# EVS TUTORIALS
## LSM CONNECT

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1. Introduction

Welcome to the LSM Connect tutorial.

The aim of this tutorial is to present the LSM Connect and describe its main operations.

The LSM Connect is a tablet-based application that allows users to manage clips and playlists stored on EVS video servers. The application is directly connected to the LSM Remote Panel and to the EVS video server via the Ethernet network. This gives users instant access and control of all clips and playlists created on EVS servers. Automatic and instant synchronization between the LSM Connect and the EVS server provides an excellent interactivity, as well as an easy and intuitive solution to manage clips and playlists in a live production environment.

2. LSM Connect Architecture

Each LSM Remote can have its associated LSM Connect tablet.

The tablet has to be able to access the PC LAN port of the server.

A docking station is delivered with the tablet along with a Power Over Ethernet injector that provides the power and the Ethernet connection to the docking station.

3. Starting the Application

To start the LSM Connect application, tap the icon located on the main screen.

In the Connection menu, tap 'XT and remote connection'.

A dialog box opens. In this box, we can select the LSM Remote we want to connect our tablet with. Once this is done, the LSM Connect will retrieve the information from the server and we are ready to start using LSM Connect.
4. User Interface

By default the interface will look like this and we can identify 4 different areas.

1. The **Clip area** displays the clips stored on the EVS Server.
   The clips can be displayed in grid or in list view.
   In the grid view, we can find a bank selection area in the left column where we can switch from one bank to the other.
   In the bottom area of the window, we can do the same with the pages.

2. The **Playlist area** displays the list of visible playlists stored on the EVS Server.
   We can remove from or add playlists to this list by tapping the icon on the bottom area.

3. The **Toolbar area** displays metadata information of the clip or playlist we have selected in the 2 previous areas.
   To select a clip, we simply have to tap it in the grid.

4. The **Command bar** gives access to the following windows or commands;
   - multi selection of elements,
   - locking the interface,
   - searching the Multicam database,
   - and finally opening the Settings menu.
5. Clip Management

5.1. Clip Information

Having a closer look to the Clip area, we can see different elements.

Every small block represents a clip and displays its LSM ID and primary or secondary clip indication.

| 117A = demo | 117B = demo |

Selecting a clip will display its associated information and metadata in the toolbar area.

This can be:

- the clip name,
- its type (primary or secondary),
- the codec used,
- the keywords associated,
- an icon, color and rating.

This information can be changed or completed at any time and will help us to retrieve the media much faster afterwards.

When a clip is loaded on an output channel of an XT Server, it will be displayed in red.

| 113A = AUX | 113B = AUX |

When, on the other side, the clip is used as an Aux clip in a playlist, an AUX indication will be displayed in the clip element.

We can also find a small icon representing a lock to indicate that clips have been protected.

| 211A | 211B = AUX |

When clips have been archived - to an XFile for instance - a blue folder icon will be displayed.

When they are scheduled to be archived, the folder icon will be white.

Keywords, icons, and colors can also be added by selecting the clip and changing the values in the toolbar area. Let's tap the keyword field, select a keyword from the grid, select another one and press OK. Both keywords have been associated to the clip.

We can also select an icon and give the clip a color and ranking.

The background color of the clips also has a meaning.

- Blue means the clip is selected.
- Red means it is loaded on an output channel.

The dark grey zones indicate empty clip positions.

For the positions with a grayed out LSM ID, the codec of the clip is not the same as the codec selected for the current EVS server configuration.
5.2. SDTI (XNet) Functions

From the Clip tab, we can also access distant EVS Servers on the SDTI network. Let's tap the network icon.

Then select the server we want to access and press OK.

We can see that the background of some clips is in a kind of dull red. This indicates that we are accessing the clips of a distant server.

This can also be read from the top of the grid where the name of the distant server is displayed.

From here on, we can use these clips in the same way as local ones. For instance, if we double tap a clip, it will be loaded on the output channel of the server.

5.3. Clip Management

Several actions can be performed on a clip once we have selected it.

The actions are displayed in a contextual action bar at the top of the window.

The actions available for clips are:

- Cut,
- Copy,
- Delete,
- Archive,
- and Push.

When we copy or cut a clip from a certain location, and we press an empty position, we can paste it on that position.

It is also possible to select multiple clips by using the multi-selection icon . Once activated, this function will stay active until you deactivate it again.

