



# Mettler Toledo Scale (SICS)

## Integration App-note

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# 1. Introduction

This document will detail the integration of a Mettler Toledo device with the CathesisVision software. This integration uses SICS (Standard Interface Command Set) interface. Functionally this integration will entail the triggering of standard CathesisVision Events, based on triggers from the Mettler device.

There is a General Integration section in the main *CathesisVision Setup Manual*. It contains information on creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section.**

## 1.1 General Requirements

- CathesisVision 2019 Service Pack 2 and later.
- Mettler Toledo compatible with the Standard Interface Command Set (SICS).

### Notes:

1. For information regarding the regular operation of a Mettler Toledo device, please consult the relevant Mettler documentation.
2. This is a multi-channel integration and data is sent over an RS232 serial connection.

## 1.2 License Requirements

The Mettler scale integration license requirements are as follows:

License No.	License Name	Description
<b>CMET-2000</b>	Mettler scale (SICS)	This license is the “base” license to integrate with a scale system. It is applied to the server to which the scale device is connected.
<b>CMET-1001</b>	Mettler scale (SICS) device	These licenses apply to the scales in a scale system. The <b>CMET-1001</b> will license a single scale, and may be added on a scale-by-scale basis.
<b>CMET-3000</b>	Mettler scale (SICS) bundle	This license includes the <b>CMET-2000</b> Mettler Toledo scale device license, and also provides support for unlimited <b>CMET-1001</b> scale licenses.

**Note:** In this integration, individual scales will require a **CMET-1001** license for each scale.

### A NOTE ON CAMERA CHANNELS

The CathesisVision software packages have **limits on camera channels**. A multi-sensor 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.

## 1.3 Integration Components

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

<b>Device</b>	The device is CathesisVision software’s interface, which handles all the interaction between CathesisVision and the integrated hardware. When an integration is added to the CathesisVision system, a device is added. The messages received from the device are called Device Events.
<b>Objects</b>	Objects are the individual pieces of hardware that comprise the integration. There may 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.

## 1.4 Features and Abilities

### 1.4.1 Device Objects

Objects are populated automatically as soon as communication between the Mettler Toledo software and CathesisVision is established.

Object Type		Feature
Scale	General Object Features	<ul style="list-style-type: none"> <li>• This integration has Scale and Communication channel objects.</li> <li>• Objects are automatically created as soon as communication between the CathesisVision unit and device is established.</li> <li>• Information about the connected Mettler Toledo system is displayed.</li> <li>• State changes can be used to trigger CathesisVision system events.</li> </ul>
	States	<ul style="list-style-type: none"> <li>• Online</li> <li>• Offline</li> </ul>
	Object Properties	<ul style="list-style-type: none"> <li>• Name</li> <li>• State</li> <li>• Serial number</li> <li>• Type</li> <li>• Version</li> <li>• Licensed</li> </ul>
	Command	<ul style="list-style-type: none"> <li>• N/A. The Mettler device cannot be controlled as a CathesisVision action.</li> </ul>

	<b>Overlays</b>	<ul style="list-style-type: none"> <li>• The Device object supports overlays in the camera feed.</li> <li>• Overlays display time.</li> <li>• Overlay location, text size, text colour, and background colour are configurable.</li> <li>• Overlays display scale ID and weight.</li> </ul>
	<b>Status</b>	<ul style="list-style-type: none"> <li>• Up.</li> <li>• Down.</li> </ul>
	<b>Object Properties</b>	<ul style="list-style-type: none"> <li>• Name</li> <li>• Channel status</li> <li>• Details</li> <li>• Creation type</li> <li>• Creation time</li> <li>• Idle time (min)</li> </ul>
	<b>Commands</b>	<ul style="list-style-type: none"> <li>• N/A. Communication channel cannot be commanded.</li> </ul>

### 1.4.2 Device Events

The CathesisVision Paxton integration generates reflected in CathesisVision.

Event Element	Features/Abilities
<b>General</b>	<ul style="list-style-type: none"> <li>• Event messages generated by the device will generate device event messages in CathesisVision.</li> <li>• These device event messages can be used to trigger system events.</li> </ul>
<b>Device Event Types</b>	<ul style="list-style-type: none"> <li>• Weight.</li> <li>• Communication.</li> </ul>
<b>CathesisVision Event Actions</b>	<ul style="list-style-type: none"> <li>• Events generated by the device are reflected in CathesisVision, and can be used to create CathesisVision system events.</li> <li>• The device and device objects cannot be controlled as part of the system events.</li> </ul>

### 1.4.3 Metadatabase

A unique metadatabase is created on the CathesisVision server for this integration. It is fully searchable, with configurable filters based on device event information (as above), and time stamping. The filtered event/s, and the associated video, will then be available for review in a new window from which an archive can be created and exported.

Database Element	Features/Abilities
General	<ul style="list-style-type: none"> <li>All device events are databased.</li> <li>Database entries include the footage from the first camera linked to device objects.</li> <li>Multiple cameras may be linked to multiple objects.</li> <li>Device event metadata is displayed where applicable.</li> <li>Databased device events may be viewed in the embedded video player, which includes the usual CathesisVision video review tools.</li> </ul>
View Options	<ul style="list-style-type: none"> <li>Weight.</li> <li>Communication.</li> </ul>
Sort Options	<ul style="list-style-type: none"> <li>Time.</li> </ul>
Easy Search	<ul style="list-style-type: none"> <li>Name.</li> <li>Scale ID.</li> <li>Scale name.</li> <li>Scale serial.</li> <li>Weight.</li> </ul>
Filter	<ul style="list-style-type: none"> <li>Time.</li> <li>Scale ID.</li> <li>Scale name.</li> <li>Scale serial.</li> <li>Weight.</li> </ul>
Export	Database entries may be exported in CSV and PDF format.

### 1.4.4 Maps

The CathesisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

Map Element	Features/Abilities
General	Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action.
Map Action Triggers	<ul style="list-style-type: none"> <li>All device objects may be set to trigger a map action if the user left-clicks on map.</li> <li>Some device objects may be set to trigger a map action if a state change message is received from the device.</li> <li>All device objects may be set to perform a map action if <i>any</i> event occurs on the device.</li> <li>Device objects, which can be configured to trigger CathesisVision events, may also be set to perform a map action when specific CathesisVision events are triggered.</li> </ul>

**Map Actions Options**

When triggered (see above), objects may perform the following map actions (where applicable):

- Connect to a site.
- Perform an animation.
- Go to a camera preset.
- Load a map.
- Set a PTZ relay output.
- Show a popup menu.
- Set a relay output.
- Show an HTML block.
- Show a block of text.
- Show a device popup menu.

**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>



## 2. Device Addition and Configuration

This section will detail the procedure for adding and configuring a Mettler scale device in CathesisVision.

### 2.1 CathesisVision Specific Mettler Setup

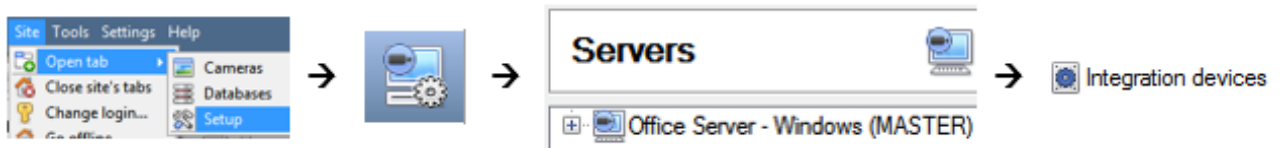
To setup the scale either a direct serial cable connection to the server or IP connection via a Cathesis ESP1204/ESP3102 Serial to IP convertor is required. The serial port is then configured from within the Mettler scale integration in CathesisVision.

### 2.2 Devices Section (Add a New Device in CathesisVision)

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:

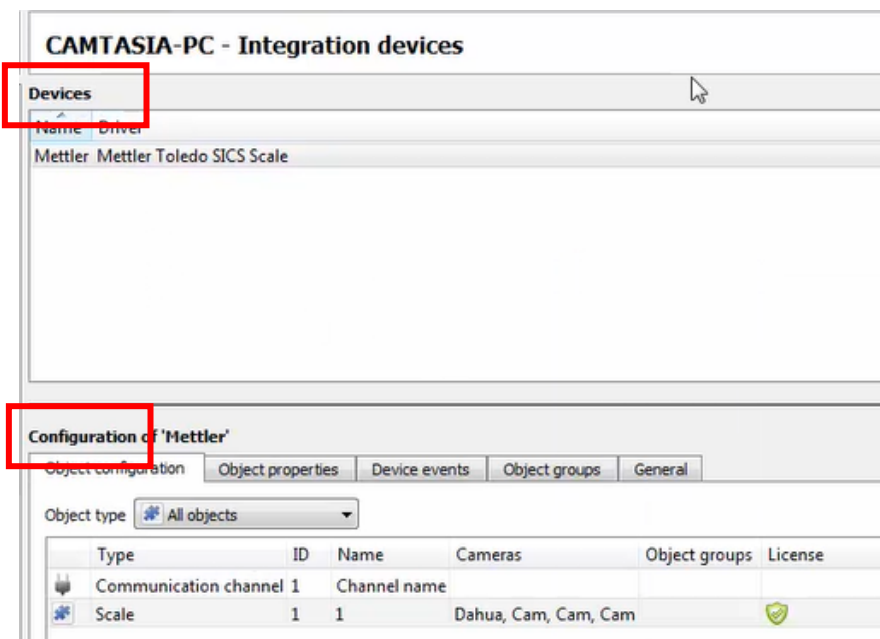
#### 2.2.1 The Integration Panel

To get to the Integration Panel, follow this path: **Site / Open tab / Setup / Configuration icon / Server / Integration devices.**



