
Mvix Digital Signage Control Portal

User Guide



Table of Contents

1	GETTING STARTED	3
1.1	WHAT IS MVIX DIGITAL SIGNAGE CONTROL PORTAL.....	3
1.2	OVERVIEW	4
2	'SCHEDULER' CONTROLS DESCRIPTION.....	6
2.1	PLAYER SELECTOR SELECTION	6
2.2	SCHEDULE DEFINITION.....	6
2.3	DEFAULT MEDIA.....	7
2.4	SCHEDULES LIST	7
2.5	GLOBAL SETTINGS	8
2.6	SAVE SCHEDULER CHANGES	8
3	'REMOTE PLAYBACK CONTROLLER' CONTROLS DESCRIPTION.....	9
3.1	PLAYER SELECTOR SELECTION	9
3.2	MEDIA SELECTION.....	9
3.3	REPEAT MODE.....	9
3.4	ACTIONS	9
3.5	PLAYER SELECTOR STATE.....	10
4	'UPNP SERVER BROWSER' CONTROLS DESCRIPTION.....	12
5	USAGE EXAMPLES.....	13
5.1	SCHEDULER	13
5.1.1	SIMPLE USAGE EXAMPLE	13
5.1.2	COMPLEX USAGE EXAMPLE.....	14
5.2	REMOTE PLAYBACK CONTROLLER.....	ERROR! BOOKMARK NOT DEFINED.

1 Getting Started

1.1 WHAT IS MVIX DIGITAL SIGNAGE CONTROL PORTAL

The Mvix Digital Signage Solution is a low-cost, comprehensive solution that integrates the functionality of Media playback for Digital Signage, while controlling it remotely over a Local-Area Network (LAN). Functionally, it works via a combination of a Media Player / Renderer and a Server (a regular PC). The Server stores all the Media files, whereas the Media Player / Renderer decodes and renders it to the display screen (i.e. TV). Theoretically, a Mvix Digital Media Player can act as a Renderer and a Server – Renderer, because it has the decoding capability and Server, because it can store media locally (On a internal Flash Drive or SD Card) and decode/play it locally. Apart from this Media Player, a user needs a PC-based Application that controls this Renderer over the LAN network. This Application (Mvix Digital Signage Control Portal) works like a remote control application over LAN to control all DLNA-compliant Renderers or Players. The Mvix Digital Signage Control Portal can control multiple players, renderers simultaneously.

The **MVIX DIGITAL SIGNAGE CONTROL PORTAL** (CPS) is a simple application that integrates a Scheduler and a Remote Playback Controller (Renderer).

The application runs on windows system (Windows Vista, XP) and has a simple, intuitive user-interface.

The **Scheduler** feature of the **Control Portal** allows to:

- List/select all DLNA-compliant Players /Renderers on the LAN network and browse/select UPnP content servers (servers that store the media file)
- Create a schedule list by adding single schedule. Each schedule is defined by a Start time, a Media title and a Repeat mode
- Play a user defined schedule list on a defined Player or a Renderer at a specified time
- Stop playback on all Player Selector at specified time (called Global Time)
- Start playback of a default media on all Player Selector at a specified time (called Global Time)

The **Remote Playback Controller** feature of the **Control Portal** allows to:

- List/select all DLNA Player Selectors on the network and browse/select UPnP content servers
- Play any media of any UPnP Server on the network – in Real-time. The functionality is similar to that presented by a typical remote control of a standard DVD player.
- Control (play, pause, stop, volume up, volume down) any DLNA-compliant Player on the LAN network. The functionality is similar to that offered by a typical remote control of a standard DVD player.

1.2 OVERVIEW

The CPS application is composed of two windows. The main one is the 'MVIX DIGITAL SIGNAGE CONTROL PORTAL' window and the second one is the 'UPnP Server Browser' window.

The '**MVIX DIGITAL SIGNAGE CONTROL PORTAL**' window contains different types of controls (button, textbox, list view ...). Some of them are common to Scheduler and Control Point functions and others are specific to a function.

