ISDCF Main Meeting Notes – February 12, 2020

<u>Upcoming Meetings</u>

  EDCF / ISDCF working session part of pre-cinemacon tour?
    Thursday March 26 at 5pm?
  Social Pub at CinemaCon? EDCF/ISDCF
    Wednesday April 1 at 4pm location TBD
ISDCF April 8 Wednesday (just after cinema con)
ISDCF June 10 Wednesday
ISDCF July 22? Wednesday
Immersive plugfest August?

Part 1: General Reporting

Housekeeping:
- Introductions around the room (attendee list at end of these notes)
- Set next meeting dates (above). Inter-Society pays for lunches.
- Thank you Universal for the facilities and parking.
- Thank you Universal for support of the Chairman.
- Thank you to Inter-Society for providing the funding for lunch, travel, general expenses and admin support.
- Thank you to Universal for the coffee and treats
- Meeting notes from January '2020 approved
- InterSociety requests you be a member! $500/company. You can join from the link on the front page of ISDCF (dot) com.
- Legal reminder / press reminder / 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. The information is on the front page of isdcf(dot)com. We have added the no-social-media request for discussions held at ISDCF.
  * 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.

Note: No drive on after noon day before ISDCF meeting. If you want to attend and have not added your name to the drive on, please CALL IN.

Attendance is at end of these notes.

Action Items from February 12, 2020

1. Please Join Inter-Society! https isdcf dot com/ISDCF/membership-status dot html $500 per company per year, $100 individual membership.
2. Create note to LMT group on differences between the language tables and ISDCF table (Pierce to lead, LLamb, Harold, Matt, Pierre to edit)

From Last Meetings (These items are on long-term hold until the next plugfest and/or standards have been finished.)
3. Make a test package with slightly different content in the CPL Content Title Text, PKL text, etc for testing at the next plugfest or to conduct a field test of systems to see where the user displayed content is from for different TMS/Servers.
4. Post new versions of the framing charts.
5. Get a new version of SMPTE-DCP B2.1 with fixed CPL.

===

Organizational issues:

isdcf.com registration has been moved to InterSociety control (NameSecure.com is our registrar, Erin Von Hoetzendorff's account - same as intersociety.com)

Isdcf.com is now a Wordpress site! Steve LLamb and Jerry Pierce are primary editors. Others can be added as needed. It is still hosted at dreamhost.com.

Digital Cinema naming convention has moved the language codes to a GitHub registry. Both are on the site, but the new GitHub is the one that will be maintained. See https://isdcf.com/dcnc/home/appendix-1ab-language-codes.html

InterSociety is considering adding a new membership category: corporate sponsor that would be on the way to self-supportive funding of all activities of ISDCF/InterSociety. Not yet decided, but considering $2,500 and those sponsors would be part of the "steering committee" for ISDCF/InterSociety.

There was recognition of the need to fund developments (like the GitHub) and future support of all expenses for ISDCF.

There was confirmation of the need to keep ISDCF as open as possible - no change from current status. The steering committee was proposed as a limited group primarily for Inter-Society in identifying projects and opportunities. Inter-Society has been meeting twice a year - once at ICTA and once at CinemaCon and the meetings have not been able to identify projects that would be helpful to our industries. This might fill the gap.

There was concern about the pay-to-play aspect of a special category.

We currently have 29 corporate members of InterSociety (at a rate of $500/year).

The budget over the past year was $19K income and $13K expenses. We expect to have expenses of about $12-15K per year for support for GitHub registries and other document sharing needs (automation of the Naming Convention site). We also want to get documents published that are not behind a firewall.

The big question is how to finance the new activities and continued support of current activities. This discussion will be continued in the Inter-Society board and the chairman of Inter-Society thanked the group for the feedback.

Two upcoming meetings: Inter-Society meeting at 7:30am on Wednesday. Joint ISDCF/EDCF/Etc for a meet and greet on 4pm at CinemaCon.

ISDCF/EDCF meet up March 26 between 5-6 at the ITC.

