



Outline User Guide

for the

aQ Video Server

CONFIDENTIAL DOCUMENT

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Outline User Guide for the AVS – aQ Video Server

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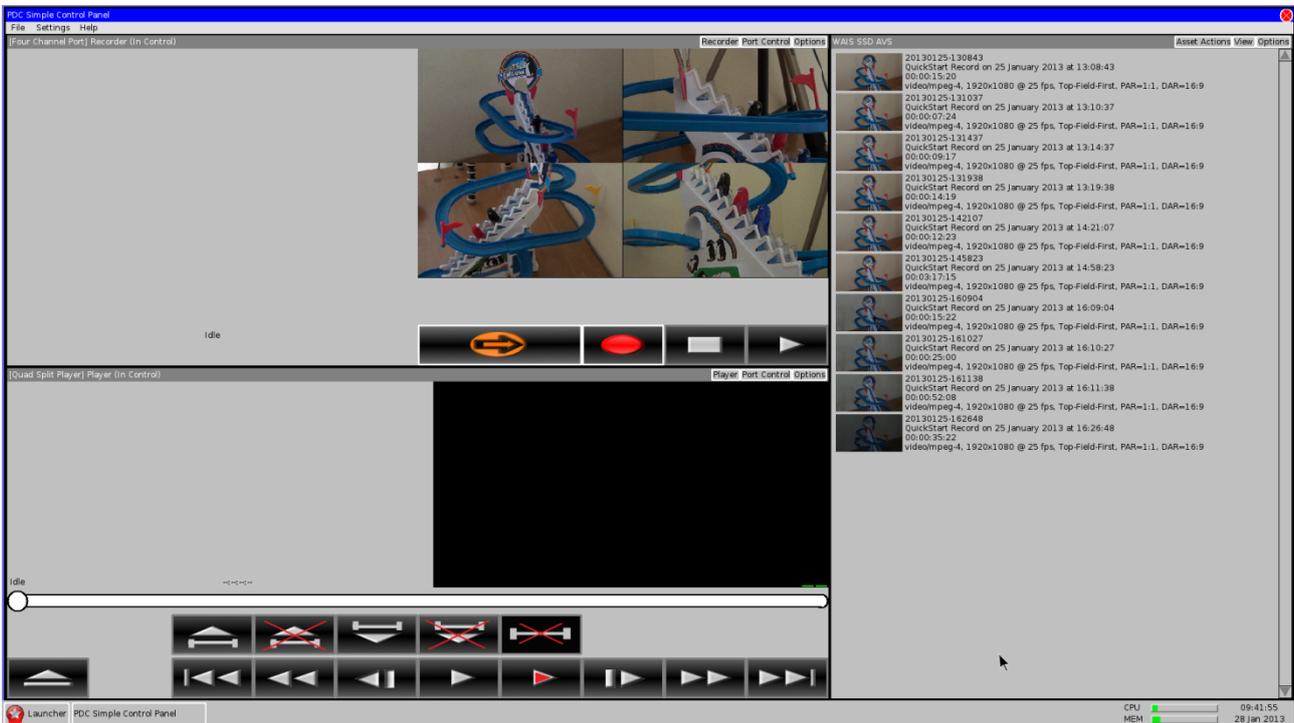
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1. INTRODUCTION

This document is intended to provide some simple and initial guidance for use of the aQ Video Server (AVS). It is expected to be eventually replaced by a full Operational / User Guide.

2. SOFTWARE OVERVIEW

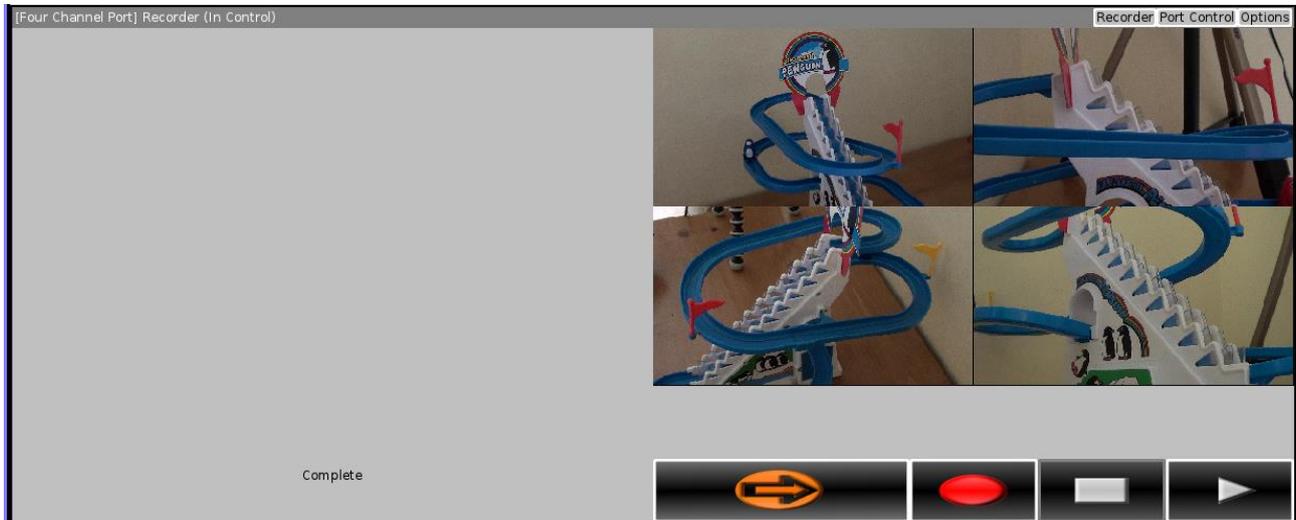
The system is configured so that the Graphical User Interface (GUI) starts up automatically when the server is powered up. A typical view of the GUI is shown below.



The GUI in this example is split into three sections – the recorder panel, the player/review panel and the media panel, each described briefly below and in more detail in the System Operation section. Other screen configurations are possible.

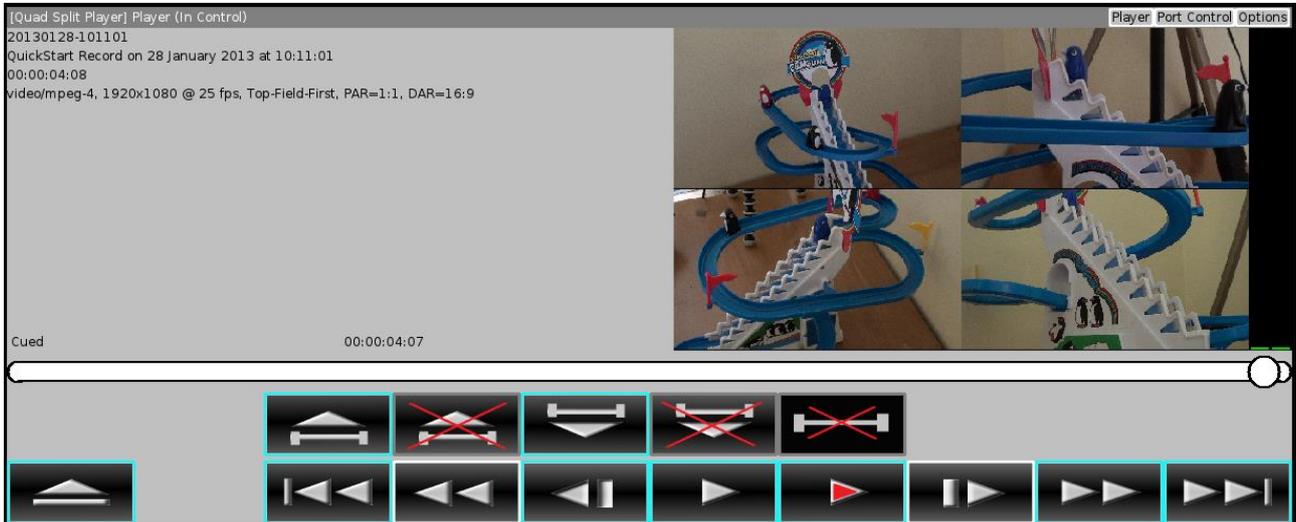
2.1 Recorder Panel

The recorder panel provides a view of the input, buttons to control the recording, status information about the current recording and menu options to allow the record operation to be configured.



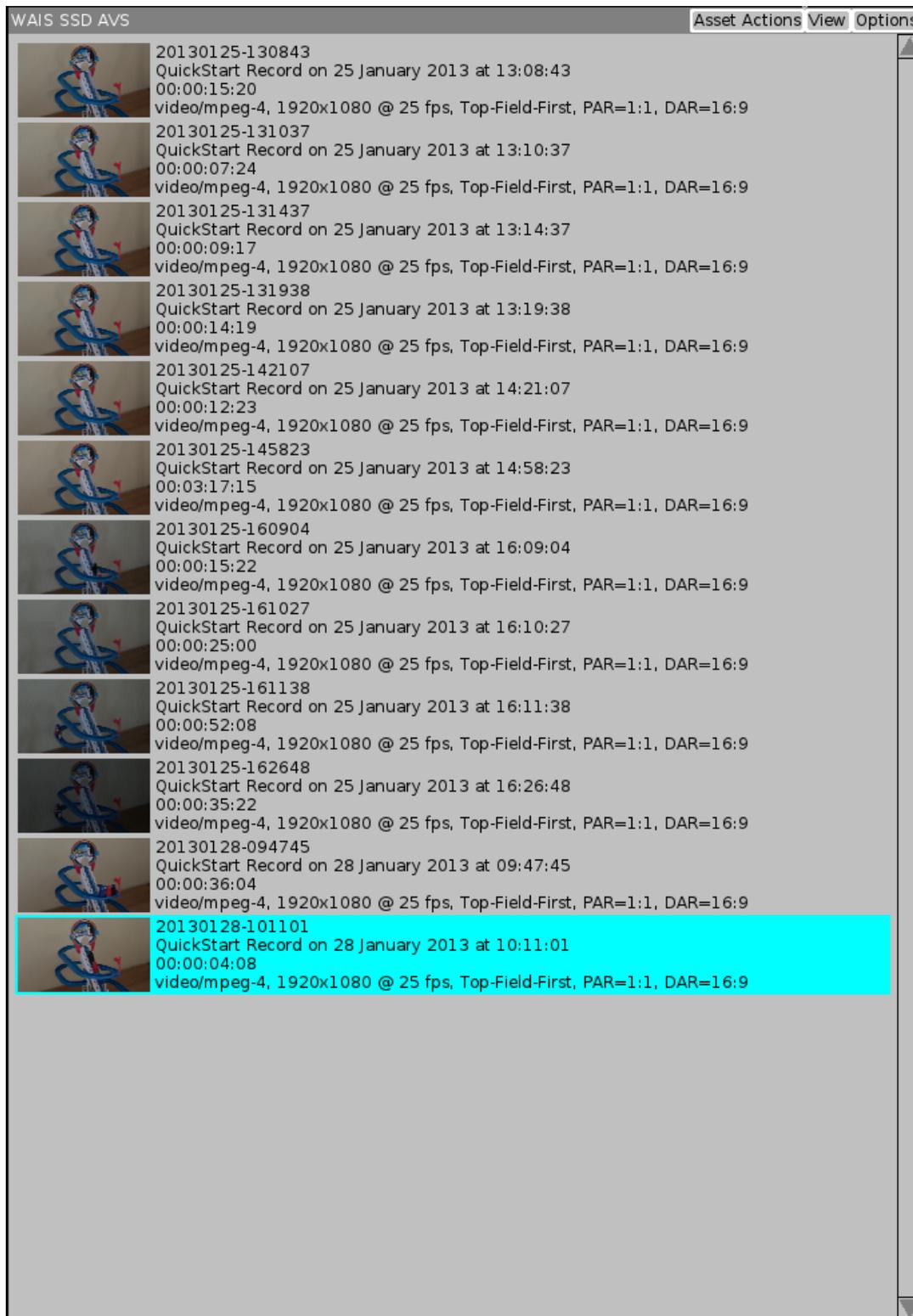
2.2 Player Panel

The player panel provides the ability to review a specific clip. The system can be configured so that the clip which has just been recorded is loaded into the player automatically once recording is complete, but any other clip can be loaded at any time. The panel includes a view of the selected clip, buttons to control the playback, status information about the current set of clips and menu options to allow the playback operation to be configured.



2.3 Media Panel

The media panel shows a list of all of the recorded events, including metadata for each clip or group of clips, and provides menu options to manage the media (including the ability to delete content).



3. SYSTEM OPERATION

3.1 Power On

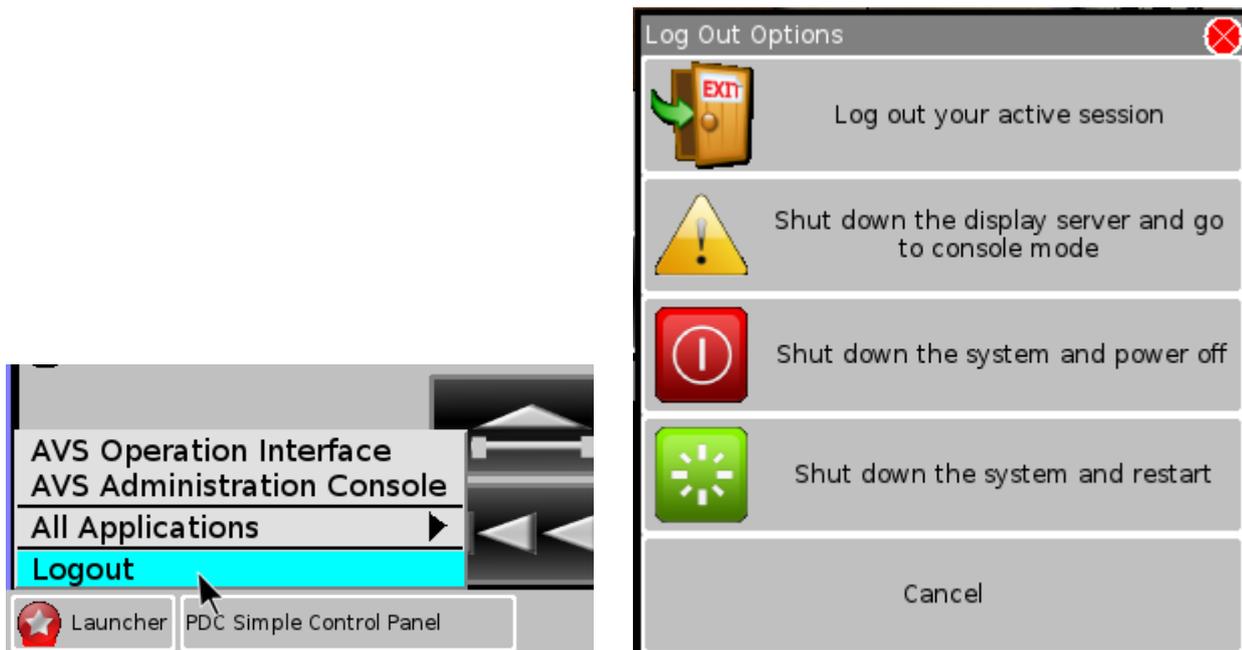
The system is turned on by pressing the small silver button, which is mounted bottom-left on the front panel, briefly (assuming a front panel is fitted and functional).



3.2 Power Off

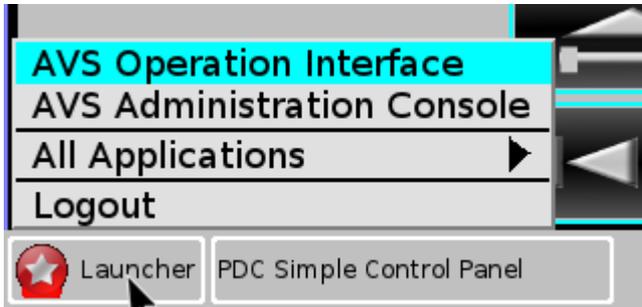
As with any computerised hardware, it is very important that the system is shut down correctly. If the power is removed before the system has been shut down, it is likely that elements of the software configuration or the recorded content will become corrupted, preventing further use.

The system can be turned off in two ways. One way is simply to press the small silver power button on the front panel, which will invoke a shutdown sequence. The other way is to click the 'Launcher' button, choose the 'Logout' option from the pop-up menu and select 'Shutdown the system and power off' from the list of log out options. In either case, it is very important to wait for the system to shut down completely before removing the mains supply. In some cases it can take around 90 seconds for the shutdown process to finish correctly.



3.3 User Interface Restart

The GUI is set to start automatically when the system is turned on. However, if the GUI needs to be started manually (or restarted if, for instance, it has accidentally been shut down), it can be invoked from the 'Launcher' button by selecting the 'AVS Operation Interface' option.



Unlike previous versions of the AVS firmware, the GUI runs independently from the underlying operation of the server. So if the GUI is shut down for any reason while a recording is taking place (for instance), that recording will continue unhindered. When the GUI is restarted, it will reconnect to the record and playback ports and allow normal operation – such as stopping the recording – to resume.