Common controls:

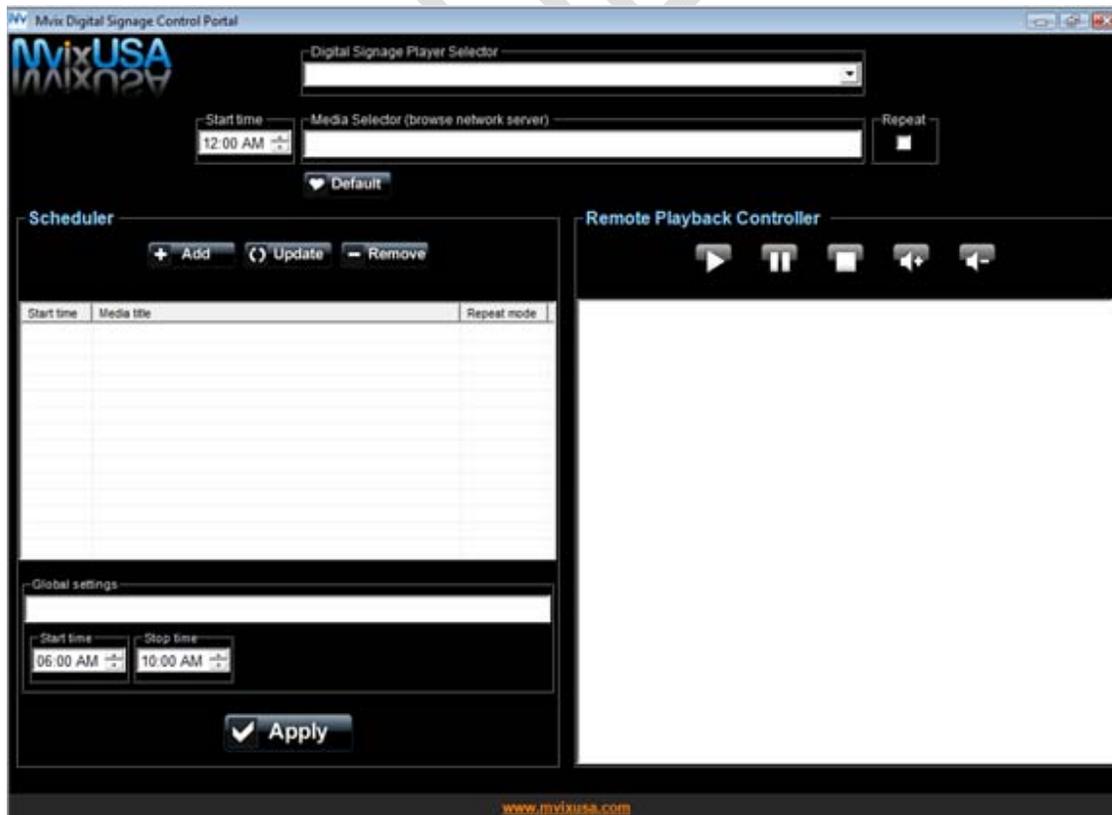
- 'Player Selector selection' combo box
- 'Media selection' text box
- 'Repeat' check box

Scheduler specific controls:

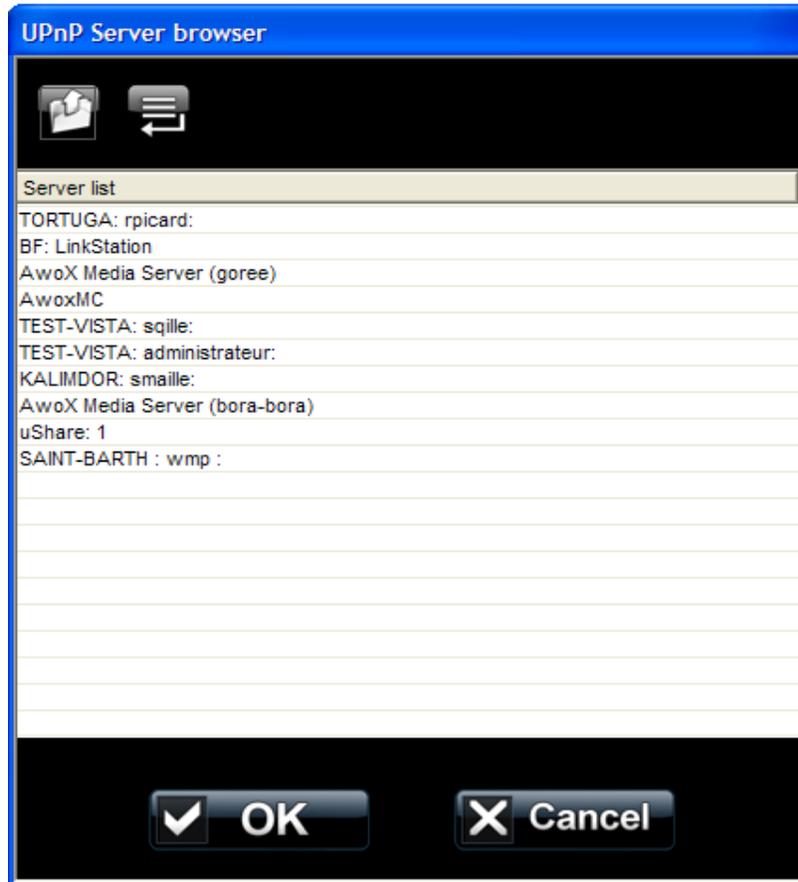
- 'Start time' time picker
- 'Default' button
- All controls contained in the 'Scheduler' group box

Remote Playback Controller specific controls:

- All controls contained in the 'Remote Playback Controller' group box



The '**UPnP Server Browser**' window is launched when the user double-clicks on the 'Media Selector' text box. This window allows a user to browse the *UPnP content servers* and subsequent media selection. Then, the selected media can be played directly via the Control Point, or can be used to define a schedule.



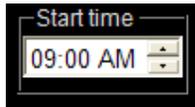
2 'Scheduler' Controls Description

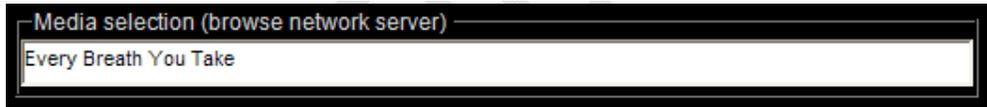
2.1 PLAYER SELECTOR SELECTION

	
Name	Player (Renderer) Selector selection
Type	Combo box
Action	Mouse click event will update and display a list that contains all the DLNA Player Selectors on the network. This field allows Player Selector selection. The schedules list that will be defined will be played on the selected Player Selector.

2.2 SCHEDULE DEFINITION

A schedule is defined by the followings fields: a Start time, a Media and an auto Repeat mode.

	
Name	Schedule Start time
Type	Time picker
Action	Mouse click, directional keys or numeric keys events will change the time. This field represents the playback start time of the media associated to the schedule.

	
Name	Media Selector
Type	Text box
Action	Mouse double clicks event will open the 'UPnP Server browser' window. This window allows to browse UPnP content servers and to select a playable folder or media. The selected folder name or media title is displayed in this text box. This field represents the media that will be played at the specified time on the selected Player Selector. At the end of the playback, it will restart immediately if the repeat mode is activated.

	
Name	Repeat mode
Type	Check box
Action	Mouse click event will check/uncheck the box. This field represents the auto repeat mode of the media associated to the schedule. At the end of the playback, it will restart immediately if the repeat mode is activated. So, when the repeat mode is activated, the playback stops when another schedule starts, or when the global stop time is reached or when the Control Point Stop button is pressed.

