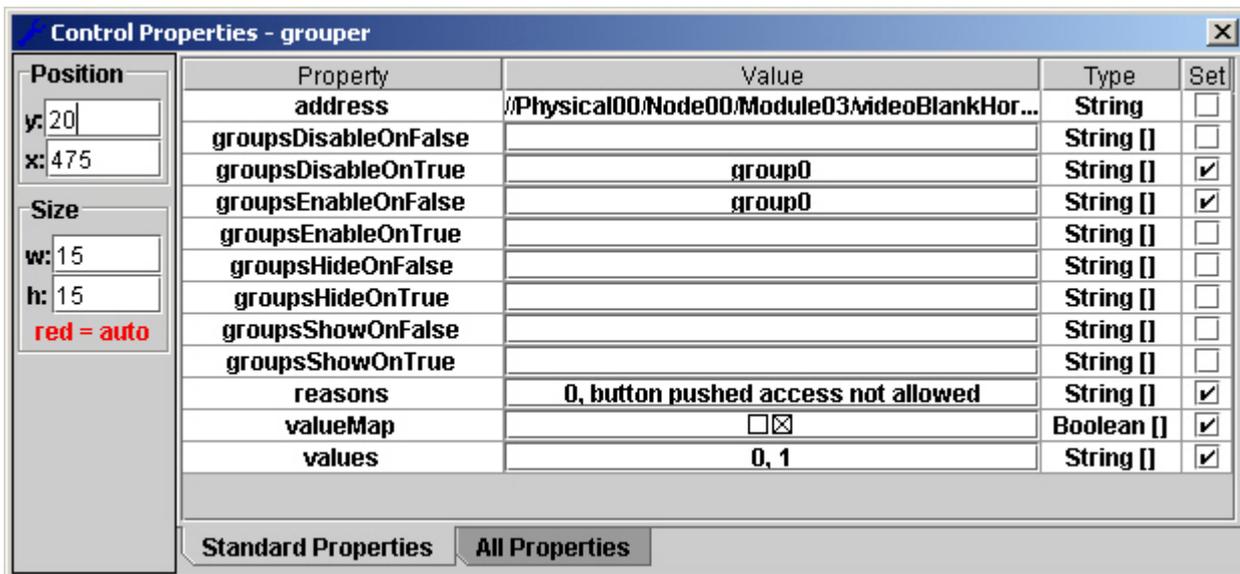
- Open the screen containing these controls in the Module Builder
- In the control's **properties** , click **displayOptions** to open the **displayOptions** window.
- In the **grouping** section, click **add** . A default group name will appear like **group0**
- Decide on a **unique name** for the group effect
- Replace the default name with the chosen name.
- Click **OK**

- Repeat this process for all controls to be affected

23.3. Setting up the Grouper Control

This control **coordinates** the grouping action by tying together the **address** , **values** and **group name** . It then decides the appropriate display action for that page.

Figure 23.1. The Grouper Control properties window



- From the **Standard Controls list** , drag the **grouper** control onto the Virtual Screen in the Module Builder

 The size and position of the grouper control is not important. Place it where convenient and logical

- Select the grouper control on the page to display the grouper control's properties.
- **Type** or paste the **affecting** control's address into the **address box**.

 It is possible to drag the address from the Physical Network window

- Click **values** , an **editing array** window opens. **Add** an element for **each value** of the affecting control.
- **Insert** the correct **values as noted** in [Section 23.1, "The affecting control"](#) . Click **OK**
- Click **value map** . **Add** the same number of elements as values.
- Select those values that will **cause** the grouping effect to happen. These are the **true** values. Click **OK**
- Click **reasons** . **Add** an element for each value and **text string** for each value that is **true** . Click **OK**

 These reasons will appear as **tooltips** on the affected controls. The 0 value will not show.

- Decide on the grouping action to happen on **true** - **disable, enable, hide or show** .
- Click on the required action in **properties** . An **editing array** window will open.
- **Add** one element, and type in the **name** of the group as decided in [Section 23.2, “Setting up the affected control\(s\)”](#) . Click **OK**
- Decide on the grouping action to happen on **false** - **disable, enable, hide or show**.
- Click on the required action. An **editing array** window will open.
- **Add** one element, and type in the **name** of the **group** as decided in [Section 23.2, “Setting up the affected control\(s\)”](#) . Click **OK**
- **Save** the Virtual Screen

23.4. Testing grouped controls

Grouping cannot be tested while the screen is in Module Builder mode. Clickable and Live modes will have their usual effect but controls will not disable or hide.

It will be necessary to place the Virtual Screen in the Virtual Domain and open it via the main ViewNet window. The relevant controls will need to be online - hardware connected - to be able to see the grouping effects.

 In the operational Virtual Screen you will not see the grouper control

23.5. Grouping Virtual pages

Even though Virtual pages are not addressed, they can still be included in grouping if a whole page needs to be hidden:

- Follow the procedures outlined in [Section 23.1, “The affecting control”](#) and [Section 23.3, “Setting up the Grouper Control”](#)
- Click on a blank part of the page to be grouped. The **page properties** will be displayed.
- In the page's properties, click **displayOptions** to open the **displayOptions** window.
- In the grouping section, click **add** . A default group name will appear like group0
- Replace the default name with the chosen group name.
- Click **OK**

23.6. Using multiple groups

23.6.1. One control with multiple groups

One control may be subject to a number of different grouping effects, all having different group names. The extra group names are added to the affected control's list and to the grouper control's editing array:

- In the affected control's properties, click on **displayOptions** to open the displayOptions window.
- Click **add** to add another group element.
- Type in the additional group name.
- Click **OK** .
- In the grouper control's **properties** , click on the desired grouping action to open the relevant **editing array** window.
- **Add** another element and type in the additional group name. Click **OK**

23.6.2. More than one grouper control per page

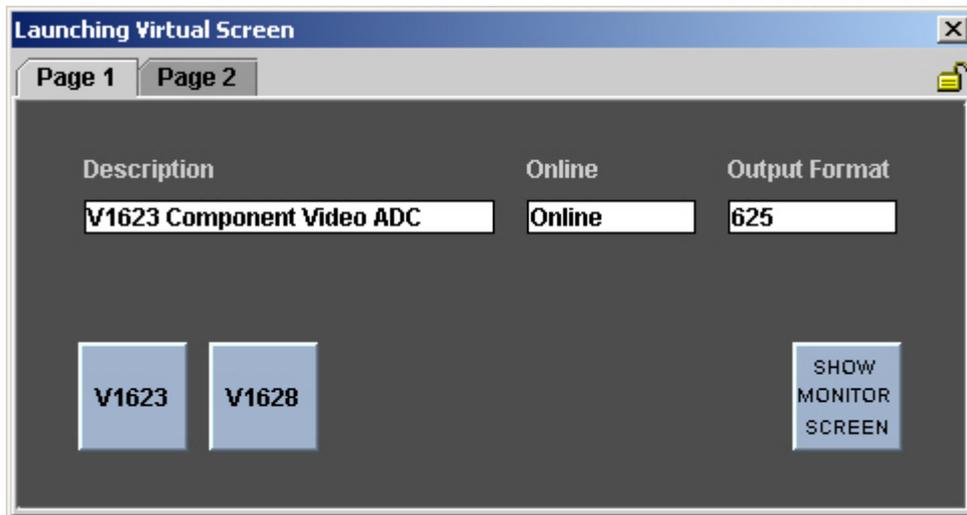
It is possible to have more than one grouper control on a page if there is more than one control creating a grouping effect.

- Drag another grouper control from the **Standard Controls** list.
- Follow the procedures outlined in [Section 23.1, “The affecting control”](#) , [Section 23.2, “Setting up the affected control\(s\)”](#) and [Section 23.3, “Setting up the Grouper Control”](#)

Chapter 24. Launching

ViewNet controls can be used to open new Physical or Virtual screens or to pass selected data to existing controls or screens. This is known as **launching** . With the use of **aliases** and other control **parameters** , screens can be made to behave in specific ways when launched.

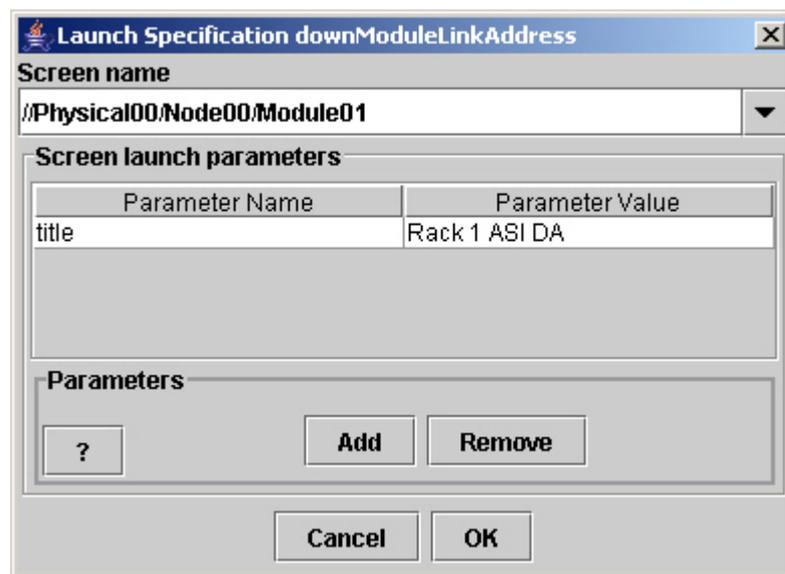
Figure 24.1. A Virtual Screen with 'launch' controls



24.1. Launching Screens using a standard control

ViewNet Module Builder can create a Virtual Screen that can act like a **control panel** for other screens. A standard button can then be used to launch other Physical or Virtual Screens. In most cases, the **Launch Specification window** is used to set up the launch parameters:

Figure 24.2. The Launch Specification window



 Clicking the ? in the Parameters section will bring up a window with all parameter options

-
- Create a **new Virtual Screen** . **Append** a page by right-clicking the client area.
 - From the **Standard Controls** list, drag a button onto the new Virtual page. It will have a default label and an LED.
 - In the **control properties** , click on **downModuleLinkAddress** . This opens up the Launch Specification Window.
 - In **Screen Name / Address** , type the address of the **Physical Screen** to be launched
 - Or
 - From the **drop-down** list, select one of the **Virtual Screens** listed
 - Click **OK** .
 - **Modify** the button as required - change the **label** , remove the **LED** , **resize** . See [Section 12.4, “Properties Panel”](#)
 - Repeat the above procedure for other buttons and screens.
 - **Name** the page if required by double-clicking on the page tab.
 - ☞ To leave a **blank tab** , delete the name and click OK.
 - Save the screen using **Save as** to give it a unique name.
 - The screen may be tested by using the **clickable** and **live** modes.

TRY IT NOW

It's easy!