There are two sections in the Integration Panel:

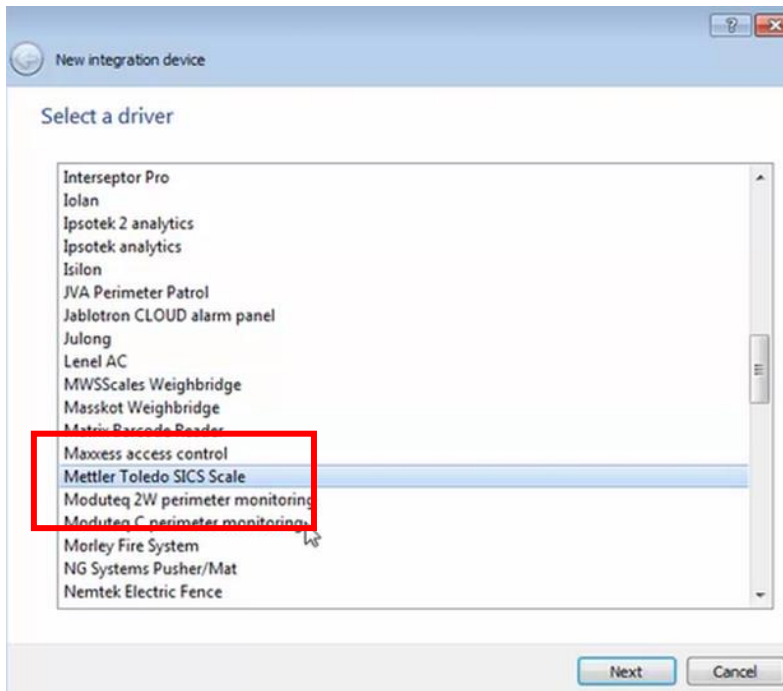
1. The **Devices** list shows the integration devices attached to the integration database.
2. The **Configuration** section enables editing/reviewing the device selected in the **Devices** section.



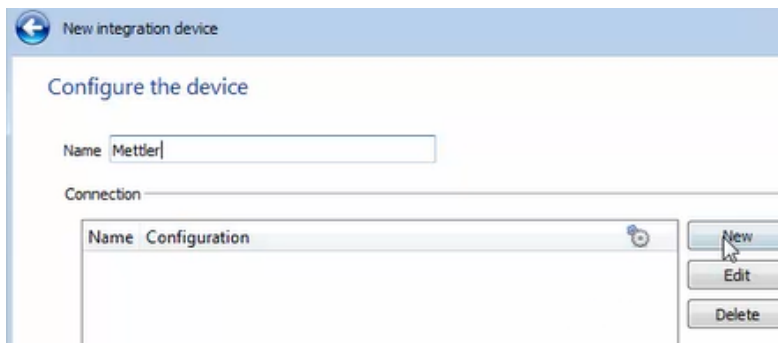
### 2.2.1.1 Device Addition

New device

1. Once in the Integration Panel, navigate to the **Devices** section.
2. Click on the **New device** button on the right-hand side. This will open the addition dialogue.



3. Select the Mettler Toledo SICS Scale driver from the list.



4. Give the device a descriptive **name**.
5. Add **New**, **Edit**, or **Delete** channels from the device by using the buttons on the right side of the configuration window.

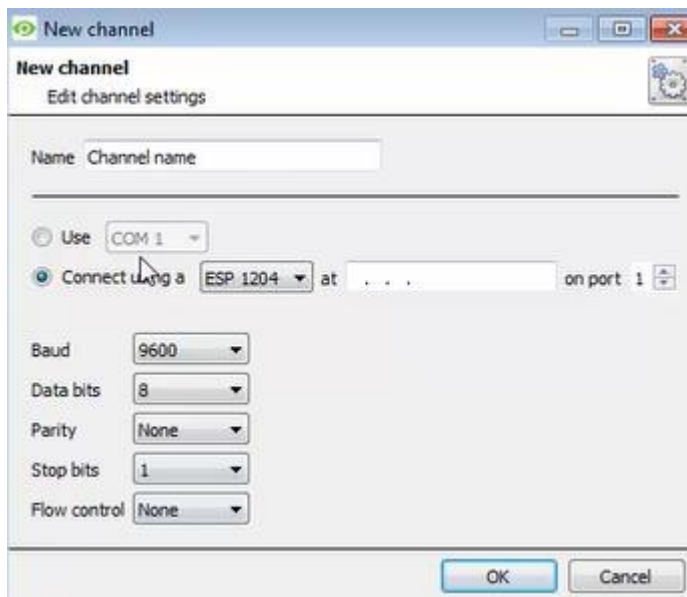
See below for **Adding a Channel**.

Once added, the device objects and information should populate automatically.

#### Adding a Channel

New

Click **New** to add a channel.



Give the channel a **Name**.

Use a direct serial cable connection to the server or IP connection via a Cathesis ESP.

Click **OK** when finished.

## 2.3 Configuration Section (Tabs)

The configuration section is divided up into a number of tabs. These tabs are: **Object configuration**, **Object properties**, **Device Events**, **Object groups**, and **General**.

### 2.3.1 Object Configuration Tab

Communication channel and Scale objects are automatically added when the NVR receives transactions from the Mettler scale.



The object configuration tab is where all the individual objects that comprise the integration may be viewed. The Mettler Integration has two object types: **Communication Channel and Scale**.

#### 2.3.1.1 Object Configuration Buttons

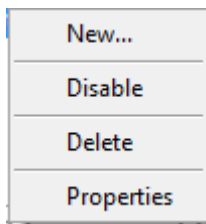


Click to **New** to add a new object.

Click **Edit** to change an existing object.

Click **Delete** to remove an existing object from the CathesisVision configuration.

### 2.3.1.2 Object Configuration Right-click Options



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

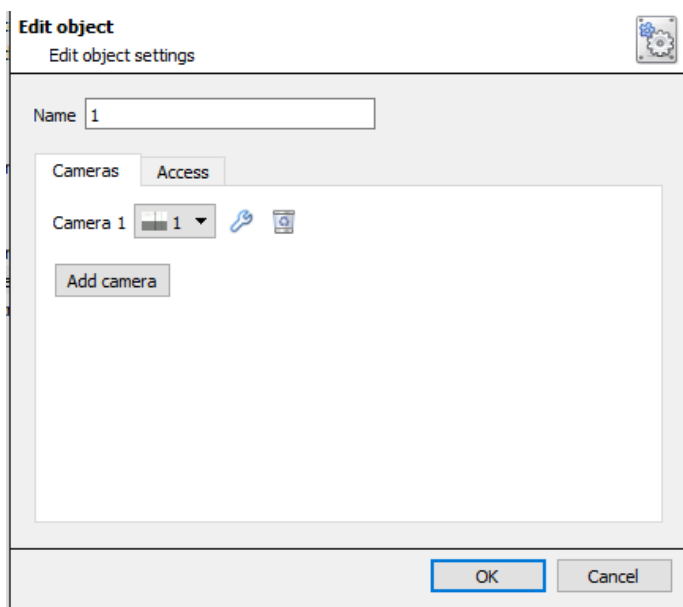
**Disable/Enable** allows manual enable/disable of individual objects.

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

**Properties** will open up the object properties. Objects may be edited from here. (Specifically, cameras may be assigned to this object and user access levels may be defined 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.



Click on **Add Camera**, and select the relevant camera from the drop-down menu.



To edit the Overlays, click the settings icon. See below.

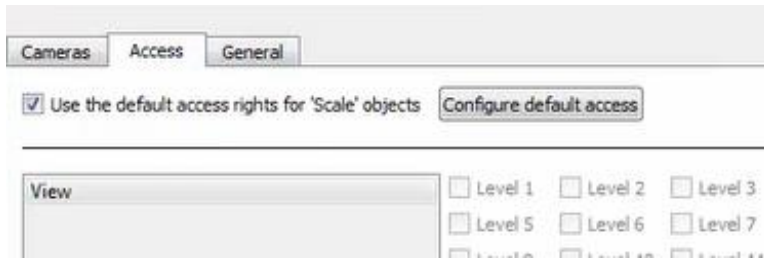


To delete a camera, click the trash icon.

#### Note:

1. Multiple cameras may be added here and all cameras added with the object will be linked in the integration database. They are individually selected on review.
2. If **continuous recording** is not set up on associated cameras, it runs the risk of device objects triggering while the cameras are not recording. To record only cameras when an object triggers, set up **Events** that trigger a recording, when one of these objects is activated.