2.3 DEFAULT MEDIA

♥ Default	
Name	Default media
Type	Button
Action	Set the selected media as the default media. If no media is selected (Media selection text box is empty), an error message occurs. The default media is set for all Player Selectors. The playback of the default media starts when the global start time is reached. The default file playback is interrupted when the first schedule start time is reached.

2.4 SCHEDULES LIST

+ Add	
Name	Add
Type	Button
Action	Add the defined schedule to the schedules list. A new line is created in the schedules list and Start time, Media title and Repeat mode values are reported in corresponding columns.

↶ Update	
Name	Update
Type	Button
Action	<u>Prerequisite:</u> a schedule must be edited to be able to modify one or more fields. To edit a schedule, just double click on the corresponding line in the schedules list. All schedule values are reported in corresponding fields (Start time, Media selection, Repeat). Modify fields that you want to update. Update the edited schedule with modified values.

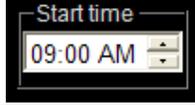
- Remove	
Name	Remove
Type	Button
Action	<u>Prerequisite:</u> a schedule must be selected to be able to remove it. To select a schedule, just click on the corresponding line in the schedules list. Remove the selected schedule.

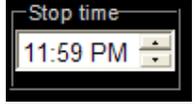
Start time	Media title	Repeat mode
09:00 AM	Hero	True
10:00 AM	Assinie Mafia	False
11:00 AM	Nles technologies 06/02/2008 00H35	True
01:00 PM	01_CBR_64_48_2.wma	False

Name	Schedules list
Type	List view
Action	Mouse click event on one line will select the corresponding schedule. Mouse double clicks event on one line will edit the corresponding schedule.

2.5 GLOBAL SETTINGS

	
Name	Default media
Type	Text box
Action	No action. Display the default media if this one is already selected.

	
Name	Global Start time
Type	Time picker
Action	Mouse click, directional keys or numeric keys events will change the time. This field represents the playback start time of the default media on all Player Selectors.

	
Name	Global Stop time
Type	Time picker
Action	Mouse click, directional keys or numeric keys events will change the time. This field represents the playback stop time on all Player Selectors.

2.6 SAVE SCHEDULER CHANGES

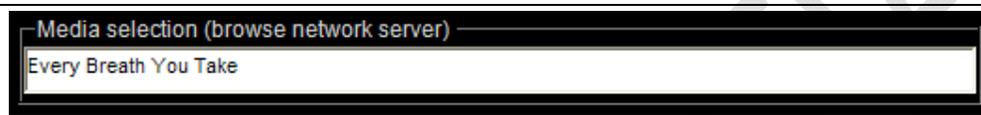
	
Name	Apply
Type	Button
Action	Save all scheduler changes (Schedules list for each Player Selector, global settings ...).

3 'Remote Playback Controller' Controls Description

3.1 PLAYER SELECTOR SELECTION

	
Name	Player (Renderer) Selector selection
Type	Combo box
Action	Mouse click event will update and display a list that contains all the DLNA Player Selectors on the network. This field allows Player Selector selection. The direct control point actions (play, pause, stop ...) will be applied to the selected Player Selector.

3.2 MEDIA SELECTION

	
Name	Media selection
Type	Text box
Action	<p>Mouse double clicks event will open the 'UPnP Server browser' window. This window allows to browse UPnP content servers and to select a playable folder or media. The selected folder name or media title is displayed in this text box. This field represents the media that will be played when the Play button is pressed. At the end of the playback, it will restart immediately if the repeat mode is activated.</p> <p>A schedule can also be played immediately. To select the schedule, just double click on the corresponding line in the schedules list. The media title is automatically reported in the 'Media selection' control. Then press on the Play button to start the playback.</p>

3.3 REPEAT MODE

	
Name	Repeat mode
Type	Check box
Action	Mouse click event will check/uncheck the box. This field represents the auto repeat mode of the selected media. At the end of the playback, it will restart immediately if the repeat mode is activated. So, when the repeat mode is activated, the playback stops when a schedule starts or when the Stop button is pressed.

