ISDCF Main Meeting Notes – March 22, 2017

<u>Upcoming Meetings</u>

Wednesday May 10, 10:30am Universal
Thursday June 29 (Prior: Wednesday June 28), 10:30am Probably Universal

Part 0:
Jim Whittlesey 1953-2017

One of our key members has left us.

Jim was known and beloved throughout the entertainment industry as a d-cinema pioneer and ambassador. We are forever grateful to Jim for his invaluable contributions to its organization and to the digital cinema community.

More on Jim's contributions at https://celluloidjunkie.com/2017/01/24/remembering-jim-whittlesey-1953-2017/

Contributions may be made to Purdue: <[Giving dot Purdue dot edu/InMemoryofJimWhittlesey>.](Giving dot Purdue dot edu/InMemoryofJimWhittlesey)

Part 1: General Reporting

A comment from a normally call in attendant: It's very important to identify who is talking to be able to follow the conversation. It was suggested that the chairman try to identify when folks are recognized to speak.

Housekeeping:
- Antitrust Disclaimer – The official antitrust guidelines are posted on our website and are linked from the main ISDCF page. A short verbal overview of guidelines was given.
- Thanks to Disney for lunch. InterSociety will pay for all upcoming lunches!! Please become a member!!
- Thank you to Disney for the facilities and parking.
- Thank you to Universal for support of the Chairman.
- Thank you to Inter-Society for providing the funding for notes, travel, general expenses, LUNCHES! and admin support.
- Thank you to Disney / Sony / Christie for the coffee and treats
- Meeting notes from January '17 were reviewed and approved.

- Forum update.
- Legal reminder / press reminder
  * Chatham House Rule:
    * When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.

Attendance is at end of these notes.

Action Items from March 22, 2017

1. Please Join Inter-Society! http:// www.intersociety dot org / become-a-member / $500 per company per year, $100 individual membership.
2. Create a generic ISDCF framing chart to be freely shared (Wade)
3. CJ to post link to DCP-O-Matic and the verifier DCP-Tester to the reflector.

From Earlier Meetings:

4. Update and post Tech Document 12 -Ingest Behavior document
5. Post the updated encrypted test material to ISDCF website.
6. Techie group to discuss RPL timing - Harold, Dean/JP (Dolby), Tim R (TI), Bill E., Kevin (Christie). Jerry to send emails to Harold.
7. Subgroup to edit / recommend changes for Document 12 - RP for Ingest Behavior - Steve L to lead, Dean B, John H, Mike R, Jim W, Chris W, Bill E "volunteered" to participate.
8. Add to the SMPTE CPL metadata document the use of lower case subtitles indicating burned in subtitles and upper case is rendered. Dean [Post on Forum.]
9. Post SMPTE standards to ISDCF website.
10. ISDCF should help improve description of submission aspect ratios to the Academy. (Ernie / Bill H.)

EDCF - what's happening?

EDCF is on the way to CinemaCon and has a two day LA tour planned - in addition to attending ISDCF.

Tour is a "fact finding" adventure. 20+ European members are scheduled for the tour. Demos and meetings planned for two days. Paramount, Sony, Academy, USC, ASC, Barco Innovation Center, Christie, IMAX VR, and Dolby.

Goal is to find out what is really happening in Cinema.

Answering the question: where should the exhibitors spend their money? What is the value of new cinema features. Is HFR, HDR and other technology features worth it? Many exhibitors are not looking at NEW technologies, but working on maintain equipment and maximizing current technologies to bring value to the patrons. (i.e. Make sure presentations are bright.) How can new technologies help make the presentations great (again).

EDCF working with UNIC has held 18 meeting focusing on SMPTE-DCP rollout in Europe. Norway and Netherlands are now SMPTE-DCP deployed. Other countries are moving forward.

UNIC released a report about 3D ghosting. EDCF was not part of the release. They are guessing what it means as well. It seems there may be a misunderstanding on how "ghost busting" is done today. It is applied by the presentation system, content is not delivered with a ghost busted version. Dolby has a paper describing ghosting (see D. Schnuelle).

We had a brief discussion of current work flow for 3D (one studio mastered on a white screen/active glasses and tested on a polarization system. Unfortunately, many times they decide to "live" with ghosting for some scenes.)

A recommendation is to optimize the projector 3D dark time settings for the light levels as displayed.