## Properties: Access



**Access** protects sensitive objects by only allowing certain user levels access to them.

Under **View**, the 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.

### 2.3.1.3 Configure Overlays

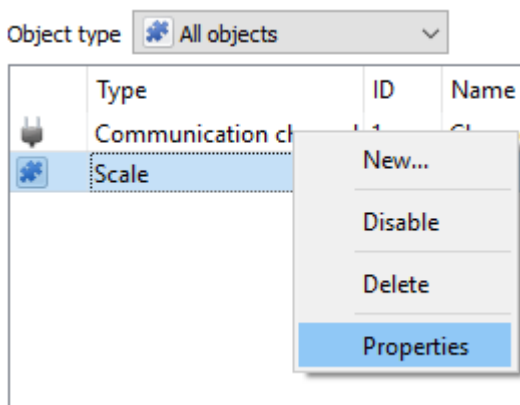
Overlays are connected to objects. Overlays may be configured by Default for **all objects** of a certain type, or they may be configured for one specific object. See below for how to open the overlay configuration window for Default or Individual overlay configuration. Thereafter, the overlay configuration window looks the same for both options.

#### Configure Default Overlays

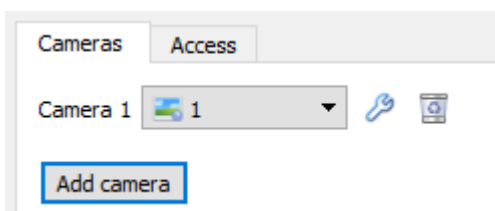


Select the Scale object from the Object type drop-down menu and click the Overlay Settings icon setting.

#### Configure Overlays for Individual Objects



Right-click object and select **Properties** to edit the object.

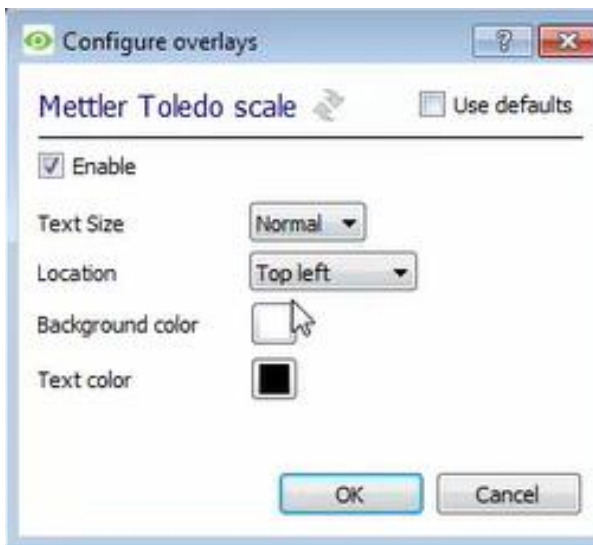


Add a camera to the object.

Then click the settings icon that appears next to the camera name.

## Overlay Configuration Window

**Note:** This window looks the same for both Default and Individual object overlay configurations.



Use defaults      Uncheck to configure overlay, or leave it checked to use the default overlay settings.

Enable      Check to enable the overlays.

Select the **Text Size** for the overlay panel from the dropdown menu.

Define the **Location and Background color** of the overlay.

Set the **Text color** of the overlay.

## 2.3.2 Objects Properties Tab

Object properties may be viewed for either Scale or Communication Channel objects.

Please see the below sections for details on each object type.

### 2.3.2.1 Scale Object Properties

When the Scale object is selected in the Properties tab, the objects will be displayed as seen below:

Name	State	Serial number	Type	Version	Licensed
1	Online	B44523917	MS8001S/01 8200.9	2.22 42.28.3.2764.133	✓

The **Name** of the Scale object will be displayed.

The **State** column will show the state of the Scale object.

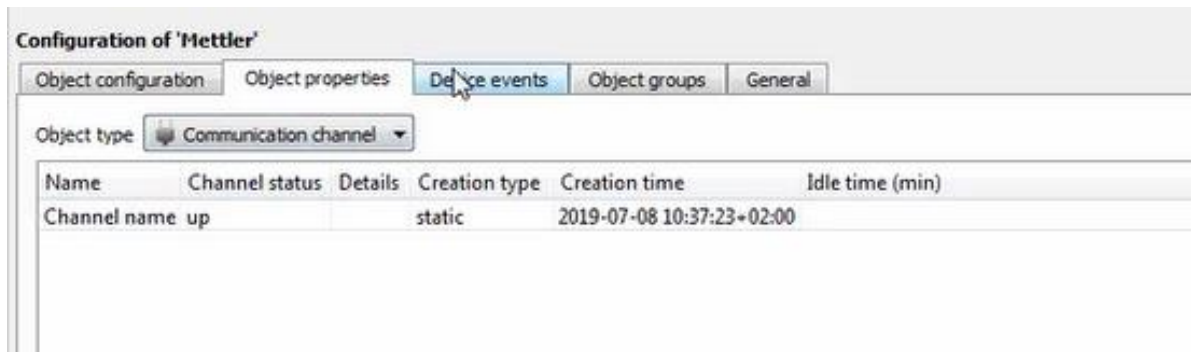
The **Serial number** column indicates the serial number of the Scale object.

The **Type** of the Scale object.

The Scale object **Version**.

The **Licensed** column displays whether or not the Scale object is licensed in CathesisVision.

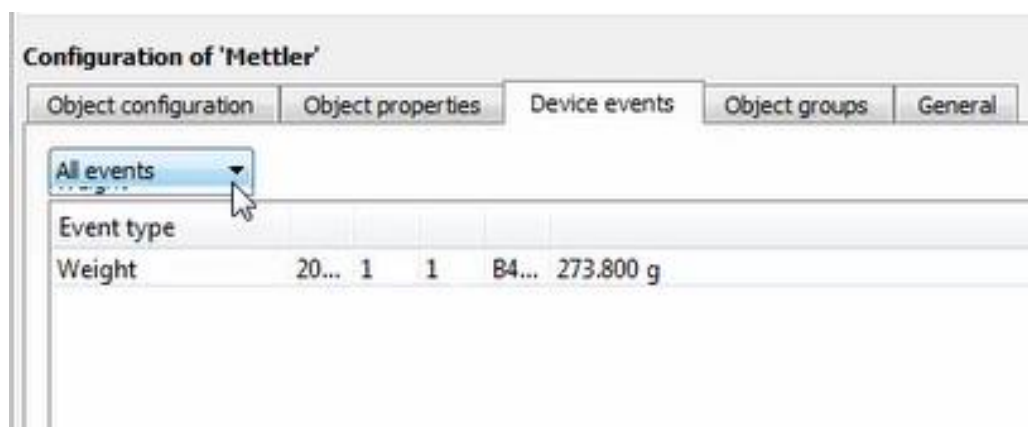
### 2.3.2.2 Communication Channel Object Properties



Column Name	Description
<b>Name</b>	The name of the Communication Channel object.
<b>Channel Status</b>	The Channel status of the Communication channel object: either up or down.
<b>Details</b>	The Details of the Communication channel object.
<b>Creation type</b>	The Creation type of the Communication channel object.
<b>Creation time</b>	The Creation time of the Communication channel object.
<b>Idle time (min)</b>	The Idle time (min) of the Communication channel object.

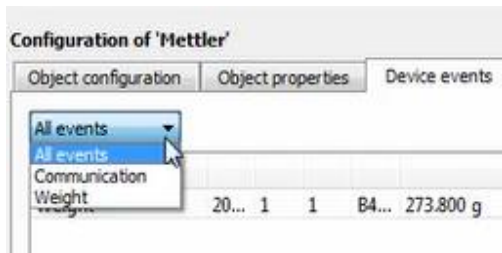
### 2.3.3 Device Events Tab

The Device events tab lists real-time events happening on this device. Installers can ensure that the integration is functioning, and monitor the Events happening on site.



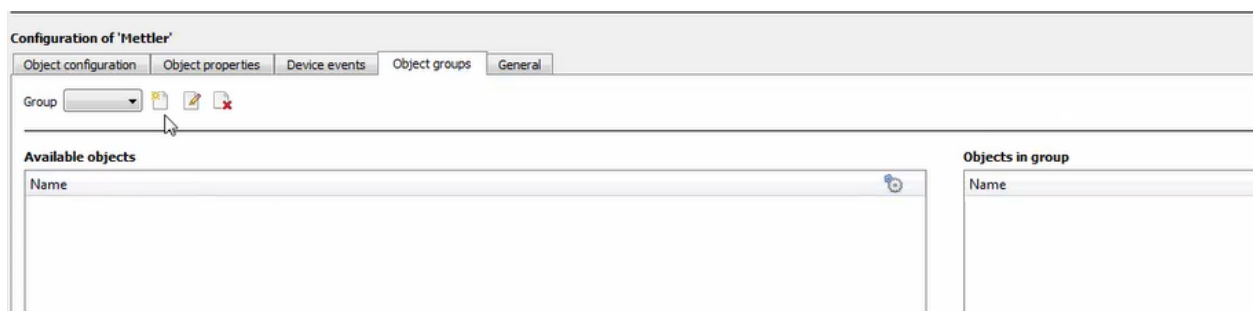
### 2.3.3.1 Event Type Options

Events may be viewed according to type. Mettler Event types are: **Communication** and **Weight**.