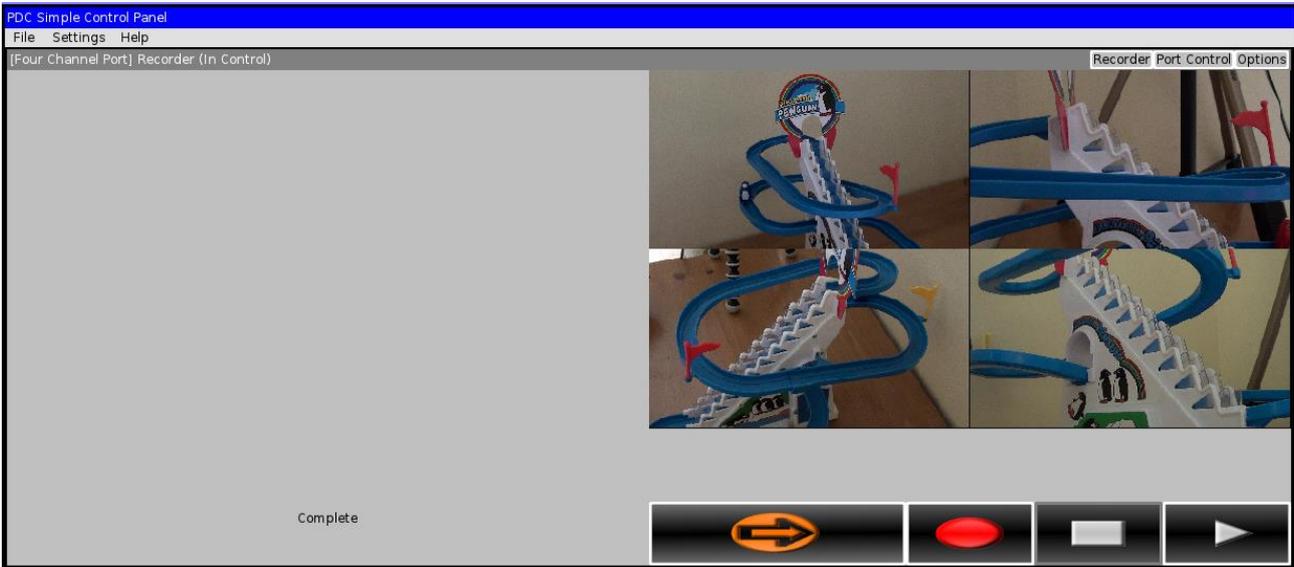
3.4 Recording Operation

3.4.1 Recorder Panel Overview

The recorder panel will typically be in one of two states – recording (where content is actively being recorded) or idle (where it is ready to begin recording). The appearance of the panel will vary slightly based on its current state – different buttons will be enabled and different status information will be displayed.

3.4.2 Panel in Idle mode

In this state, as shown below, the panel is ready to begin recording.



A close up of the control buttons is shown below:

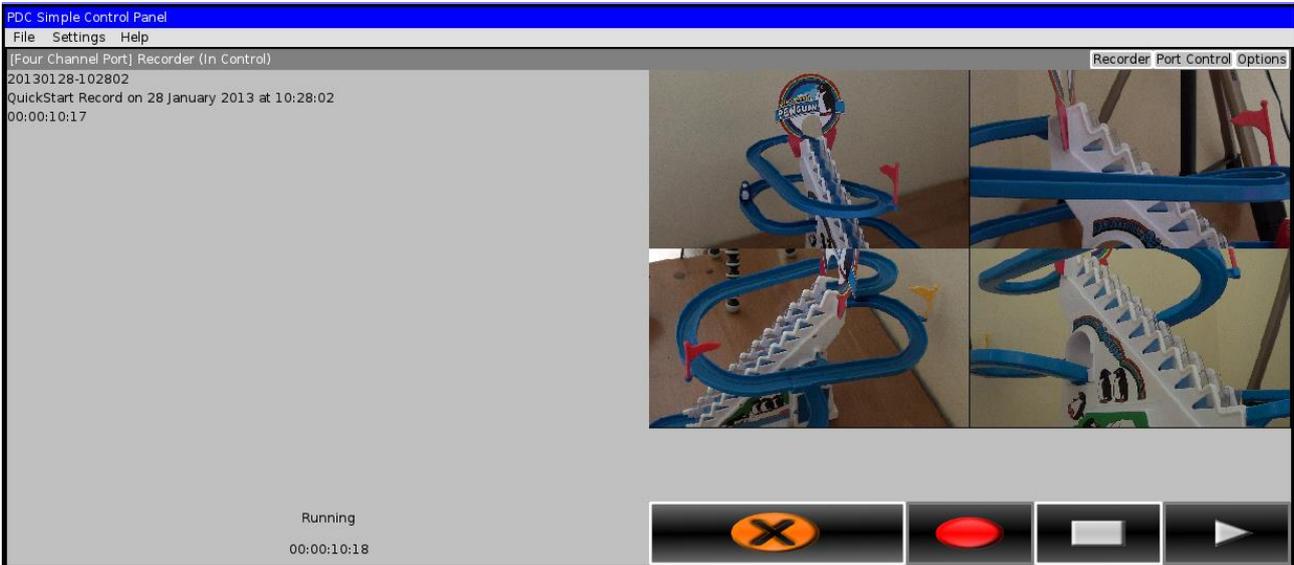


These provide the following functionality:

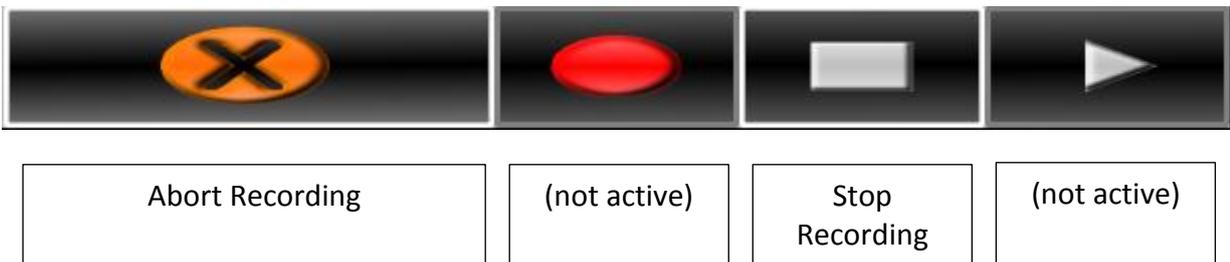
Prepare for Recording	This allows the name and description for the next recording to be entered in advance. If this information is not entered manually, the name and description will be generated automatically.
Start Recording	This initiates recording. It can be pressed after the ‘prepare’ button, in which case the manually-entered clip name and descriptions will be used, or it can be pressed directly (without a preceding ‘prepare’), in which case the clip name will be set to a name based on the current date and time (in the form ‘yyyymmdd-hhmmss’) and the description will be set to ‘Quickstart Record on dd mmm yyyy at hh:mm:ss’.
Play Previous Recording	This will cause the set of clips generated during the last record session to be loaded into review panel.

3.4.3 Panel in Recording mode

In this state, as shown below, content is currently being recorded. The panel shows additional status information, including the name and description being used for the current set of clips, the current duration of the recorded content and the current timecode.



A close up of the control buttons is shown below:



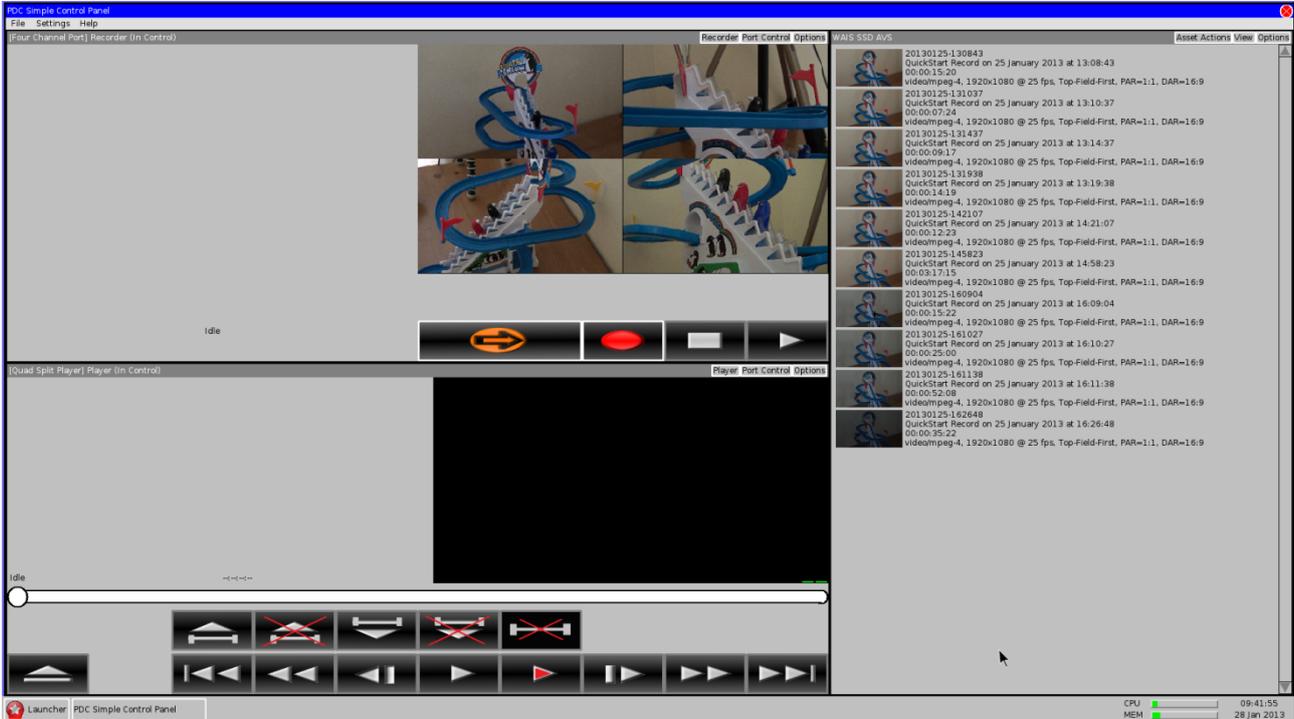
These provide the following functionality:

Abort Recording	This will terminate the recording and discard the recorded material.
Stop Recording	This will stop the recording, commit the recorded material to the media database and then automatically load the clips into the playout panel to allow for immediate review.

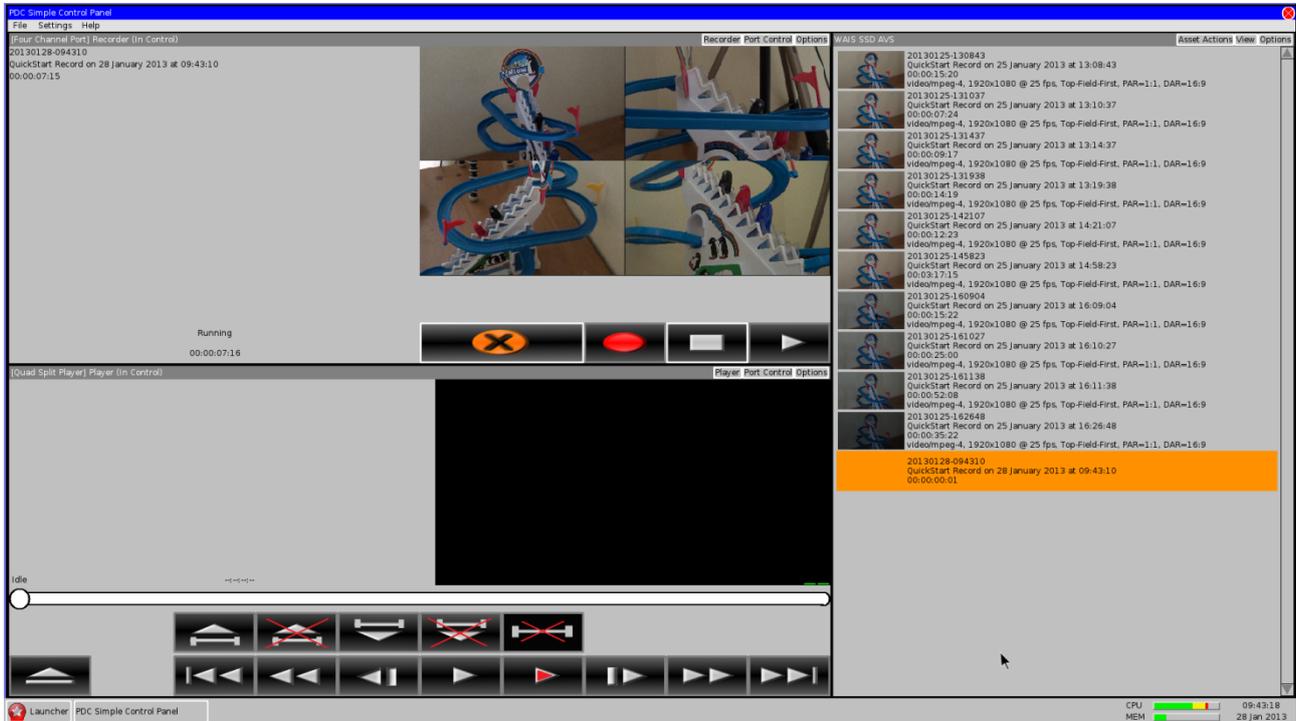
3.4.4 Example of a recording

The sequence of screenshots below provides an example of a recording.

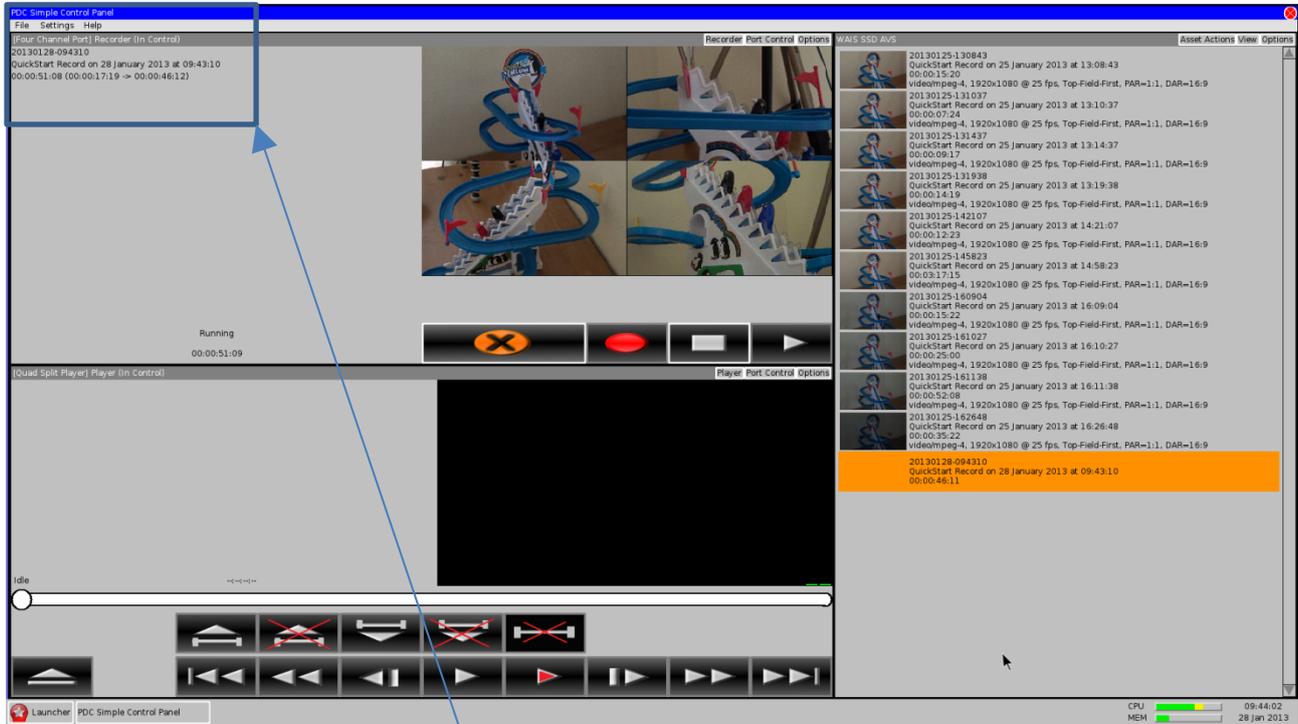
- The record panel is 'idle' (in that a recording has not yet taken place) or 'complete' (indicating that the previous recording was completed successfully).



- The operator clicks the ‘Start Recording’ button to initiate a quick-start recording. A name and description for the new set of clips is generated based on the current time and date and recording begins immediately. The panel displays status information about the name, description and duration of the recorded content. The media panel highlights the new clip in orange..