3.4 REAL-TIME ACTIONS

	
Name	Play
Type	Button
Action	<p><u>Prerequisite:</u> a Player Selector and a media must be already selected.</p> <p>Real-time Play the selected media on the selected Player Selector. At the end of the playback, it will restart immediately if the repeat mode is activated. If the media playing is paused, this button will un-pause.</p>

	
Name	Pause
Type	Button
Action	Prerequisite: a playback is running on the selected Player Selector. Real-time Pause the media being played. If the media is already paused, pressing this button has no effect. Use the 'Play' button to resume a paused media.

	
Name	Stop
Type	Button
Action	Stop the media being played.

	
Name	Volume Up
Type	Button
Action	Real-time Increase the volume of 10 units (currently supported volume range is 0 to 100).

	
Name	Volume Down
Type	Button
Action	Real-time Decrease the volume of 10 units (currently supported volume range is 0 to 100).

3.5 PLAYER SELECTOR STATE

<pre> Renderer name: 'AwoxMC' Playmode: Playing Status: OK Track 1/1 Mute: Off Volume: 40 Duration: 00:04:37 - Position: 00:00:13 / 00:04:37 Media: http://10.1.117.90:9000/disk/music/O1\$268435466\$1744831228.WMA Track: http://10.1.117.90:9000/disk/music/O1\$268435466\$1744831228.WMA Next: Title: 'Sunday Bloody Sunday' - Creator: 'U2' Play speed: 1 </pre>	
Name	Player Selector state

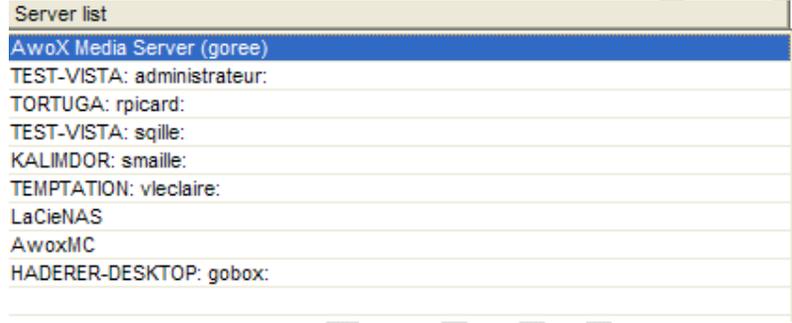
Type	List view
Action	No action. Display information for the selected Player Selector. The Player Selector state is updated each second.

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4 'UPnP Server browser' Controls Description

	
Name	Browse Up
Type	Button
Action	Browse up UPnP content server. If the root level is reached (servers list) pressing this button has no effect.

	
Name	Servers list
Type	Button
Action	Go back to servers list. If the root level is reached (servers list) pressing this button has no effect.

	
Name	Servers list/Server content
Type	List view
Action	Mouse double click event will browse down the selected server or the selected server content. To select a playable folder or media, just click on the corresponding line.

	
Name	OK
Type	Button
Action	Keep the selected media, close the 'UPnP Server browser' window and copy the media title in the 'Media selection' text box. An error message occurs if the selected folder/media is not playable.

	
Name	Cancel
Type	Button
Action	Close the 'UPnP Server browser' without changing the previous media selected.

5 Usage Examples

5.1 SCHEDULER

5.1.1 SIMPLE USAGE EXAMPLE

Prerequisites: At least one Player Selector and one server are available on the network.

Actions:

1. Start 'MVIX DIGITAL SIGNAGE CONTROL PORTAL' application.
2. Wait few seconds to let the time to the Player Selectors to be discovered. Then click on the 'Player Selector selection' control and select a Player Selector: **Player Selector1**. If the Player Selector is not already present in the list, just click again on the control to update the list.
3. Select a global Start time: *08:00 AM*
4. Select a global Stop time: *07:00 PM*
5. Define a first schedule:
 - a. Set the schedule start time: *09:00 AM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title1**
 - c. Leave the repeat box unchecked to disable the auto repeat mode
6. Press the 'Add' button. The schedule is added to the schedules list.
7. Define a second schedule:
 - a. Set the schedule start time: *10:00 AM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title2**
 - c. Check the repeat mode box to enable the auto repeat mode
8. Press the 'Add' button. The schedule is added to the schedules list.
9. Press the 'Apply' button

Expected results:

At *09:00 AM*, the playback of *media_title1* starts on *Player Selector1*. When the playback ends, it is not started again.