Once an Event type is selected from the drop-down menu, the column headings will be displayed according to the specific device Event.




### 2.3.4 Object Groups Tab



Groups of the same type of object.

**Tip:** This is very useful when setting up Events, because Events can be triggered by an object group. (E.g. a group will trigger, if any of the devices in that group is triggered.)

#### 2.3.4.1 Create a Group

-  To **create** a group, click on this icon.
-  To **edit** a group, click on this icon.
-  To **delete** a group, click on this icon.

A new dialogue box will pop up.







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

Click on the drop-down menu to select the **Object type** for grouping.

**Note:** Once a group has been created, the object type of the group may not be edited.

#### 2.3.4.2 Add or Remove Objects

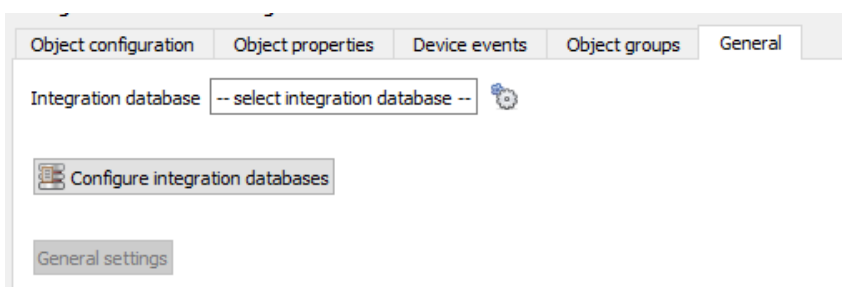
After creating a group, a list of all the available objects for that group will be displayed in the Available objects panel, on the left-hand side. These are ready to be added to the group.

-  To **add** these objects to the group, select them from the list, and **click on the right arrow**.
-  To **remove** these objects from the group, select them and **click on the left arrow**.

**Note:** Multiple objects may be selected at a time.

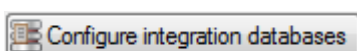
### 2.3.5 General Tab

Currently the general tab deals with the **Integration database**. Here an existing database can be selected, or a new integration database may be configured.



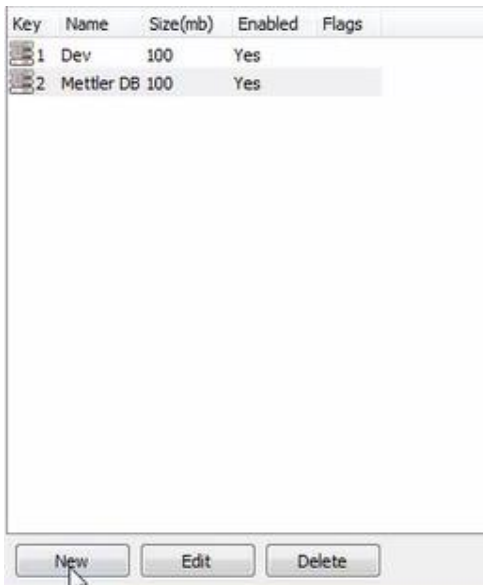
**Important Note:** Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here the integration will not function properly within the CathesisVision system.

#### 2.3.5.1 Configure a New Database

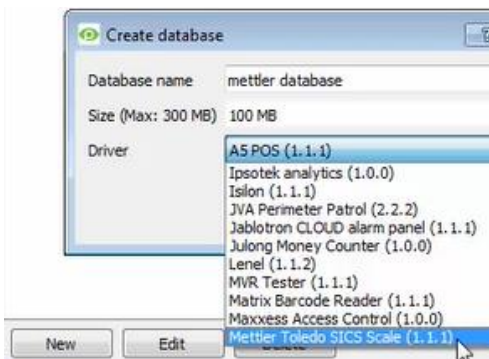


If there is no database created yet, clicking on this button will begin the integration database setup.

### Configure Integration Database



Select the unit the database will be added to, from the list on the left, and click **New** to create a new integration database.

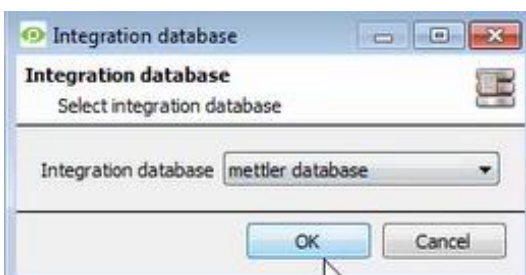


Give the database a **name**.

Set the database **Size**.

Select the **Mettler Toledo SICS** driver from the drop-down menu.

### Select the Integration Database



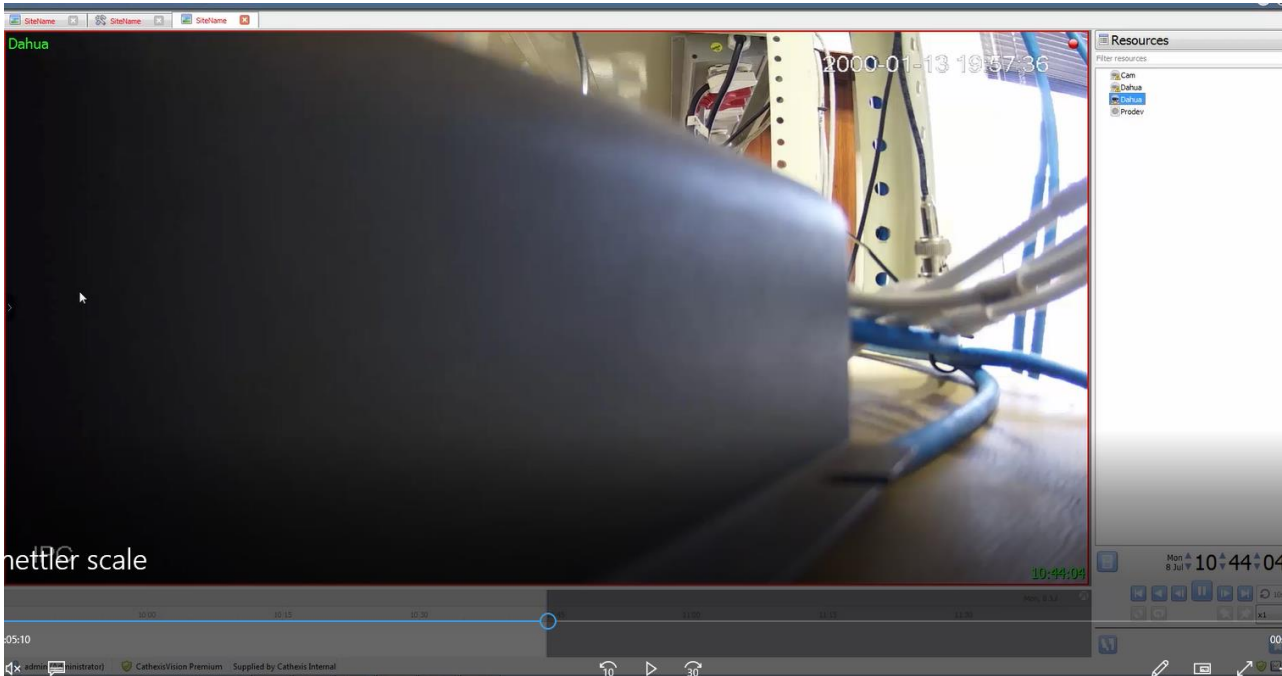
Integration database -- select integration database --



Once a database has been created, the user may select it by clicking on the settings icon, and selecting it in the dialogue that appears. Only databases which relate to the current device should appear.

### 3. Camera Tab Overlay Setup

Once all the relevant settings have been configured, the Mettler overlay can be pulled through over the relevant camera feed.



**Note:** Cameras must have already been added to the Mettler scale objects.

#### 3.1 Video Feed Options Panel



To bring up the overlay, click the arrow to the left of the screen, to pop out the Video feed options panel.

Once popped out, the Video feed options panel will present a number of options specific to the settings configured for that video feed.

##### 3.1.1 Select the Overlay



Clicking the overlay icon will bring up the overlay options for this video feed.

Select the desired overlay and it will appear over the video feed.

## 4. Database

The database tab will allow navigation of the databased entries, for each individual database. In the database tab, each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording, it can be launched from within the database tab.