If we repeat this cut or copy operation now, and we select an empty location, we will have two functions available.

We can select Paste Same Position if we want the clips to be pasted on the same camera angles as the initial ones.

Or we can select Paste Contiguous if we just want to copy them the one after the other.
5.4. Searching for Clips

When we have to search for clips, we can perform a free text search on the clip metadata. Tap the Magnifier icon in the upper right area of the window. From here we can type some text.

The application will suggest through the autocomplete feature some metadata that matches the text typed. These can be clip names or keywords. It is also possible to filter the database by selecting other elements of the metadata on the right side of the window, in the toolbar area. For instance, we can search on a color or icon.

The search results will always be displayed in the List view. And all possible actions on these clips can be performed from here, such as loading a distant clip on the playout channel, for instance.

5.5. Clip Creation

When a clip is being created from the LSM Remote, a window will pop up as soon as the IN point or the OUT point has been defined.

From this window, it is possible to add metadata even before the clip is created. We can type a name by using the keyboard so when the clip is saved the name will automatically be allocated. The keyword list is coming from the server itself.

The name can have up to 24 characters.

6. Playlist Management

6.1. Playlist Information

Let's have a look now at the Playlist area. From here we can see the list with visible playlists. The colors used to define the statuses of the playlists are the same as for the clips:

- Red means the playlist is loaded on an output channel,
- Blue means it has been selected,
- Dark grey means the position is empty,

An interesting thing to notice refers to the position 15. This position is not empty but it is taken by a timeline. The difference is that a timeline cannot be accessed from the LSM Connect, and the system simply indicates that this position is already used.
As already explained, on the bottom of the window we can manage the playlists that need to be visible for us. We can select or deselect some playlists if needed.

The function will not delete the playlists, it will just hide them. This can be useful when multiple operators are working on the same machine. Each operator will then only select his own playlists.

Next to each playlist we can see a small triangle.

If we tap this icon, the playlist will expand and show the playlist details such as the different clips with their transition effects for instance.

When the playlist is loaded on an output channel, the light grey indication between the clips refers to the current position of the playlist on the output channel.

If we tap the Clip Details button, we can see which keywords have been assigned to the clips in the playlist. Tap the icon again to hide the clip details.

A playlist element can be selected and its information can be changed in the toolbar area on the right.

If we want to be sure that the clips in the playlist are sorted from the oldest to the most recent timecode we can tap the Sort by TC IN button which will reorganize the clips if needed.

Press the back button to go back to the list view.

6.2. Playlist Creation

When creating a new playlist, the first thing we have to do is select one or multiple clips in the Clips area.

The order of clip selection is important and will be reflected in the playlist we will create.

Select multiple clips and tap the plus icon next to an empty playlist location.

The clips are now added to this playlist.

When tapping the plus icon of an existing playlist, we add the selected clips at the end of this playlist.

The operations that we performed do not impact what's happening on the output channel. This means that we can for instance create and edit playlists while we are playing out another one.

If we go into the Detail view of the playlist, we can find the clips that we have just added.

If we now select an element of the playlist, we can simply move it around and drop it to a new position.

It is also possible to insert a clip from the Clips area between 2 playlist elements.

We can also edit playlists from here, such as naming them to make their retrieve easier.
Or we can select one or multiple elements from the playlist and change some of their parameters all at once.

For instance change the Video or Audio transition.

6.3. Merge Playlists

The merging function of playlists enables to combine two playlists into one.

If we want to use this function, we need to enable the Multi-selection tool.

Select the first playlist .... Then the second one and tap the merge button.

The first playlist will be added at the end of the second one.

We can note that if we would have selected an empty playlist as the second playlist, this would just have copied playlist one into that empty position.

7. LSM Connect Parameters

In the Parameters menu of the LSM Connect, we can find settings related to the LSM remote and tablet operations. During this tutorial, all these features were enabled.

The 'Edit clip metadata on mark IN/OUT' is the setting that enables the metadata window to pop up when making an IN or OUT point on the LSM Remote.

The 'Tablet and remote sync' setting is similar to the VGA and Remote sync functionality. When enabled switching between pages or banks on one of the devices - LSM Remote or LSM Connect - will be reflected simultaneously on the other one.

The 'Load clip/playlist' setting offers the possibility to load a clip or a playlist with a double tap on the Program channel we are controlling with the LSM Remote.

We can also hide certain metadata columns when working in list mode by deselecting them from the list.