ISDCF Immersive Audio

Plugfest was held at Deluxe Flower Site - prior 2 days. (February 10/11 2020)

• Monday/Tuesday plugfest
  – Dolby Installed
  – Dolby development
  – Barco Auro Max
  – DTS/GDC

      – DTS/QSC

- Content: (P1 - Profile 1 - to be described later)
    - Disney/Fox "Killer reel"
    - Planet of Apes (Atmos - TwentyCentury Studio), P1
    - Zombie (Atmos - Sony), P1
    - Locked Up (Frogs) (DTS/IAB), P1
    - DTS sound Unbound (Cube) (DTS/IAB), P1

Special Thanks!!
- Deluxe
    - Steve, Justin, Mike, Sarah
- Mike Radford

Highlights:

- Defined at least 4 profiles and approach for labeling
- All systems play content restricted to profile 1
    - Same as current Dolby Atmos
- Found specification / renderer expectation that was interpreted differently (is part of profile 1)
    - Object Zone Gain Test
    - Discussion to take place to determine "correct" way, in SMPTE
- Opened discussion on number of channels & output channels needed
- Disclaimer for test content needed
    - Violence, language, etc.

Profiles:

As part of testing we defined "Profile 1" as the minimum set of features that we are implemented NOW on all systems (with common understanding of the effect). This includes the deployed Dolby Atmos systems in the field. Other profiles are tentatively defined in the chart below. Defining Profile 1 will allow release of SMPTE content now.

We did find a disagreement with the definition of the "object zone gain test." We had a healthy discussion and determined the "right" way and all agreed to this definition (it will be clarified in the SMPTE document).

Test Conditions	Test Outcome	PROFILE 1	PROFILE 2	PROFILE 3?	PROFILE 4?
Ingest Content	All Implementations	X	X	X	X
Validate Content	All Implementations	X	X	X	X
Playback of Content	All Implementations	X	X	X	X
Show that IA is playing	All Implementations	X	X	X	X
Sync Test	All Implementations	X	X	X	X
Simple Bed Channel Routing (5.1)	All Implementations		X	X	X
Simple Bed Channel Routing (7.1DS)	All Implementations	X	X	X	X
Simple Bed Channel Routing (9.1OH)	All Implementations	X	X	X	X
9.1OH' Bed - Gain Test	All Implementations		X	X	X
9.1OH' Bed - Decorrelation Test	No Implementations				X
Pink Noise 13.1HT Bed with 3 Spoken Conditional Beds.	Implementation Mismatches				X
Bed Remap Test (Source: 13.1HT, Dest: 5.1, 7.1DS, 11.1HT, 9.1OH)	Implementation Mismatches				X
Object Gain Test	All Implementations		X	X	X
Object Snap Test - Off	All Implementations	X	X	X	X
Object Snap Test - On	Implementation Mismatches			X	X
Object Snap Test - On, Tolerance	Sounds Different per Implementation	X	X	X	X
Object Zone Gain Test (using ZERO/ONE gain flags)	No Implementations				X
Object Zone Gain Test (using decimal gain)	No Implementations				X
Object Spread Test, Overhead, Low-Rez	All Implementations		X	X	X
Object Spread Test, Overhead, One-D	All Implementations	X	X	X	X
Object Spread Test, Overhead, Three-D	Implementation Mismatches				X
Object Spread Test, Screen, Low-Res	All Implementations		X	X	X
Object Spread Test, Screen, One-D	All Implementations	X	X	X	X
Object Spread Test, Screen, Three-D	Implementation Mismatches				X
Object - Decorrelation Test, Screen (None, Max, Decimal)	Implementation Mismatches				X
Object - Decorrelation Test, Rear (None, Max, Decimal)	Implementation Mismatches				X
Object - Decorrelation Test, Left (None, Max, Decimal)	Implementation Mismatches				X
Object - Decorrelation Test, Right (None, Max, Decimal)	Implementation Mismatches				X
Multiple Objects (3) combined with Snap/Spread Test, Spread On	All Implementations	X	X	X	X

