

EVS Open Solutions

Third-party integration featuring Final Cut Pro Studio
 XT[2] Native ProRes 422 support

A common desire in multi camera/multi feed production is to take content that is being captured by EVS XT[2] servers and repurpose it in the post-production process.

In the past, in order to edit material in a traditional NLE such as Final Cut Pro, the Producer/Editor has had to digitize all of the content (the line cut and camera ISOs) as baseband transfers either from the XT[2] server or from video tape into Final Cut Pro, all in real-time. This means that for a 2-hour show with 8 camera isolates (plus line cut), there are 18 hours of real time digitizing required before you can begin to edit. Multiple edit stations connected to shared storage can help alleviate this bottleneck somewhat, but can be an expensive addition. All of this is potentially time and cost prohibitive, especially if the production is faced with a tight deadline.

Many productions already rely on the EVS XT[2] server for its speed and reliability during live events. Most, if not all, of the significant camera ISOs are already recorded into the server network. With new support for native Apple ProRes 422 and Apple ProRes 422 HQ, file-based scenarios can take advantage of this existing EVS infrastructure. Now editors and producers can repurpose all of the live recorded content in a post production environment, saving both time and money.

To achieve this improvement requires very little additional equipment, and very little modification to existing work methods. The advantages this solution can provide to a new installation are potentially the greatest, as a new facility can bypass the limitations inherent in video tape and move directly to a tapeless workflow.

KEY FEATURES

- **Bi-directional EVS/FCP transfer process:** gigabit Ethernet-based file exchange from XT[2] to Final Cut Pro through XFile Gateway and XTAccess.
- **EVS native support for IMX, Apple ProRes 422, and Apple ProRes 422 HQ:** no transcoding process required. Native media quality and attributes are preserved.
- **Edit-while-transfer to Final Cut Pro:** clips can be edited during transfer to a shared storage volume via QuickTime Reference movies.

Transfer Type	Content Source Type	Feature	Initiating Device
Clip Transfer	Clips from EVS XT[2] to Final Cut Pro	Import from EVS XT[2] server only the content that is required	EVS IPDirector-OR-Import from FCP plug in
Instant Feed Streaming	Active feeds from EVS XT[2] to Final Cut Pro	Streams active recordings and allows editing while transfer is in progress	EVS XTAccess via QuickTime Reference Movies
File Transport	EVS XT[2] via XFile	Content is captured on site, and transported via removable drives to	EVS XFile streaming module
Final Cut Pro Sequence Export	Final Cut Pro Sequences to EVS XT[2]	Finished Final Cut Pro sequences automatically integrate back into production	Final Cut Pro



Clip Transfer

Clips created on the XT[2] network from various EVS user interfaces (e.g the LSM remote, IPDirector) are selected and directly transferred by EVS XTAccess or EVS XFile applications via a high speed gigabit Ethernet connection to any Final Cut Pro workstation. The Final Cut Pro editor can then drag the clip from a finder window into a bin to begin the edit process. Additionally, EVS has created a plug-in for Final Cut Pro that allows the Final Cut Pro editor to browse clips on the XT[2] server and initiate a transfer into the current sequence bin by double clicking a clip in the import window. Both of these processes support the use of QuickTime Reference Movies, so that the Final Cut Pro editor does not have to wait for the completion of the transfer. The content is instantly available and is updated dynamically.

Instant Feed Streaming

Multiple active, on-going feeds (record trains) from the EVS XT[2] server are selected and directly streamed to shared storage, using the EVS XFile streaming module. Through the use of QuickTime Reference Movies, the Final Cut Pro editor can access and edit the content as soon as the recordings begin, without having to wait for the event to end.

File Transport

In a remote broadcast scenario, content is recorded on an XT[2], and simultaneously archived on XF[2] removable storage that can be transported back to a studio facility. The files created on these drives can be Apple ProRes 422, Apple ProRes 422 HQ, or IMX QuickTime movies. Upon arrival they can be directly mounted by the Final Cut Pro system and easily dragged into a bin for immediate use.

Final Cut Pro Transfer to EVS

A finished Final Cut Pro sequence can easily be exported to shared storage which is scanned by the EVS XTAccess application and then automatically restored to an XT[2] for playback to air.

