



# Future Fibre Technologies Perimeter Monitoring Integration App-note

# Contents

1. Introduction.....	3
1.1 License requirements .....	3
1.2 Integration components .....	3
1.3 CathexisVision specific FFT setup .....	4
2. Device Addition and Configuration .....	8
2.1 Devices Section (add a new device) .....	8
2.2 Configuration Section (Tabs) .....	9
3. Database .....	12
3.1 Navigate to the database .....	12
3.2 Database interface.....	12
4. Events .....	14
4.1 Events .....	14
4.2 Triggers .....	14
4.3 Device Events.....	15
4.4 Actions .....	16
5. Conclusion .....	18

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## 1. Introduction

This app-note explains the integration of the Future Fibre Technologies (FFT) device with CathesisVision. Its focus will be to explain how the device is integrated with the CathesisVision GUI, and CathesisVision Events Setup.

**Note:**

1. For information regarding the regular operation of a FFT device, please consult the relevant FFT documentation.
2. There is a General Integration section in the main CathesisVision manual. It has vital information about creating an integration database, as well as a general introduction to the Integration Panel. Read over this section.

### 1.1 License requirements

#### 1.1.1 Future Fibre Technologies license (CFFT-2000)

This license will allow CathesisVision to communicate with the FFT device.

#### A NOTE ON CAMERA CHANNELS

The CathesisVision software packages have **limits on camera channels**. A multi-head camera is physically a single device (camera) but it **requires a camera channel for each one of the internal cameras**. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathesisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

### 1.2 Integration components

All CathesisVision integrations have two component levels: **Device** and **Object**.

**Device** The device is CathesisVision software's interface, which handles all the interaction between CathesisVision and the integrated hardware. When a user adds an integration to the CathesisVision system, a device is added. The messages received from the device are called Device Events.

**Objects** Objects are the individual pieces of hardware that comprise the integration. There can be multiple "object types" under the objects group. For example, the main controller and door nodes, of an access control system, are both objects. They are different types of objects.

## 1.2.1 Messages and Object Types

The following device event messages, and objects/object types, will be represented in the CathesisVision integration, after installation and configuration, of the FFT hardware. They will be visible in **Site / Setup Tab / Configure Servers / Integration devices**.

### 1.2.1.1 Device Events

- a. Partition added
- b. Partition state updated
- c. Zone added
- d. Zone state updated

### 1.2.1.2 Object property

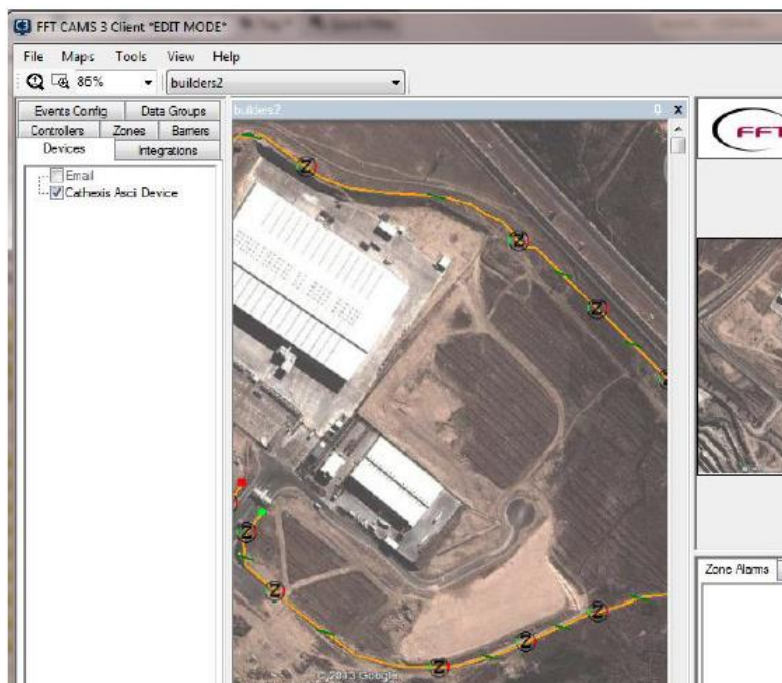
The FFT system has three objects:

- a. Controller
- b. Sensor
- c. Zone

## 1.3 CathesisVision specific FFT setup

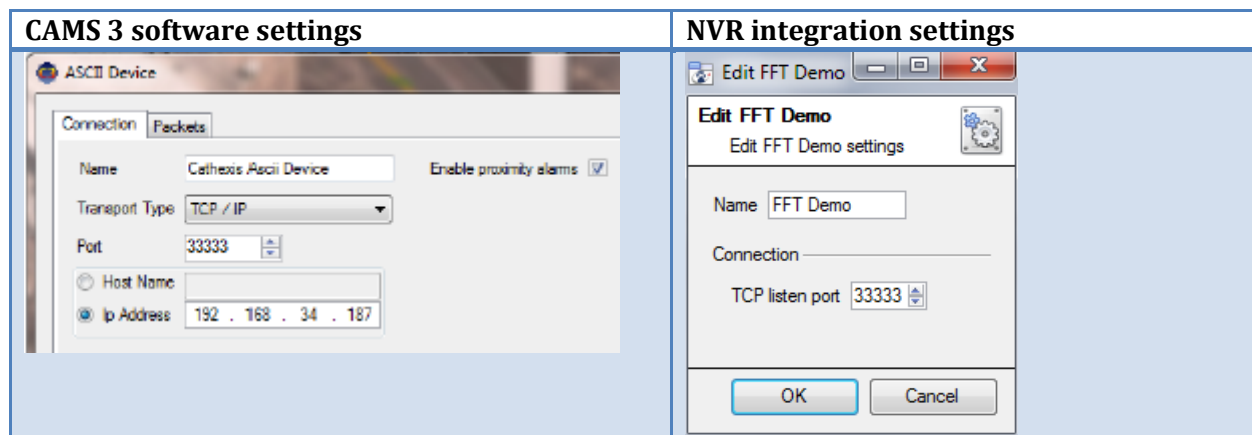
The following CathesisVision-specific setups are necessary to get the FFT integration working. These steps require the FFT CAMS 3 software. After installing this software follow these steps:

### 1.3.1 Add an ASCII device



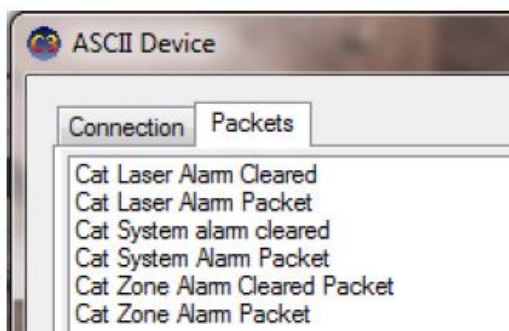
### 1.3.2 Add the ASCII device's connection details

Configure the ASCII device connection details to match the IP of the NVR where the integration device has been added. Make sure the TCP port number matches that configured on the NVR integration device as shown in the pictures below.



### 1.3.3 CAMS ASII device packets definition

An **alarm** and alarm **clear** message type will now have to be created for each message category: zone, laser, system. **Note:** The message structure needs to be followed carefully or the integration will not function correctly.