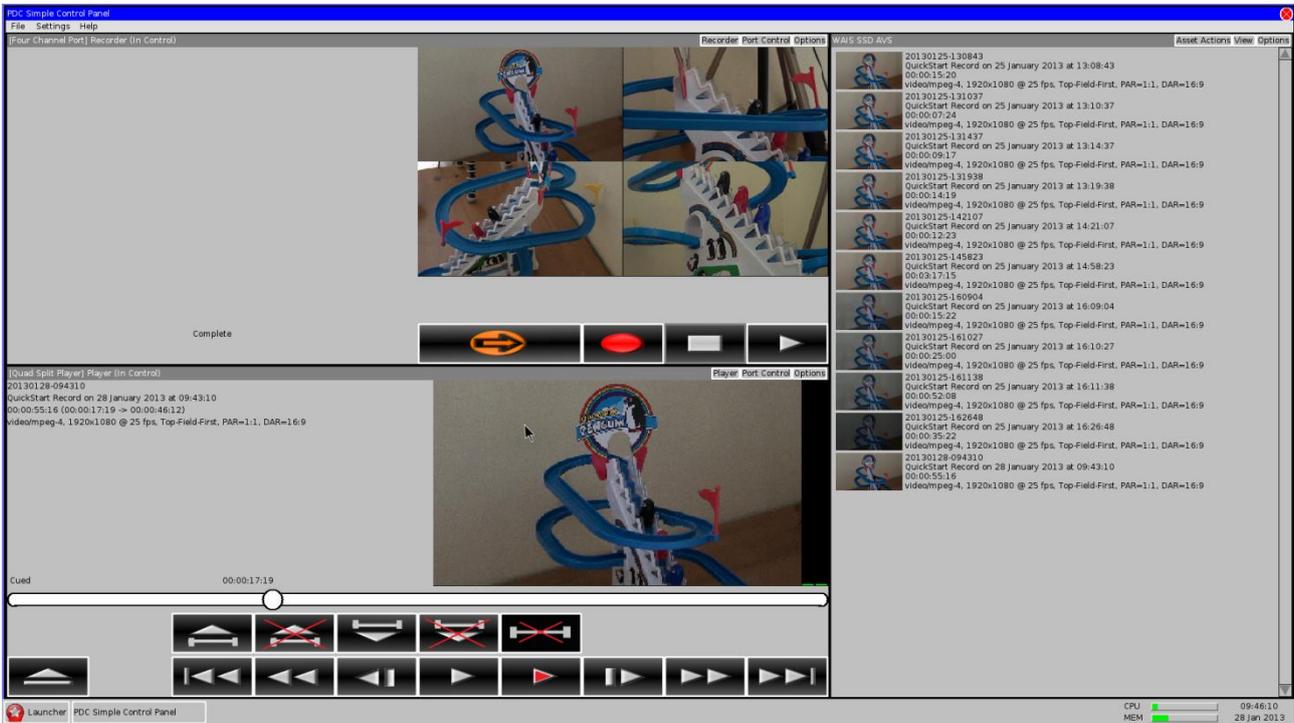


- In this case, the operator has marked an in- and an out-point for the recorded clip, in order to highlight the content that is actually required (rather than any wasted footage before the action began or after it had finished). Once both an in- and an out-point have been marked, the status information changes to indicate the marked portion of the clip – in this case between 00:00:17:19 and 00:00:46:12. These marks are not essential, and if neither is set, the entire clip will be used during playback. Even if marks have been set, they can always be changed or removed at a later stage.



PDC Simple Control Panel
File Settings Help
[Four Channel Port] Recorder (In Control)
20130128-094310
QuickStart Record on 28 January 2013 at 09:43:10
00:00:51:08 (00:00:17:19 -> 00:00:46:12)

- The operator clicks the ‘Stop Recording’ button to complete the recording, which causes several things to happen:
 - The status of the record panel changes to ‘complete’ and the buttons are enabled to allow another recording to be initiated
 - The set of clips that have just been recorded are loaded into the playback panel automatically, so that the event can be reviewed immediately
 - The orange highlight around the new item in the media list is removed to indicate that it is complete, and a new thumbnail image is generated automatically.

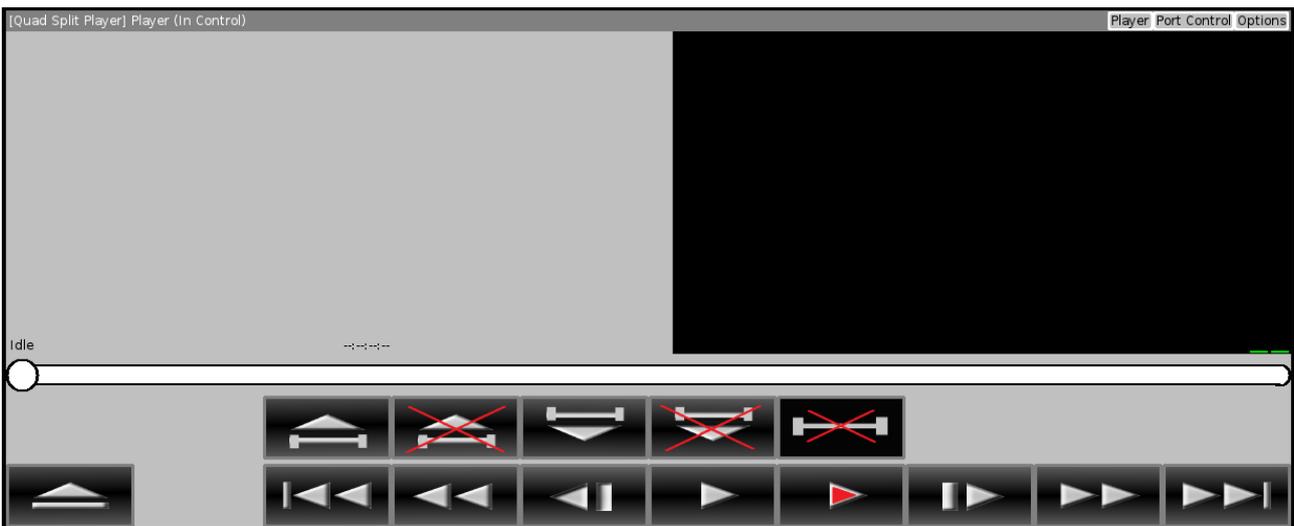


3.5 Review Operation

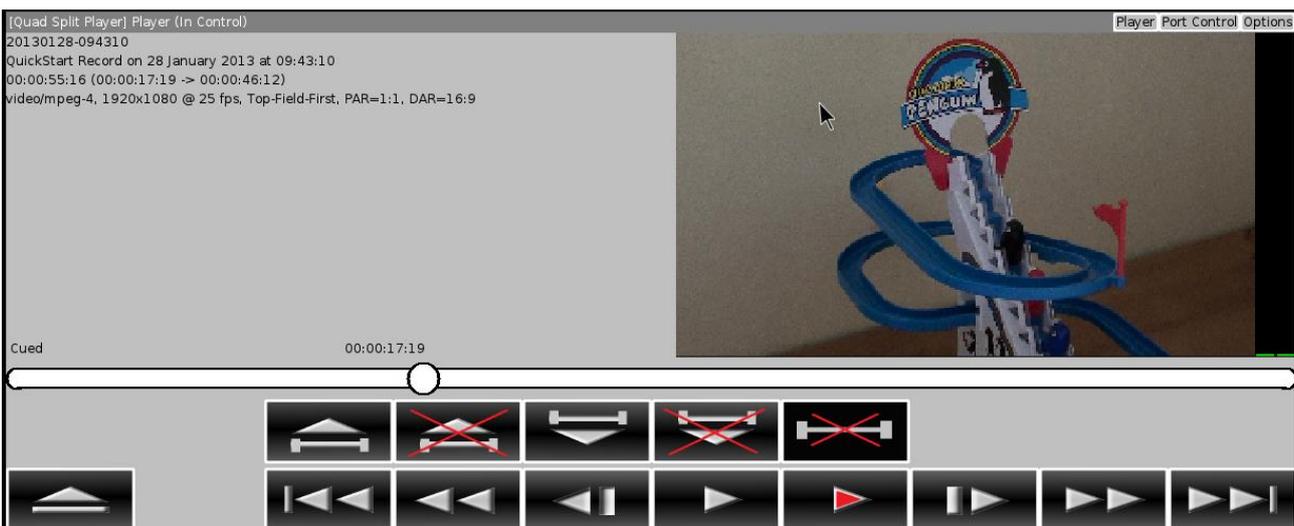
3.5.1 Player Panel

The player panel is slightly simpler than the recorder panel, in that it will either have nothing loaded (in which case the preview window will be black and no clip status information will be displayed) or it will have a group of four clips loaded to allow a particular action to be reviewed.

With nothing loaded, none of the player buttons will be active, as shown below. A group of clips can be loaded manually by dragging the required linkset item (the virtual record which groups the four clips together) from the media list and dropping it into the player panel. Alternatively, the set of clips from the last recorded action will be loaded automatically as soon as recording is stopped.



Once a group of clips has been loaded, the preview window will show the recorded content, status information will be displayed and the buttons will be come active.



3.5.2 Player Panel Buttons

Close-up views of the player panel buttons are shown below.

Bottom Row



From left to right, these provide the following functions:

- Eject (unload the current group of clips so that the player is empty)
- Jump to start of clip (or the in-point if one is marked)
- Rewind
- Frame Back
- Play (normal)
- Play (special)
- Frame Forwards
- Fast Forward
- Jump to end of clip (or the out-point if one is marked)

Top Row



From left to right, these provide the following functions:

- Mark in point
- Clear in point
- Mark out point
- Clear out point
- Clear in and out points

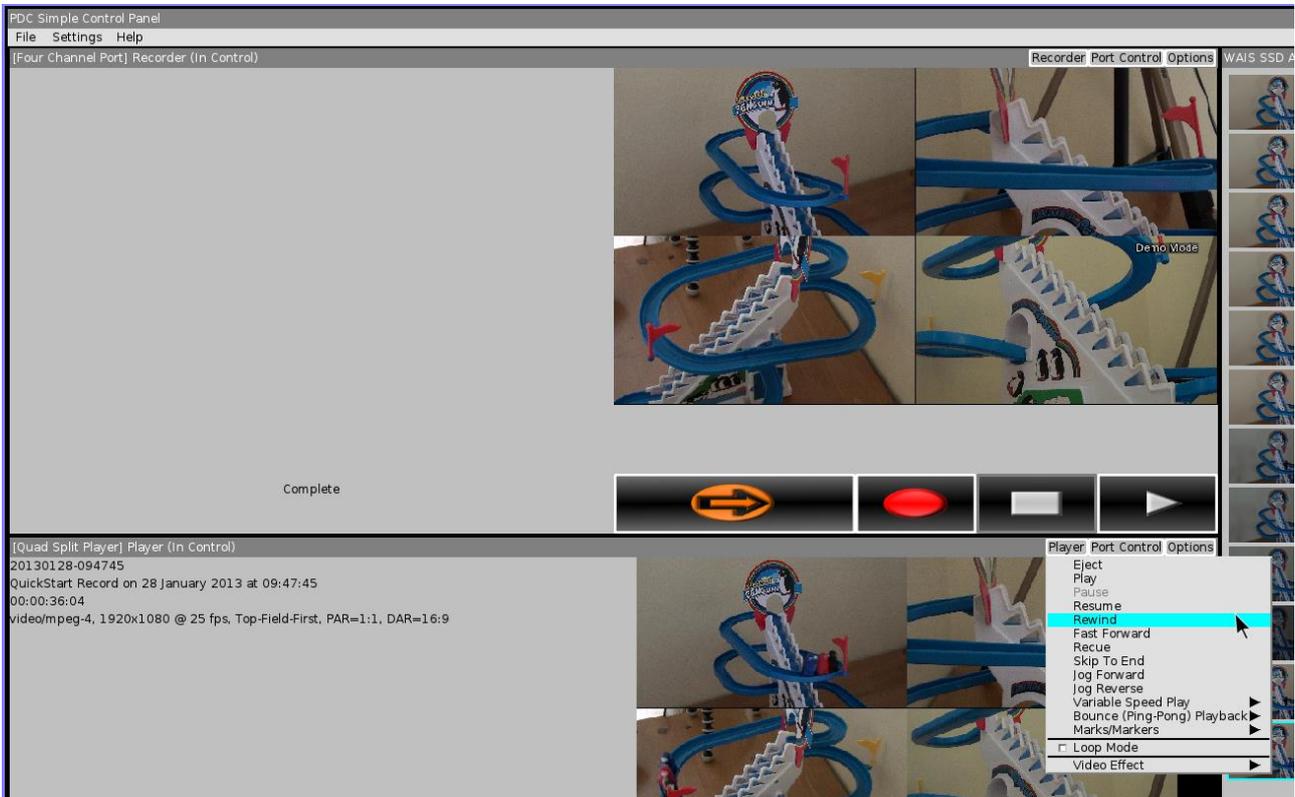
3.5.3 Transport Control details

A number of the transport buttons have specific functionality, as follows:

- Rewind & Fast Forward – clicking these buttons more than once will increase the speed at which the material is shuttled
- Frame Back & Forward – clicking these buttons alone will jump forwards or backwards by one frame. When clicked while the Shift, Ctrl or Alt keys are held down will result in jumps of 10, 100 or 1000 frames respectively
- Play – clicking the play button will swap between normal playback (1x play speed) and paused.
- Special Play – clicking the special play button will swap between the currently selected special play mode (e.g. ½ speed playback or ¾ speed bounce play) and paused.

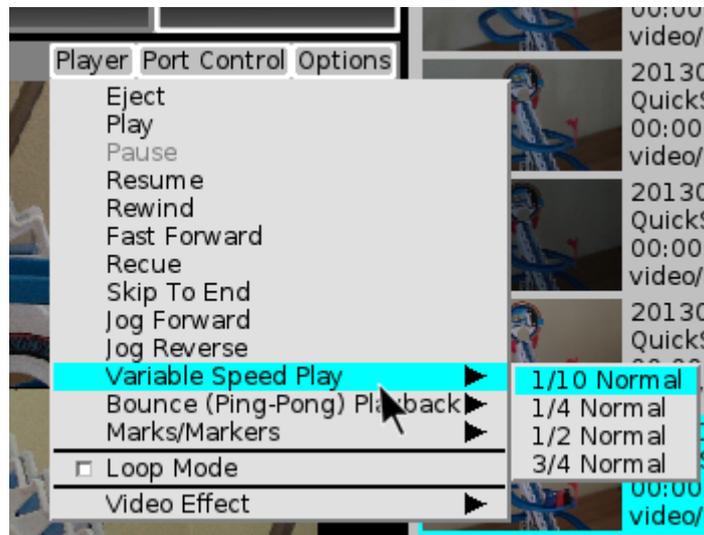
3.5.4 Extended Player Functions

Clicking on the 'Player' button in the top-right-hand corner of the panel will open a menu of commands which offers the same functionality as the buttons, as shown below.

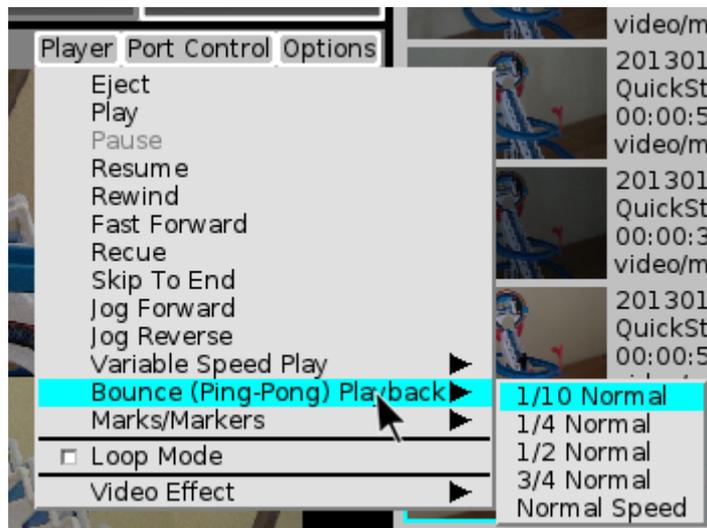


However, there are four particular functions which are not otherwise available:

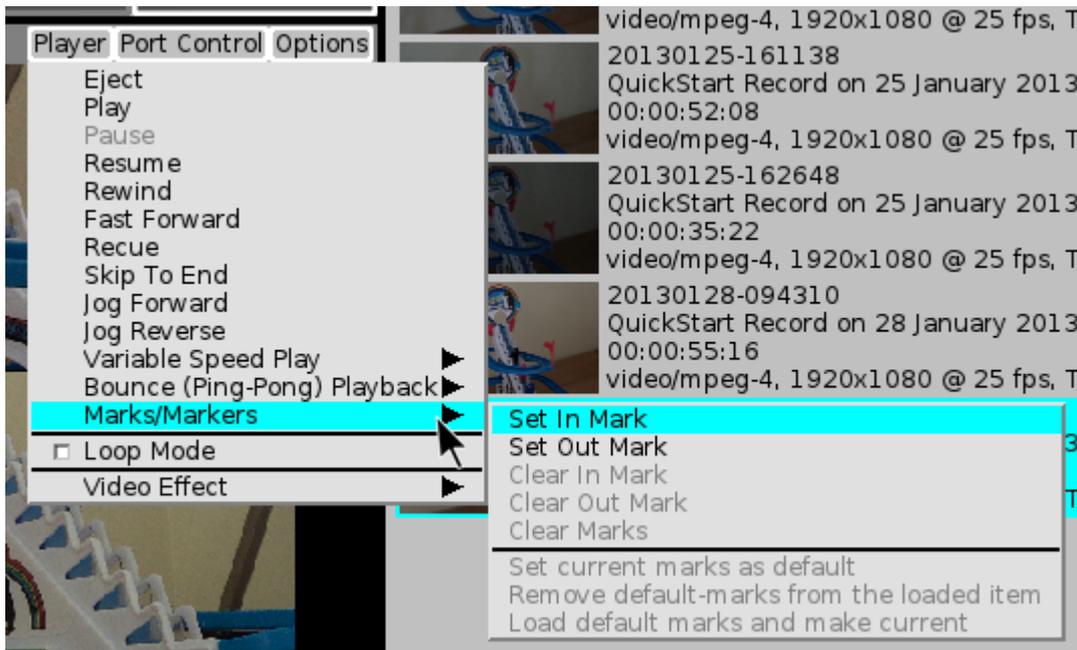
- Variable Speed Play allows the clips to be played back slower than real time to allow the action to be reviewed in detail



- Bounce Playback allows the clip (or the portion of the clip between the marked in- and out-points) to be played forwards and then backwards at a range of speeds, allowing a particular action to be reviewed in both forwards and reverse motion.