SMPTE-DCP - Updates

Disney

Major release in SMPTE-DCP. Beauty and the Beast went WIDE in SMPTE-DCP.

Strategy:
- Beauty was delivered an OV (original version - containing image and sound) for 2D 5.1 audio. It was built similar to ISDCF Test Package B2.0 (not including MCA labeling - B2.1 has problems on Atmos systems).
- Then there was a VF (Version File) that referenced the OV's image track with the 7.1 audio.
- Then an Atmos VF that had a 5.1 audio track as well.

We believe this is the first time such an OV/VF combination has been used - this minimizes the total transmission to theaters.

The equivalent was done for the 3D version of Beauty.

For security back up they sent a Interop-DCP version via satellite (but not published - hidden) to all sites. They sent hard drives SMPTE-DCP to over 600 sites that had not been tested for SMPTE-DCP playback (with an Interop-DCP drive sent later - but in the future the back up won't be sent - everything worked well). An Atmos version was in backup, but not needed.

There were no on-screen subtitles for the US release.

<u>Beauty and the Beast SMPTE</u>

DCP build strategy:
2D:
-    5.1 OV (SMPTE B2.0)
-    7.1 VF (SMPTE B2.0)
-    Atmos VF w/5.1 main sound – does not require 7.1 VF to play (SMPTE B2.0)

3D:

- 5.1 OV (SMPTE B2.0)
- 7.1 VF (SMPTE B2.0)
- Atmos VF w/5.1 main sound – does not require 7.1 VF to play (SMPTE B2.0)

Interop backup DP:
- Delivered via satellite
- ~600 delivered in a second wave to "new untested" locations
- 170+ HDD staged for fulfillment

Atmos DP (SMPTE A):
- XXX staged for backup (but never used)

Results (Big Picture)

SMPTE deliveries: 3560 locations
*IOP deliveries: **556** locations - known issues servers/TMS/etc*
Total deliveries: 4116 locations

Issues related to SMPTE delivery: 42 (1.18%)
Issues associated with the ~600 "new untested" locations: 8

Better than Interop delivery in terms of problems.
Caption devices/ HI/VI **generally the source of problems** (probably not checked before)
SOFTWARE UPGRADE is the general solution to fix problems

US/Canada 62% locations are SMPTE-DCP qualified
(75% screens US/Canada)
Only 7% of locations have not been tested.

Looks like the US/Canada is ready to go!!

Except for KNOWN ISSUES: The last 16% challenge. Known issues:
- TMS CD - 340 sites US/Canada (no international) hardware MUST be replaced
- Server D1 - 400 sites that have at least one (upgrade soon)

- Upgradable Sites - 100 or so

On screen captions international for Beauty - not encrypted subs

Fox - Next: "Snatched" - B2.1 - wide release (no Atmos)

Sony: "Trainspotting" (as we speak) B2.1

Universal: Soon!

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How to deal with the "Free" Shareware software to create DCP's. Many of the resultant packages are not good. Solution could be an on-line validator.

Some have mentioned that DCP-O-Matic and it's associated verifier is one solution - with known issues.

Service providers have learned other technical restrictions that will make a DCP more likely to play on all systems. This has become part of their internal testing/verifying prior to release (such as a more constrained bit rate on subtitles or the capitalization of characters). These are not based on standards but on behavior of devices. Even if these are shared, it is not possible to test for all possible odd behavior. "You can't make anything foolproof since fools are so creative."

 The industry is welcome to work on the open source testing software, but there did not seem to be enthusiasm to work on this software.

One SMPTE-DCP problem was discussed in KDM formulation for a 2 projector system and an Atmos processor with a SMPTE-DCP/Atmos delivery. The new security options for SMPTE-DCP - content authenticator in the KDM - can be present and will be more restrictive, especially when equipment is relocated and problems in reporting to the KDM provider.

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ISDCF framing Chart for 1.85 and 2.39 content (unencrypted and on the ISDCF site). Keep on List.

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DCI release of new NIST requirements for FIPS.

DCI released an update the March 21 (yesterday):

> DCI has posted a Memorandum on Digital Cinema Compliance with NIST SP800-56Br1. See <www dot dcimovies dot com/FIPS/> or download the memo from <dcimovies dot com/FIPS/ DCI_Memo_on_Compliance_with_NIST_SP800-56Br1_2017-0316.pdf>.