Create a screen, drag a button, choose a module, enter its address and save. You can test it while still in the Builder.

Screens all opening on top of each other? See [Section 12.4.12, “Launch Position”](#)

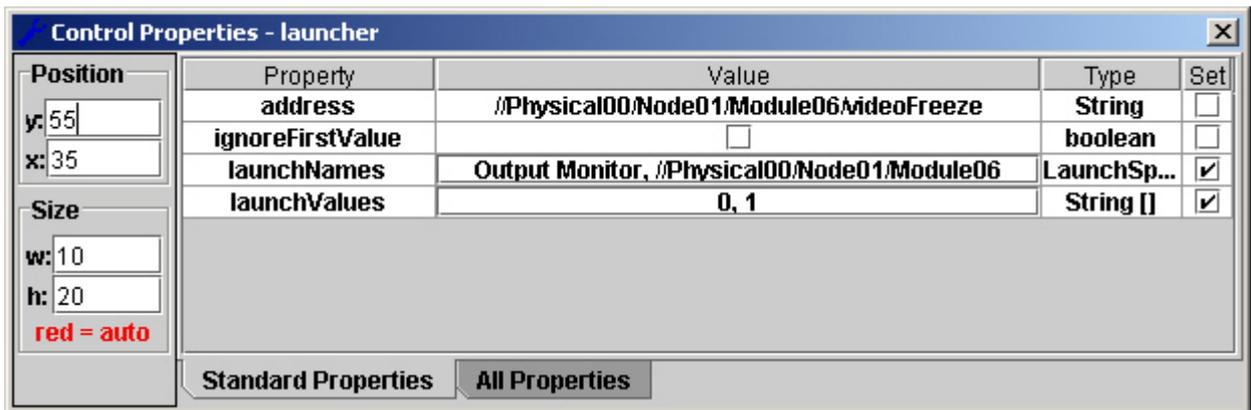
24.2. Launching Screens using a module control

Occasions may arise where, when a particular selection is made on a screen, another related screen opens.

For example; when an input to a device or switcher is selected, the screen relating to the source of that input signal is also opened.

The **launcher control** , available from the standard controls list, is used to provide this facility.

Figure 24.3. The Launcher Properties window



- Open or create the Virtual Screen that contains the control that will launch the additional windows
- From the **Standard Controls** list, drag the **launcher control** to the Virtual Screen
- Select the launcher control to display its properties in the control properties window.
- Type the **address** of the controlling control into the properties address box
 - ☞ It is also possible to drag the address from the Physical Network window
- If action is not required when the screen is first opened, click the **ignoreFirstValue** check-box.
- Click **Launch Values** , an editing array will open
- **Add** elements, and **values** to correspond with the control values that will open screens. Click **OK**
- Click **Launch Names** , an editing array will open
- **Add** enough elements to match the Launch Values above.
- Click on the **value** for each element. A **launch specification window** will open.
- In **Screen Name / Address** , type the address of the **Physical Screen** to be launched
- Or
- From the **drop-down** list, select one of the **Virtual Screens** listed
- Click **OK** .
- Repeat the process for the other values in the launch names editing array
- **Save** the screen.

☞ Like grouper controls, launcher controls cannot be tested in the Module Builder. A Virtual Domain entry must be made and the screen tested via the main ViewNet window.

24.3. Pointing new addresses to existing controls

Using aliases and launch parameters it is possible to create a screen or screens that contain a fixed set of controls but uses and displays the values from an operationally selected module.

For example; a rack of similar modules needs to be monitored in turn at the touch of a button. A Virtual Screen is created with a row of buttons, each corresponding to one module, and some text boxes displaying the module's status. Pushing a particular button will cause that module's status to be displayed in the text boxes.

This can be achieved all on one screen or using two separate screens.

24.3.1. Pointing new addresses to the same screen

- Create a **Virtual Screen** and **append** a page.
- Right-click and **Save As** to give the screen a unique name
- From the **Standard Controls** list drag the required (destination) controls to the screen
 -  A text-box for the module description or shortname is useful to identify the current module.
- In the properties **address box** , type a **unique alias** followed by the control name: such as **%mytest%/description**
 -  The alias %mytest% is being used as a substitute for the module address
- For each different module to be accessed, drag a button from the **Standard Controls** list to the screen.
- In each button's properties, click **downModuleLinkAddress** . A Launch Specification window will open.
- From the **Screen Name** drop-down list, select the Virtual Screen just created.
- Click **add parameters** .
- In the **Parameter Name** box, type the **alias** used above
- In the **Parameter Value** box, type the **hardware address** of each module.
 -  This is the hardware address of the module without any control name
- Click **OK**
- **Modify** each button as required - change the **label** , remove the **LED** , **resize** . See [Section 12.4, "Properties Panel"](#)
- **Modify** the destination controls as required - change the **label** , **title** , **resize** etc. See [Section 12.4, "Properties Panel"](#)

-
- **Save** the screen.



This screen cannot be fully tested in the Module Builder. A Virtual Domain entry must be made and the screen tested via the main ViewNet window.

If you have incorrectly addressed the destination control or it does not exist in the selected module, an **exclamation decoration** will appear when testing.

24.3.2. Pointing new addresses to a new screen

It may be preferable to have the selector and destination controls on separate screens. This is possible by making the selectors launch a new screen rather than their own screen.

For example; a rack of similar modules needs to be monitored in turn at the touch of a button. A Virtual Screen is created with a row of buttons, each corresponding to one module. Another Virtual Screen is created that contains all the required destination controls. Pushing a particular selector button will launch the second screen and cause that module's status etc. to be displayed.

The process is very similar to that used in [Section 24.3.1, “Pointing new addresses to the same screen”](#) except that a second screen is created for the destination controls.

- Create a **new Virtual Screen** and **append** a page.
- Right-click and **Save As** to give the screen a unique name. This will be the **destination** screen.
- From the **Standard Controls** list drag the required (destination) controls to the screen
- In the **properties address** box, type a unique **alias** followed by the control **name** : such as **%mytest%/description**



The alias **%mytest%** is being used as a substitute for the module address

- Create a second **Virtual Screen** and **append** a page.
- Right-click and **Save As** to give the screen a unique name. This will be the **selector** screen.
- For each different module to be accessed, drag a **button** from the **Standard Controls** list to the **selector** screen.
- In each button's **properties** , click **downModuleLinkAddress** . A Launch specification window will open.
- From the **Screen Name** drop-down list, select the **destination** Virtual Screen.
- Click **add** parameters.
- In the **Parameter Name** box, type the **alias** used above
- In the **Parameter Value** box, type the **hardware address** of each module.

 This is the hardware address of the module without any control name

- Click **OK**
- **Modify** each button as required - change the **label** , remove the **LED** , **resize** . See [Section 12.4, “Properties Panel”](#)
- **Modify** the destination controls as required - change the **label** , **title** , **resize** etc. See [Section 12.4, “Properties Panel”](#)
- **Modify** the destination screen's **Launch Position** as required. See [Section 12.4.12, “Launch Position”](#)
- **Save** the screen.

 These screens cannot be fully tested in the Module Builder. A Virtual Domain entry must be made for the selector and the screen tested via the main ViewNet window. The destination screen does not need to be in the Virtual Domain.

24.3.3. Using Physical Controls as destination controls

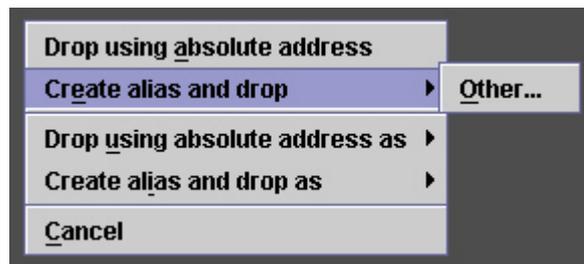
In [Section 24.3.1, “Pointing new addresses to the same screen”](#) and [Section 24.3.2, “Pointing new addresses to a new screen”](#) a control from the Standard Controls list was used as a destination control (to receive values from a selected module). It may be easier and quicker, in some instances, to use a Physical control from one of the modules to be selected as a **pattern with a pre-determined appearance** . The method is the same as outlined except:

- From the relevant **all controls** list in the Physical tree, click and drag the required control onto the destination page.

However, a further advantage is that by **right-clicking** and dragging the control from the Physical tree, an option is offered to create an **alias** and drop the control using that alias instead of its original address:

- From the relevant All Controls list in the Physical tree, **right-click and drag** the required control onto the destination page. A list of options will appear:

Figure 24.4. Physical control right-click-and-drag options

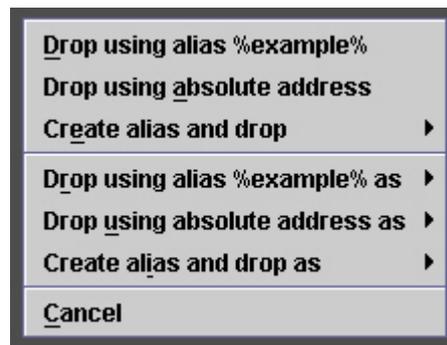


 If alternative System or Content names have been created for the module, then these names will be offered as aliases.

-
- Select **Create alias and drop** and then **other** . A **New Alias** dialogue window opens.
 - Type in a unique **alias** . You do not need the % symbols. Click **OK** .
 - Use this alias in the selector control's Parameter Value box - be sure to add % symbols.

If you have already created an alias from this module you will be offered the choice:

Figure 24.5. Physical control right-click-and-drag options with existing alias



24.4. Launch Parameters

Launch Parameters can be passed to Virtual Screens when they are opened via another control, or when directly opened via the main ViewNet window. The same set of parameters is used in both cases. Useful parameters include:

- **Child** - The launched window will be closed when the launching window is closed. No value needed.
- **Tag** - A unique identifier for the screen, used to allow the same screen design to be used multiple times.
- **Title** - An alternative title for the launched screen.

Click the ? symbol in the corner of the parameters window to reveal the full list and explanation of all possible parameters.

 In most cases, for new Launch Parameters to take effect, the **Virtual Domain must be saved** via the Editor window.