Test Conditions	Test Outcome	PROFILE 1	PROFILE 2	PROFILE 3?	PROFILE 4?
Multiple Objects (3) combined with Snap/Spread Test, Snap Off, Spread Off	All Implementations	X	X	X	X
Multiple Objects (3) combined with Snap/Spread Test, Snap On	All Implementations		X	X	X
Multiple Objects (3) combined with Snap/Spread Test, Snap Tolerance	All Implementations		X	X	X
Pan Sub-Block Test #2	Sounds Different per Implementation	X	X	X	X
10 Simultaneous Objects, No Bed	All Implementations	X	X	X	X
15 Simultaneous Objects, No Bed	All Implementations	X	X	X	X
18 Simultaneous Objects, No Bed	All Implementations	X	X	X	X
30 Simultaneous Objects, No Bed	All Implementations		X	X	X
50 Simultaneous Objects, No Bed	All Implementations		X	X	X
128 Simultaneous Objects, No Bed	Implementation Mismatches				X
10 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations	X	X	X	X
15 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations	X	X	X	X
18 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations	X	X	X	X
30 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations		X	X	X
50 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations		X	X	X
118 Simultaneous Objects, Quiet 9.1OH Bed	All Implementations		X	X	X
Authoring Tool Info Test, at begin of IAFrame ChildElements	All Implementations		X	X	X
Authoring Tool Info Test, at end of IAFrame ChildElements	All Implementations	X	X	X	X
Unknown Element Test, beginning of the IAFrame	All Implementations		X	X	X
Unknown Element Test, end of the IAFrame	All Implementations	X	X	X	X
User Data Test, at begin of IAFrame ChildElements	All Implementations		X	X	X
User Data Test, at begin of IAFrame ChildElements	All Implementations	X	X	X	X
Audio Description Test	All Implementations	X	X	X	X
Mixing of Two Simultaneous Beds	Implementation Mismatches				X

	"All Implementations" in chart assumes Dolby Dev Software tested
PROFILE 1	Current ATMOS DCP Releases
PROFILE 2	Assumes Dolby Software Dev Release
PROFILE 3	
PROFILE 4	
	IAB Profile Extention Metadata:
	<cpl-meta:ExtensionMetadata scope=" http://www.smpte-ra.org/schemas/429-16/2014/Ext-Meta#scope"> <cpl-meta:Name>SMPTE</cpl-meta:Name> <cpl-meta:PropertyList> <cpl-meta:Property> <cpl-meta:Name>**IAB Profile**</cpl-meta:Name> <cpl-meta:Value>**SMPTE-IAB2098-2-P#**</cpl-meta:Value> </cpl-meta:Property> </cpl-meta:PropertyList> </cpl-meta:ExtensionMetadata>

We talked a bit about the content we were looking/listening for evaluation (in particular Planet of Apes and Zombies). There was concern that we are subjecting participants to this content without warning of what was going to be shown and some might be sensitive to the violence shown on screen for these clips.

It was pointed out that these clips would not be widely distributed. They would ONLY be used at plugfests that included representatives from those studios. ISDCF will give fair indication at the beginning of evaluation sessions of the upcoming clips and what they may contain. No one would be forced to watch a scene at ISDCF plugfests. We will look for future clips that are less likely to be offensive and still demonstrate the characteristics desired.

We should not use the MPA rating system to indicate issues with content. MPA rating is based on the entire movie, not a clip.

Comments:

Profile discussion. Are we setting up a situation where we begin releasing IAB profile 1 and never progress to the next profile? A: when all systems in the field are upgraded to profile 2 new content can be released. Companies are doing upgrades on rendering solutions to move to higher profiles. This is not like SMPTE DCP since it is a logical evolution, not a step-wise upgrade.

Can we create a road-map to moving up the profiles? Can we set timing? No follow-on for this question.