Time	Scale id	Scale name	Scale serial	Weight	Links
2019-07-08 10:41:05	1	1	B44523917	273.800 g	
2019-07-08 10:41:27	1	1	B44523917	273.700 g	
2019-07-08 10:41:27	1	1	B44523917	273.800 g	
2019-07-08 10:41:27	1	1	B44523917	273.900 g	
2019-07-08 10:41:28	1	1	B44523917	273.800 g	
2019-07-08 10:42:09	1	1	B44523917	273.900 g	
2019-07-08 10:42:10	1	1	B44523917	273.800 g	
2019-07-08 10:42:10	1	1	B44523917	273.700 g	
2019-07-08 10:42:10	1	1	B44523917	273.800 g	
2019-07-08 10:42:11	1	1	B44523917	273.700 g	
2019-07-08 10:42:12	1	1	B44523917	273.800 g	
2019-07-08 10:43:34	1	1	B44523917	273.900 g	
2019-07-08 10:43:35	1	1	B44523917	273.800 g	
2019-07-08 10:44:20	1	1	B44523917	10.000 g	
2019-07-08 10:44:26	1	1	B44523917	273.800 g	
2019-07-08 10:45:20	1	1	B44523917	290.200 g	

1 Stable 273.8 g

2000-01-13 19:54:34

7/8/2019 10:41:05:059

Mon, 8 Jul

10:38 10:40 10:42 10:44

Mon 8 Jul 10:41:03

**Time** 2019-07-08 10:41:05

**Scale id** 1

**Scale name** 1

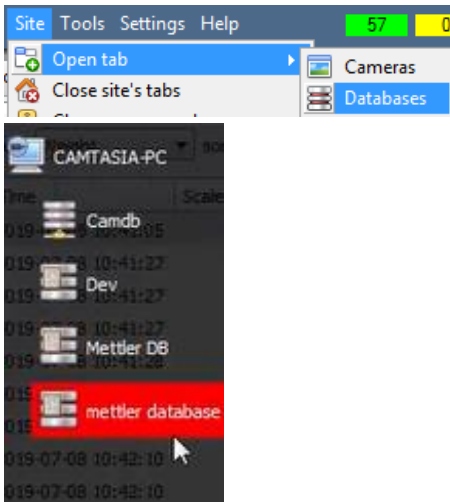
**Scale serial** B44523917

**Weight** 273.800 g

Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathesisVision by the integrated device.

The Mettler scale database is information rich. This is an example of some of the information that is included.

### 4.1 Navigate to the Database



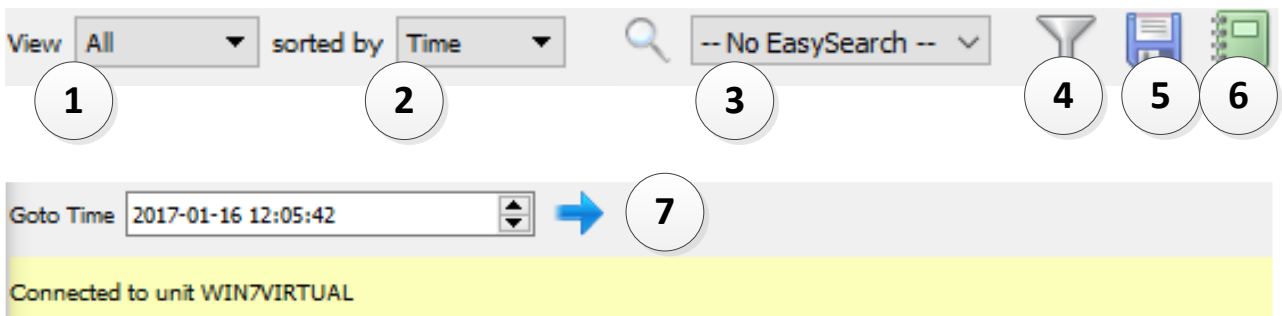
To open the Database tab, follow **Site / Open tab / Databases**.



When the database tab opens, select the relevant integration database from the database panel that opens on the left-hand side. The databases are ordered under the NVRs that they are attached to.

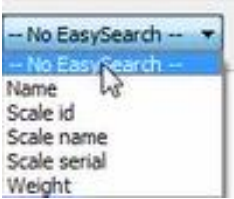





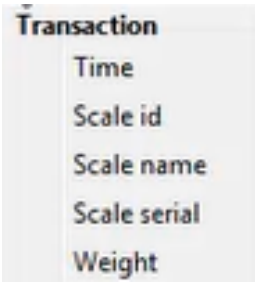

To open and close this list click on the arrow in the centre of the list:



### 4.2 Database Interface



<p>① <b>View</b></p>	<p><b>View</b> changes the way the database is presented.</p>  <p>Some integration databases have multiple view options.</p>
<p>② <b>Sorted By</b></p>	<p>For the Mettler integration, Events may only be sorted by Time .</p>  <p>scale id   Scale name   Scale serial   Weig</p>

<p>③ <b>Easy Search</b></p>	<p>The easy search option quickly searches the database within one of the following options:</p> 
<p>④ <b>Filter</b> </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, these are the options:</p> <ol style="list-style-type: none"> <li>1. To <b>enable</b> filters check this box: <input checked="" type="checkbox"/> Enable filters</li> <li>2. To <b>add</b> a new filter click on . The filter icon  will change to  when filters are active.</li> <li>3. To <b>delete</b> an added filter click on .</li> </ol> <p>The options in this integration are:</p>  <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. Multiple filters may be run simultaneously.</li> <li>2. The same parameter may be used more than once.</li> <li>3. 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>Export</b></p>	<p>Generate metadatabase reports in PDF or CSV format. See below.</p>
<p>⑥ <b>Manage Reports</b></p>	<p>Generate scheduled metadatabase reports. See below.</p>
<p>⑦ <b>Go to Time</b></p>	<p>This navigates to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes.  Then click on the arrow icon.</p>

## 4.2.1 Generate Metadatabase Reports



Click the save icon to open the Export window.

The screenshot shows the 'Export' dialog box with the title 'Export'. Under the heading 'Select the period to export', there are four radio button options:
 

- Preset: A dropdown menu is set to 'Quarter to date'.
- Specific: The 'From' field is set to '1 January 2017 00:00:00' and the 'to' field is set to '1 April 2017 00:00:00'.
- Previous: The 'Previous' field is set to '1' and the unit is 'Hours'.
- Period of: The 'Period of' field is set to '1', the unit is 'Hours', and the time range is 'from 00h00 16 January 2017'.

 At the bottom right, there are 'Back' and 'Next' buttons.

Select the **Period** to export, and enter the required details.

Click **Next**.

The screenshot shows the 'Export' dialog box with the title 'Export'. Under the heading 'Configure the report', there are two fields:
 

- Format:** A dropdown menu is set to 'CSV'.
- Filename:** A text box contains 'C:/Program Files/CathexisVision Client/report.csv' and a folder icon to its right.

 At the bottom right, there are 'Back' and 'Export' buttons.

Select the **Format** to export the report in; either CSV or PDF.

See below for the two options.

### 4.2.1.1 Export CSV

This is a close-up of the 'Configure the report' section from the previous screenshot. It shows the 'Format' dropdown set to 'CSV' and the 'Filename' text box containing 'C:/Program Files/CathexisVision Client/report.csv' with a folder icon to its right.

Select **CSV Format**.

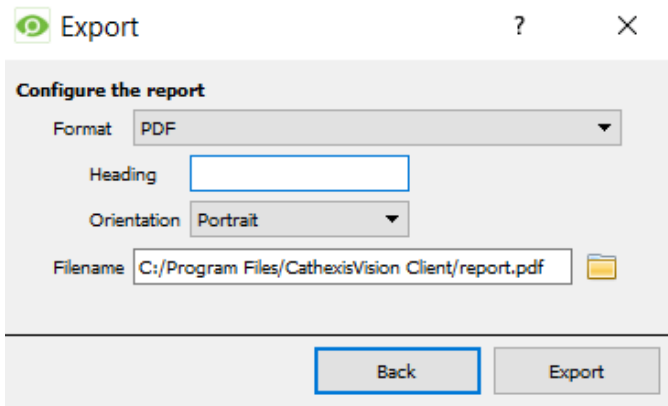
Edit the **Filename** by either entering it straight into text field (replacing **report.csv**).



Click the folder icon to choose a new save folder and filename.



### 4.2.1.2 Export PDF



Select PDF **Format**.

Give the PDF a **Heading**.

Select either Landscape or Portrait **Orientation** of the PDF.

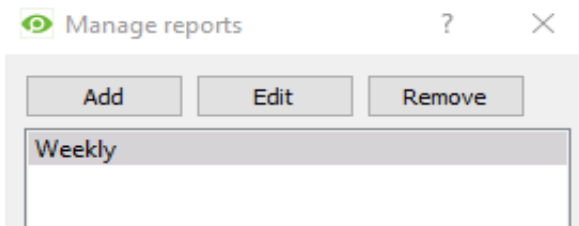
Edit the **Filename** by either entering it straight into text field (replacing **report.pdf**).



Or click the folder icon to choose a new save folder and filename.