24.4.1. Launch Parameters in the Launch Specification window

This determines what happens when a Virtual Screen is launched **via a control** . The Launch Specification window is accessed via a control's properties:

- Select the relevant control on the Virtual Screen
- In the control **properties** , click **down** or **upModuleLinkAddress**
- The **Launch Specification** window will open

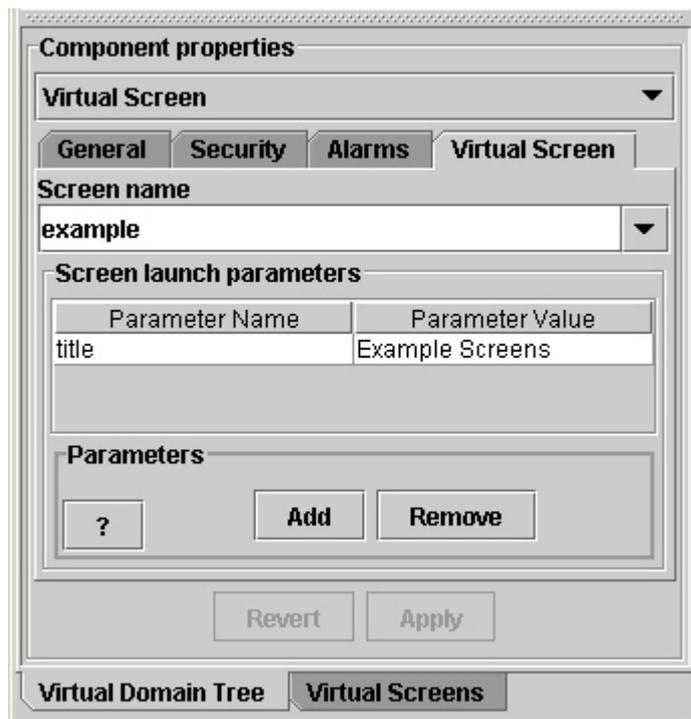
24.4.2. Launch Parameters in the Virtual Domain Editor window

This determines what happens when a Screen is launched **via the main ViewNet window** .

Virtual Screens, Hard Links and Symbolic links all have Screen Launch Parameters.

- In the **Virtual Domain Editor** , select the relevant Virtual Domain element
- In the Component Properties section, click the **Virtual Screen** or **Parameters** tab
- The **Screen launch parameters** section is available in the lower portion of the window.

Figure 24.6. The Virtual Domain Editor, Screen Launch Parameters



Chapter 25. Alarms

ViewNet Alarms are specifically tailored **events** used to identify, indicate and log critical conditions arising from operational errors or faults. A flexible and comprehensive monitoring system - the **Alarm Monitor** - is provided using visible and audible indicators.

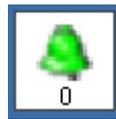
There are pre-defined **basic alarms** for most Vistek modules, accessed via Physical Screens, and **alarm controls** available for use in Virtual Screens. **Alarm logs** are available on Physical Screens and as controls for Virtual Screens.

If the **ViewNet Events Manager** licence (**VNSEV**) is held, **Custom Alarms** that respond to any defined event, may be created for both Physical and Virtual Screens. See [Section 25.3, “Custom Alarms”](#)

25.1. The Alarm Monitor

In the main ViewNet window, clicking the red bell icon -  - will launch the **Alarm Monitor**.

Figure 25.1. The Alarm Monitor (default appearance)



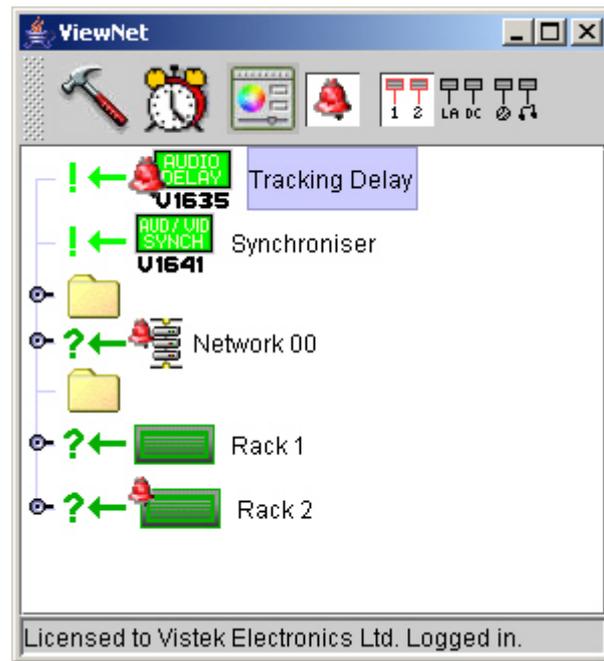
Upon an alarm being triggered:

- The bell image will **change colour** (by default, from green to red)
- A **warning sound** will be heard (if set)
- The numeral below the bell will indicate the **number of alarm events** occurring in the Virtual Domain
- A single or double-click on the bell will initiate pre-determined actions as defined in the Alarm Monitor Configuration. See [Section 25.1.2, “Alarm Monitor Actions”](#)

At the same time:

- Red bell indicators will appear attached to the Virtual Domain components that contain the triggered alarm.

Figure 25.2. The Virtual Domain with triggered alarms



➔ An alarm indicator will appear on every component that contains that alarm. So, a node or network component will have an indicator attached to show that an alarm has been triggered within it.

These indicators will also appear on components in the Virtual Domain Editor tree.

- A Red bell indicator will appear on the Physical Screen's Alarms page tab

Figure 25.3. Physical Screen Alarms tab - showing a triggered alarm



A number of alarm actions are available:

- **Point** at the **upper edge** of the alarm monitor to reveal a control bar
- Click the down arrow to reveal a **drop-down** list of options

Figure 25.4. Alarm Monitor drop-down options

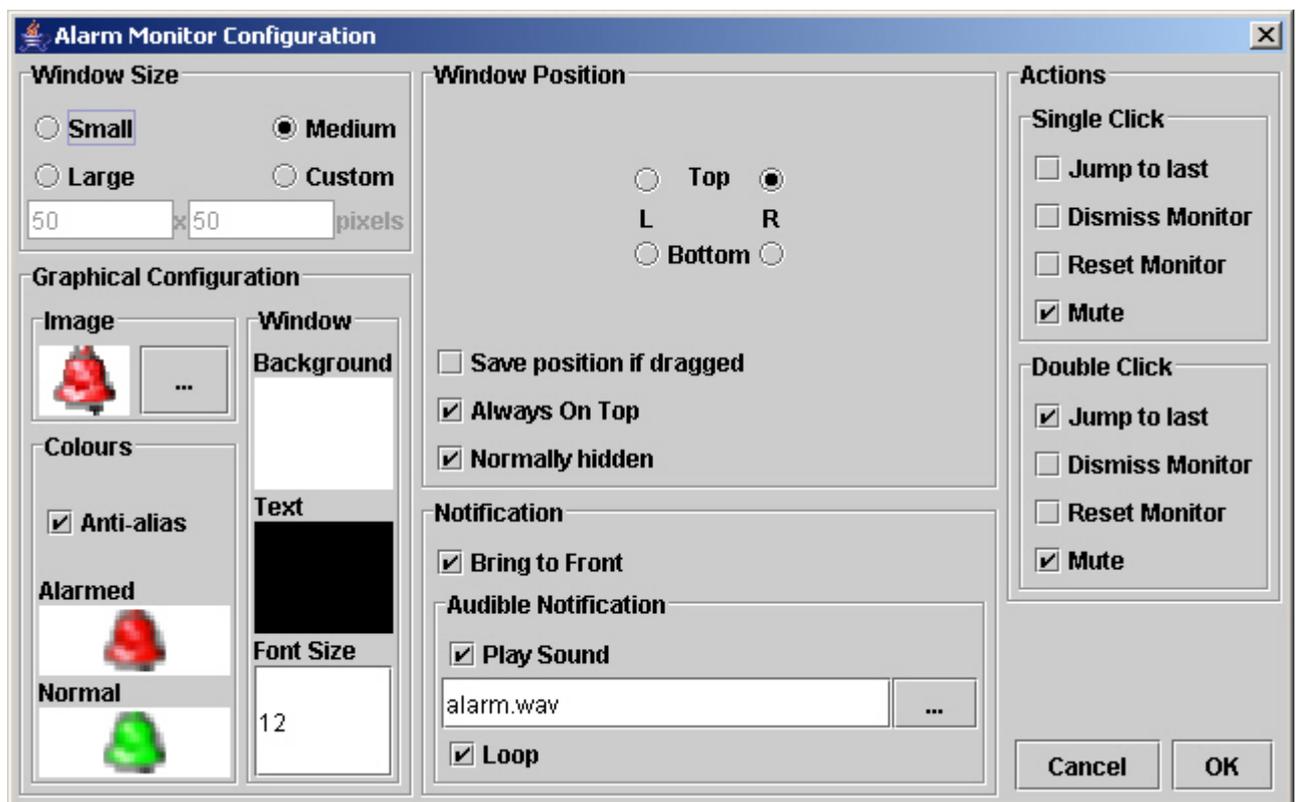


- **Mute** - will silence the warning sound. It will not reset the alarm.
- **Reset Monitor** - will reset the Alarm Monitor ready for the next event. It will not reset the alarm indication on the Virtual Domain or Screen.
- **Jump to last** - will highlight alarm's location in the ViewNet Virtual Domain. This identifies the module so that remedial action can be taken.
- **Options** - opens the Alarm Monitor Configuration window
- **Close** - closes the Alarm Monitor

25.1.1. Alarm Monitor Appearance

By selecting **options** from the Alarm Monitor the **Alarm Configuration** window is opened. Many options are available to control the monitor's appearance and behaviour on screen.

Figure 25.5. The Alarm Monitor Configuration window



25.1.1.1. Window Size

- **Small** (30x30) **Medium** (50x50) **Large** (70x70) - click to select
- **Custom** - click to select and type required size (in pixels)

25.1.1.2. Window Position

- **Top / Bottom, Left / Right** - click to select the default launch position
- **Save position if dragged** - select this option to make the alarm window launch in a specific position when ViewNet is started.
- **Always On Top** - select to make the Alarm Monitor always visible
 - ☞ If using this option make sure that the Alarm Monitor does not cover any important screen/window function, such as a close icon.
- **Normally hidden** - with this option selected, the Alarm Monitor will automatically appear when an alarm is triggered. De-selecting this option means the Alarm Monitor will only appear if manually launched.

25.1.1.3. Graphical Configuration

- **Image** - click the file selector icon -  - to choose an alternative alarm image
- **Colours** - clicking the images will open a **colour-chooser** . Select the required **alarmed** or **normal** colour and click **OK** . De-selecting **Anti-alias** will remove the smoothing effect from the image.
- **Window** - clicking the coloured panels will open a colour chooser. Select the required **background** or **text** colours and click **OK** . Click in the **Font Size** box to type in a new value.

25.1.1.4. Notification

- **Bring to Front** - If **Always On Top** is **not** selected, this option will bring the Alarm Monitor to the front of any other window.
- **Audible Notification** - Select **Play Sound** to hear a warning sound. Click the **file selector** to choose an alternative sound file or type a full web address to a .wav file on a remote site, such as: **http://www.mysite.com/myaudionotifiaction.wav** . Select **loop** to make the sound repeat.