- Marks/Markers duplicates the functions provided by the buttons, allowing in- and out-marks to be inserted or deleted, but also allows those changes to be made permanent (so that they will apply again the next time that the clip is loaded)



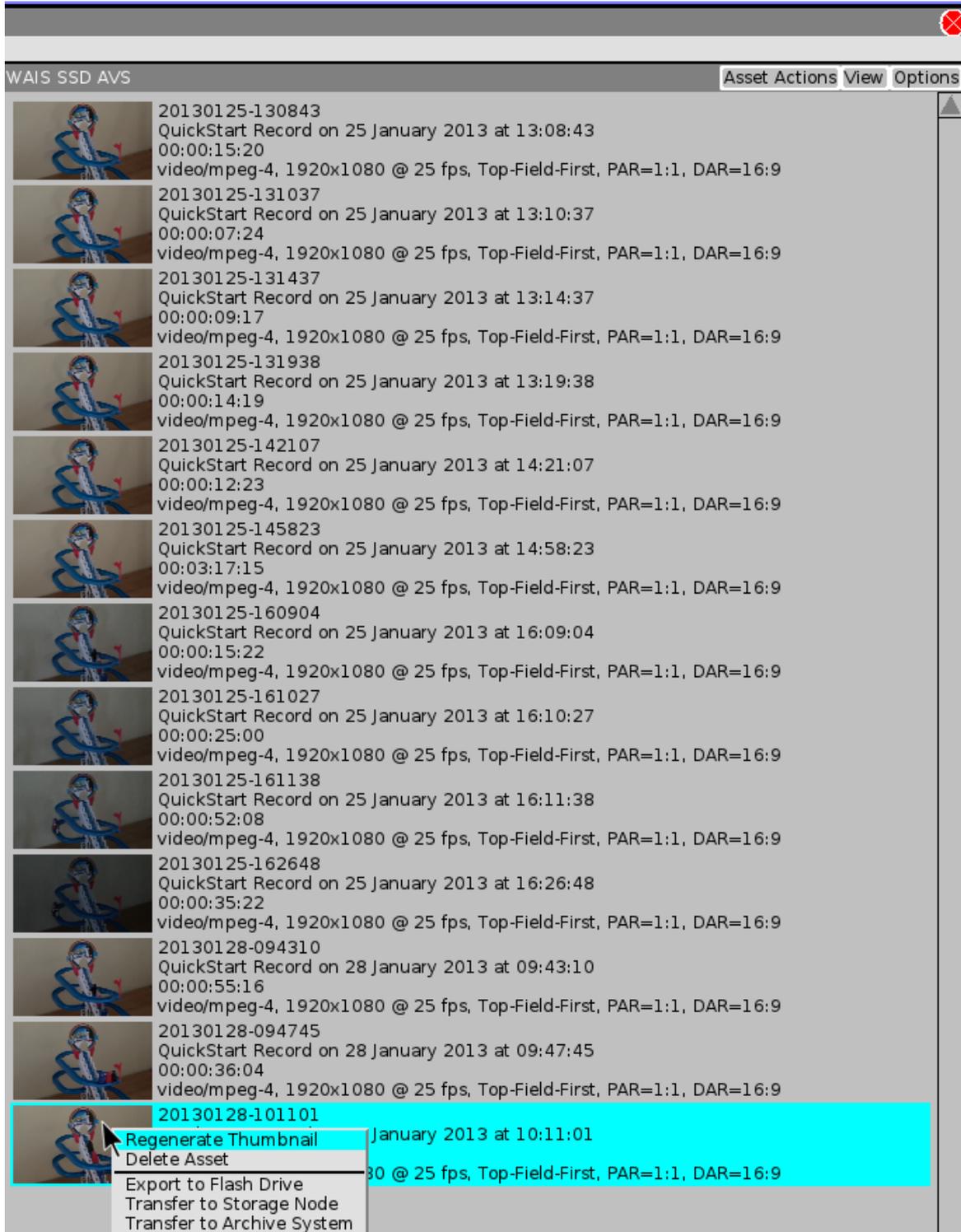
- Loop Mode – when checked, this means that the clip will continue playing from the beginning (or its marked in-point) once it reaches its end (or marked out-point).

3.6 Media Management

The media panel provides some media management functionality, in particular the ability to delete a group of clips that are no longer required.

3.6.1 Clip Deletion

The easiest way to delete content is to select the ‘linkset’ for the target item, click the ‘Asset Actions’ button and then choose ‘Delete’. Alternatively it is possible to right-click a specific item and choose ‘Delete’ from the menu that appears, as shown below.



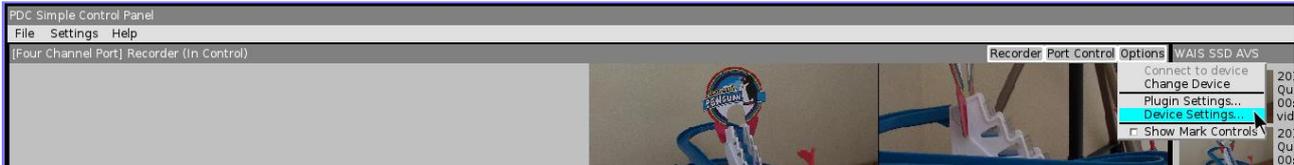
Note that it is not possible to delete an item if it is currently loaded into either the recorder or the player panel.

4. SYSTEM CONFIGURATION

This section covers functions relating to how the system is configured, rather than how it is operated.

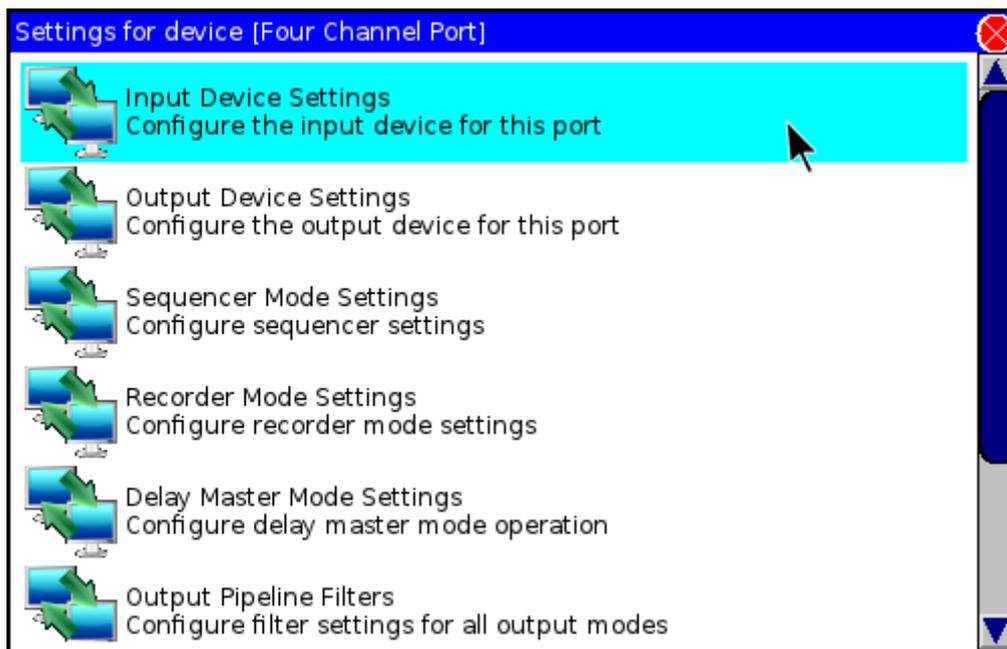
4.1 Configuration of Port Input Connection

Each input port can use either the SDI or the HDMI video connection. The connector to be used is enabled through the ‘Port Control’ | ‘Device Settings’ menu option from the recorder panel, as shown below.

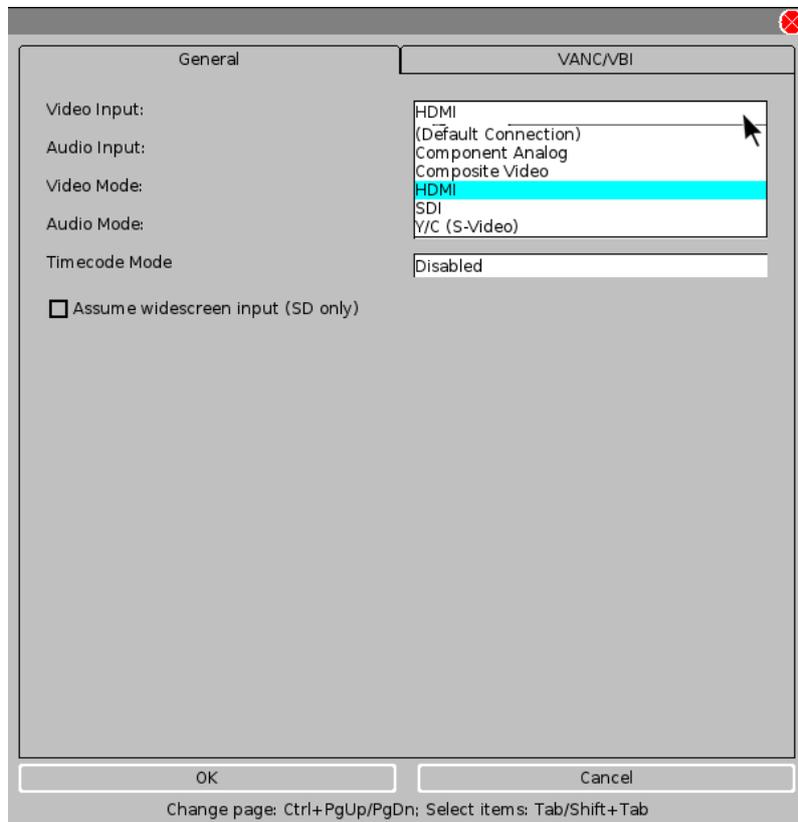
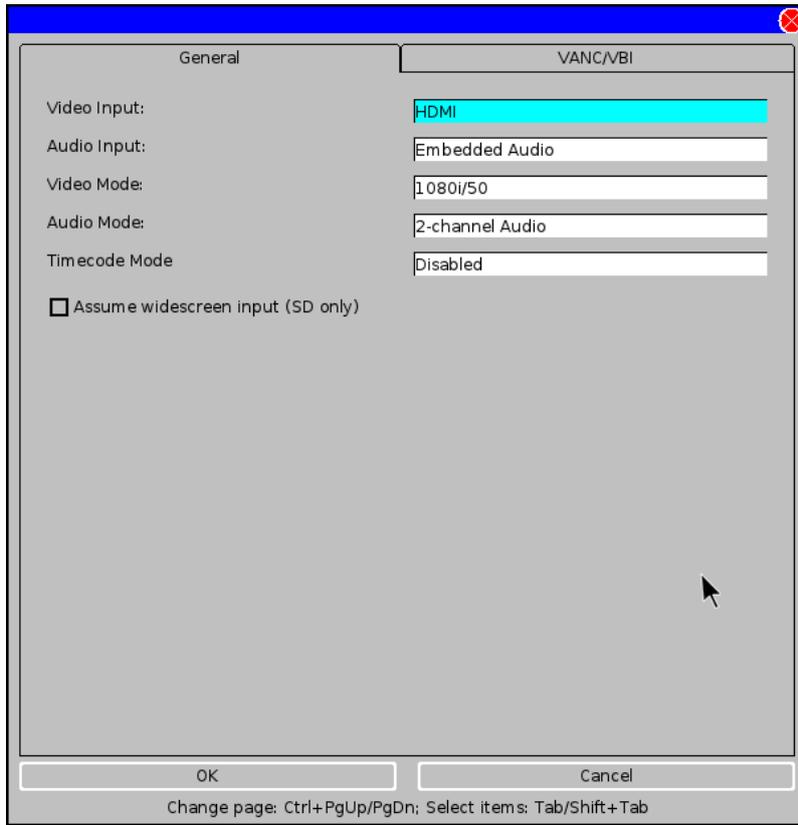


The following steps are then required:

- The active connection can be defined by double-clicking the ‘Input Device Settings’ option.

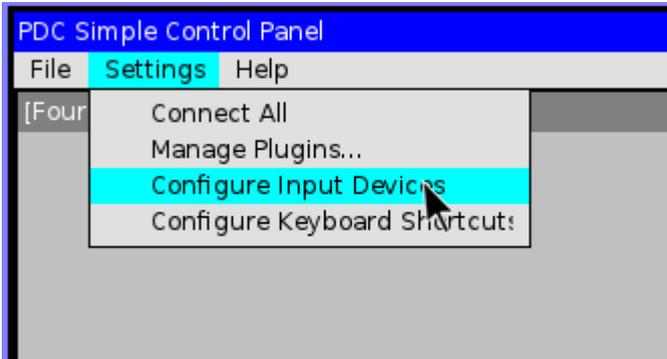


- Having selected the appropriate device, the inputs and modes for that device can be set from the configuration dialogue which appears. Specifically, clicking on the box marked in blue below will allow an alternative input to be selected, as shown.

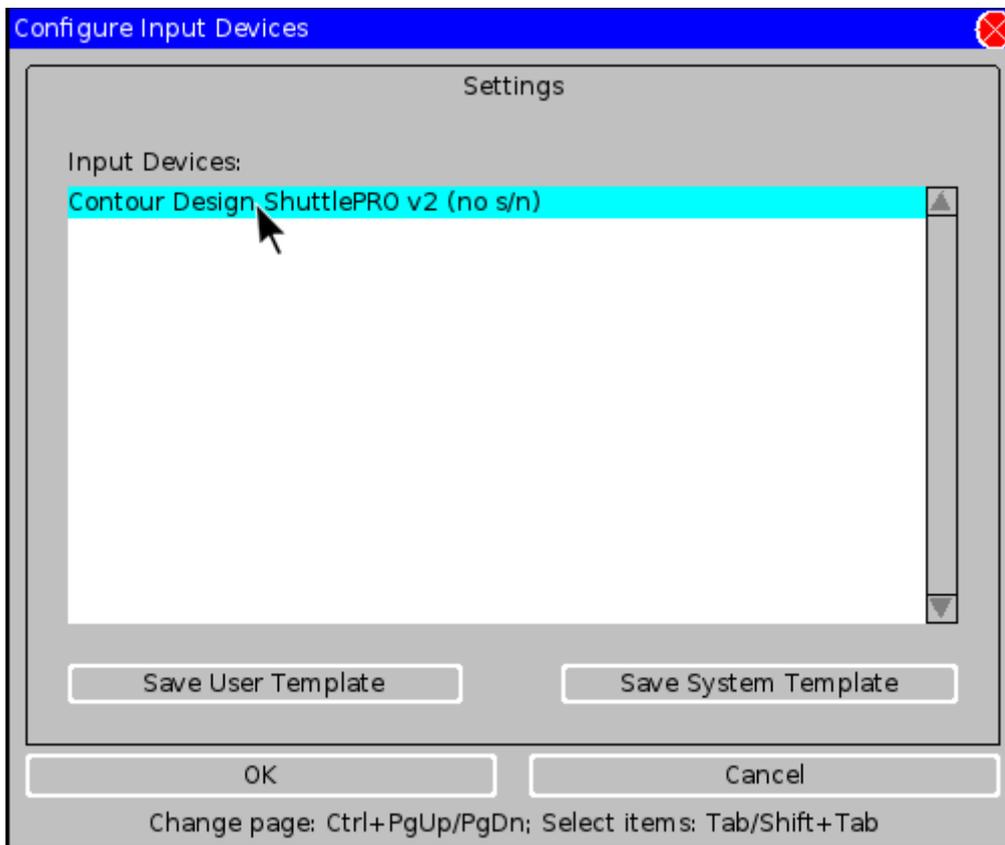


4.2 Configuration of ShuttlePro

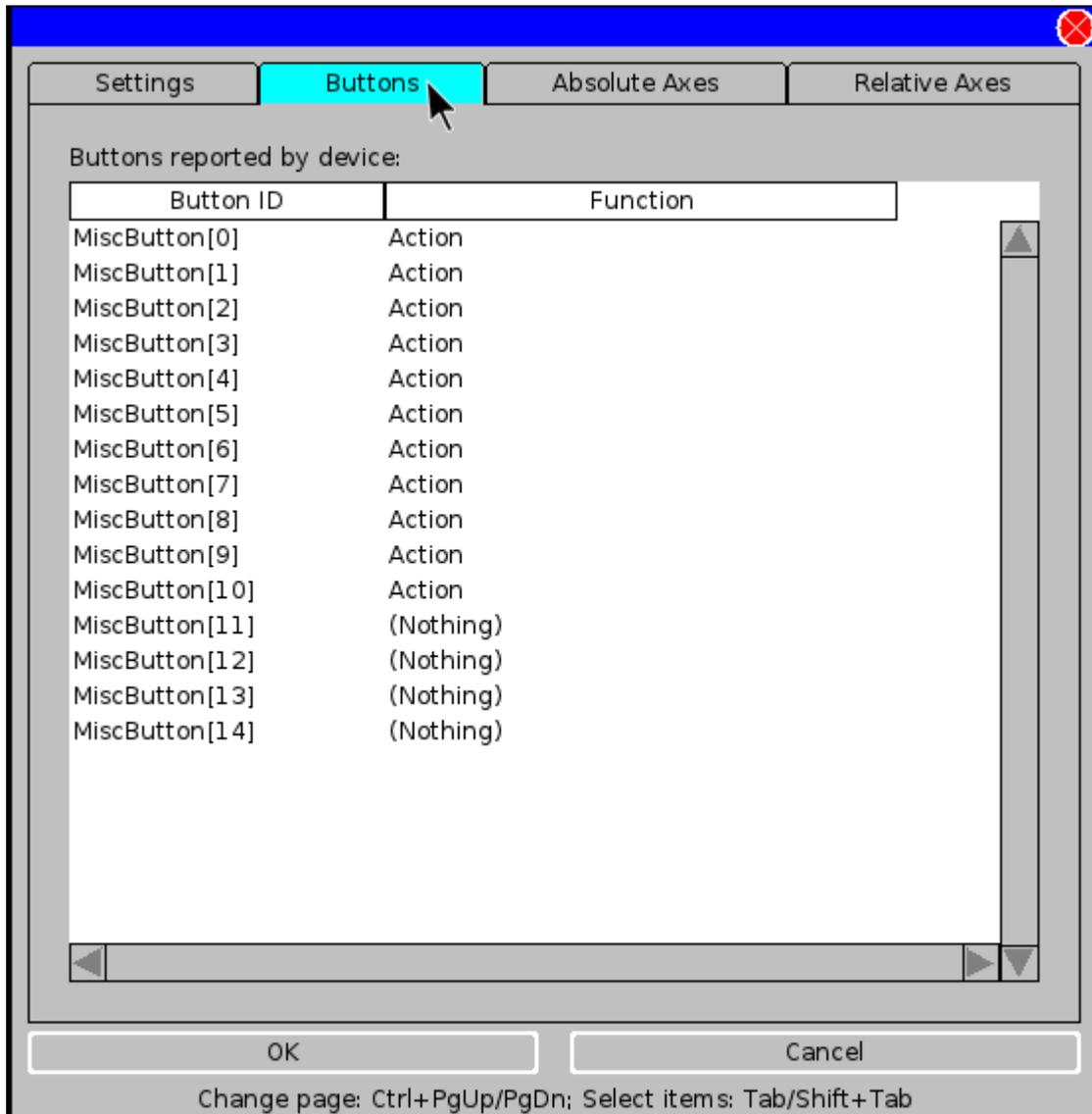
The default mapping of the ShuttlePro controller buttons is shown in the System Operation section. However, if required, it is possible to modify or extend these mappings through the ‘Settings’ | ‘Configure Input Devices’ option from the main GUI menu.



