

EVS XT[2]/XS INTEGRATION WITH APPLE FINAL CUT PRO POST-PRODUCTION

A common practice in multi-camera/multi feed-production is to take content that is recorded on EVS XT[2] or XS servers and repurpose it during post-production. In the past material that was edited with traditional NLE tools, such as Final Cut Pro, had to be digitized in real-time. This meant that for a 2-hour show with 8 camera isolates (plus line cut), there was 18 hours of real-time digitizing before you could actually begin to edit. Multiple edit stations connected to shared storage would help to alleviate this bottleneck, but at quite a cost.

Many productions already rely on the EVS servers for their speed and reliability during live events. Most, if not all, of the significant camera ISOs are already recorded on the server network. And since EVS servers natively support the Apple ProRes and the Apple ProRes 422 HQ codecs, clipped files can be directly transferred to the Apple post-production environment without the need of encoding and decoding, which saves time and preserves the quality of the images.

KEY FEATURES

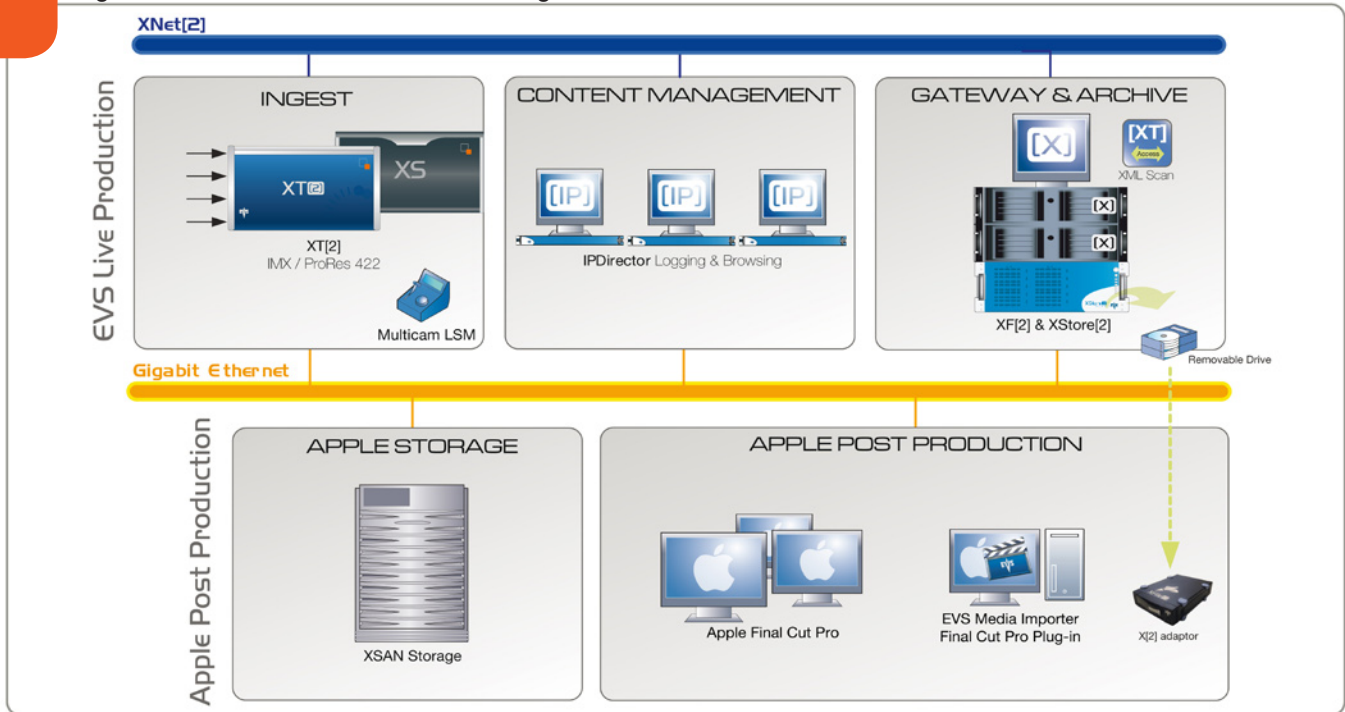
- Bi-directional EVS/FCP transfer process: Gigabit Ethernet-based file exchange from XT[2] or XS to Final Cut Pro through XFile Gateway and XTAccess.
- EVS native support for IMX, Apple ProRes, and Apple ProRes 422 HQ: No transcoding process required. Native attributes are preserved.
- Edit-while-transfer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