25.1.2. Alarm Monitor Actions

For a quick response to an alarm, **single** or **double-clicking** the Alarm Monitor image will initiate pre-determined actions. There are a number of options available:

- **Jump to last** - will highlight alarm's location in the ViewNet Virtual Domain. This identifies the module so that remedial action can be taken.
- **Close Monitor** - closes the Alarm Monitor window.
- **Reset Monitor** - will reset the Alarm Monitor ready for the next event. It will not reset the alarm indication on the Virtual Domain or Screen.
- **Mute** - will silence the warning sound. It will not reset the alarm.

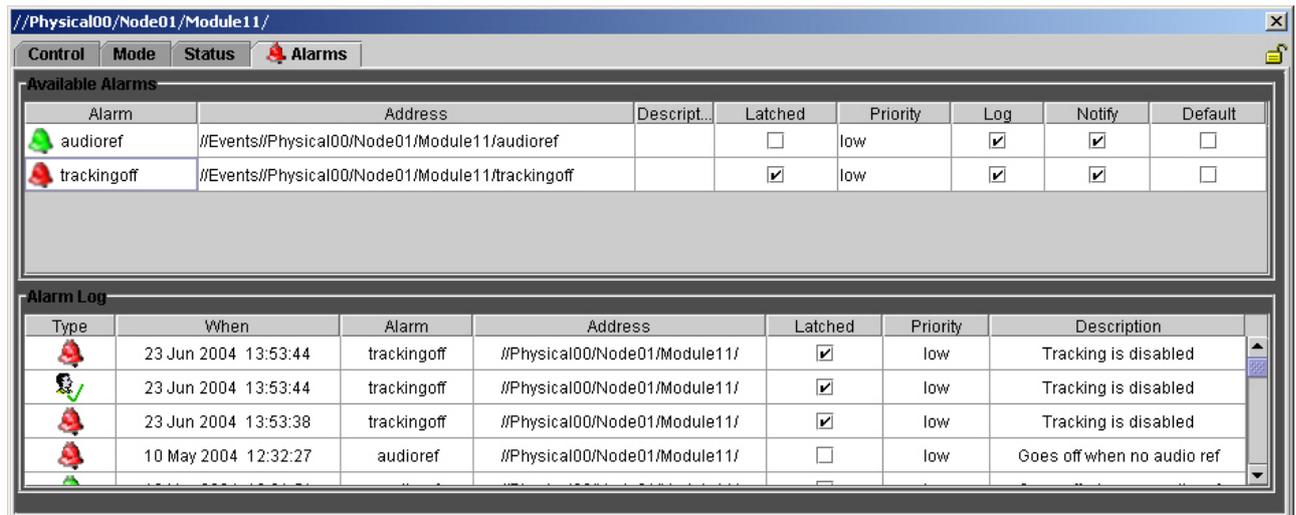
25.2. Basic Alarms

All ViewNet Physical Screens have an Alarms page that shows all Available Alarms for that module and an Alarm Log listing all recent alarm events.

Alarm controls and alarm table controls are available for incorporating Alarms into Virtual Screens

25.2.1. Alarms Page on a Physical Screen

Figure 25.6. A typical Physical Screen Alarms page



25.2.1.1. Available Alarms

The Available Alarms table lists all Alarms that exist for this specific module:

- **Bell Icon - Red** indicates the alarm has been **triggered** and not yet reset. If the **latched** option is selected, **click** this icon to **reset** the alarm.
- **Alarm** - This is the title used as a label for the Alarm Control
- **Address** - The physical address of the Alarm Control
- **Description** - Text used to describe the alarm action. It is used as a **Tooltip** for the Alarm Control.
- **Latched** - Select this option to keep the alarm indication running even after the alarm condition has been resolved. **Click the bell icon to cancel the alarm.**
- **Priority** - Clicking in this box reveals a drop-down list - **Low, Medium, High** . Alarm events may then be sorted by priority in the Alarms Log.
- **Log** - Select this option to log this specific alarm's events in the **Alarms Log**
- **Notify** - Select this option to launch the Alarms Monitor. If left un-selected, the alarm event will only be logged.

-
- **Default** - Sets Latched, Priority, Log and Notify to a default setting defined in the **Alarms / Events Manager** . See [Section 25.3.2, “Alarms Configuration”](#)

25.2.1.2. Alarm Log

If the **Log** option is selected, every alarm event for this module is recorded here. By default, alarm events are listed in date and time order.

- **Click** on a **column heading** to **re-order** the whole list using the selected data column.
- **Right-click** on the log to select the **Clear log** option.
- **Type** -  - an alarm has been **triggered** .  - an alarm has been **cleared** .  - a **latched alarm** has been **cleared** by an operator. Pointing to this icon will reveal a tooltip indicating who cleared the alarm.
- **When** - The date and time of the alarm event.
- **Alarm** - The alarm control name
- **Address** - The address of the module
- **Latched** - Indicates if the alarm was latched.
 -  With a latched alarm, the log entry will show when the alarm indication was cleared, NOT when the alarm condition was cleared.
- **Priority** - Alarm events may be re-ordered by priority.
- **Description** - The alarm action.

TRY IT NOW

From the Virtual Domain open a Physical Screen for a module.

Go to the Alarms page and choose an alarm that can be easily triggered via the ViewNet Screen - for instance a 'no reference' alarm.

Experiment with the different settings - Latched, Log, Notify and Default.

Also experiment with the various Alarm Monitor options.

 Make a note of any settings you alter so they can be restored when you are finished!

25.2.2. Building Alarm Controls and Tables into Virtual Screens

25.2.2.1. Alarm Controls

Alarm Controls may be added to Virtual Screens to give a local indication of an alarm having been triggered.

Virtual Screens containing Alarm Controls may be created using the same process as described in [Chapter 15, *Creating Virtual Screens*](#) .

- Open the **Physical Network** tree to reveal the relevant module.
-
- Open the **Alarms** folder -  - to reveal the list of alarm controls.
- **Click and drag** the required control to the Virtual Screen

 Notice in the control's Properties window that it has a special address.

For example - `//Events//Physical00/Node01/Module11/audioref`

Standard and **User Defined** Alarm controls ([Section 12.7, “Controls Palette”](#)) may also be used:

- **Click and drag** the Alarm Control from the **Controls Palette window** to the Virtual Screen
- **Address** the control by typing, or dragging the address from the Physical Network, into the Properties **address** box.

25.2.2.2. Alarm Tables

Available Alarms and **Alarm Logs** are available as controls from the Controls Palette Standard Controls list.

By careful manipulation of their Address properties they can be made to list a specific selection of alarms and events:

 These control's address properties are actually **value arrays** - they may hold a number of different addresses. These arrays may be 'loaded' simply by dragging addresses from the Physical Network onto the properties `logAddress` or `alarmAddress` boxes. The arrays will be filled automatically.

- **Click and drag** the **alarmTable** control -  - from the Controls Palette to the Virtual Screen.
- For the table to list a specific module's alarms, **click and drag** that **module address** from the Physical Network to the Properties **alarmAddresses** box.
- Repeat this for any other module whose alarms also need to be in the same list.
- You may **check** or **remove** addresses by clicking on the **alarmAddresses** box to open the **alarmAddresses editing array** .

Alarm Logs may be addressed so that they display specific module events, or all events within a node (rack) or within a whole network. Alarm events may then be filtered so that only specific alarms are logged.

- **Click and drag** the **eventLog** control -  - from the Controls Palette to the Virtual Screen.
- For the log to list a specific module's events, **click and drag** that **module address** from the Physical Network to the Properties **logAddresses** box.
- Repeat this for any other module whose alarm events also need to be in the same list.
- For the log to list all **alarms events within a node** (rack), click and drag the relevant **node icon** to the **logAddresses** box
- For the log to list all **alarms events within a network** , click and drag the relevant **network icon** to the **logAddresses** box
- You may **check** or **remove** addresses by clicking on the **logAddresses** box to open the **logAddresses editing array** .
- To show specific alarm events only, click on the **eventFilters** box to open the **eventFilters editing array** .
- Enter the **names of the alarms** that you wish to be displayed only.

TRY IT NOW

Create your own alarm screen!

In the Module Builder, Create a Virtual Screen.

Locate an existing alarm control (for instance, a 'no reference' alarm) in the Physical Tree window and drag it to the new screen.

Save the screen and place it in the Virtual Domain. See [Chapter 16, Placing Screens in the Virtual Domain](#)

Launch your new alarm screen and the Physical Screen that will be used to trigger the alarm.

Alter the reference to trigger the alarm and wait for the bells and whistles!

Experiment with adding an Alarms Table and Log.

25.3. Custom Alarms

While ViewNet is supplied with a number of predetermined alarms which can be used for Virtual Screens, it is possible to create alarm controls derived from existing ViewNet controls, that trigger on user-defined conditions.

For example: An audio delay module is used to permanently track and adjust an audio delay. If the tracking function is disabled on the module or ViewNet Screen, an alarm is triggered to alert the operator. To achieve this a ViewNet Alarm control is created that **monitors the values returned by the tracking enable/disable control** . If the value changes to the 'disable' value, the alarm is triggered.

A Custom Alarm is created and managed using the Alarms / Events Manager.

 This option is only available if the Events Manager licence (VNSEV) is held.

- In the main ViewNet window **click on**  to launch the **Events Manager**
- **Click** on the **Custom Alarms** tab

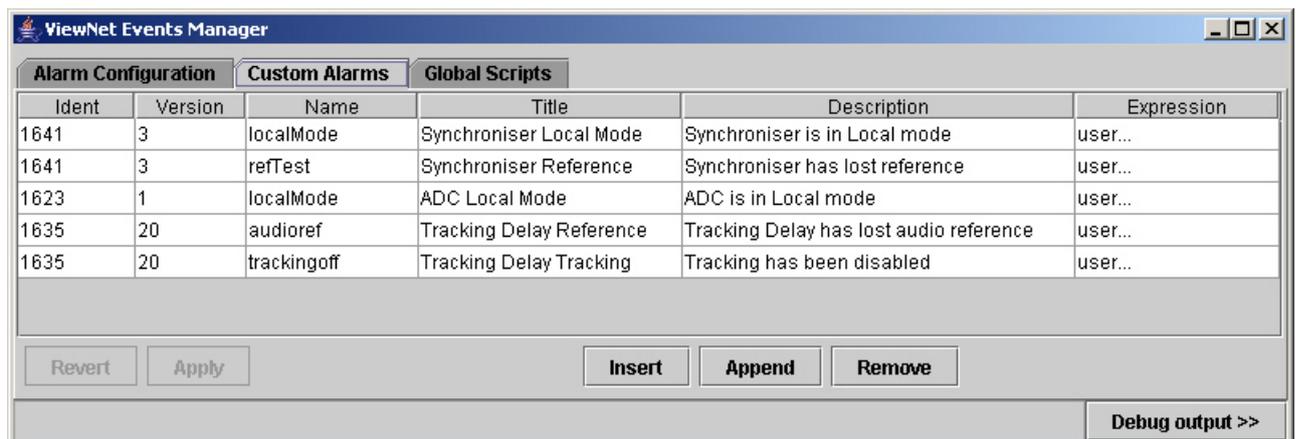
25.3.1. Creating Custom Alarms

There are two elements to creating a Custom Alarm:

- **Identify** the control to be monitored
- Set the **expression** that detects the alarm condition

25.3.1.1. Custom Alarms page

Figure 25.7. Events Manager - Custom Alarms page



Ident	Version	Name	Title	Description	Expression
1641	3	localMode	Synchroniser Local Mode	Synchroniser is in Local mode	user...
1641	3	refTest	Synchroniser Reference	Synchroniser has lost reference	user...
1623	1	localMode	ADC Local Mode	ADC is in Local mode	user...
1635	20	audioref	Tracking Delay Reference	Tracking Delay has lost audio reference	user...
1635	20	trackingoff	Tracking Delay Tracking	Tracking has been disabled	user...