Packets to be sent to CathesisVision should be prefixed with the category, and then the message type, followed by all the datafields in the order they appear in the combo box. The category and message type strings are both user defined fields, and should match the strings provided in the table below exactly:

CathesisVision ASCII packet structures									
catzone	alarm	<zone> ID	<zone name>	<zone description>	<cable distance>	<perimeter distance>	<latitude>	<longitude>	<altitude>
catzone	clear	<zone> ID	<zone name>	<zone description>	<cable distance>	<perimeter distance>	<latitude>	<longitude>	<altitude>
catlaser	alarm	<sensor ID>	<sensor description>	<sensor channel>	<alarm type>	<controller ID>	<controller name>		
catlaser	clear	<sensor ID>	<sensor description>	<sensor channel>	<alarm type>	<controller ID>	<controller name>		
catsystem	alarm	<controller ID>	<controller name>	<controller description>	<alarm type>				
catsystem	clear	<controller ID>	<controller name>	<controller description>	<alarm type>				

### 1.3.3.1 Packet examples

Packet Editor

A packet can contain several fields. Use this form to add fields to the packet.

Packet Details

Packet Name:

Packet Type:

Add New Field to Packet

Data:

Type:

- Zone ID
- Zone Name
- Zone Description
- Cable Distance
- Perimeter Distance
- Latitude
- Longitude
- Altitude
- <<User-defined data>>

Packet Preview

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Save Cancel

Packet Editor

A packet can contain several fields. Use this form to add fields to the packet.

Packet Details

Packet Name:

Packet Type:

Add New Field to Packet

Data:

Type:

- Sensor ID
- Sensor Description
- Sensor Channel #
- Alarm Type
- Controller ID
- Controller Name
- <<User-defined data>>

Remove Last Field

Packet Preview

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0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Save Cancel

Packet Editor

A packet can contain several fields. Use this form to add fields to the packet.

Packet Details

Packet Name: Cat System Alarm Packet

Packet Type: System alarm

Add New Field to Packet

Data: Controller ID

Type: Controller ID, Controller Name, Controller Description, Alarm Type, <<User-defined data>>

Buttons: Add New Field, Remove Last Field

Packet Preview

Waterfall

```

c a t s y s t e m , a l a r m , 3 1 2
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    
```

Buttons: Save, Cancel

### 1.3.3.2 Packet examples

The packets defined above should now be assigned to the matching CAMS message type as shown below. This sort of mapping applies to **zone**, **laser** and **system** packet types defined.

ASCII Device

Connection | Packets | Zone Alarms | Laser Alarms | System Alarms | Isolations

**Zone is Alarmed**

Everything will output:

Cat Zone Alarm Packet

**Zone is Cleared**

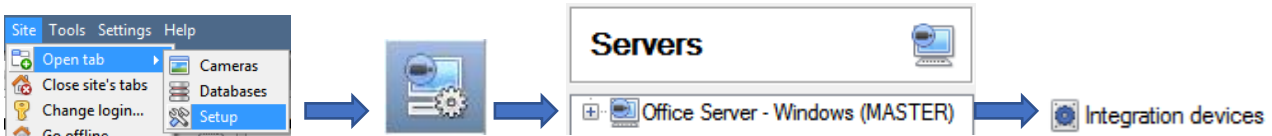
Everything will output:

Cat Zone Alarm Cleared Packet

Buttons: Modify, Only send a packet when zone is first alarmed, << Simple, Save, Cancel

## 2. Device Addition and Configuration


Integrations are added on a server-by-server basis. They are managed in the Integration Devices panel, under the Setup Tab of the servers to which they are added. To get to the Integration Panel follow this path:

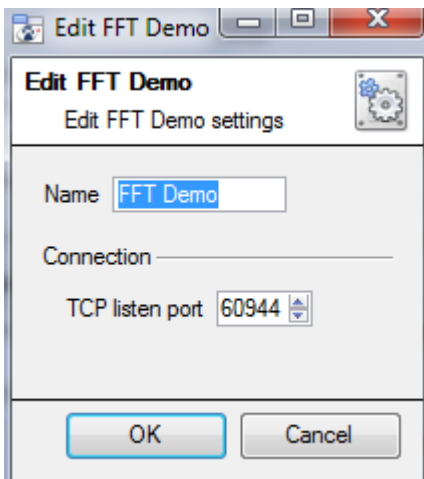


There are two sections in the Integration Panel:

1. The **Devices** list: this lists the integration devices that are attached to the integration database.
2. The **Configuration** section: this enables the user to edit/review the device that has been selected in the **devices** section.