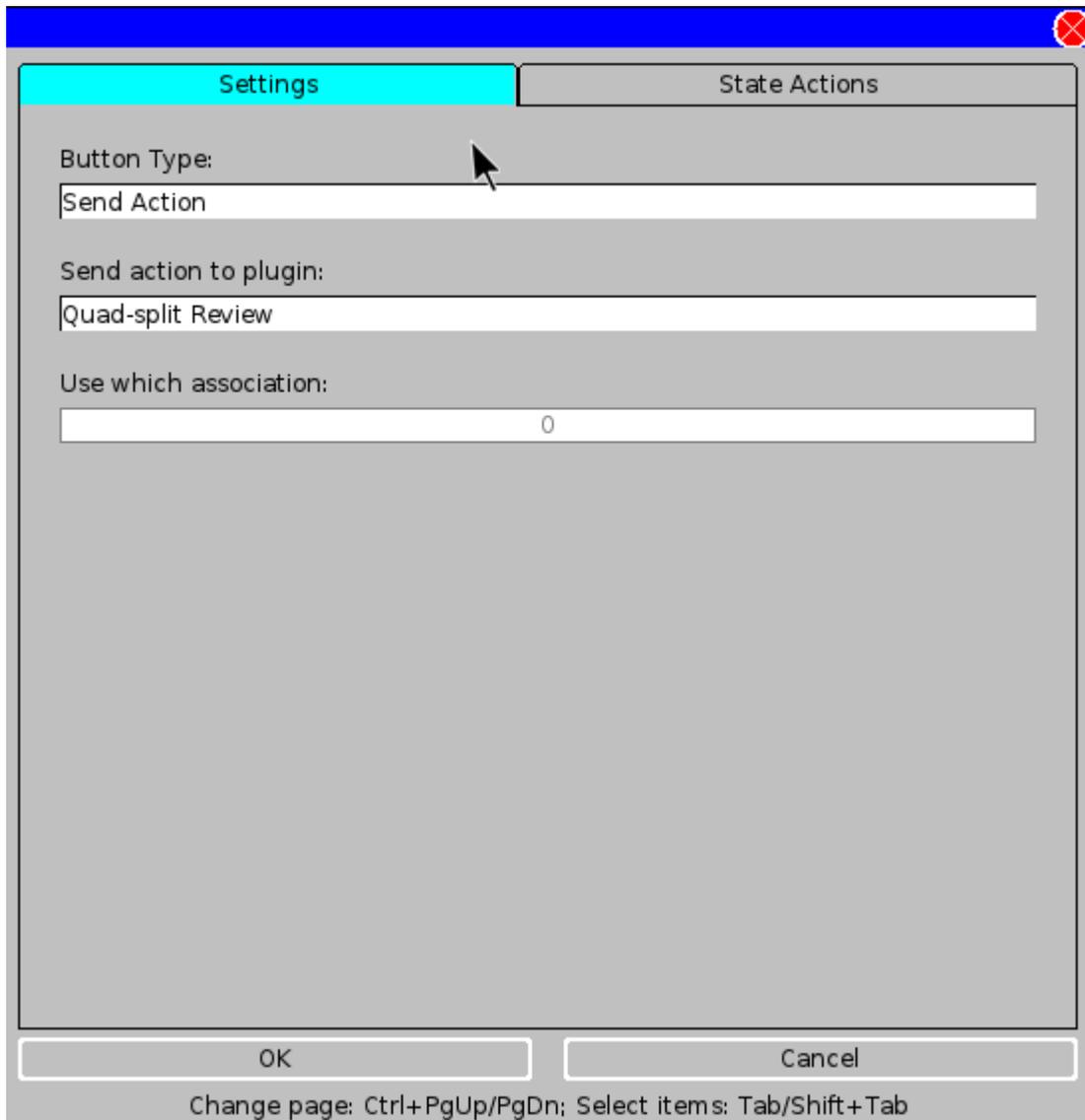
- Double-click the ShuttlePro device



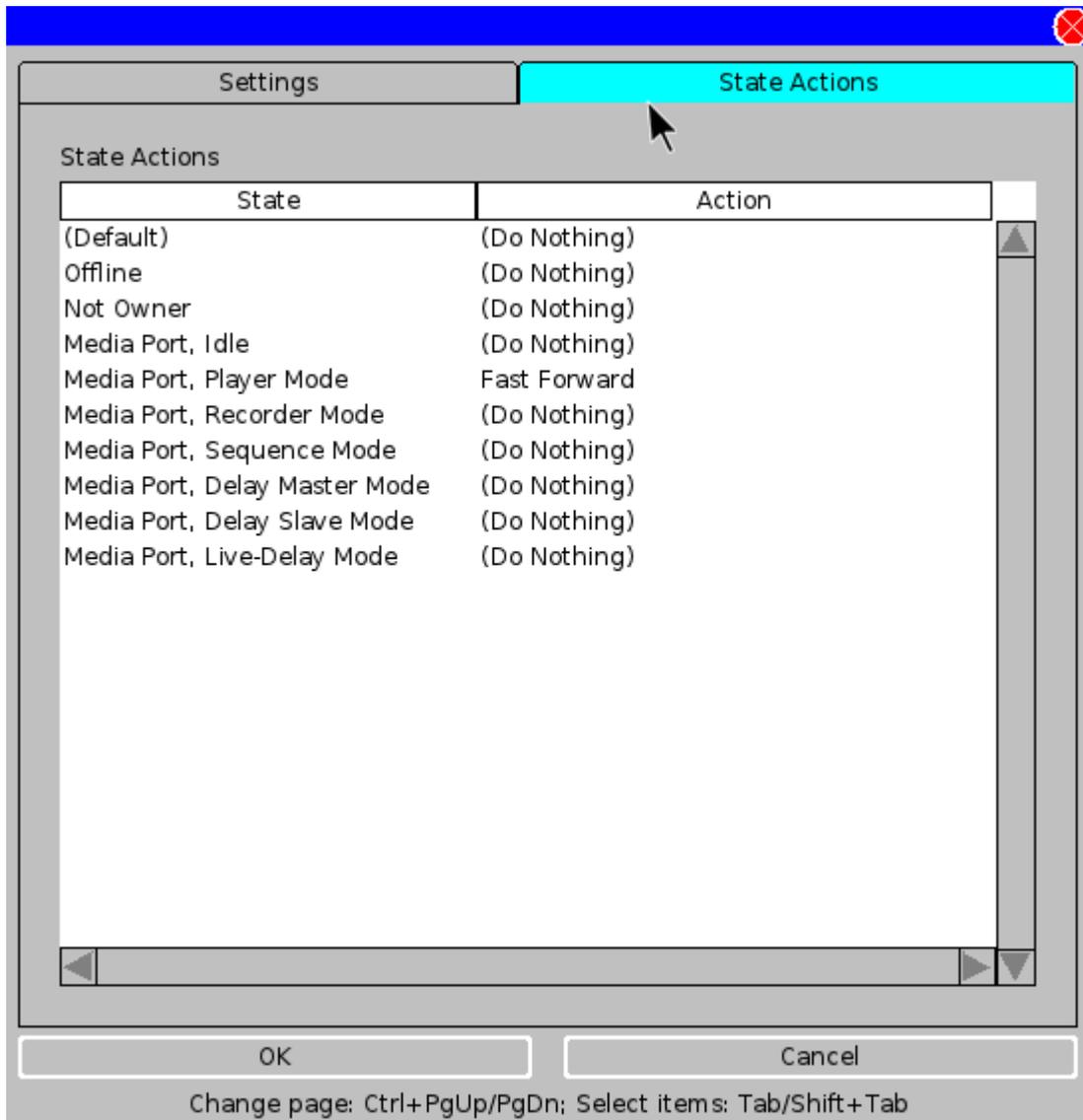
- Double-click the button to be modified



- If necessary, the overall function of the button can be changed – so for instance it relates only to record rather than playback – by clicking the option box underneath ‘Send action to plugin:’. But in most cases it will simply be necessary to select the ‘State Actions’ tab.



- In this example, the current button is set to trigger Fast Forward. This can be altered by clicking the 'Media Port, Player Mode' line and then choosing an alternative action from the drop-down list which appears.

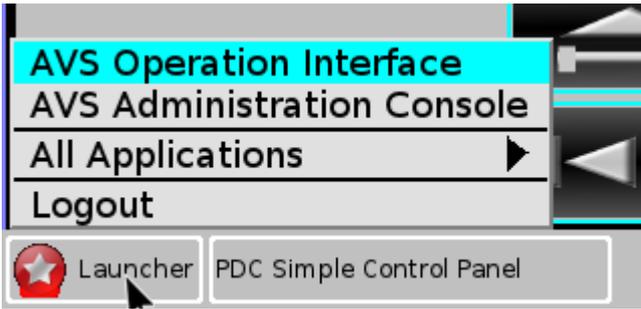


5. ADMINISTRATOR OPERATIONS

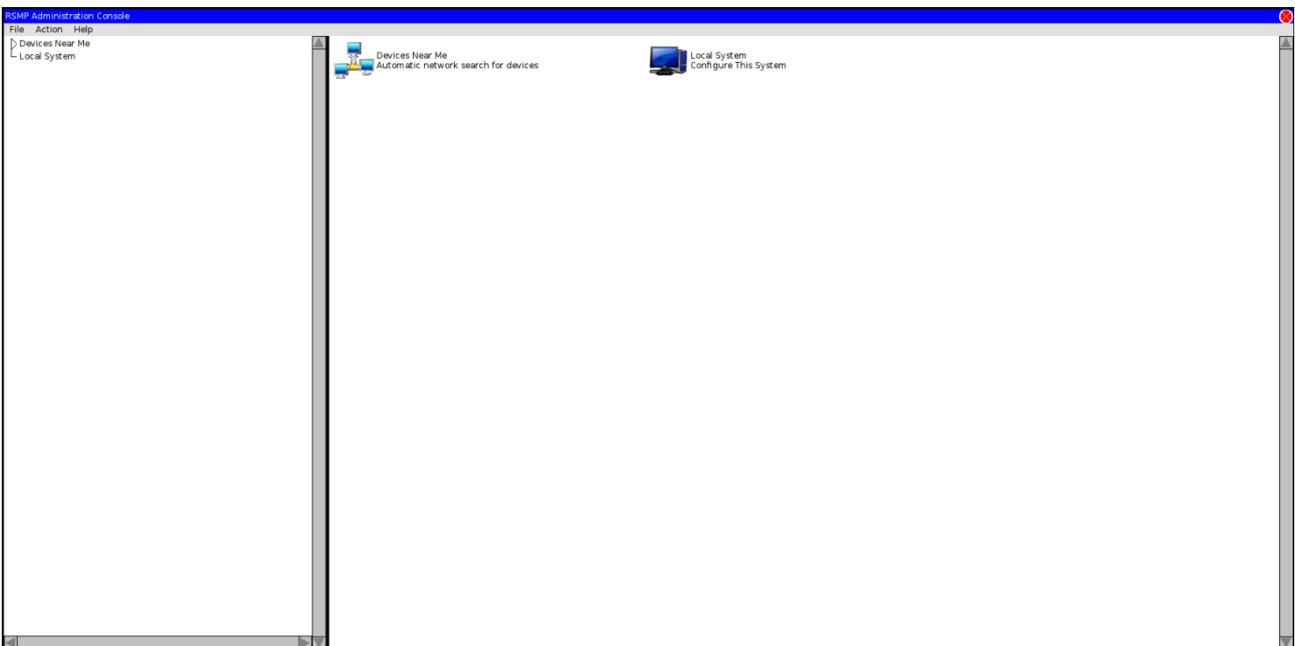
This section describes operations which would only be carried out by the System Administrator – e.g. to carry out a firmware upgrade.

5.1 Administrator Console

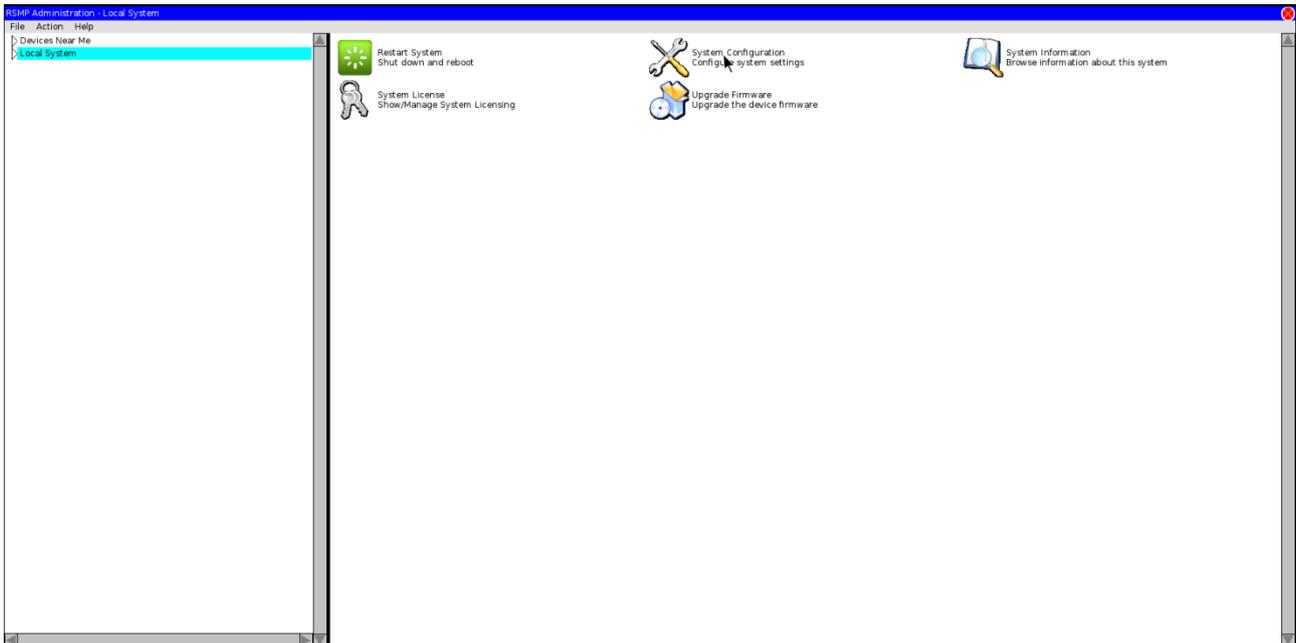
Administrative functions are carried out through the ‘AVS Administration Console’ which can be accessed via the ‘Launcher’ menu.



The Administrator Console is a generic application which can access any AVS system accessible on the local network. In this case it is only necessary to connect to the local system, so the ‘Local System – Configure This System’ icon should be double-clicked.