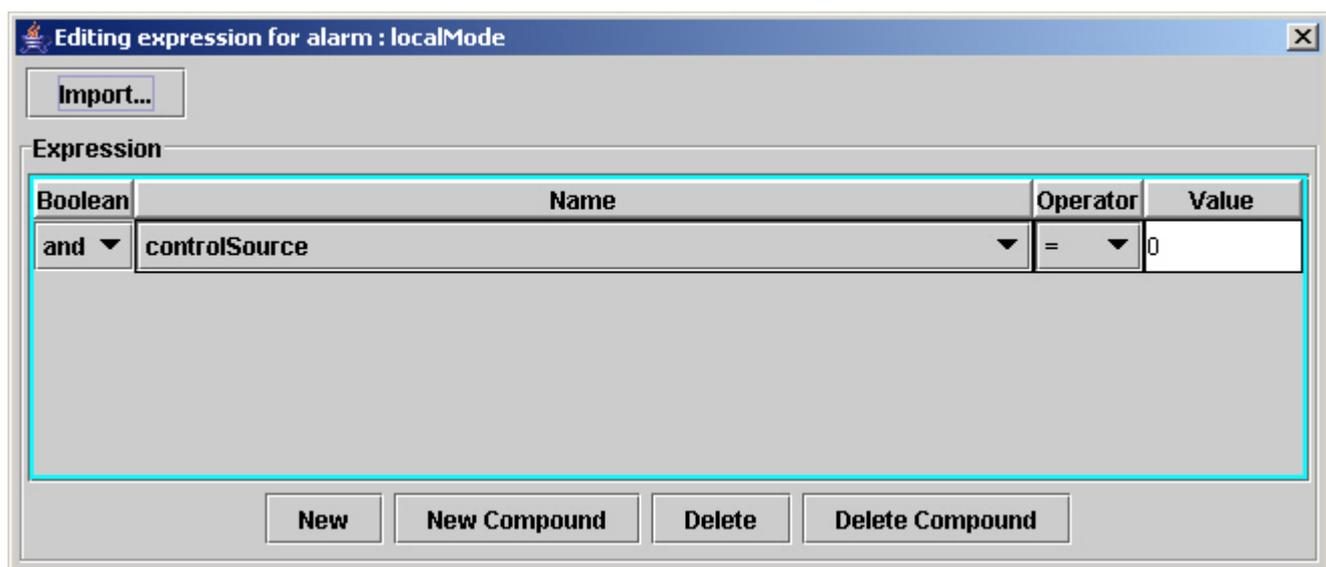
- Click **Append** to create a new entry

 Insert will place the new entry above the currently selected alarm

- Click in the **Ident** box to reveal a drop-down list of all modules. Scroll and select the required module
- Click in the **Version** box to reveal a drop-down list of all relevant FRS numbers for that selected module. Scroll and select the required FRS number.
- Type into the **Name** box a unique name for the new alarm control.
 - ☞ If other alarms exist for the selected module they will be presented as a drop-down list
- Give the alarm a title by typing into the **Title** box. This title will be used as the **control title** on virtual screens.
- Give the alarm a description by typing into the **Description** box. This text will be used as a **tooltip** on virtual screens.
- **Double-click** in the **Expression** box to open the Editing Expression window.

25.3.1.2. Custom Alarms Expressions

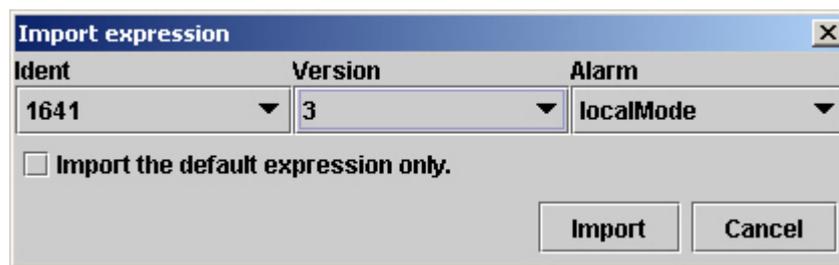
Figure 25.8. Editing Expression window



- Click **New** to create a new entry
 - ☞ An alarm can be triggered by a **combination of events** - each will have their own entry in this list
- **Boolean** - A drop down list of **logical operators** used to determine the alarm conditions. If just one expression is used, then **and** is OK.
- **Name** - Click to reveal a drop-down list of **all controls** for this particular module. Scroll and select.
- **Operator** - Click to reveal a drop-down list of **mathematical operators** used in the control value expression.

- **Value** - Type in the value that will be used to trigger the alarm.
 - ☞ This value may be a fixed value as from a button panel, a continuously variable value as from a slider control.
- Click the **close** icon - you will be prompted to **save** the expression.
- Use **Import** to use an expression from an **existing alarm** . Click this option to open the **Import Expression window** where a specific alarm may be selected. Use the drop-down selectors and click **Import** .

Figure 25.9. Import Expression window



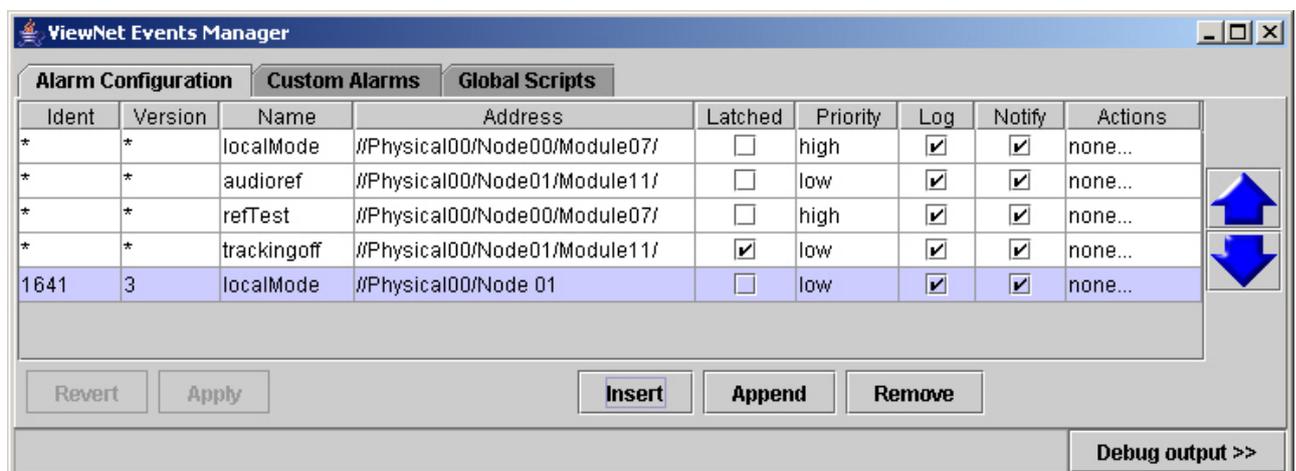
- Use **New Compound** to add an expression as a **subset of the previous expression** .
- Click **Apply** to **save** the new or modified expression.

25.3.2. Alarms Configuration

Having created a Custom Alarm it will be automatically added to the Alarms Configuration page along with ALL other alarms.

On this page the **SAME** alarm may be configured for a **number of different physical locations** and to have differing settings.

Figure 25.10. Events Manager - Alarm Configuration page



- Use **Ident** and **Version** to select a specific module. Use the * option to make it globally applicable to all modules and versions (FRS).

-
- **Name** is a drop-down list of all predetermined and Custom alarms. Use the * option to apply the settings to all alarms.
 - **Address** - Type in an address to limit the alarm to a specific **Network, Node or Module**.

In the **Available Alarms** list ([Section 25.2.1.1, “Available Alarms”](#)) on a Physical or Virtual Screen, the **Default** setting refers to the following settings:

- **Latched** - Select this option to keep the alarm indication running even after the alarm condition has been resolved. **Click the bell icon to cancel the alarm.**
- **Priority** - Clicking in this box reveals a drop-down list - **Low, Medium, High** . Alarm events may then be sorted by priority in the Alarms Log.
- **Log** - Select this option to log this specific alarm's events in the **Alarms Log**
- **Notify** - Select this option to launch the Alarms Monitor. The alarm indication on the Virtual Domain tree will still happen regardless of this setting.
- **Action** - If **none...** then only normal notification and logging will take place. If **user...** then a **script** has been written to perform other functions upon triggering of the alarm. Double-click this box to launch the **editing actions** window. See [Section 26.2. “Scripting Overview”](#)



For further documentation on ViewNet scripting and the Editing Actions window please contact [Vistek Ltd](http://www.vistek.tv) [http://www.vistek.tv] .

- Click **Apply** to **save** the configuration.
- **Debug output** - Opens the **Event Manager Debug Output** window - a blank window into which the script **print** and **println** functions will print data or messages. This window is used to test that a script is running correctly during editing, it is not a ViewNet operational window. The Debug window will also display script error messages.

TRY IT NOW

Create a Custom Alarm!

Select a simple ViewNet control from a module - such as an 'enable/disable' or 'on/off' control. This will have just two values, probably 0 and 1.

Using the Alarms / Events Manager Custom Alarms page, create an alarms entry for this control.

Set the Expression to **(selected control) = 1** . This is likely to be the non-default value, so the alarm will be triggered when the button is operated.

Don't forget to **Apply** your settings.

Close the screen and re-launch it.

Test your alarm - you may need to set the **Notify** option to see and hear the Alarm Monitor.

Chapter 26. Global Scripts Overview

While Custom Alarms are ViewNet events tailored to launch under alarm conditions, Global Scripts are ViewNet events that may be launched at any time, or may be running continuously, to generate a variety of internal and external system actions - including the operation of ViewNet Controls. A script may be a simple one-line instruction or a complex multi-line sequence that retrieves data, processes it and performs a number of actions.

