

The Inter-Society Digital Cinema Forum (ISDCF) is an open cinema industry group that meets once a month in Los Angeles, with a telephone bridge for out of area participants. Participants include representatives from studios, mastering houses, distribution companies, technology suppliers and theater owners. ISDCF provides a cross-industry information exchange for issues affecting the Digital Cinema rollout. It also provides a forum where representatives from different parts of the industry (including competitors) can share experiences, discuss common problems and consider best practices to recommend to the industry.

This report, which I have prepared for the EDCF community, summarizes some of the most important topics of the May 16 meeting; for additional details and information please check the meeting notes and other documents at the ISDCF website (<http://www.isdcf.com>). Any interested party can also sign up at the website for the ISDCF e-mail reflector [a yahoo account is required first as ISDCF uses the Yahoo groups facility]. ISDCF would welcome additional contribution from the European digital cinema industry.

Some additional comments from EDCF officers are appended to this report.

DCP and KDM Upgrade path

As Digital Cinema specifications are still evolving and SMPTE has not yet released a full specification set, a group of implementor companies have been working closely together to coordinate upgrades and achieve maximum interoperability during the transition to SMPTE compliance. This "Interop" group issues status reports at ISDCF meetings; at the May meeting this involved the coordinated rollout of new DCP and KDM/certificate features:

DCP

"single inventory" is the goal: a single DCP should be able to play at all screens. Accordingly, new DCP features should be supported at all screens before a DCP using these features is released. Three phases have been defined:

- a. MXF Interop DCP format, now phased out.
- b. Transitional (JPEG) interop DCP format, now in the field.
- c. SMPTE DCP format, to be released in the future after specifications finalized (SMPTE has completed specifications for many but not all DCP components). To minimize requirements for multiple DCPs, this should not be used until all installed equipment can support it.

KDM/certificates.

More heterogeneity is possible here, and distributors and service providers that issue KDMs know the supported KDM format of devices in target auditoriums through the device certificates. There are presently two formats in the field and either can be used with the Transitional (JPEG) Interop DCP format:

- a. Transitional Interop KDM and certificate.
- b. SMPTE KDM and SMPTE certificate.

As SMPTE KDM/certificate capability gets rolled out through upgrades in the field and new installations, the Transitional Interop format can be phased out.

Note that it is up to individual vendors to report their upgrade plans to the customers; ISDCF is not a vehicle for this. Major upgrades and especially rollout of new DCP format should only occur in slack periods in the spring and fall, so the SMPTE DCP rollout will probably not occur until March of next year.

DCI news

A DCI representative reported the following information (most of which was originally announced at NAB):

- a. DCI version 1.1 is available for download and incorporates all errata to version 1.0.
- b. A 3-D guideline is also available with the goal of single inventory DCP for 3-D.
- c. CineCert has been hired to complete a DCI approved test plan based on the Fraunhofer specification.
- d. 40 companies have purchased a DCI reference DCP and KDM for development, indicating a high level of industry interest in DCI.

Auditorium number

Many Digital Cinema business processes require the ability to rapidly and unambiguously identify a specific auditorium. This is been shown to be particularly important in support and troubleshooting operations; remote support personnel can use an auditorium number as an inventory key and identify equipment in the local auditorium even if the local person has little expertise with DC equipment.

Sony and Fox proposed the following approach:

- a. a large yellow label with a unique numeric ID would be placed somewhere easily visible in the auditorium.
- b. The ID would be shown in large Roman numerals (only numbers to avoid language problems) and with a barcode.
- c. Operational errors in reporting the auditorium number are minimized by the algorithm used to generate the IDs; a number with an error can be immediately detected before searching for it in a database.
- d. Generation of the unique IDs is a very separate function from registering the IDs and associated equipment with an auditorium number.
- e. Sony and Fox have already used this scheme and have printed 50.000 labels.

The auditorium numbers could also be used in trusted device lists; however, there were a lot of questions raised and it was agreed that the whole proposal needs more study before wider deployment.

Flat Lens Versus Electronic Resizing

This issue involves cost and quality trade-offs regarding digital projection of "flat" and "Cinemascope" formats: whether to support both formats with a single lens by using the projector's scaling capabilities or to change the lens between formats (without scaling by the projector). [*This is an oversimplification*]. As in previous meetings, the discussion in the May meeting was inconclusive, with participants strongly committed to both points of view. There have been no volunteers to organize a more comprehensive test/demo than the demo from the March meeting. More analysis and more parties coming forth with their evaluations would help resolve this issue.

Key distribution and KDM working group

The KDM subcommittee of ISDCF is gathering information on current KDM related business processes. The group's goal is to assemble a report on advantages and disadvantages of different models of KDM distribution. This report could help guide the industry as efficient KDM processes are necessary for larger scale deployment of digital cinema.

Several steps were taken at the May meeting to increase the group's focus and accelerate its progress. Jerry Pierce (who is also the current chairman of ISDCF) will help chair the group; it will now have meetings on the same day as ISDCF; and the current focus will be on fully describing push and pull models of KDM distribution.

There is an RFI on the website but so far only two responses have been received. In the future, EDCF will help channel more European input into the group.