### 2.1 Devices Section (add a new device)

1. Once in the Integration Panel, in the devices section, click on . This will open the addition window.
2. Select **FFT** from the list.



Give the device a descriptive **name**.

The **connection** may be done via a direct serial port, or through an ESP. (The ESP is a Cathexis product that gives devices, which use serial connections, access to the network.)

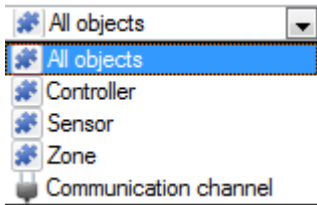
**Note:** Make sure that the TCP port there is the same as the TCP port that was set in the FFT setup.



## 2.2 Configuration Section (Tabs)

The configuration section is divided up into a number of Tabs. The available tabs are: **Object configuration, Object properties, Device events, Groups, General.**

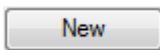
### 2.2.1 Object configuration tab



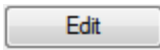
The object configuration tab is the tab where the user may view all the individual objects that comprise the integration.

The **FFT** integration has the following objects: **controller, sensor and zone.**

#### 2.2.1.1 Object configuration buttons



Click on New to add a new object.

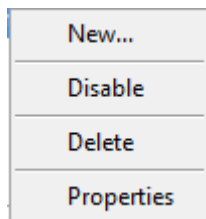


Click on Edit to open up an existing object for editing.



Click on Delete to delete an existing object from the CathesisVision configuration.

#### 2.2.1.2 Object configuration right-click options



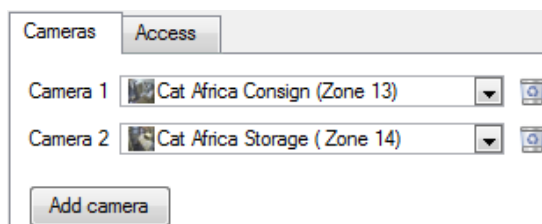
**New** will open up the dialogue to add a new object.

**Disable/Enable** allows users to manually enable/disable individual nodes.

**Delete** will permanently remove this object from the list.

**Properties** will open up the object properties. The user may edit the object from here. (Specifically, the user will be able to assign cameras to this object, as well as define user access levels for it.)

#### Properties: cameras



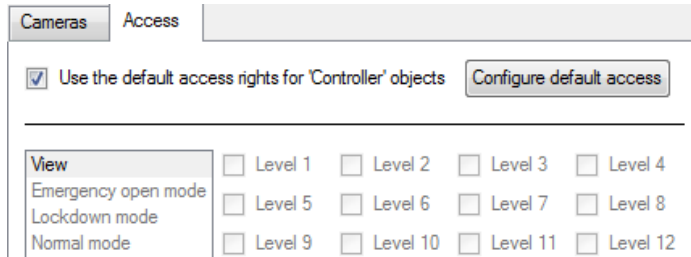
Adding a camera to an object will mean that, whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database.

To add a camera, click on , and select the relevant camera from the drop-down menu.

To delete a camera, click on .

**Note:** If *continuous recording* is not set up, on associated cameras, there is a risk that zones (objects) could trigger while the cameras are not recording. To record cameras, only when an object triggers, **Events** that trigger a recording must be set up, when one of these objects is activated.

### Properties: access



**Access** allows the user to protect sensitive objects, by only allowing certain levels users access to them.

There will be a list of objects, for which access levels may be set.

**Note:** If *Use default access rights* is checked, make sure that those default rights have been correctly defined. Click on **Configure default access** to do this.