For example:

- One Slider control on a Virtual Screen is used to alter the value of both horizontal and vertical position controls on a module at the same time. A Global Script is written to pass the Virtual Slider's values on to both position controls continuously.
- A button on a Virtual Screen is used to output the status of an alarm to an e-mail, file or printer. A Global Script addressed by the button generates the data output.
- An LED on a Virtual Screen lights up when a slider control is pushed beyond a certain value. A Global Script monitors the slider's value and outputs a value to the LED to make it change colour.

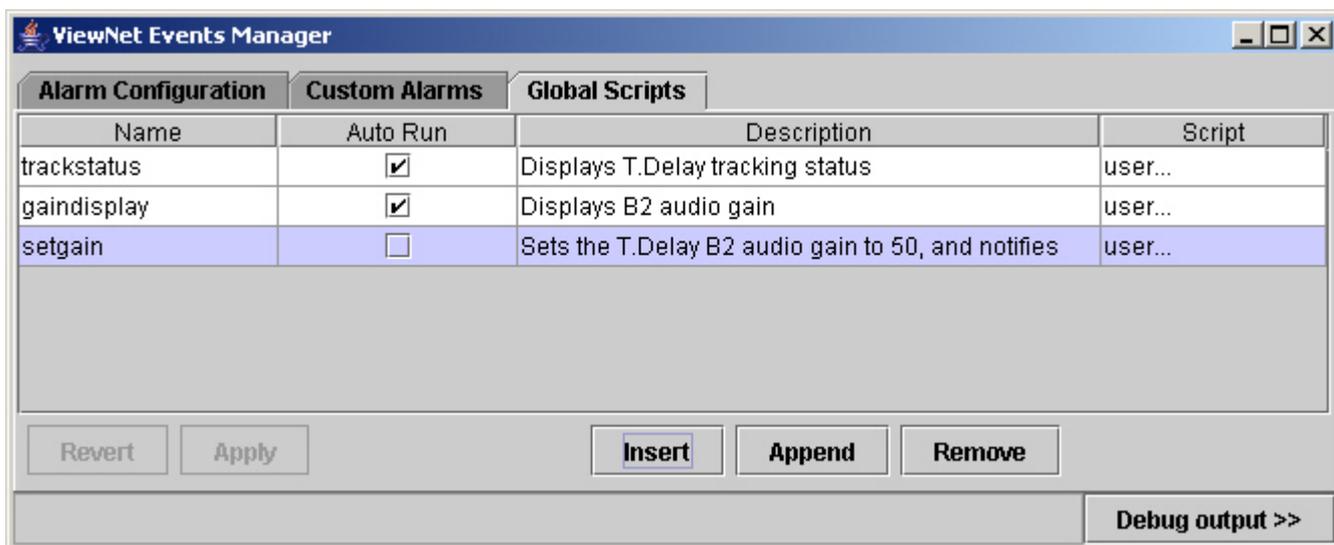
26.1. Creating Global Scripts

Global Scripts are accessed via the ViewNet Events Manager:

26.1.1. ViewNet Event Manager

- In the main ViewNet window **click on**  **to launch the Events Manager**
- Click on the Global Scripts page tab.

Figure 26.1. Events Manager - Global Scripts page



-
- **Insert / Append / Remove** - Use these buttons to add or delete a script entry from the list
 - **Name** - Type in a unique name for the new script. This is the name used when addressing scripts.
 - **Auto Run** - Check this box to make the script run continuously. When un-checked the script will only run when called by a ViewNet control (button / slider).
 - **Description** - Used to provide a description of the script action.
 - **Script - none...** Implies there is no associated script. **user...** implies that a script has been written. **Double-click** this box to access the **Editing Global Script** window. See [Section 26.2, “Scripting Overview”](#)
 - **Apply / Revert** - Use these buttons to save the new or modified script or to revert to previous settings.
 - **Debug output** - Opens the **Event Manager Debug Output** window - a blank window into which the **print** and **println** functions will print data or messages. This window is used to test that a script is running correctly during editing, it is not a ViewNet operational window. The Debug window will also display script error messages.

26.1.2. Applying Global Scripts

All scripts are stored in a location with the following (typical) address: `//Scripts/myscript` .

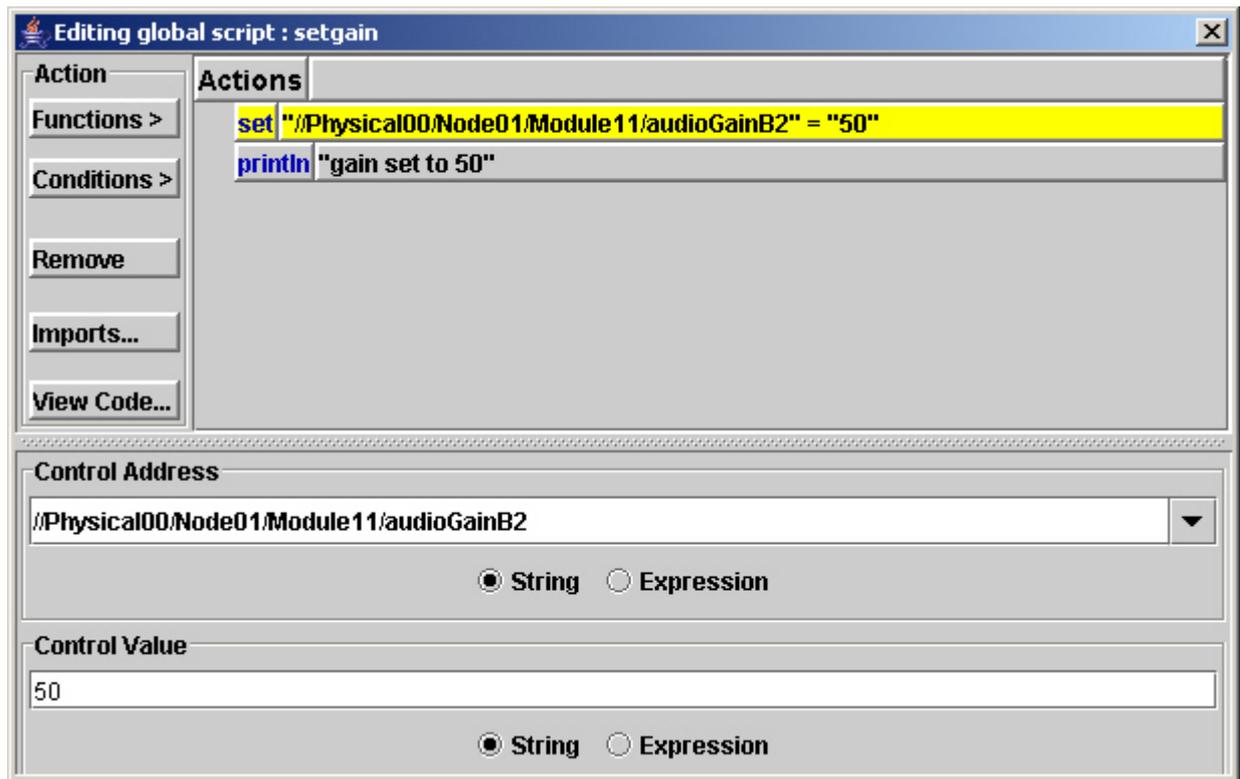
- For a Global Script to be run by the action of a custom control, the **script address** needs to be entered into to control's **Properties Address** using the Module Builder.
- For a Global Script to 'monitor' the values returned by a ViewNet control, the script **get** function is pointed at that control's address. The script should be set to Auto Run.
- For a Global Script to set the value of a ViewNet control, the script **set** function is pointed at that control's address.

26.2. Scripting Overview

Global and Alarm Action scripts use the same basic window for creating and editing the script code:

- For **Alarm Actions** , double-click the **Action** box in the Events Manager for the relevant Alarm.
- For **Global Scripts** , double-click the **Script** box in the Events Manager for the relevant Global Script.
- The appropriately titled **Editing** window will open.

Figure 26.2. (Script) Editing window

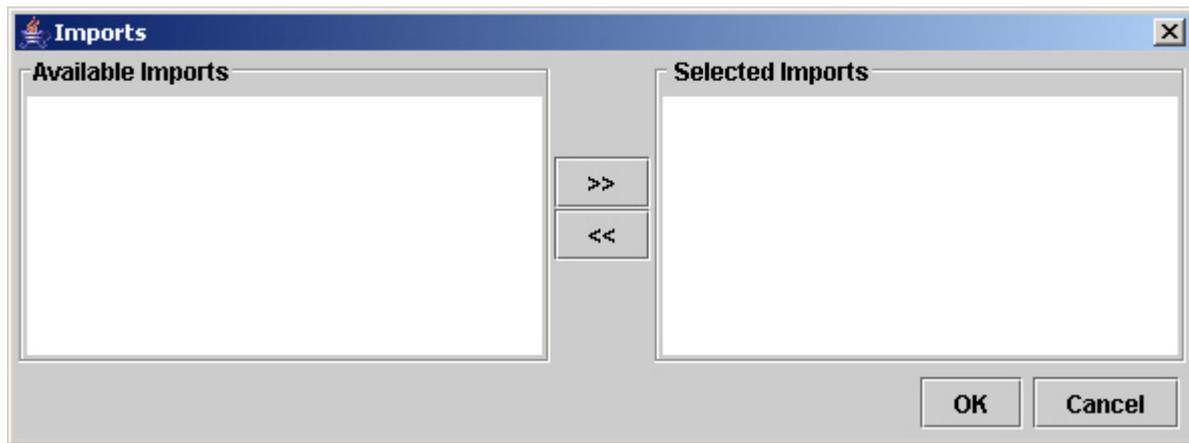


The code created is based on the Simkin scripting language (www.simkin.co.uk [http://www.simkin.co.uk]). This is a C-like embedded language for use with Java. The Editing window is a Vistek designed GUI that presents all script elements in an easily accessible format.

The five buttons on the left of the Editing window give access to all required script and editing functions:

- **Functions** - offers a drop-down list of script functions, such as: **e-mail, print, get, log**
- **Conditions** - offers **if** and **else** condition functions
- **Remove** - click this button to **delete** the selected element (highlighted in yellow)
- **Imports** - opens the **Imports** window which allows the transfer of scripts between systems

Figure 26.3. Script Imports window



- **View Code** - opens a window showing the script code generated by the Editor.

When a **function** or **condition** is selected, the element is inserted in the main **Actions** area of the window below the element currently highlighted in yellow. If a **condition** is inserted then a new Actions section is created as a sub-set.

The lower portion of the Editing window will display the parameters associated with the selected element. These parameters vary according to the element selected. These parameters may include: Strings, expressions, addresses, control names and variable names etc.

All script elements have the option to attach a **comment** (text for clarification) to the entry. This appears in the box beside the element name. If a comment is not added then data associated with that element may be displayed instead.

- **Close** the Editing window by clicking the window **close icon** - you will be prompted to **save** the script.

 For further documentation on ViewNet scripting and the Editing Actions window please contact [Vistek Electronics Ltd](http://www.vistek.tv) [<http://www.vistek.tv>] .