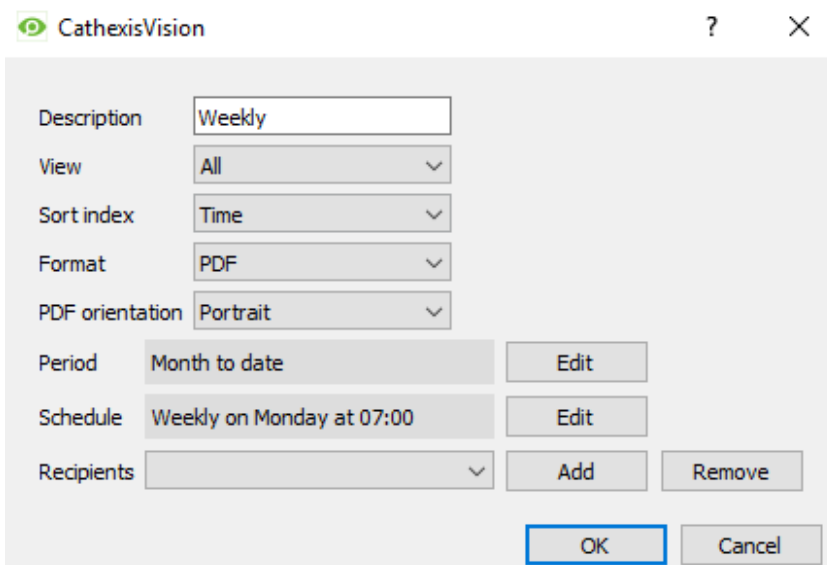
## 4.2.2 Manage Reports

Metadatabase reports may be auto-generated according to a user-defined schedule.



Click **Add** to add a new report. Once added, reports will populate the list.

Double-click the selected report (or select and click **Edit**) to configure the parameters of the scheduled report. See below.



Give the report a **descriptive name**.

Select the default presentation of the database entries by selecting desired options for **View** and **Sort Index**.

Select the **Format (PDF/CSV)** of the report, as well as the **orientation** of the report (if PDF selected).

Select the **Period** to report, and the **Schedule** according to which reports will be auto-generated.



Add report recipients by clicking **Add** and entering the relevant email address. Multiple recipients may be added. To remove a recipient, select the entry from the drop-down menu and click **Remove**.

### 4.2.3 Metadata

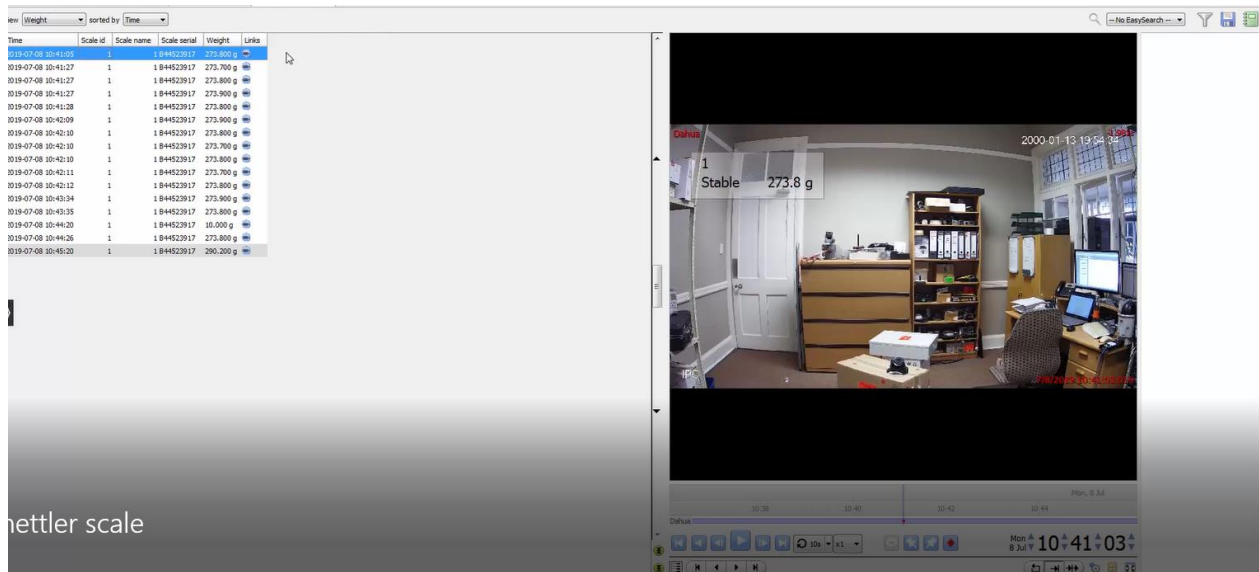
<b>Time</b>	2019-07-08
	10:41:05
<b>Scale id</b>	1
<b>Scale name</b>	1
<b>Scale serial</b>	B44523917
<b>Weight</b>	273.800 g

On the right-hand side of the database, metadata about the Event entry is displayed.

### 4.2.4 Viewing an Entry's Associated Recording

This integration uses the new video option where the video player is embedded in the database view. This player uses the same timeline features as the CathesisVision cameras tab.

- To view an associated recording, simply left-click on a database entry which has the camera icon in the **Links** column. Then click play in the video player.



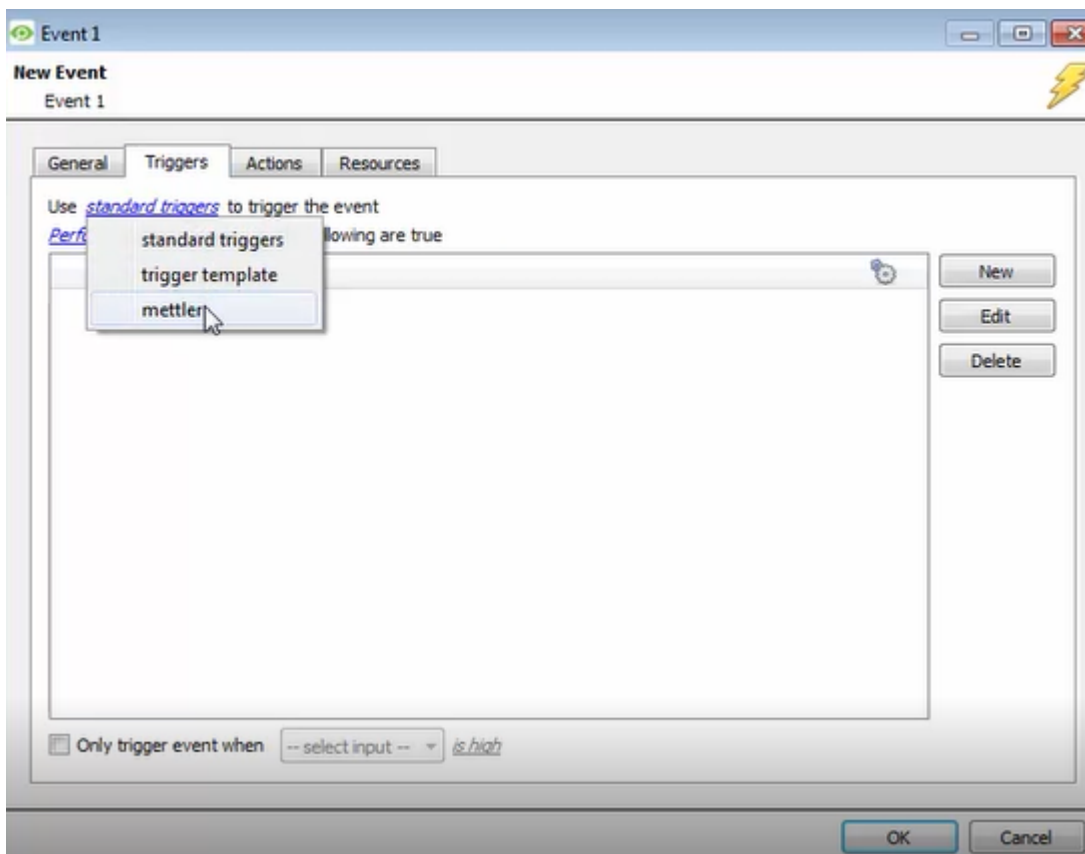
## 5. Events

A CathesisVision Event has a trigger, which causes an action. Integrated devices can be set to act at triggers, or as actions. This document will detail the aspects of Events specific to the Mettler device. There is a comprehensive guide to CathesisVision Events in the main setup manual.

Most of the data that CathesisVision 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.

### 5.1 Event Window

Events in CathesisVision are setup via the Event Window. This has 4 tabs. In the **General Tab** an Event is given a name, description, schedule and priority. In the **Triggers Tab** the trigger/s for the Event is defined. In the **Actions Tab** the action/s which the Event takes is defined. In the **Resources Tab** the various site resources which can be used as part of an Event are defined.



## 5.2 Creating an Event

To create an Event using the Mettler device, enter the Events management area:



Once in Events management click on New. This will open up the New Event window.

### 5.2.1 While/When and Any/All

When triggering on an object, there is an option to trigger **while/when** a trigger is active. Multiple triggers may be selected, and it should be defined whether **all/any** of the triggers need to be active to start an Event.

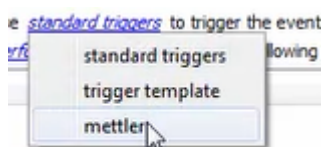


To change these settings click on the related, blue hyperlinks.