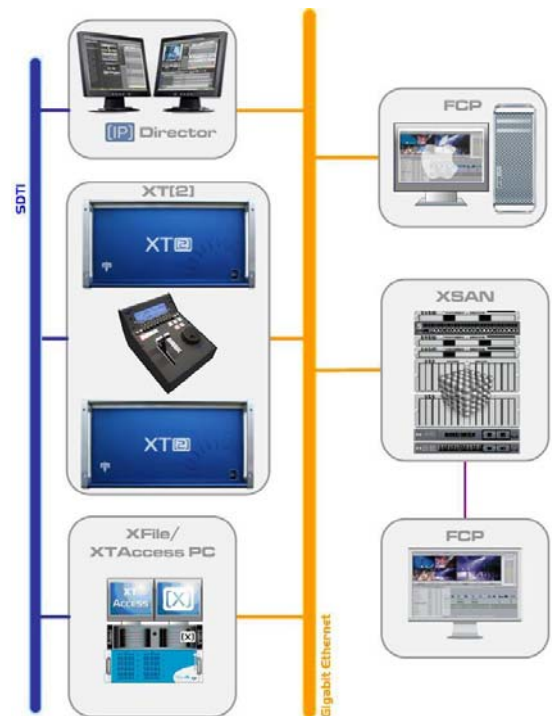
TYPICAL WORKFLOWS

In a file-based workflow, the media is captured by the EVS XT[2] servers in a codec that is natively compatible with Final Cut Pro. Regardless of whether the production is Standard Definition or High Definition, the toolset and workflow remain the same.

Live Production

A typical EVS configuration would give 12 inputs, generally enough to record all of the available cameras, audio ISOs, and the line cut. The XNet[2] allows every recorded input to be available to any and all outputs, instantly and simultaneously. The rapid replay of recorded elements and the building of playlists continue as in the past, but additionally users can take advantage of the fact that all of this content is being digitized live, and make all of the content immediately available to one or more Final Cut Pro editors.

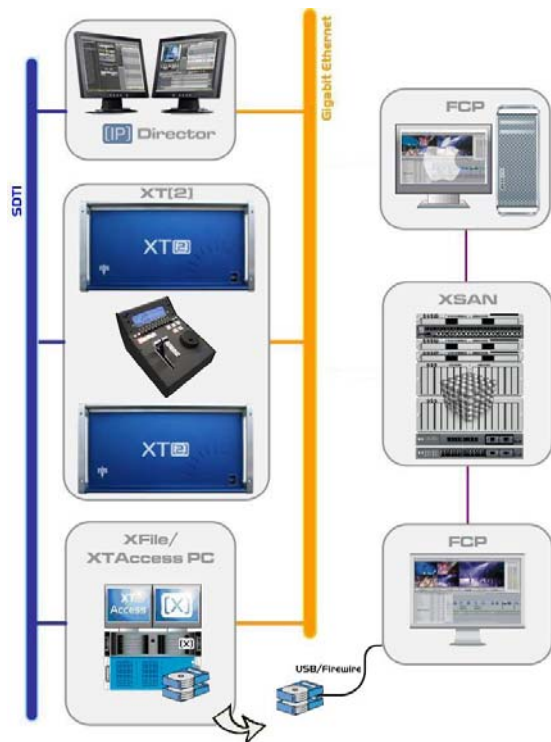
The EVS XT[2] servers and XTAccess/XFile PC's can be directly connected via gigabit Ethernet to either a single Final



Cut Pro or an Xsan network and multiple Final Cut Pros connected to the Xsan via Fiber Channel. A user can stream active open-ended recordings and/or transfer Clips to one or more networked Final Cut Pro workstations.

For most production models, this last scenario offers the most control. The IPDirector has complete visibility over all of the media available on the networked XT[2] servers, both pre-existing clips and active recordings. This allows the user to selectively transfer just the relevant content. The XT[2] servers act as a giant front-end server, freeing the Final Cut Pro editor from the task of sorting through a large amount of content to find the best shots. This “just sends what you need” approach frees up storage capacity as well as an editor’s time.

Remote Production



In this scenario, the EVS XT[2] server acts as the encode point for multiple feeds. Again, all of the work that is currently done on the network of XT[2]s continues and the production workflow can remain undisturbed. Through the use of the EVS toolset detailed above, all or selected portions of the content can be archived to removable storage for transport back to a post production facility. The removable storage medium could be:

- the XF[2]’s 500 GB removable drives (capable of holding approximately 22 hours of IMX 50 content or 7 hours of Apple ProRes 422).
- Any Windows mountable storage volume (i.e. USB, Firewire) connected to the XF[2] (with certain performance restrictions based on the storage).
- Network Attached Storage accessible via EVS XTAccess.

Once the content is transported to the studio or post production facility, the user simply mounts the storage so that it is accessible from the Final Cut Pro editing station(s), drags the clips into a bin, and begins the edit process. Content can be copied from the removable storage to a central storage volume within the facility in order to maintain the content within an archive. If metadata was created on site with IPDirector, that too can be transported and imported into the facility Asset Management System.

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