Chapter 27. Styles

The appearance of ViewNet controls can be modified on an individual basis, but this would be time-consuming if a global look was required. The **Stylesheet Editor** enables the user to modify the overall appearance of ViewNet controls and pages on a user-by-user basis. Colours, borders, text size and alignment and opacity can all be modified.

- **Login** to ViewNet from the ViewNet Home page. The ViewNet window opens.
- Click the **Stylesheet Editor icon** at the top of the window. A **Choose Stylesheet** dialogue window opens.

 If the icon is greyed-out - you do not have permission to access the Stylesheet Editor

- There are two levels of Stylesheet accessible - **User** or **System** . Select the required level. Click **OK** .

Figure 27.1. The Choose Stylesheet dialogue box



27.1. System Stylesheet

The System Stylesheet modifies **all controls and pages for all users** . This option would be used if a global style had been agreed.

 Do not use this option unless you are sure - other user's pages and controls will be affected.

27.2. User Stylesheet

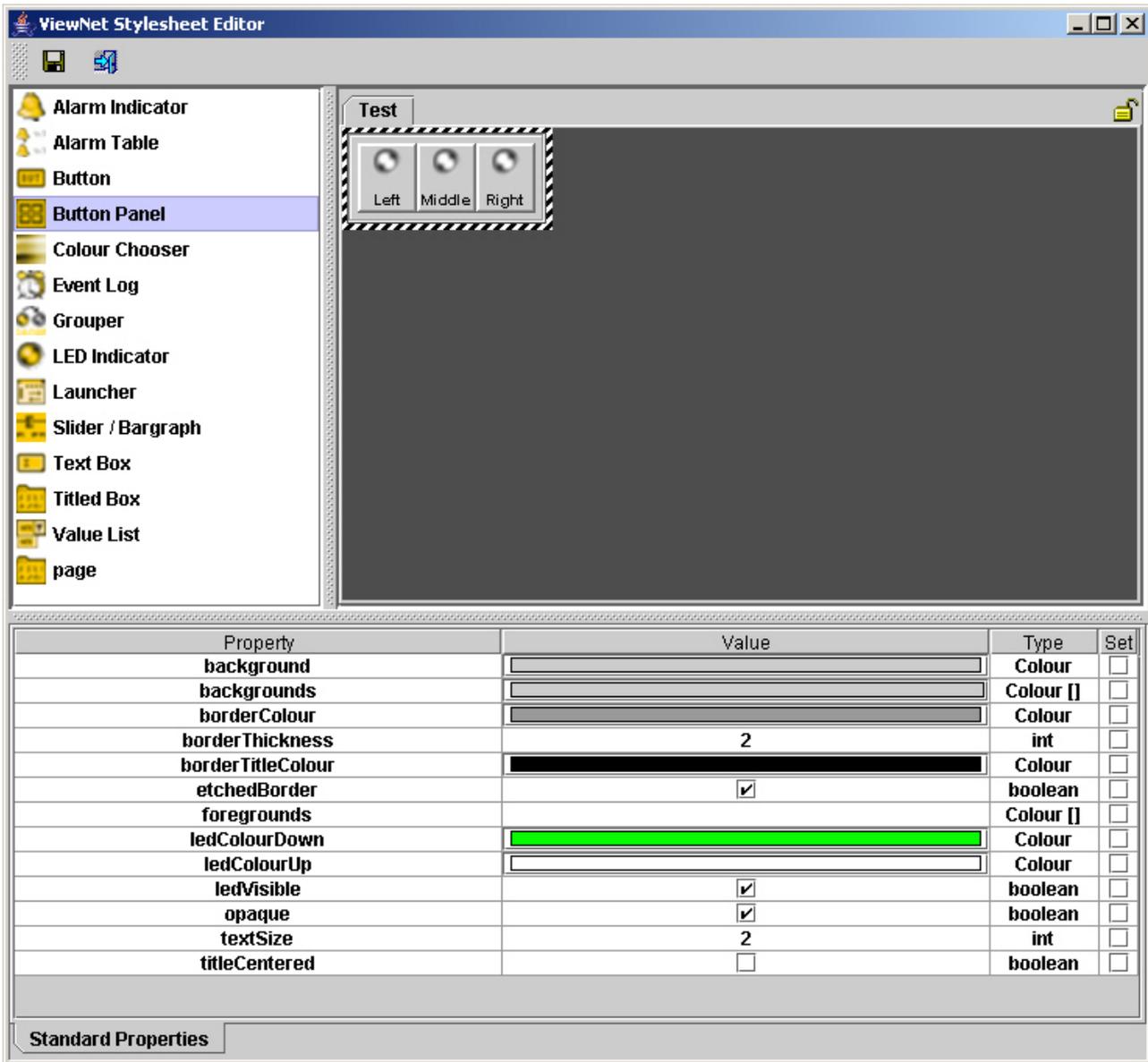
This is the level of Stylesheet applied to users on an **individual** basis. Logging in as a different user would invoke a different Stylesheet when in the Module Builder.

 Modifications to the User Stylesheet will supersede any System Stylesheet settings

27.3. Using the Stylesheet Editor

The Stylesheet Editor lists the **properties** of each control in a similar manner to the Module Builder Properties window. The properties are modified in the same way.

Figure 27.2. The ViewNet Stylesheet Editor - showing typical properties



27.3.1. Top row icons

- Save the current Stylesheet
- Exit Stylesheet Editor - duplicated by the window close icon. You will be prompted to save if necessary.

 By **right-clicking** on this area you can select large or small icons and text.

27.3.2. Editing controls

The list of editable controls is on the left. Notice there is a **page** control. There are no icons for grouper or launcher - they do not have any style as they are hidden. The range of properties is limited to those that affect appearance.

-
- **Click once** on the control icon to load a control into the editor.
 - The control's position and size is not significant.
 - Modify the control's properties in the same manner as in the Module Builder. See [Section 12.4, “Properties Panel”](#)
 - Any **modified** property will be indicated by the **set box** being ticked.
 - **Revert** to unmodified by **un-checking** the set box.
 - Click the **save** icon.
 -  If in doubt - do not save.
 - **Exit** the Stylesheet editor.

Chapter 28. Profiles

The ViewNet Profiles system enables

- **Backing-up** all current ViewNet settings, files, Virtual Screens etc. in use at any one time.
- **Copying** ViewNet settings to or from another ViewNet System.
- **Restoring** ViewNet to a set of previously-saved settings

To use Profiles, the User has to have the Profiles Webmin permission set in their User settings. See [Section 5.2, “Webmin Modules”](#)

 Profile management involves multi-file manipulation. There may be a short delay while the Profiles system performs the requested task.

28.1. Accessing Profiles

- Using your web-browser, go to the **ViewNet Home** page. Click on **administration** . A login dialogue window will open.
- Once logged-in, the **Server Administration** page will open. Click on **ViewNet Configuration** .
- The **ViewNet Configuration** page will open. Click on **Profiles** . The Profiles page will open:

Figure 28.1. The ViewNet Profiles page (part)



The screenshot shows the 'Profiles' page with the following sections:

- Create a new profile:** A text input field for 'Name:' followed by a 'Create' button.
- Upload a new profile:** A text input field followed by a 'Browse...' button and an 'Upload Profile' button.
- Currently available profiles:** A table listing profiles with action buttons for each.

Profile Name	View	Download	Install	Delete	Rename
backup050704	View	Download	Install	Delete	Rename
txcontrol	View	Download	Install	Delete	Rename
backup280604	View	Download	Install	Delete	Rename
engineering	View	Download	Install	Delete	Rename

- Listed on the page will be all ViewNet files that will be included in the current profile

 If no profiles have been previously saved then the **Currently available profiles** section will be missing.

28.2. Saving and Installing Profiles

ViewNet profiles are stored on the ViewNet Gateway.

- To **save** a new profile, type a unique name into the **Name** box. Click **Create** . The new profile will be added to the **Currently available profiles** list.
- Click **View** to see a list of the files within the selected profile.
- To **install** an available profile onto the ViewNet system, click the **Install** button next to the required profile entry. A **Confirm Installation** page will open.
- Asterisks in the Different Version column will indicate any difference between the current profile and the selected profile. Click on individual files and select an **action** to keep, update or delete.
- Click **Confirm Installation** or **Cancel** .
- Saved profiles may be **Renamed** and **Deleted** here.

28.3. Downloading and Uploading Profiles

ViewNet profiles may also be saved to **alternative locations** such as floppy disks or network hard drives.

- The profile to be saved (downloaded) must first be created. See [Section 28.2, “Saving and Installing Profiles”](#)
- In the **Currently available profiles** list, click **Download** against the selected profile. A file **open or save** dialogue window opens.
- Select **Save** . A **Save As** window opens.
- Select the chosen destination for the profile and click **Save** .
- To **upload** a profile from an alternative location, click **Browse** . A **Choose File** dialogue window opens.
- Select the location of the profile. Click **Open** . The location will be entered into the **Upload New Profile address box** .
- Click **Upload** profile.

Chapter 29. Image Management

ViewNet Module Builder has a complete set of default images stored for icons, decoration, LEDs etc. These are known as System images. Many of these images are used on ViewNet controls. Some ViewNet controls can be customised by modifying or adding images.

- **Titled Boxes** - can have a background image.
- **Buttons** - have an LED image by default, which can be replaced with another image.
- **LEDs** - have an LED image by default, which can be replaced with another image.
- **Pages** - can have a background image
- **Page tabs** - can have an image in addition to the text (used in Alarms).

For example; The Vistek logo found on ViewNet Physical Screens, is a titled box with the Vistek logo as a background image, with a link address set to point to the Vistek website:

Figure 29.1. The Vistek Logo as a background image in a titled box



29.1. Accessing the Image Manager

The user, with permission, is able to create and load their own images - User Images - in the Module Builder using the ViewNet Image Manager. These images can then be used on controls in Virtual Screens.