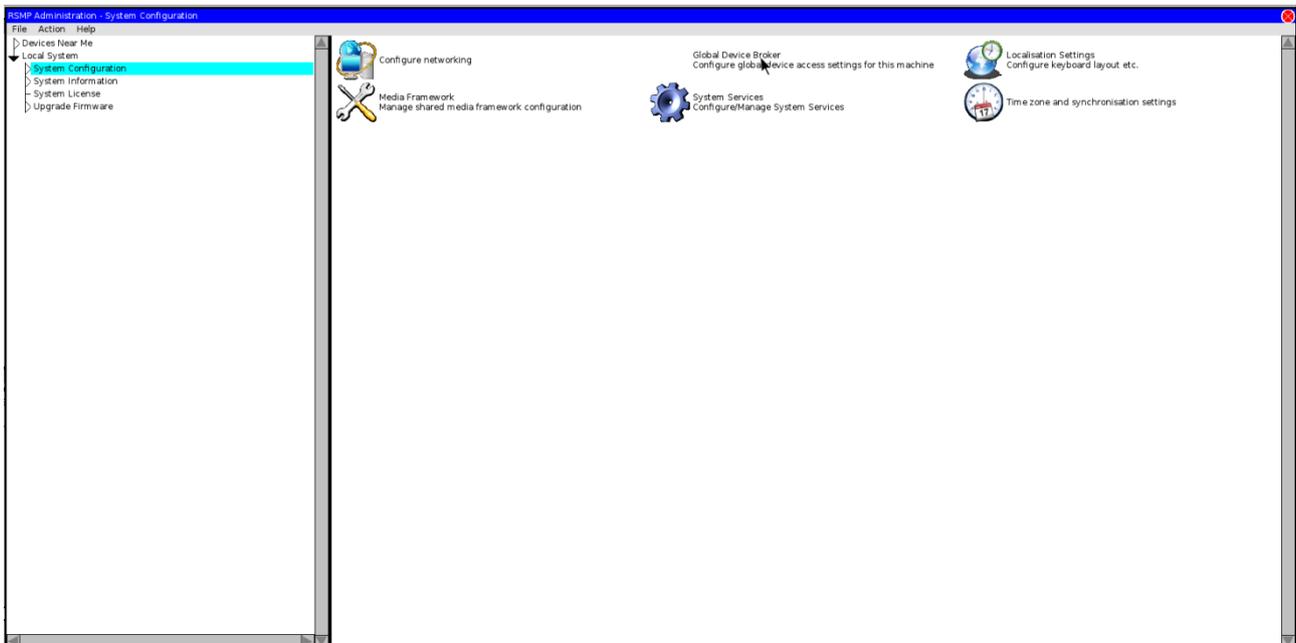


This will open the administration options for the current system, including options to reboot it, alter its configuration, obtain information about its current configuration, upgrade the system licence and upgrade the system firmware.



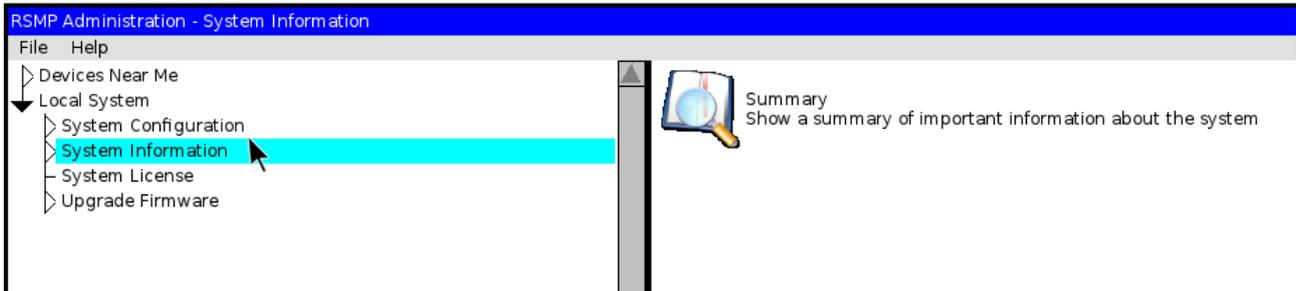
5.2 System Configuration

Double-clicking the 'System Configuration' icon will open configuration options for the current system, particularly including the ability to modify the network configuration and set the system date, time and timezone.



5.3 System Summary

Double-clicking the ‘System Information’ icon will provide access to a ‘Summary’ option. Clicking this will open a dialogue box which displays a large amount of information about the current system – including the IP address, for instance.



5.4 Firmware Upgrade

Double-clicking the ‘Upgrade Firmware’ icon will provide a number of options to allow the current firmware to be upgraded. In most circumstances, this upgrade would be carried out from a USB flash drive which has been temporarily plugged into the server.



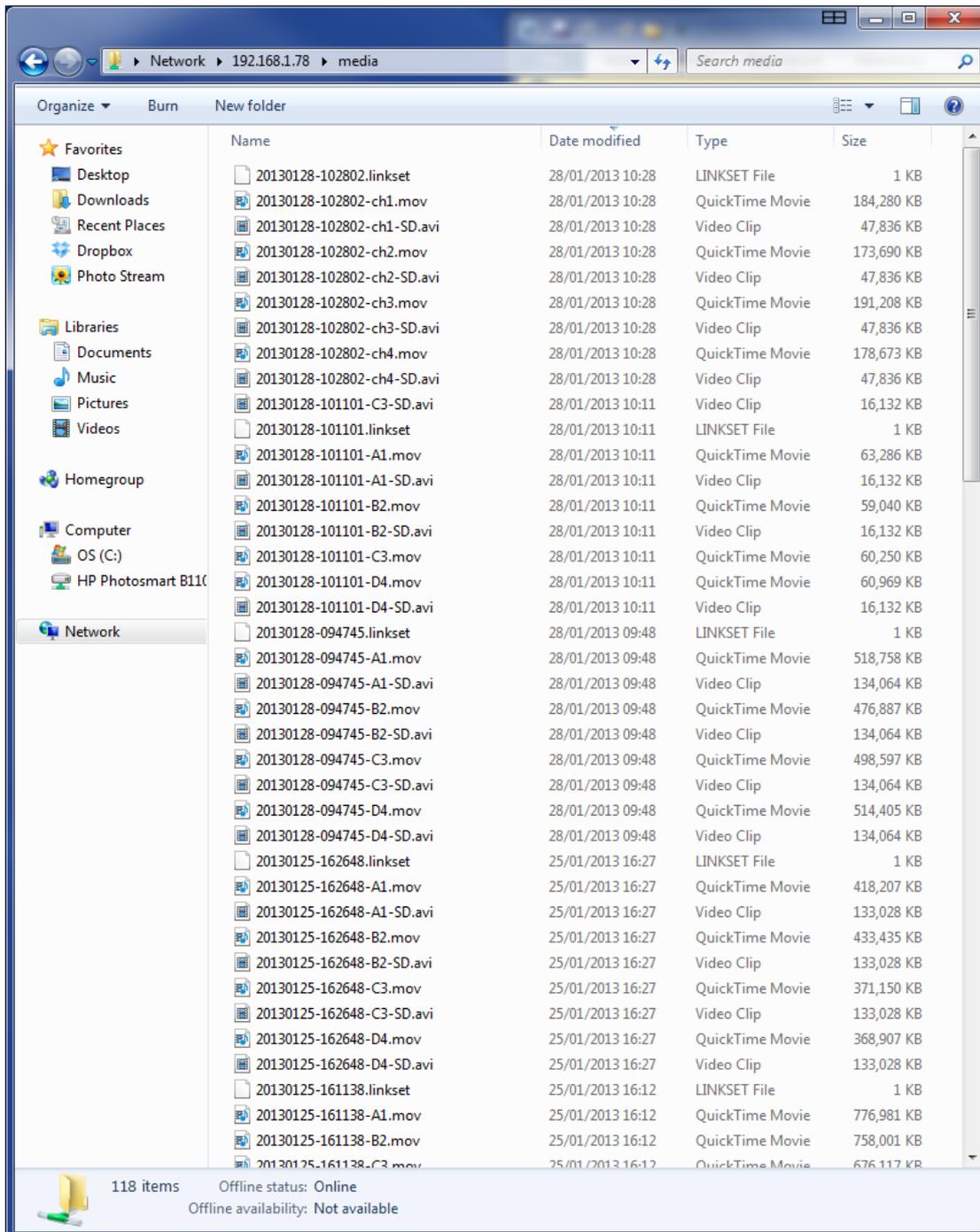
6. MISCELLANEOUS

6.1 Access to Media Share

It is possible to access files on the server by browsing to the media share from another computer connected to the same network. A username and password will be requested to allow this access – the correct username is ‘media’ and the correct password is ‘media49’.

It is important that care is taken when connected to the media share from a remote machine. In particular, there are a number of special files which are vital to the correct operation of the system. If these are deleted from a remote connection, the server will no longer be able to run properly.

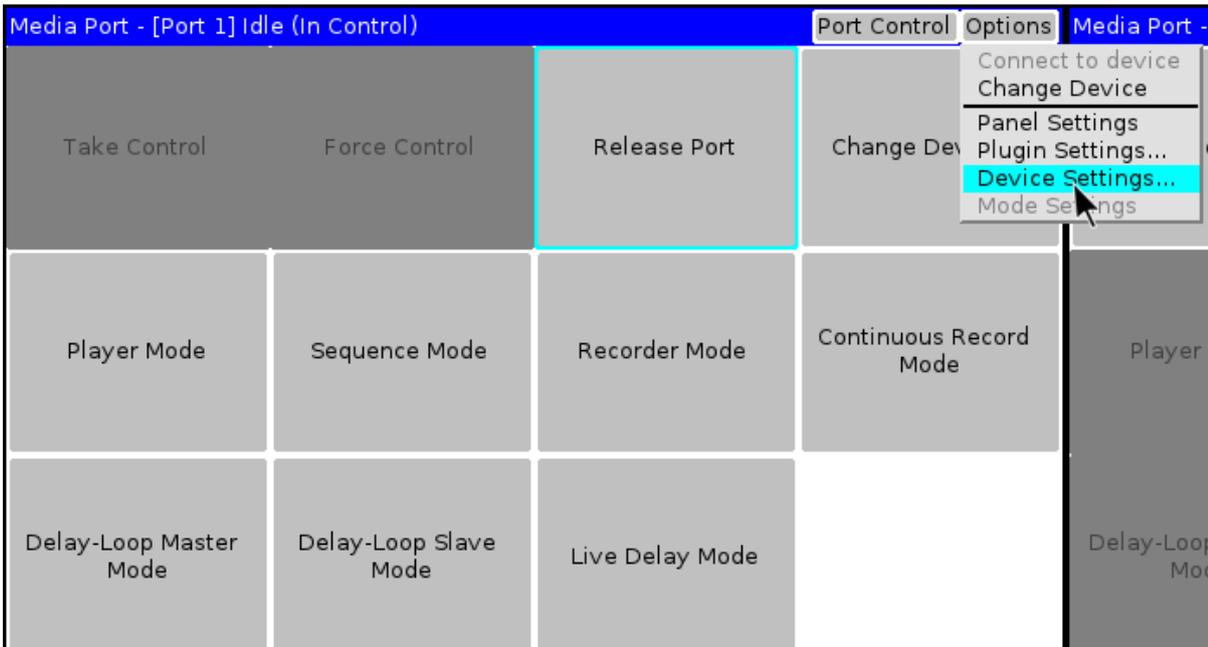
An example of remote access to the media share from a Windows 7 PC is shown below.



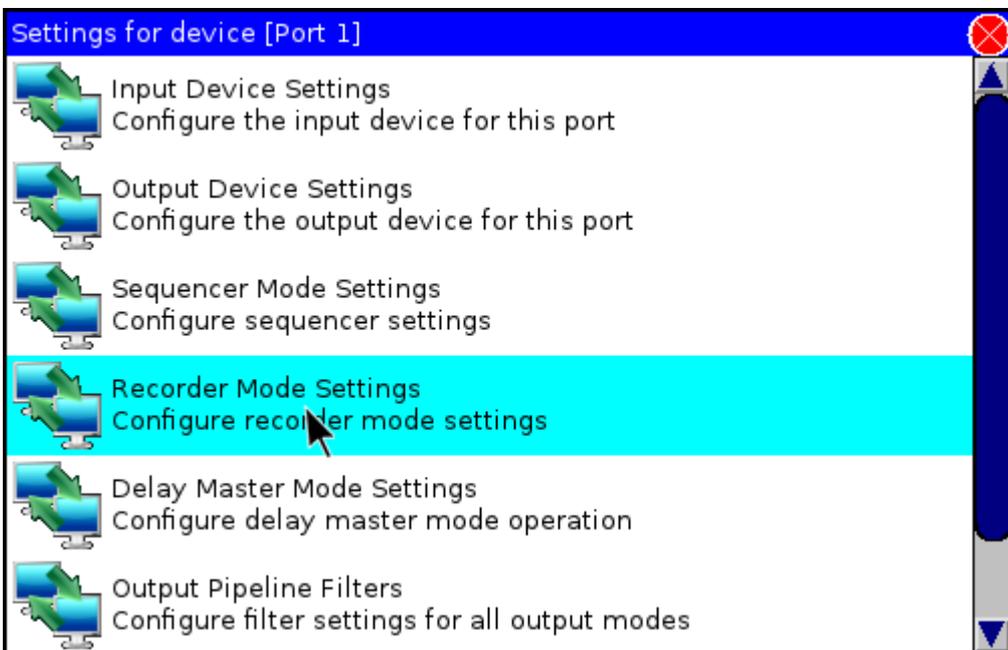
7. SELECTING AND CREATING ENCODING PROFILES

7.1 Selecting an alternative Encoding Profile

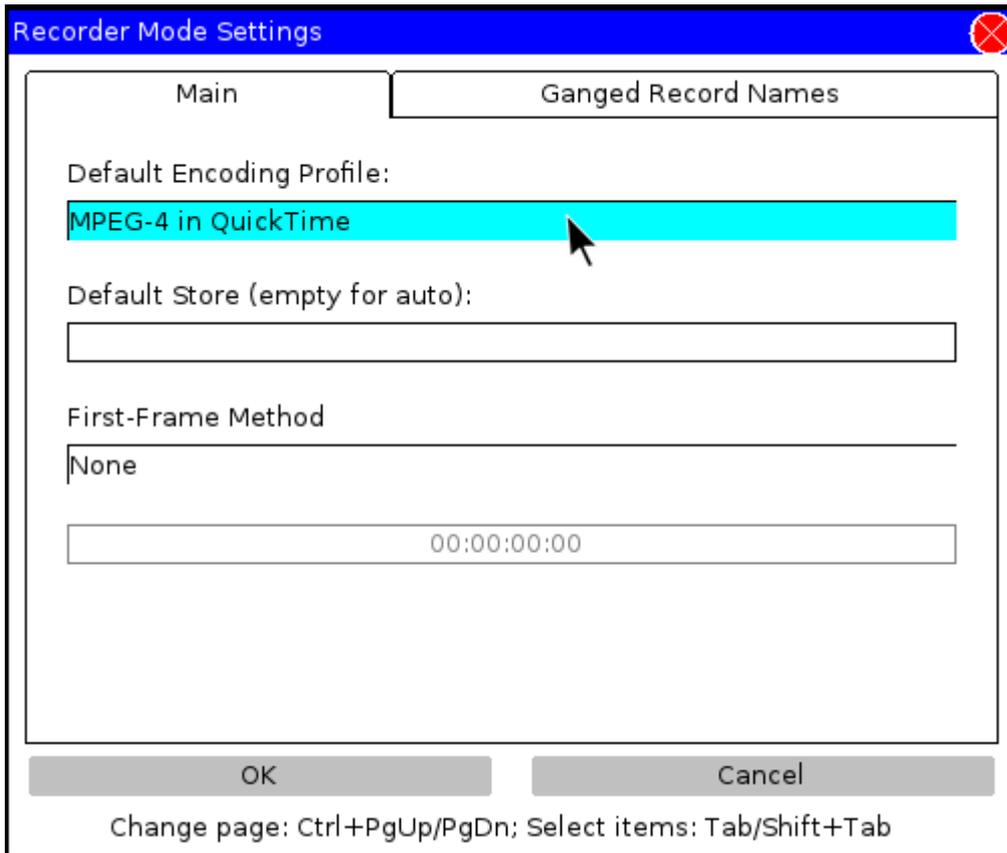
From the 'Options' button on the Recorder window, choose the 'Device Settings' option.



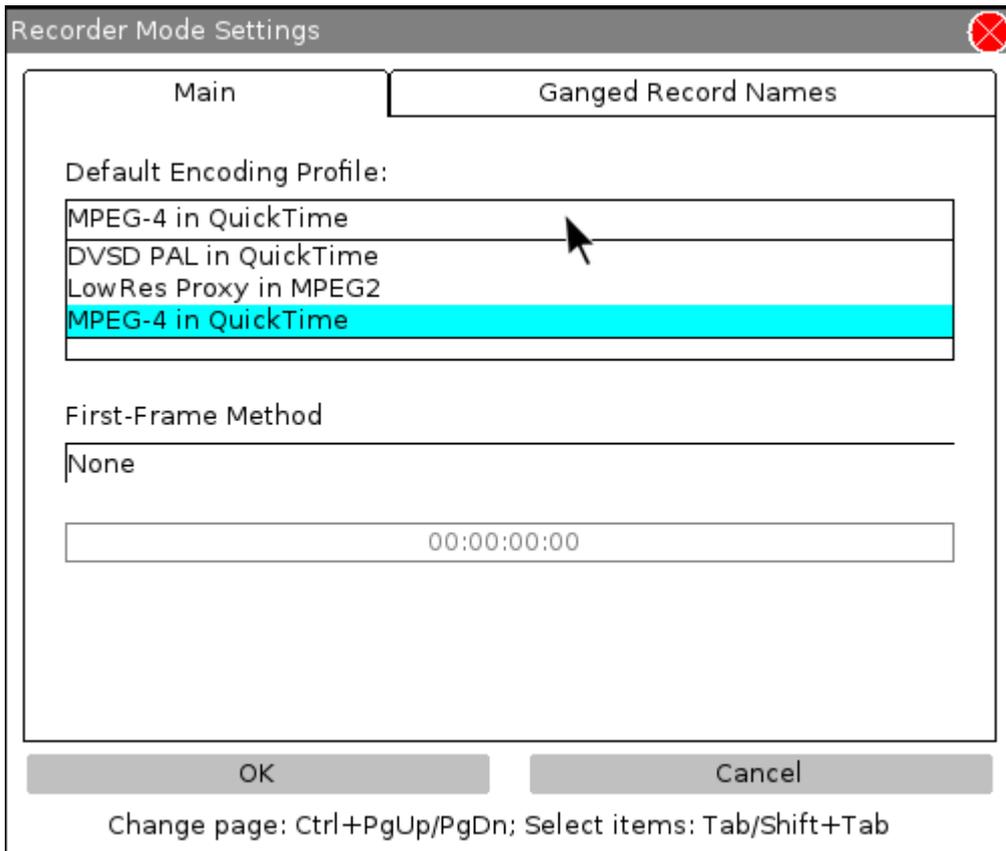
This will show a Settings dialogue. Choose the 'Recorder Mode Settings' option.