At *10:00 AM*, the playback of *media_title2* starts on *Player Selector1*. When the playback ends, it restarts automatically.

At *07:00 PM*, the playback stops automatically on *Player Selector1*.

5.1.2 COMPLEX USAGE EXAMPLE

Prerequisites:

At least two Player Selectors and one server are available on the network.

Actions:

1. Start 'MVIX DIGITAL SIGNAGE CONTROL PORTAL' application.
2. Wait few seconds to let the time to the Player Selectors to be discovered. Then click on the 'Player Selector selection' control and select a Player Selector: **Player Selector1**. If the Player Selector is not already present in the list, just click again on the control to update the list.
3. Select a global Start time: *08:00 AM*
4. Select a global Stop time: *07:00 PM*
5. Define a first schedule:
 - a. Set the schedule start time: *09:00 AM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title11**
 - c. Leave the repeat box unchecked to disable the auto repeat mode
6. Press the 'Add' button. The schedule is added to the schedules list.
7. Define a second schedule:
 - a. Set the schedule start time: *10:00 AM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title12**
 - c. Check the repeat mode box to enable the auto repeat mode
8. Press the 'Add' button. The schedule is added to the schedules list.
9. Select another Player Selector: **test_Player Selector2**
10. Define a first schedule:
 - a. Set the schedule start time: *11:00 AM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title21**
 - c. Check the repeat mode box to enable the auto repeat mode
11. Press the 'Add' button. The schedule is added to the schedules list.
12. Define a second schedule:
 - a. Set the schedule start time: *02:00 PM*
 - b. Select the schedule media title by using the 'UPnP Server browser' window: **media_title22**

- c. Check the repeat mode box to enable the auto repeat mode
13. Press the 'Add' button. The schedule is added to the schedules list.
14. Select a media that will be used as default media: **default_media_title**. Press 'Default' to set this media as default media.
15. Press the 'Apply' button

Expected results on Player Selector1:

At 08:00 AM, the default media *default_media_title* is playing in loop.

At 09:00 AM, the playback of *default_media_title* is stopped and the playback of *media_title11* starts. When the playback ends, it is not started again.

At 10:00 AM, the playback of *media_title12* starts. When the playback ends, it restarts automatically.

At 07:00 PM, the playback stops automatically on *Player Selector1*.

Expected results on test Player Selector2:

At 08:00 AM, the default media *default_media_title* is playing in loop.

At 11:00 AM, the playback of *default_media_title* is stopped and the playback of *media_title21* starts. When the playback ends, it restarts automatically.

At 02:00 AM, the playback of *media_title21* is stopped and the playback of *media_title22* starts. When the playback ends, it restarts automatically.

At 07:00 PM, the playback stops automatically on *Player Selector1*.

5.2 REMOTE PLAYBACK CONTROLLER

Prerequisites: At least one Player Selector and one server are available on the network.

Actions:

1. Start 'MVIX DIGITAL SIGNAGE CONTROL PORTAL' application.
2. Select a Player Selector by using the 'Player Selector selection' control: **Player Selector1**.
3. Select a media title by using the 'UPnP Server browser' window: **direct_media_title1**
4. Check the repeat mode box to enable the auto repeat mode
5. Press the 'Play' button to start playing the media and wait until the end of the playback.
6. Press the others Control Point buttons (Pause, Stop, Volume Up, and Volume Down) to control the Player Selector.

Expected results on:

At the end of the playback, the media is played again.

The others Control Point buttons must modify the Player Selector state.