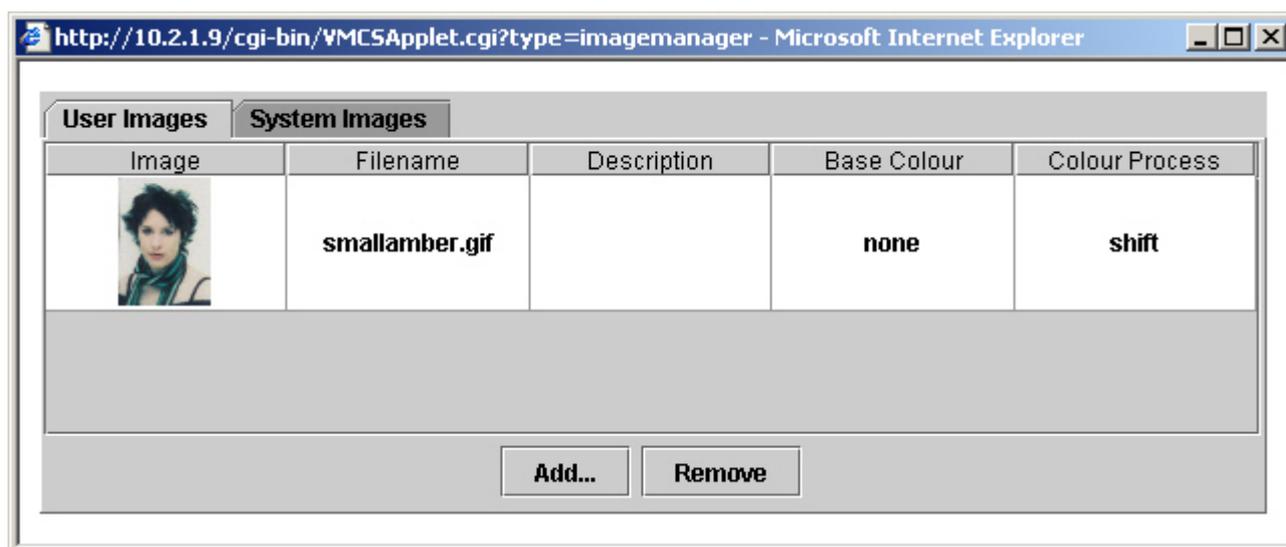
- From the **ViewNet Home Page** , click on **administration** . A login window will appear.
- Logging in will take you to a ViewNet page. Click on the **ViewNet Configuration link** . The ViewNet Configuration page will appear.
- Click the **Image Manager link** . A new Image Manager window will open on top of the web page.

29.2. The Image Manager pages

The Image Manger consists of two pages:

- **System Images** - lists all default images used within ViewNet. They may be inspected but not modified. A useful place to get correct image names. They will all be prefixed **System/**
- **User Images** - lists all customer-loaded images. On a new system this page may be empty.

Figure 29.2. The Image Manager window



29.3. Adding User Images

Images to be loaded need to be in **GIF** or **JPEG** format and be the correct size for final display.

- In the **Image Manager** window, click **add** . An **open** window will appear allowing you to browse for an image.
- Once located, click **open** or **double-click** the file. After a short delay the image will be loaded.
- Or
- Image files may be **dragged** directly from a folder onto the Image Manager window. After a short delay the image will be loaded.
- The filename shown will be the filename to type into an image location box.

29.4. The User Images page

29.4.1. Image

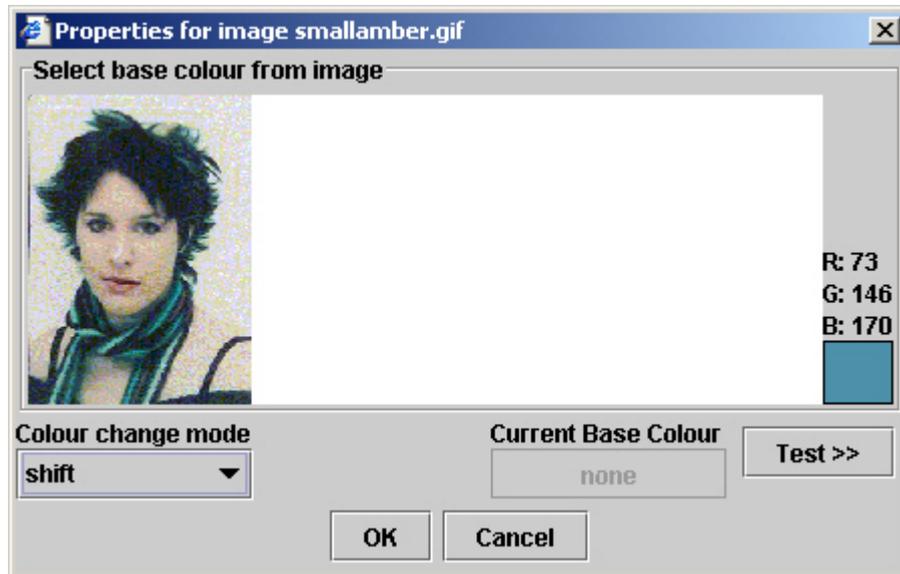
This shows a thumbnail of the image.

- **Double-click** the image to open the **Image Properties** window.
- **Colour change** mode can be set here
- If a change mode is selected, **pointing** at the image will select a **base colour** from the image.
- To see the colour change effect, click on **Test >>** . A test window will open.
- Select the **target** colour. The image will show the **modified** colours.

☞ The colour process must be set to **replace** or **shift** to show a difference.

- Click **cancel** or **OK** to return.

Figure 29.3. Image Manager - Image Properties



29.4.2. Filename

The filename cannot be changed. This is the name to type into an image location box. It is **case sensitive**.

- **Double-click** the filename to open the **Image Properties** window.

29.4.3. Description

A local descriptor.

- Type a name into the box if required. Not essential.

29.4.4. Base Colour

ViewNet can **dynamically modify** the colours of an image in response to a control **value** .

For example; an LED image can change from green to red.

- On a freshly loaded image, the base colour will be **none** (not set).
- Click in the **Base Colour** box to open a **Colour Chooser Palette** .
- Select a colour. Click **OK** , **Cancel** or **Reset** .

29.4.5. Colour Process

This determines the type of colour change performed, or not.

- Click in the **Colour Process** box. A **drop-down list** appears.
- Select **none** , **replace** or **shift** .

☞ The Shift option modifies the hue of the whole spectrum of colours used in the image.

Replace just replaces the selected colour with the target colour.

Figure 29.4. An image before and after a hue Shift



Chapter 30. Security Settings

Access to Virtual Domain components can be controlled by setting security levels in the Virtual Domain Editor. Access is defined by membership of groups. Group settings and membership is controlled by the system administrator using the ViewNet Configuration system.

There is a default login: **sysadmin** and password: **ViewNet** . This gives access to all administrative services necessary to set up local users and administrators.

30.1. User and Group Configuration

Access configuration is performed via the ViewNet Configuration web page. Only a system administrator may create and modify these settings:

30.1.1. User Login set-up

- From the **ViewNet Home Page** , select **administration** , then **ViewNet Configuration**
- Select **Access Control** , on the Access Control page click **Add User**
- Input **Name** , **Password**
- Select the required **Group Membership**
- Select **Webmin Permissions** only as necessary.



Webmin Permissions are not required to use the Module Builder. But Webmin permissions of **Profiles** and **Image Management** may be needed.

- Select **Save User** and return to the ViewNet Home Page

30.1.2. Group creation

All types of ViewNet users are members of groups. Group membership controls the access level to Virtual Domain components.

- From the **ViewNet Home Page** , select **administration** , then **ViewNet Configuration**
- Select **Access Control** , on the Access Control page click Add Group
- Enter a **group name** , and any relevant **comment**
- Click **Save Group** . The new group will now appear in the group list on this page and also in the Virtual Domain Editor component security properties.
- Return to the ViewNet Home Page

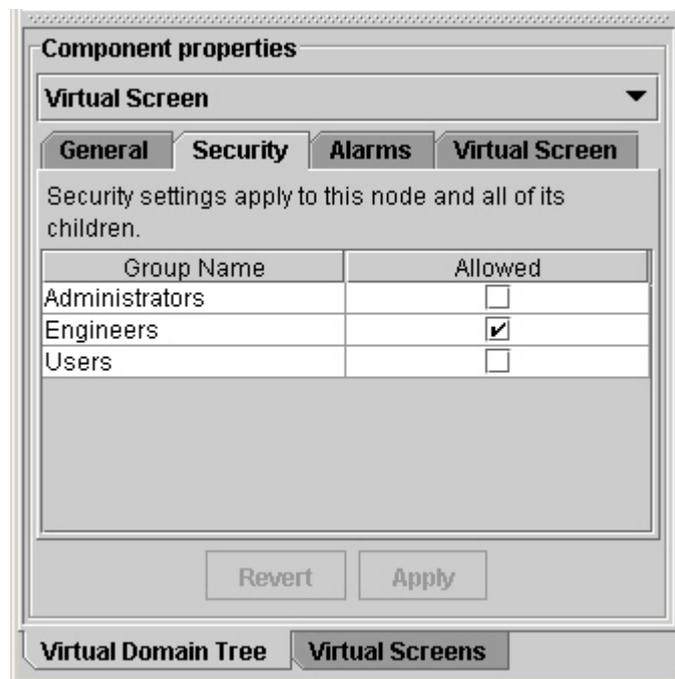
30.2. Virtual Domain Security

Security can be set on all types of Virtual Domain component - Hard Links, Symbolic Links, Virtual Screens and Folders. It can also be set on a child component. See [Section 13.1.1, “Top icons”](#)

For example: The system administrator has created some engineering test pages that regular users do not need access to. The administrator places these screens in a folder and restricts access to the engineers group only. When a regular user - who is not a member of the engineers group - logs in, the folder of test pages will not appear in the Virtual Domain tree.

- In the **Virtual Domain Editor** , select the component to have its security set.
- Select the Component Properties **Security** page.

Figure 30.1. Virtual Domain Editor Properties - Security page



- Select the **group** to whom access is allowed. This will exclude all other groups dependent on group membership.
- Click **apply** .
- **Save** the Virtual Domain.

Chapter 31. System Requirements

ViewNet is designed to run on a variety of platforms, but there are some minimum requirements:

31.1. Platforms and Operating Systems

Platforms and Operating Systems supported:

31.1.1. PC

- Windows XP - Home & Pro (Service Pack 1)
- Windows 2000 (Service Pack 3)
- Windows NT (Service Pack 6a)
- Windows ME
- Windows 98 (First & Second Edition)
- Linux (with Java Plugin 1.4 support)

31.1.2. MAC

- Mac OS X

31.1.3. Sun Workstation

- SPARC 32bit
- SPARC 64bit
- x86 Solaris 7, 8 & 9

31.2. Network Speed

- The ViewNet Gateway **must** be connected to a **100Mbit** network
- Client's external network speed is not critical, but a 100Mbit network is recommended.

31.3. Screen Resolution and Colours

For best performance there are some minimum requirements:

31.3.1. Minimum Screen Resolution

- **1024 x 768** Pixels

31.3.2. Minimum Colour Setting

- **24Bit** - 16 Million Colours

31.3.3. Monitor Arrangements

During normal ViewNet operation a single computer monitor is adequate to display the main ViewNet window and ViewNet screens.

When using the ViewNet Module Builder, a large number of windows may be open at the same time. A dual monitor arrangement would be advantageous, reducing the potential for over-crowding on one screen only.

31.4. Web Browser

For access to the ViewNet Home page and Administration pages:

- Internet Explorer 5.0 or greater (5.5 or greater recommended)
- Netscape 7.1 or greater
- Mozilla 1.6 or greater
- Mozilla FireFox 0.9 or greater