Check the 'Default Encoding Profile' entry..



If the entry doesn't look correct, it should be possible to change it to the other profile by clicking on the line so that a drop-down box appears. An alternative record profile can be selected from this list.

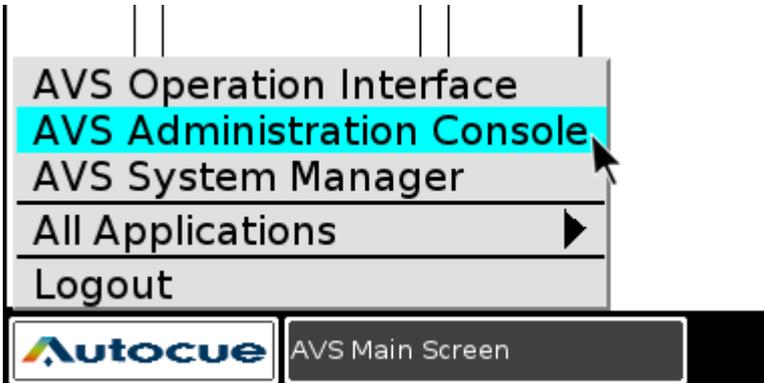


Click the 'OK' button to save the selection. Subsequent recordings will be made using this newly selected profile.

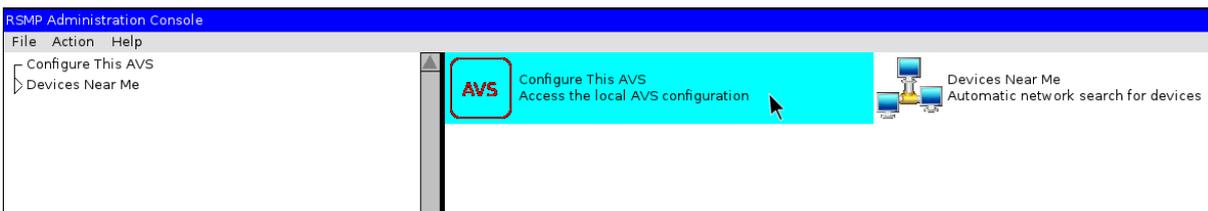
7.2 Creating a new Encoding Profile

The following steps can be followed to create a new encode profile from scratch, if necessary:

Start the 'AVS Administration Console' from the 'Autocue' launcher button on the bottom left of the screen:



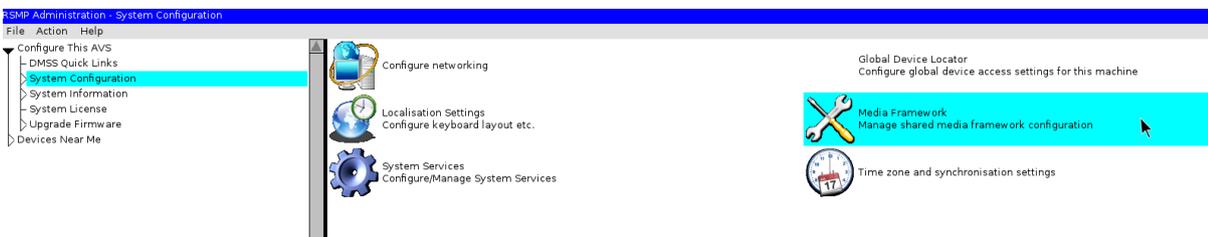
Choose 'Configure This AVS' by double-clicking the 'AVS' icon.



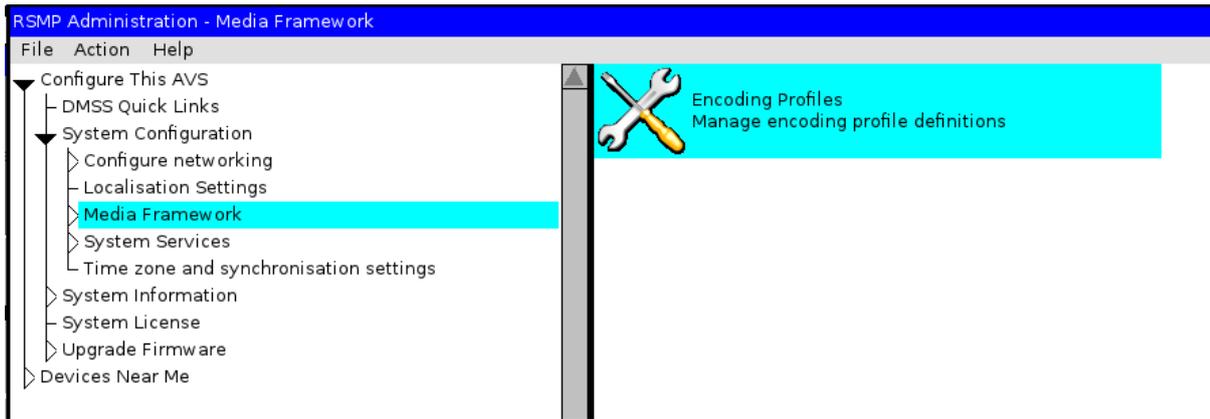
Double-click 'System Configuration',



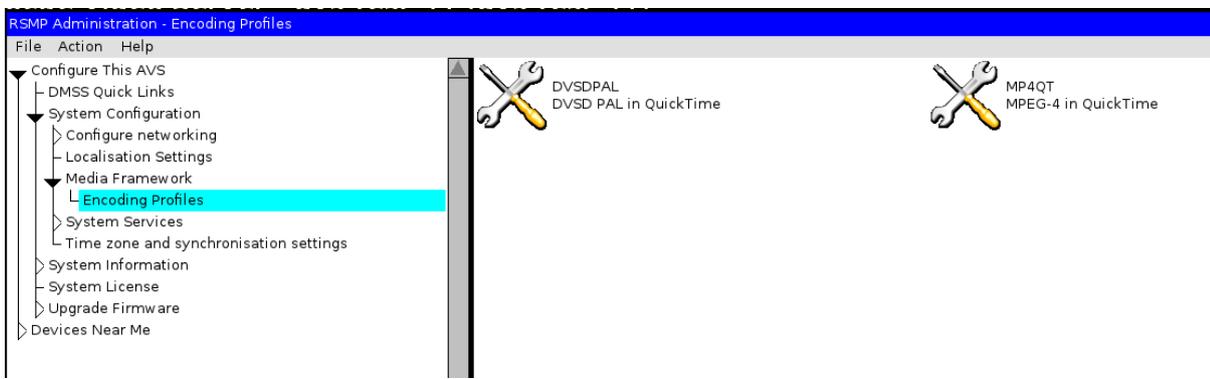
Then 'Media Framework',



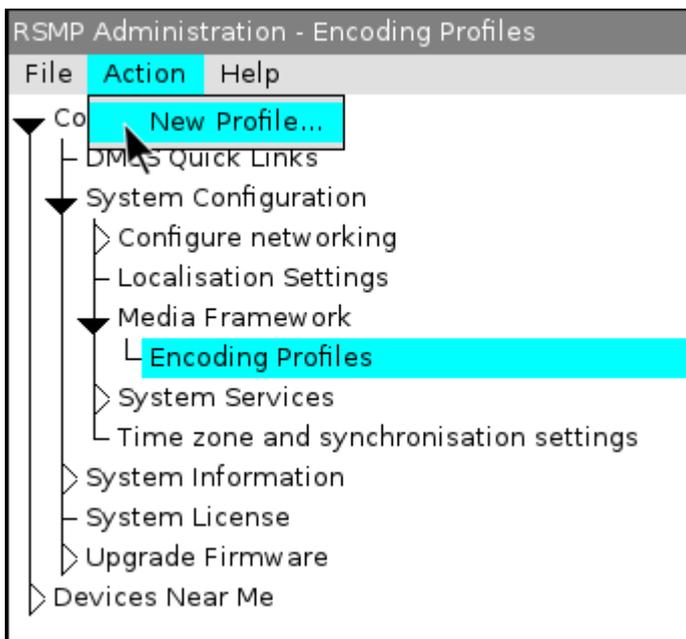
Then 'Encoding Profiles',



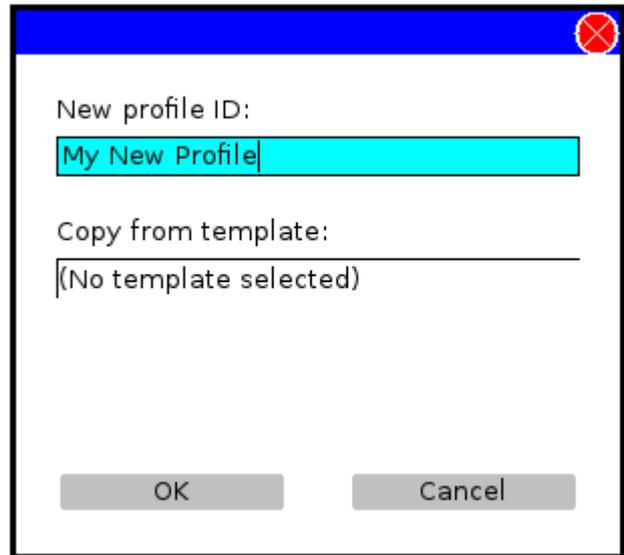
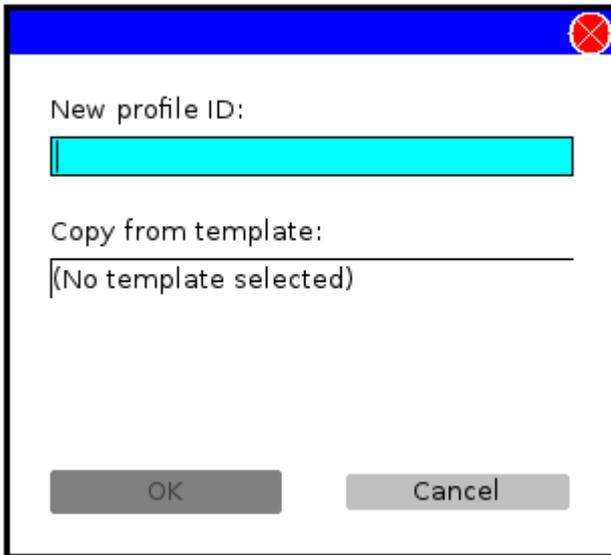
This will the existing profiles.



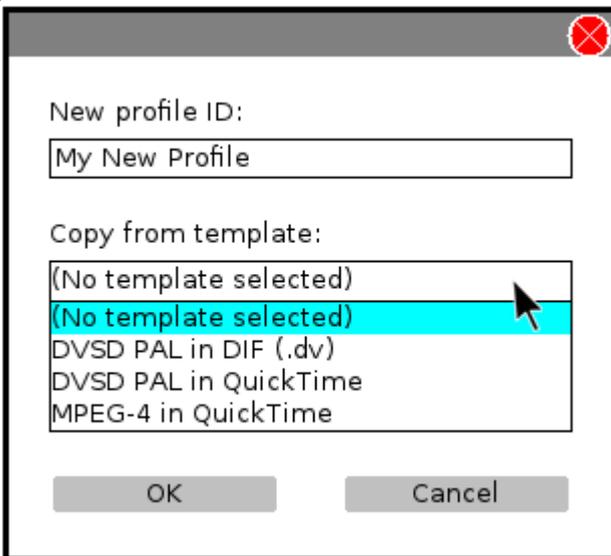
A new encoding profile can be added by clicking 'Action' (from the top left menu) and then 'New Profile...'



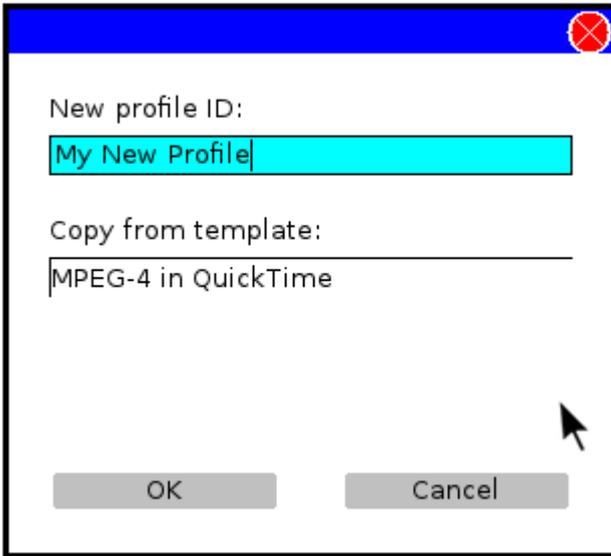
Enter an appropriate name for the new profile:



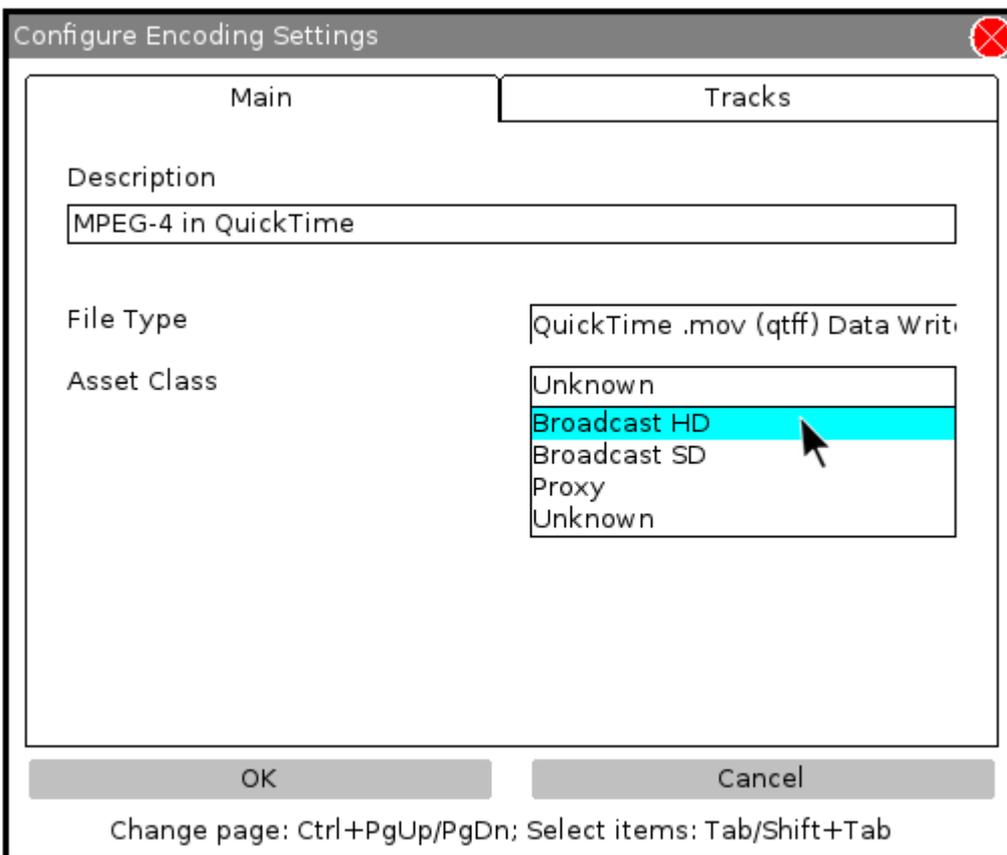
Then click on the 'Copy from template' line so that a drop-down box appears. This allows a new profile to be created from a selection of built-in templates.

