

## **D10 EXPORT FCP - PERFORMANCE**

Re-Wrapping Performance Test

26th of March 2009

## D-10 Export FCP re-wrapping performance tests

Working close to on-air deadlines requires fast access to media but also fast file exports. In this document you find a summary of our internal performance tests.

### Hardware setup

Mac Pro 3 Ghz Dual Core

2GB RAM (over equipped test setups make it more difficult to detect memory leaks)

4x 512GB internal S-ATA drives

1x fibre channel attached Xserve RAID

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Re-wrapping was performed from the Xserve RAID (read) to the Desktop (write).

### Software setup

Mac OS X 10.5.6 with QuickTime 7.6 and Final Cut Pro 6.0.5

Mac OS X 10.4.11 with QuickTime 7.6 and Final Cut Pro 6.0.5

MXF4mac MXF Import QT 1.5.1

MXF4mac Export FCP 1.0

Sony XDCAM Transfer 2.9

Flip4Mac XDCAM Component 2.2.0.6

### Final Cut Pro project setup

IMX50 timelines of 120 minutes (2:00 hours) duration

MXF sources: 625/50 (PAL) EVS and Sony D-10 OP1a IMX50

Native MXF based timeline featuring MXF4mac MXF Import QT

MOV based timeline with files created from same MXF sources by using Sony XDCAM Transfer

4 channels native interleaved AES3 audio within native MXF.

4 channels of single PCM mono tracks within MOV.

No effects, no filters.

## Test results

FCP 6.0.5, Mac OS X 10.5.6, 120 minutes IMX50 MXF to MXF (featuring [MXF Import QT](#))

MXF4mac D10 Export FCP:	28 minutes
Sony XDCAM Export*:	Re-wrapping not applicable, error
Flip4Mac XDCAM Export**:	38 minutes

FCP 6.0.5, Mac OS X 10.4.11, 120 minutes IMX50 MXF to MXF (featuring [MXF Import QT](#))

MXF4mac D10 Export FCP:	23 minutes
Sony XDCAM Export*:	Re-wrapping not applicable, error
Flip4Mac XDCAM Export**:	28 minutes

FCP 6.0.5, Mac OS X 10.5.6, 120 minutes IMX50 MOV to MXF

MXF4mac D10 Export FCP:	50 minutes
Sony XDCAM Export (EVS D-10 file)*:	Not applicable, crash
Sony XDCAM Export (Sony D-10 file)*:	73 minutes (1:13 hours)
Flip4Mac XDCAM Export**:	72 minutes (1:12 hours)

FCP 6.0.5, Mac OS X 10.4.11, 120 minutes IMX50 MOV to MXF

MXF4mac D10 Export FCP:	42 minutes
Sony XDCAM Export (EVS D-10 file)*:	Not applicable, crash
Sony XDCAM Export (Sony D-10 file)*:	84 minutes (1:24 hours)
Flip4Mac XDCAM Export**:	73 minutes (1:13 hours)

## Notes

\*The Sony XDCAM export plug-in is not able to re-wrap MXF assets which are imported by our MXF import solution. An invalid BER value message appears. This can be solved by activating the re-compress checkbox in the export setting window. However this would prevent re-wrapping so we can't compare the performance.

Exporting the 2 hours MOV timeline (based on the EVS D-10 source file) caused Final Cut Pro to crash after about 38 minutes of rendering just before starting the re-wrapping process. This issue was always reproducible on both Mac OS X 10.4 and 10.5. The EVS file was then replaced by an original Sony XDCAM file. Both files were wrapped to MOV by using Sony XDCAM Transfer but for some reasons the EVS file caused Final Cut Pro to crash when using the Sony exporter.

\*\*625/50 (PAL) D-10 files created by the Flip4Mac plug-in are not compatible with our MXF import solution due to a wrong edit rate value of 25000 / 1000. This edit value is common with QuickTime MOV but not with MXF. The SMPTE 386M document specifies an edit rate of 25 / 1 (page 6, Table 5).

Also the plug-in sets the Type Code for exported MXF files to 'XDCM'. Please remove the type code with the MXF4mac Contextual Menu or other tools. You can find more details in the MXF Import QT PDF manual.

An error occurred several times when using the Flip4Mac export plug-in in conjunction with our native MXF importer. After the first pre-rendering was done a -47 system error message appeared. Restarting Final Cut Pro solves this.