## 5.3 Triggers

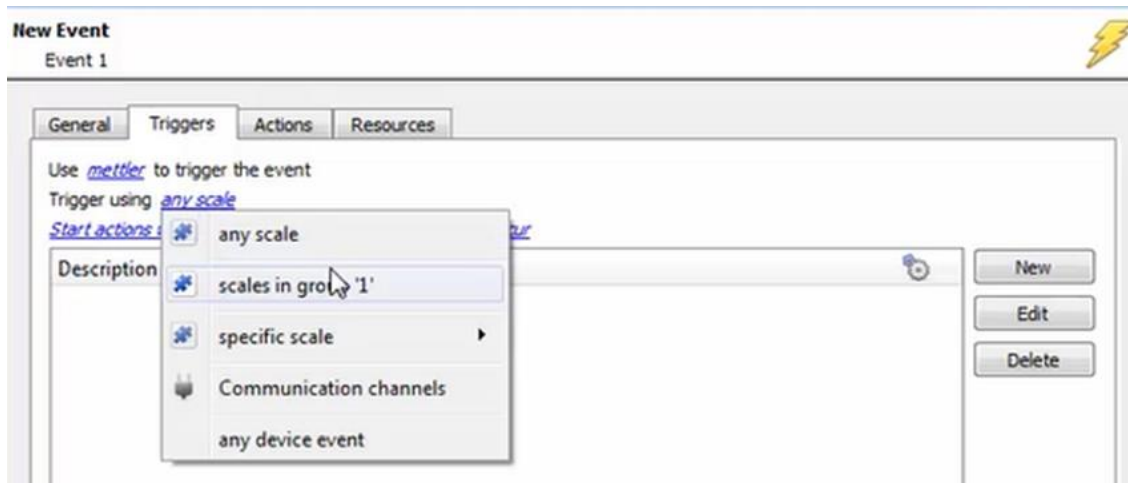
A trigger is the user defined input that prompts the Event to start. The trigger causes the subsequent action, which the user will also define.

### 5.3.1 Set the Device as the Trigger



Use Mettler to trigger an Event. If 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 Mettler device, click on the hyperlink, and select the relevant device name from the drop-down menu.

## 5.3.2 Trigger Types (Trigger Using)



It is useful to think of this as a **master trigger type**.

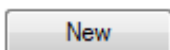
MENU OPTION	DESCRIPTION OF TRIGGER TYPE
<b>Any scale</b>	will trigger when any of these objects sends the selected trigger.
<b>Scales in group 1</b>	will trigger when any of these objects sends the selected trigger.
<b>Specific scale...</b>	will trigger an Event from the specific object selected.
<b>Communication channels</b>	will trigger only on the Communication channels.
<b>Any device Event</b>	will trigger on any Event that occurs on the device. Within the “any device Event” setup, set “device Event rules”, which will constrain which device Events will trigger the Event.

**Note for group triggers:** For this Event to be databased under the name of a specific object, and not the name of the triggering group, modify the Description field in the **General Tab** of the Event setup.

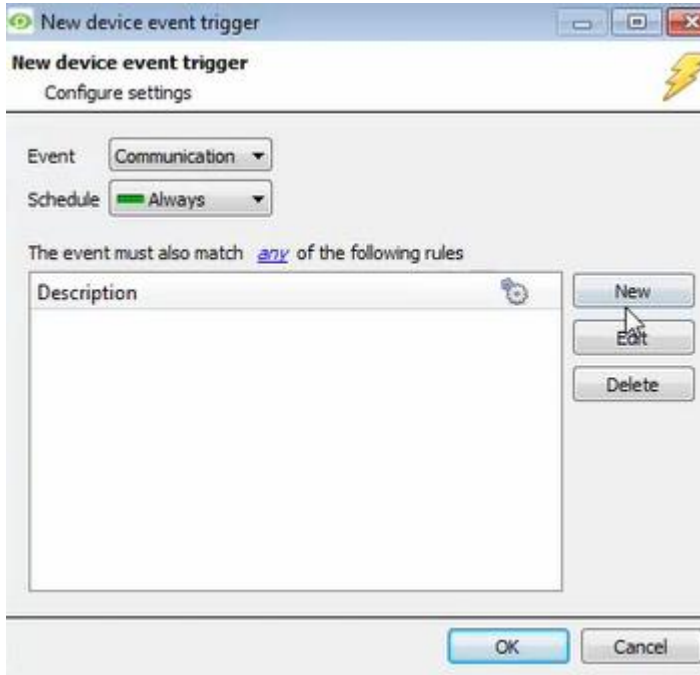
Click on the question mark to see a list of available descriptions.

### 5.3.2.1 Define the Trigger

After selecting a master trigger type, add a trigger to the Event.



Click on New in the Triggers Tab. This will bring up the dialogue box below, for the various trigger types:

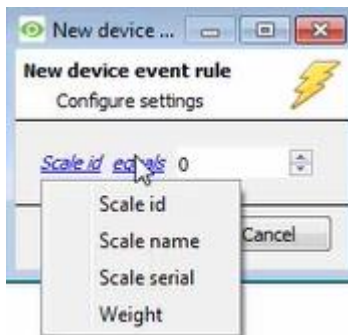


For example, within the [any device event](#) option, choose what type of device Event will be the trigger. Choose an Event type from the drop-down menu.

**Note:** Multiple constraints (**Device Event Triggers**) may be set. If a constraint is not defined, every single device Event will trigger this Event.

To add/edit/delete a **Trigger** (a constraint) use the **New**, **Edit**, and **Delete** buttons on the right-hand side.

Choose if [any](#), or [all](#) constraints need to be fulfilled to set off a trigger.

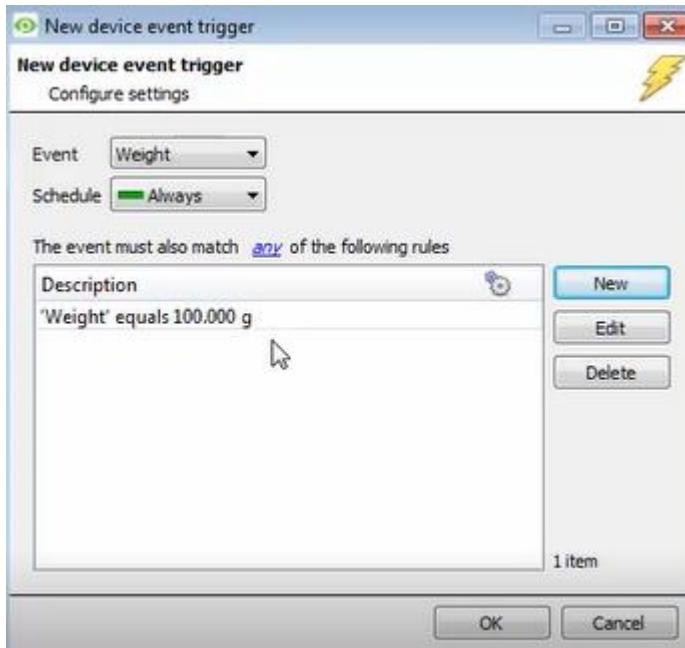


To change the constraint, click on the first hyperlink, this will bring up the full list of available rules.

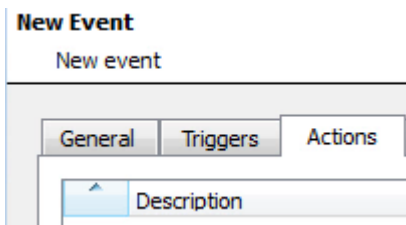
To modify the way this rule will be treated click on the second hyperlink ([equals](#) in the example) this will show display the rules options.

**Note:** When all available options are known to CathexisVision, a drop-down menu will appear. When these variables are not pre-defined, they will need to be filled in manually. The information pulled through to the Events is information sent to CathexisVision from the Mettler device, see the Mettler settings for the strings needed here.

Below is an example of a trigger configured to monitor certain transactions. This Event will trigger if **Weight** matches **any of the following rules**. In this instance it is if Weight equals **100,000 grams**.

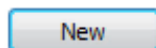


## 5.4 Actions



Once the triggers that are going to initiate the Event have been defined, define some Actions.

### 5.4.1 New Action



To create a new Event Action, click on New.

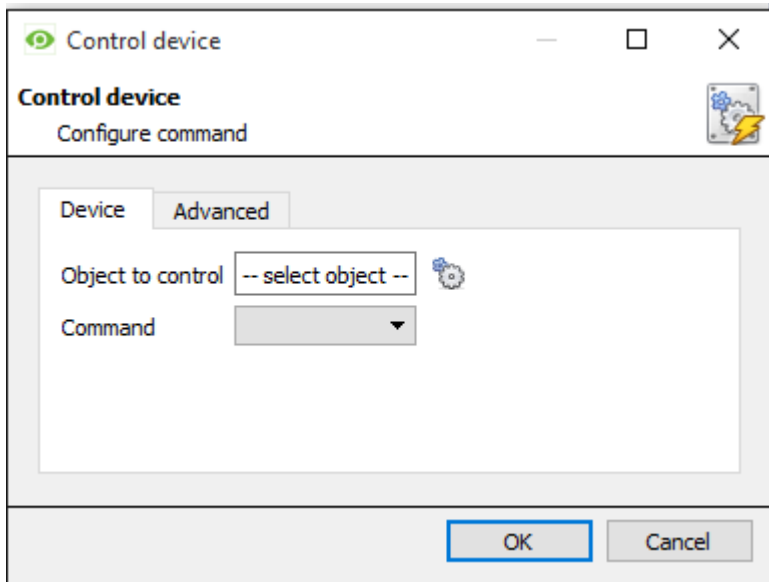
Select one of the actions from the drop-down menu, and then follow the directions in the windows that pop up.