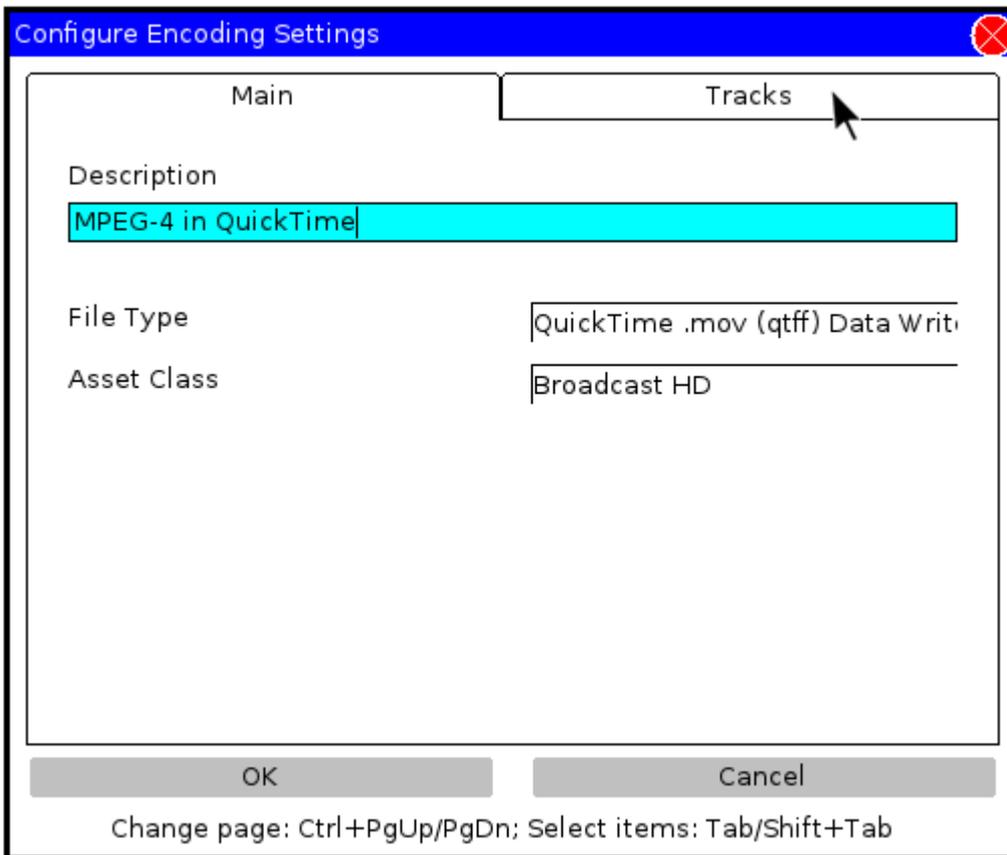


Click the required option, e.g. 'MPEG-4 in QuickTime'. If a suitable pre-defined template is not available, a new profile can be defined from scratch.

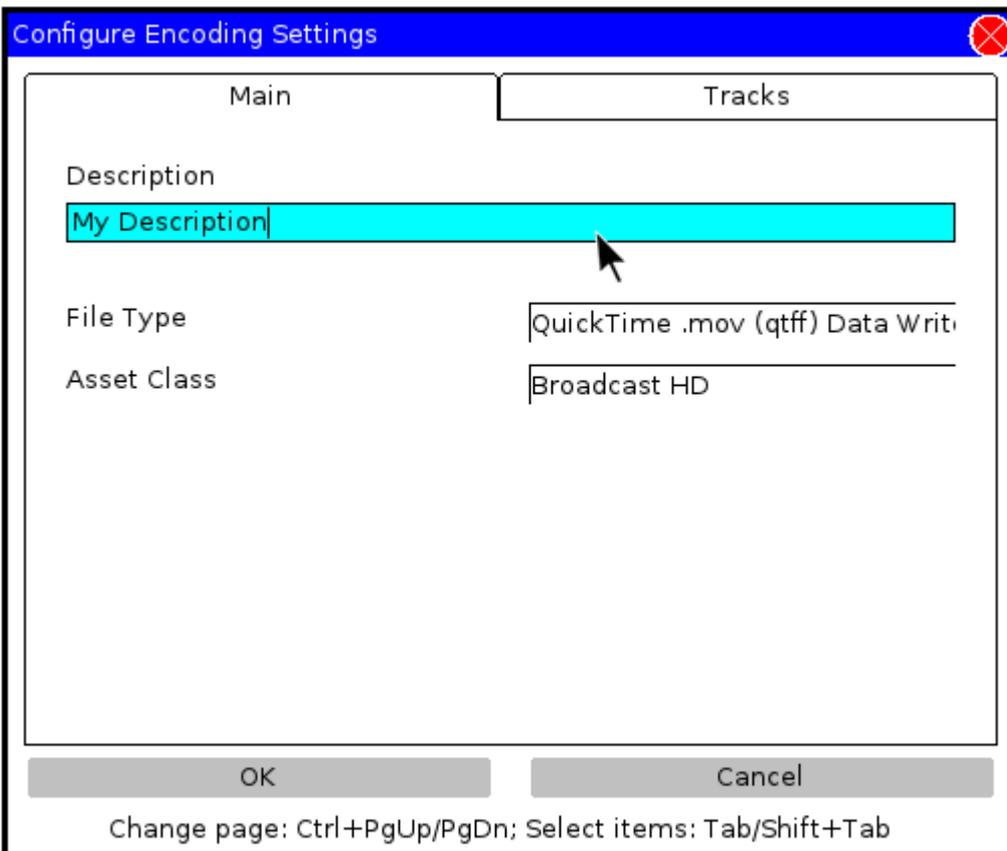


Then click the 'OK' button, so that the 'Configure Encoding Settings' dialogue appears. Click on the 'Asset Class' entry (next to the 'Unknown' text) so that a drop-down box appears. Select the 'Broadcast HD' option.

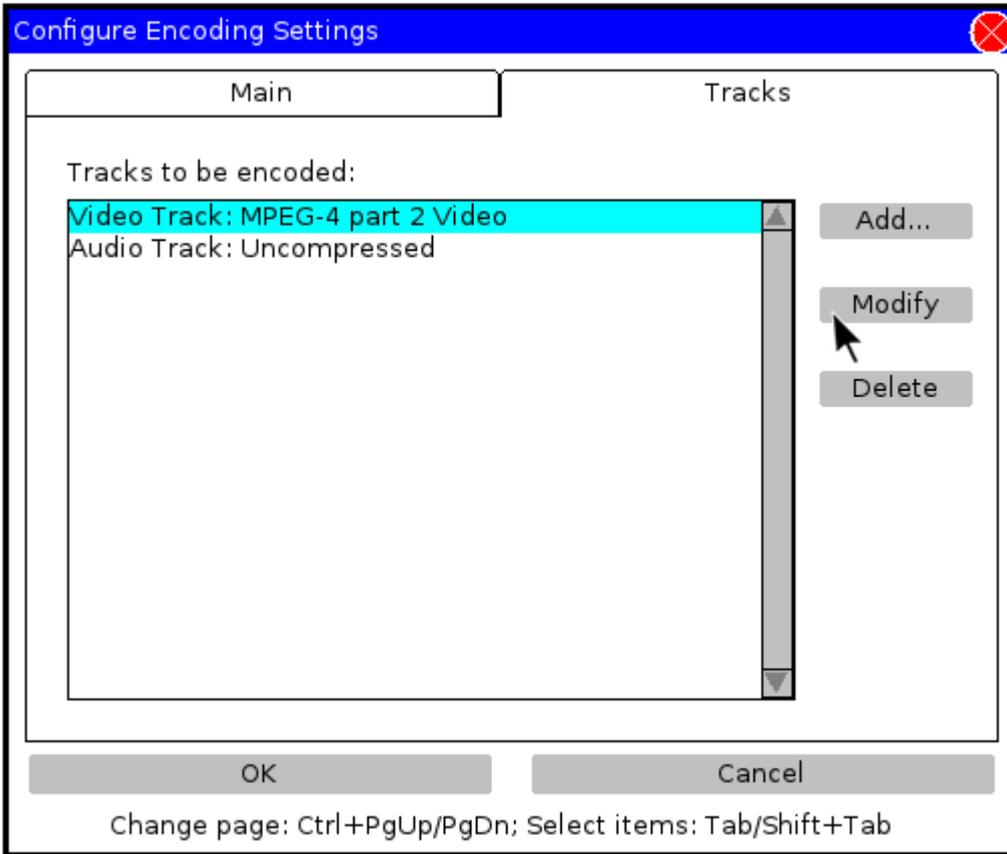




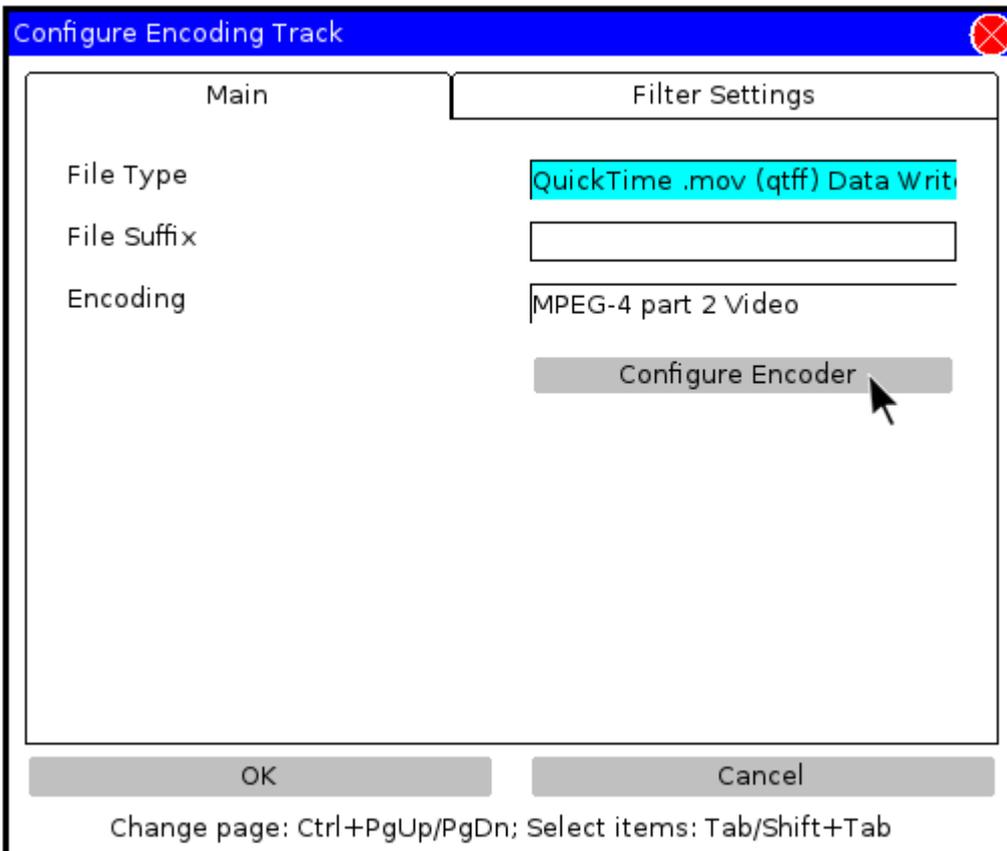
Enter a new description to allow the profile to be precisely identified later on. In this example 'My Description' has been used.



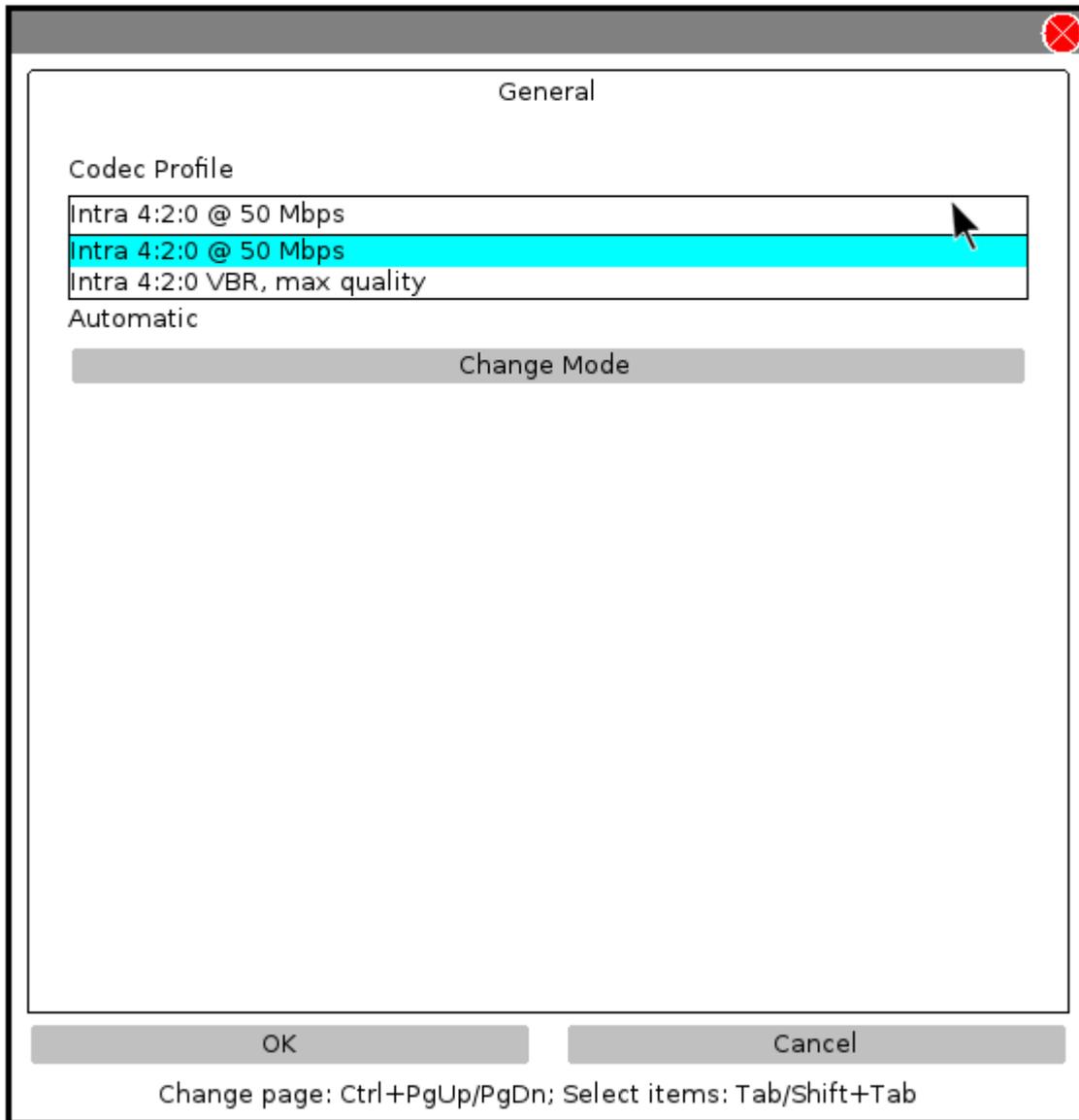
Then click on the 'Tracks' tab. Select the 'Video Track' and click the 'Modify' button.



This will open the 'Configure Encoding Track' dialogue box. Click on the 'Configure Encoder' button.



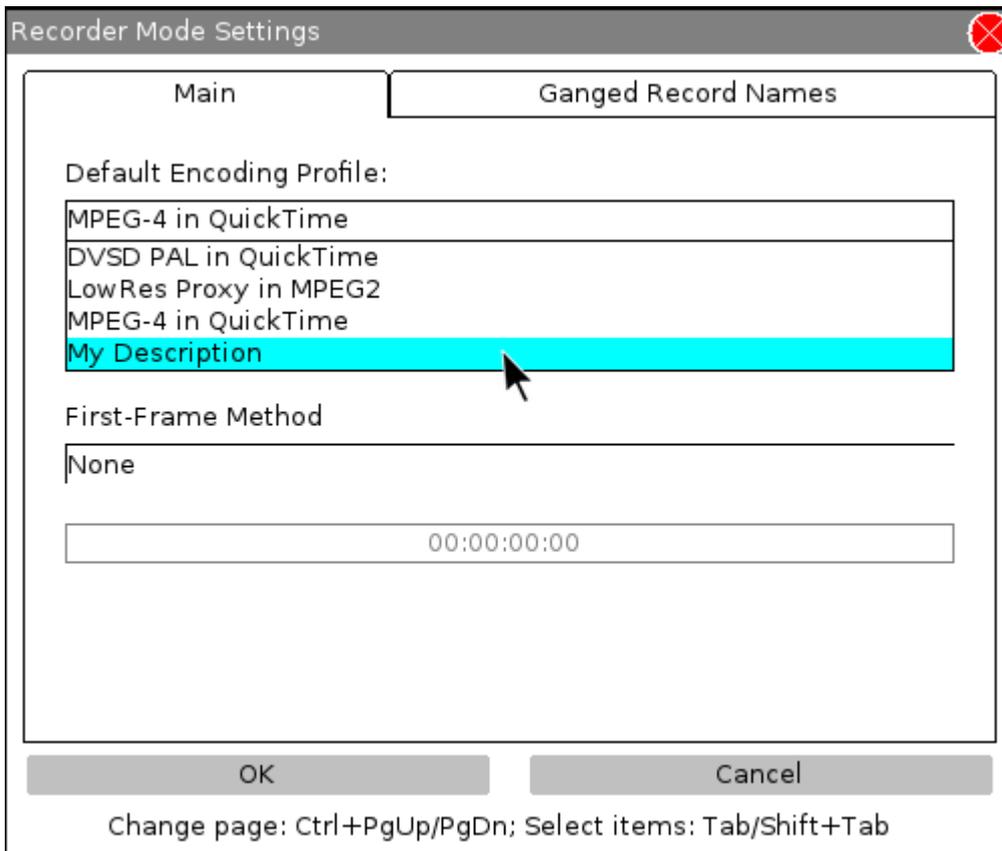
This will allow the Codec Profile to be changed. Click on the 'Codec Profile' entry so that a drop-down list is shown and select 'Intra 4:2:0 @ 50 Mbps'



Then click the 'OK' buttons on each dialogue box to return to the main screen.



The newly-created profile will then be available to select using the steps described in the previous section. It will be identified in the drop-down list by the description which was entered into the first dialogue box (in this example 'My Description').



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