> DCI has also posted a Memorandum on RNG Revocation and Related NIST and FIPS Developments. See <www dot dcimovies dot com/announcements/ > or download the memo from <dcimovies dot com/announcements/ DCI_Memo_on_RNG_Revocation_2017-0316.pdf>.

One key take away: DCI feels that the new FIPS requirement should not impact the KDM. They believe the provisions won't change the KDM document. It is possible that the document should be modified to reflect this.

The impact on Digital Cinema systems: Deployed equipment or equipment delivered before January 2018 will continue to work without modification. New designed equipment that is released after January 2018 *may* need to undergo design changes in order to pass an updated CTP. (The CTP has not yet been updated.)

SHA256 may impact this as well - but no comments were made at the meeting.

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Dark screen threshold discussion. Under what conditions should playback not start for equipment issues. Such as:

• If the sound doesn't play, should the movie go on anyway? (probably

not)

- If the sound is in mono (only center speaker)? Exhibitor decision?

- On-screen subtitles (forced)? (Probably should not play.)

- If the closed caption devices are not working?

The motivation of the discussion was for a device to wait for a closed caption device "ready" signal. How long should playback wait? Probably a time out issue - no more than 10-20 seconds.

What if Atmos system is not working? The exhibitor should play a different CPL - either a 5.1 or 7.1 version. The Atmos processor system could revert to the 5.1 included Atmos CPL/DCP.

In general some content providers assume that all elements of a CPL can play. Vendors / exhibitors make a decision for playback based on local conditions.

These are not decisions that can come from ISDCF. Vendors try to make systems that play the movie in most conditions.

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Ingest Behavior RP. Ingest behavior and transfer behavior. The group still needs to meet and finalize. Recommended practice for RPL timing (Harold). Document posted to:
isdcf dot com/files/RP-for-29-2016-RPL-Timing.pdf

   (user: dumb password: dumb)

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Lunch Break

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Brazilian Sign Language (BSL) also known as "Libras" - UPDATE

Update: Report from Brazil - February 8 meeting of The Technical Chamber. The read of the February meeting by our ISDCF participant

is that the Chamber is leaning to the avatar solution (the same as used in broadcast). They **don't** want users to use their own device (smart phone).

Four companies participated in the discussion at the Technical Chamber. Contacts are:

Rafael (Steno.com.br);
Ronaldo (ETCFilmes.com.br);
Luis (Md.org.br);
Guido Lemos(Assistatecnologia.com.br)

At the end of the meeting, the Brazil group was satisfied (for Brazil) with the avatar solution and has not scheduled a new meeting.

Support of the avatar solution may be the Portuguese closed caption track and the device would translate from the closed caption track to the avatar rendering.

DCI has proposed a solution to deliver a video stream in a single audio track (Roughly 1.1Mb/s - probably in track 15 or 16). The would also meet the goals of the new law - delivery of a sign language track. This solution would be fast to market and guaranteed sync to the content. Work continues and many (including MPAA/DCI) are monitoring the situation in Brazil.

DCI encourages ISDCF to help move this forward. This could be a future standard, but needs an ad-hoc solution to meet the September deadline.

[Side note: many servers now output LTC timecode that is generated locally by the server.]

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Ingest Behavior RP - finalize? Ingest behavior and transfer behavior. The group still needs to meet and finalize. We discussed the current document and have updated the posted document for review.

http://isdcf.com/papers/ISDCF-Doc12-Recommended-Practice-for-Ingest-Behavior-DRAFT-20170322.pdf

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Do we need to get ahead of new color standards that seem to be coming forward? We have a new "wild west" with new image adventures coming to market.

Motivated by Eclair color demonstrations and IMAX and Dolby Cinema and Laser projectors… A brief discussion - we need to read their documents and we can expect more demonstrations at CinemaCon.

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Future of Plugfests - When/Where/Who?

No need for plugfest seen at this time. Maybe sign language testing, if that is needed in the future.

We do need the updated encrypted test material posted. This should include the 3D subtitles.

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FLM / FLMx status update

SMPTE documents are ready to be published. One server manufacturer has started to implement the standard. 430-7 will be withdrawn. (If someone is using 430-7, speak now!)

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LEQm meter?

Does anyone have information for a very low cost LEQm metering device that can be used for pre-show ads?

Updates

EDCF/ISDCF meeting in Vegas! CinemaCon

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Attendance on next page.