**Note:**

With many integrations there will be the option to control the integrated device, as one of the actions. The Mettler device **may not be controlled unless the Mettler Scale integration is also connected**.

### 5.4.1.1 Control Mettler Device

Although this option is presented, it is not possible to control the Mettler scale device as a CathesisVision action



## 6. Maps

It is possible to add the Mettler device to a site map, which will allow for a number of action options when objects are triggered. The following objects and associated messages may be used to trigger map actions:

<b>System Object:</b>	<ul style="list-style-type: none"> <li>• Online/Offline state changes.</li> <li>• CathesisVision system Event triggers.</li> </ul>
<b>Scale:</b>	<ul style="list-style-type: none"> <li>• CathesisVision system Event triggers.</li> </ul>

**Note:** This section will only deal with the specifics of adding the Mettler device to the map and configuring supported map Events. For more information on using the CathesisVision Map Editor and Map Tab, please consult the dedicated and detailed **Map Editor Operation Manual**.

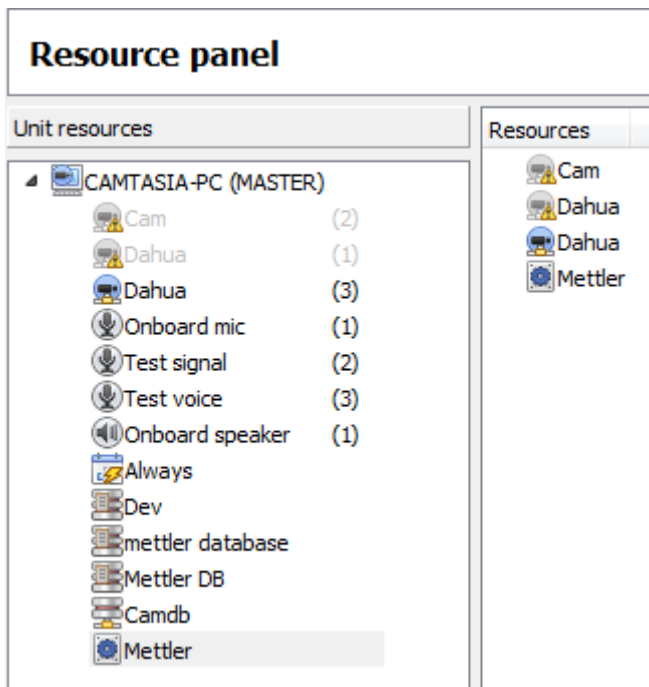
### 6.1 Add the Device as a Resource

If this has not already been done, the device must be added as a resource to be added to the map.

#### 6.1.1 Resources Panel



Setup Tab / Resources Panel



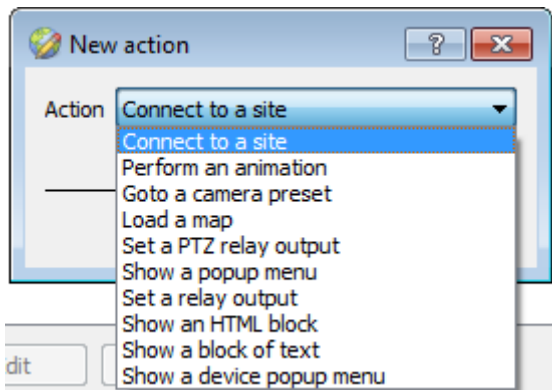
1. Navigate to the **Resource Panel** by following **Site / Open Tab / Setup / Resource Panel**.
2. Drag the Mettler device from the **Unit Resources** list into the **Resources** list, on the right.



## 6.2 Add the Device to the Map

Once the Mettler device has been added as a **Resource**, it will be available to drag onto the map area from the **Site Resources** list.

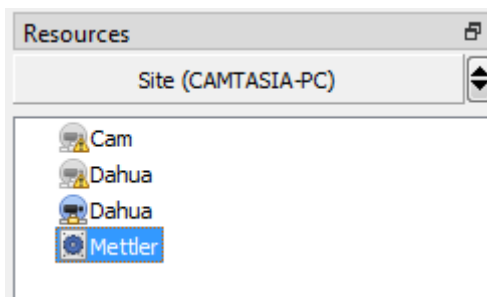
### 6.2.1 Connect to Site



At the bottom right-hand of the Map Editor screen, click the drop-down menu to select the site to connect to.

Once connected to site, all the resources available will populate the panel below.

### 6.2.2 Adding Device Objects

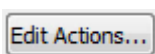


Drag the Mettler device from the Site Resources list onto the map area. All of the device objects will appear in a list. Select an object.

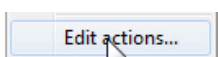
**Note:** To add multiple objects, repeatedly drag-and-drop the device onto the map area and select the desired objects individually.

**Note:** Communication objects do not support Map functionality. Only system and objects function on maps.

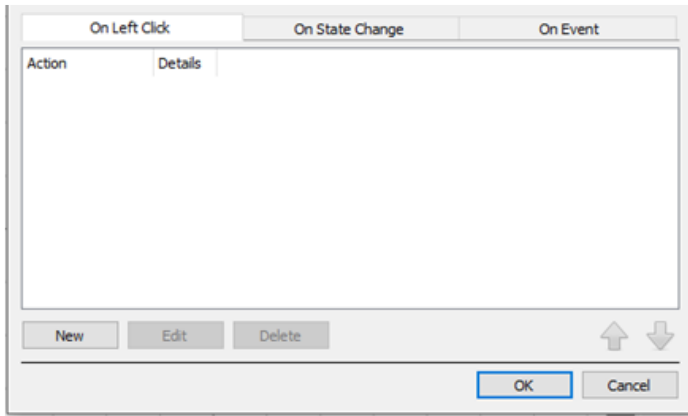
## 6.3 Adding Device Actions



To add actions to the device objects, either select the object on the map and click Edit Actions.

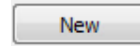


Or, right-click the map object and select Edit actions.



Actions may be set for **Left-Clicks, State Changes, and Events**. See descriptions below.

Once configured, the list of actions will populate the white space in the relevant tabs.



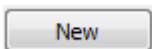
To create a new action, select.

### 6.3.1 Map Object Device Action Tabs

Map actions may be set to trigger on Left-Clicks, State Changes, and Events. The table below illustrates the triggers that may be used to generate a map action.

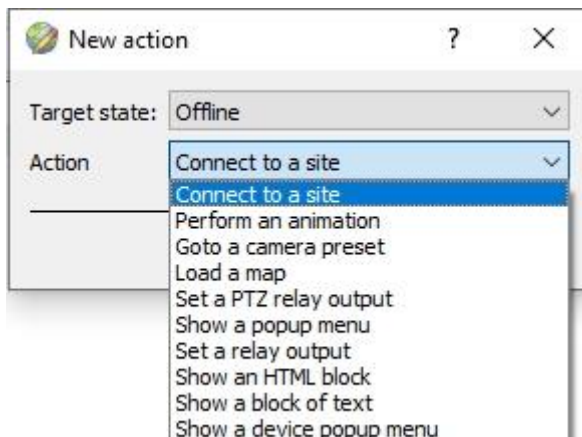
Tab	Map Action Trigger Detail
<b>On Left Click</b>	Left-clicking on the object in the map will trigger an associated map action. See below for actions.
<b>On State Change</b>	When the state of the selected object changes, the map action will occur. State change options will differ according to the selected object. <b>Note:</b> State change is only supported for <b>System objects</b> .
<b>On Event</b>	When a CathexisVision system Event occurs, that trigger can be used to trigger a map action. System Event triggers are supported for System objects ( <b>any Event</b> ) and scale objects.

### 6.3.2 Action Options



Click **New** in the relevant tab of the action window.

**Note:** Multiple actions may be added to the map objects.



Action options are the same for all tabs, except for the Event tab, which has the added option to **Show a Device Event Notification**.

Click **OK** in the Action window once all required actions have been set for the various map objects.

Once finished, save the map.

**Important note:** The map **must not be saved** in the default folder or Work folder of the installation directory. Instead, create a new directory when saving; e.g. **C:\Maps**.

## 6.4 Map Tab

The saved map needs to be uploaded to CathexisVision. Once the map is open, all objects added to the map area in the Map Editor will be visible on the map, and all actions set will be available.

## 7. Conclusion

This app-note was designed to deal specifically with this integration. For further information about the CathesisVision software, consult the main manual (<http://cathesisvideo.com/>).

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