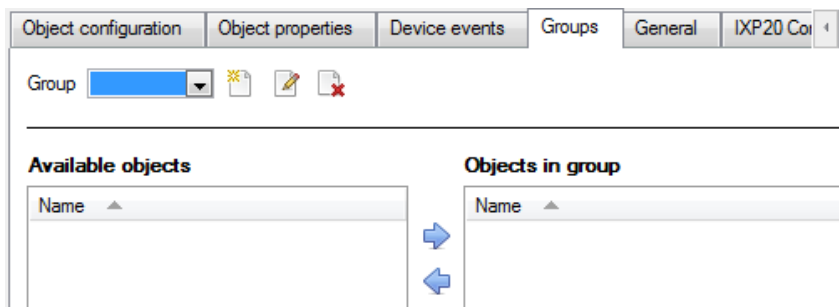
## 2.2.2 Object properties tab

The Object properties tab allows users to view the objects, sorted by type. In the case of the FFT device, users will have the options of viewing by **controller, sensor, or zone**.

## 2.2.3 Device events tab

This will list real-time events happening on this device. It is an excellent way for installers to see that the integration is functioning, and to monitor the live events happening on site.

## 2.2.4 Groups tab

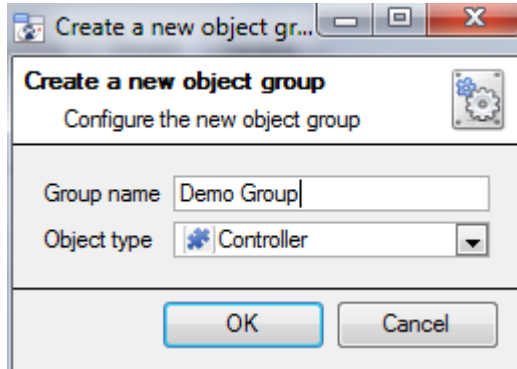


Groups of the same type of object can be created.

**Tip:** This is very useful when setting up Events, because events can be triggered by an object group. (For example, a group will trigger, if any of the zones/partitions in that group is triggered.)

### 2.2.4.1 Create a group

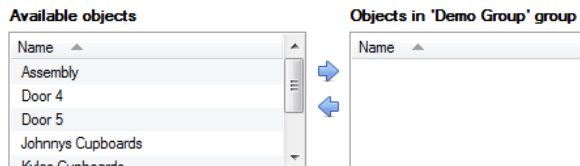
To create/edit a group click on / . (**Note:** Once a group has been created, the object type of the group may not be edited.)



When creating a group, select what object type to include in the group. Once the group is created the *available objects panel* will fill up with all available objects of that type. From this list, choose which objects to use in the group.

Give the group a descriptive **Group name**.

Click on the drop-down menu to select the **object type** to be grouped.

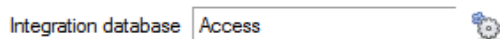


A list of Available Objects will be displayed. To add/remove these objects to the group, select them (multiple may be selected at a time), and click on / .

## 2.2.5 General tab

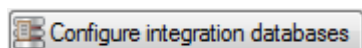
Currently the general tab deals with the integration database. Here, users can select a pre-created database, or configure a new database.

### 2.2.5.1 Select an integration database



To select a database, click on the gear icon . Select the relevant database. Only databases which relate to the device being adding should appear.

### 2.2.5.2 Configure a new database

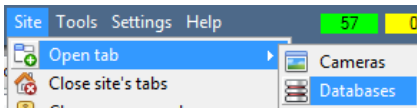


If there is no database created yet, clicking on this button will take the user to the integration database setup.

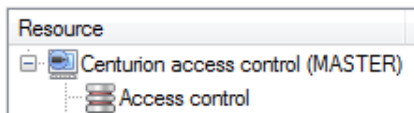
**Note:** The information on setting up an integration database may be found in the **Integration Devices General Settings** section of the *CathexisVision Setup Manual*.