Content Transfer Methods

Transfer Type	Content Source Type	Feature	Initiating Device
Clip Transfer	Clips from EVS XT[2]/XS or XF[2] disks to Final Cut Pro	Import from EVS XT[2]/XS server only the content that is required	EVS IPDirector/ INSIO-or- EVS Media Importer
Live Feed Streaming	Active feeds from EVS XT[2]/XS 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]/XS via XFile	Content is captured on site, and transported via removable drives to post-production facility	EVS XFile streaming module
Final Cut Pro Sequence Export	Final Cut Pro Sequences to EVS XT[2]/XS	Finished Final Cut Pro sequences automatically integrate back into production	Final Cut Pro



Fig. 1: File Transfer and Feed Streaming EVS - Final Cut Pro



Workflow

1) Clip Transfer

Clips created on the network with EVS' software applications (e.g MulticamLSM or 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 and drop it into a bin, so that the editing process can begin. Additionally, EVS has created Media Importer, a plug-in application for Final Cut Pro that allows the Final Cut Pro editor to browse clips on the XT[2] or XS server, as well as on the XF[2] disks, 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.

2) Live Feed Streaming

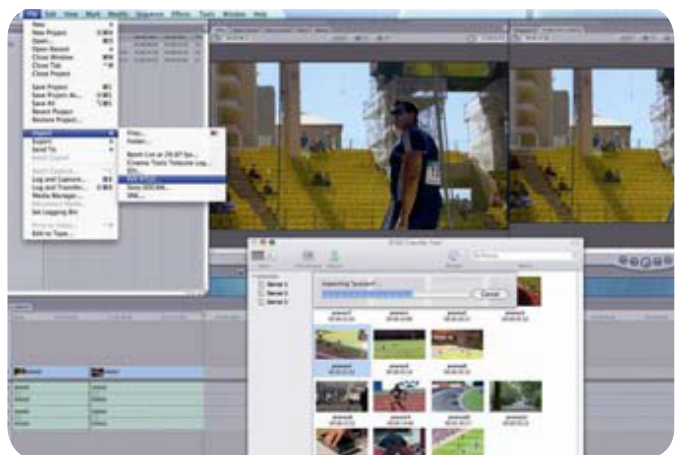
Multiple on-going feeds (recorded trains) from the EVS servers are selected and directly streamed to shared storage, using the EVS XFile streaming module. Through the use of QuickTime Reference Movies, the Final Cut Pro editor can access and edit the content as soon as the recordings begin, without having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

3) Cut and Go

In a remote broadcast scenario, content is recorded on an XT[2] or XS server, and simultaneously archived on XF[2] removable storage disks 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 browsed by the Final Cut Pro system and easily dragged into a bin for immediate use.

4) Final Cut Pro Transfer to EVS

A completed Final Cut Pro sequence can easily be exported to shared storage, which is scanned by the EVS XTAccess application and automatically restored on an XT[2] or an XS for playback.



EVS Media Importer - Plugin Application in Final Cut Pro allowing to browse EVS clips and import them into FCP timeline



COMMON WORKFLOWS

In a file-based workflow, EVS servers capture media in a codec that is natively compatible with Final Cut Pro. Regardless of whether the production is SD or HD, the toolset and workflow remain the same.

Live Production

A common EVS configuration would give 12 inputs, generally enough to record all of the available cameras, ISOs, and line cut. The XNet[2] (EVS high bandwidth Media Sharing Network) allows every recorded input to be instantly and simultaneously available on the network. In addition to replays and playlist creations, EVS production workflows allow Final Cut Pro editors to access instantly any recorded content on the XT[2] or XS servers. The EVS production servers combined with the XF[2] removable storage server and XTAccess Gateway software can be connected to Final Cut Pro via a simple gigabit Ethernet connector. Media can be exchanged with the XSAN via the fiber channel. As a result users can stream active open-ended recordings and/or transfer clips to one or more Final Cut Pro workstations.



EVS MEDIA IMPORTER

EVS Media Importer is a plug-in option tool from EVS directly integrated in Final Cut Pro interface allowing to search clips and media available on the EVS XT[2] server and import them in a flash onto the timeline editor.

In most production models, this last scenario offers the highest level of control. The IPDirector has complete visibility of all the media available on the network. This allows the user to selectively transfer only the relevant content. The XT[2] or XS server acts 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. As a result storage capacity is freed and the editor's time is saved.

Remote Production

In this scenario, the EVS XT[2] or XS server represents the encoding point for multiple feeds. Again, all of the work that is currently done on the network continues and the production workflow remains undisturbed. By employing EVS' different applications, all or selected portions of the content can be stored and transported back to post-production. The removable storage medium could be:

- the XF[2]'s 750 GB or 1 TB removable drives
- 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), the clips can then be dragged and dropped into a bin, so that the editing process can begin. Content can also be copied from the removable storage to a central storage volume within the facility for archiving. Metadata created on site with IPDirector software, can also be transported and imported into the Media Asset Management system.

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