## 3. Database

### 3.1 Navigate to the database

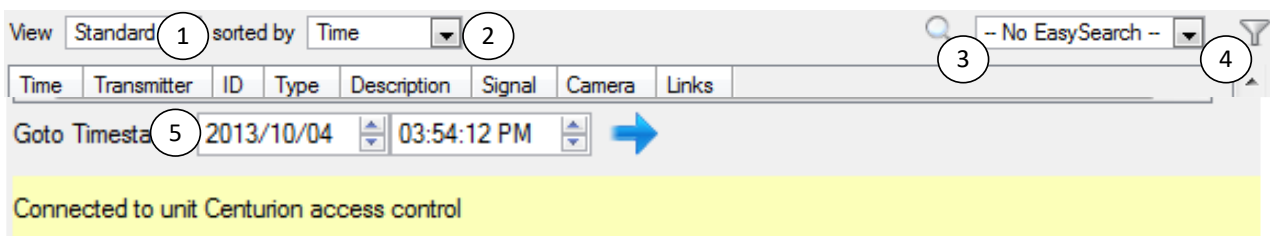


By following the path shown to the left, the user can view the information stored in the Integration database.



This navigates to the Database Tab. In the databases tab, the user will have to select the relevant integration database. The databases are ordered under the NVRs to which they are attached.

### 3.2 Database interface



<p>① <b>View</b></p>	<p>The user may change how the database is presented. Some integration databases have multiple view options. The FFT database has the <b>standard</b>, and <b>sensor</b> options.</p>
<p>② <b>Sorted By</b></p>	<p>Events can be sorted based on the following parameters: <b>time</b>, <b>object</b>, <b>name</b>, or <b>description</b>.</p>
<p>③ <b>Easy Search</b></p>	<p>The easy search option allows the user to quickly search the database within one of the following options: <b>object</b>, <b>ID</b>, <b>name</b>, and <b>event</b>.</p>
<p>④ <b>Filter</b> </p>	<p>Filtering offers a more advanced manner of sorting information in the Integration Database table. Information can be filtered based on the following parameters: <b>time</b>, <b>object</b>, <b>ID</b>, and <b>name</b>. In the filters dialogue, the following options are available:</p> <ol style="list-style-type: none"> <li>To <b>enable</b> filters check this box: <input checked="" type="checkbox"/> Enable filters</li> <li>To <b>add</b> a new filter click on . The filter icon  will change to  when filters are active.</li> <li>To <b>delete</b> an added filter click on .</li> </ol> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>Multiple filters may be run simultaneously. The same parameter can be used to filter more than once.</li> <li>To change a filter click on the blue hyperlinked text. (For example, click on <a href="#">Timestamp</a> to change the filter from Timestamp to any of the other available options.)</li> </ol>
<p>⑤ <b>Go to Time</b></p>	<p>This allows the user to go to a specific point in time, down to the second. To navigate to a timestamp, set the time using the time and date boxes and the click on the </p>

### 3.2.1 Viewing an Entry's Associated Recording



If cameras have been attached to device objects in the integration setup, and these cameras have been set up to record continuously, each Integration database entry will have a corresponding recording.

To view a databased event's recording, double-click it. A floating replay window will appear, from which the user may review and archive video content.



will present the view shown to the left.



will break down the image into 4 sequential frame viewers.

## 4. Events

A CathexisVision event comprises a trigger, and an action. The event, therefore has a trigger, which causes an action. Integrated devices can be set to act at triggers, or actions. This chapter will detail the FFT specific aspects of Events. There is a comprehensive guide to CathexisVision Events in the main ***CathexisVision Setup Manual***.

Most of the data that CathexisVision receives from a device is presented in the Events interface. This is done in order to give the user a full range of options. As a result, some of the options presented in the interface may be *impractical* for being used as an event trigger, or action.

### 4.1 Events

To create an event using the FFT device, enter the Events management area:



1. Once in Events management click on . This will open up the New Event window.
2. Once in this window, select the Triggers tab and click on the hyper link titled, [standard triggers](#). From the menu that drops down, left-click the FFT device with which the event will be triggered.

#### 4.1.1 While/When and Any/All

When triggering on a door, there will be the option to trigger **while/when** a trigger is active. Multiple triggers may be selected, and the user may define whether **all/any** of the triggers need to be active to set off an event.

Trigger using [Door 3](#)

[Perform actions while any](#) of the properties meet the following criteria

As usual, to change these settings click on the related, blue, hyperlinks.

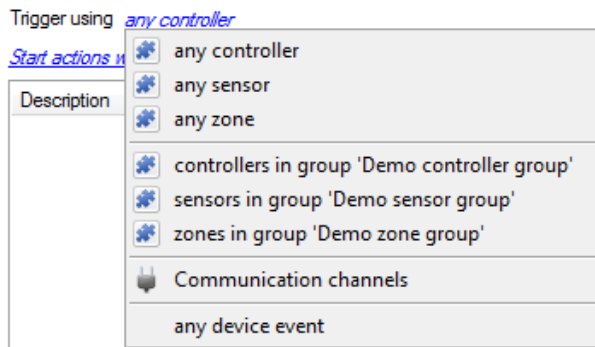
### 4.2 Triggers

A trigger is the input that tells the event to start. The trigger causes the subsequent action (which the user will define after the trigger).

#### 4.2.1 Set the device as the trigger

If the user is creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device will trigger the event, click on the hyperlink after “use”. To set it as the FFT device, click on the hyperlink, and select the relevant device name from the dropdown menu.

### 4.2.1.1 Trigger types



**Any controller/sensor/zone** will trigger based on any activity through the chosen objects/devices.

**Controllers/sensors/zones in group...** if an object group has been created, it will appear in this drop-down list, and may be selected as a trigger.

**Specific controller/sensor/zone** will trigger based on activity through a specific object.

**Any device event** will trigger when any trigger occurs on the FFT device.

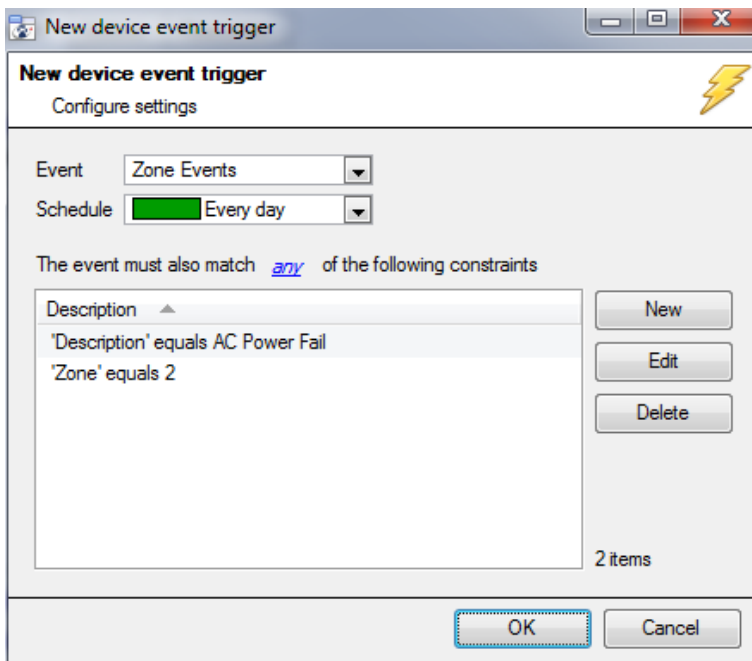
**Note for group triggers:** If the user wants this event to be databased under the name of a specific object, and not the name of the triggering group, the user will need to modify the Description field in the **General tab** of the Event setup.

Click on the to see a list of available descriptions. Here is an example which will database the text "Door Name" along with the name of the *door object* that triggered the event:

Description

## 4.3 Device Events

After selecting a master trigger type, a trigger will need to be added to the event. Click on in the Triggers tab. This will bring up the dialogue box below:




For example, within the [any device event](#) option, the user may choose what type of device **Event** will be the trigger. Choose from the drop-down menu. FFT offers **Problem Events**, **Sensor Events**, **System Events**, and **Zone Events**.

To add/edit/delete a rule use the New, Edit, and Delete buttons on the right side.

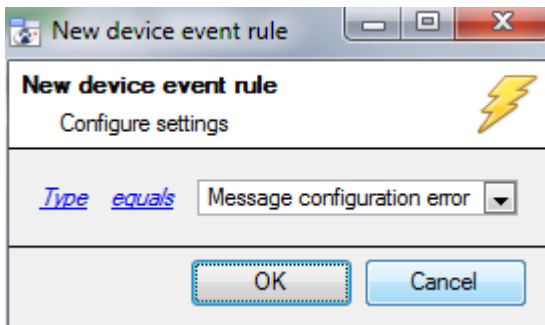
**Note:** Multiple constraints may be set, choosing if [any](#), or [all](#) constraints need to be fulfilled to set off a trigger.

Here, there are two Events, either of which will trigger the event.

If no constraints are set, every device event will trigger this. Once constraints are set, only the constraints chosen will trigger the event.

Once the type of device event that will be the trigger has been selected, the user may add a new **device event rule**. To do this, click on .

### 4.3.1 Any Device Event



To change the constraint, click on the hyperlink (in this case [Type](#)), this will bring up the full list of available rules.

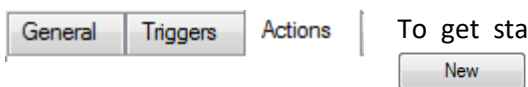
To modify the way this rule will be treated click on the second hyperlink ([equals](#) in the example) this will show the rule's options.

When all available options are known to CathesisVision, a drop-down menu will be shown. When these variables are not pre-defined, the user will need to fill them in. The information pulled through to the events is information sent to CathesisVision from the FFT device. See the FFT settings for the strings needed here.

## 4.4 Actions


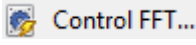
Once the triggers that are going to initiate the event have been defined, some Actions need to be defined. One of the available actions will be to *control* a FFT device.

### 4.4.1 Open Actions Tab and Select the FFT Device



To get started left-click on the tab titled "Actions", and click on



A menu will drop down containing all the available action types. The device action type is represented by this icon: . It will say "Control ..." and the name of the FFT device. E.g. .

### 4.4.2 Control device


This will bring up the **control device** dialogue. Under the **device** tab the user defines how the device will be controlled; under the **advanced** tab, the scheduling of the action is defined.



#### 4.4.2.1 Device

##### Control device

Configure command

To select an **Object** click on the  icon. This will give a selection of all the Objects available on the FFT device.

The **command** drop down will change to represent the commands available to that Object.

**Note:** only a global action may be taken here, and global actions may only apply to controllers. For example, the user may not control communication channels, or door nodes, as part of an event action. If one of these objects is selected, there will be no options in the *Command* menu.

#### 4.4.2.2 Advanced

The user may choose to **perform action at the** start of the event, or once the event triggers have subsided.

The two checkboxes allow the user to set the action to repeat every few seconds, and/or not run for a period after it has triggered.

**Schedule** is a standard Cathexis schedule, which may be applied to the actions.

## 5. Conclusion

This app-note was designed to deal specifically with this integration. For further information about CathesisVision, please consult the main ***CathesisVision Setup Manual***.

For support, contact [support@cat.co.za](mailto:support@cat.co.za)

### USEFUL LINKS

To view **tutorial videos** on CathesisVision setup, visit <https://cathesisvideo.com/resources/videos>

Find answers to Cathesis **Frequently Asked Questions**: <https://cathesis.crisp.help/en/?1557129162258>