Where is the place to hold discussion of the minimum hardware output channels for Immersive Audio? Suggestion was ISDCF is not the place to hold this discussion. The issue includes channels and room size and playback. It probably should be discussed with content providers and renderer providers.

Could this be a recommended practice? Perhaps if we are working a RP it is something that could be discussed in ISDCF. We will bring this topic up again next meeting to see if we should continue this discussion.

When next plugfest? We should call at each meeting to see if things have progressed with new rendering solutions or updates to current systems. Maybe in August?

Next Steps:

- Good to Go!
    - Label content with IAB release! (and in the CPL metadata use IABp1)
- Document profiles and labeling
- Discussion of minimum hardware output channels needed
    - We heard from 16 to 32 or more thingie
    - Recommended practice?
- Plan future plugfests to test next profiles

===

Naming Convention

We now have over 1,000 facilities in the naming convention registry!

Should we start labeling Atmos to be IAB from now on? There needs to be communication to Atmos users about the change. It is important for Dolby to help communicate the shift to their users. Should we have a campaign at CinemaCon to get people aware? The target is managers in the field and they are not likely to be at CinemaCon.

The naming convention will include a note: "Expect a change in the way Atmos content is labeled! IAB (Immersive Audio Bitstream) is the SMPTE standard for Immersive Audio. All Atmos systems can play the IAB track. Many authoring companies are planning to stop labeling Atmos and using the IAB label only." For now as a head's up.

Language Codes

It feels like LMT MESA/SMPTE is headed down a path with an XML-based database and ISDCF is headed down a path using JSON-based database. How do we all get on the same page?

ISDCF has about 80 languages and MESA/LMT has about 250 languages. MESA looks like they are headed down an RDD process at this time - which could be a problem if it is not community based.

The general feeling is that we don't want two registries that solve the same problem. We should be proactive.

We need to keep talking with the SMPTE/MESA/LMT group. We will schedule a meet up at HPA Tech Retreat.

===
EDCF Update

Tour prior to NAB. Maybe an ISDCF/EDCF joint meeting during that time.

Possible meeting/beer adventure at CinemaCon? Jerry will reach out to David to find a time.

===

SMPTE-DCP

Areas not being covered by EDCF? Should ISDCF look at rest of world? It may be a general move forward rather than ISDCF taking the lead.

The write up of "why SMPTE-DCP" has been on line for a long time. One such source is https://www.smptedcp.com/resources/what-is-the-smpte-dcp

How to we move to SMPTE-DCP trailers? The issue is that trailers are distributed on a single hard drive and you can't mix SMPTE-DCP and Interop-DCP on the same drive. (Things may be different as more folks move away from hard disk distribution.)

===
DCI update

Image viewing testing held last month (January 23/24, 2020). Nothing new to report yet.

Outboard media blocks? DCI is actively working on this.

===
21DC Document Maintenance

Update to SMPTE standards - B2.1 documentation - RDD underway. Many good comments made and are being incorporated into a revision.

Question about the RDD-52. How will revisions be made to this document since it is an RDD, not a standard? RDD-52 goes beyond ISDCF's vB2.1 and incorporates knowledge gained by mastering facilities on what is needed to create compatible DCPs.

Chairman would like to have this document available outside of a paywall. But it's not a very high paywall, actually.

We do want more exposure of the requirements defined in RDD-52 to the world, not just in ISDCF.

There was a request that any changes that are proposed to change the RDD-52 that the language be discussed at ISDCF prior to changes to the RDD.

Other SMPTE News: IMF is working on an interchange format for source files for DCDM.

===

Digital Cinema Picture Levels

Presentation given on current status and the testing held on 1/23 at AMC Burbank. The presentation is posted to https://isdcf.com/MeetingNotes/20200212-DCPL-Status.pdf

There was expressed concern about low light characteristics of the sensor. We also want to get better color readings of the systems.

Moving into second phase of the project - looking at higher brightness displays.

In review of the measurements so far, Jerry/Steve have been focusing on 5-point average and the system black. There was concern about the variance between the center and edges and not reflected in the 5 point average. Is there another way in numbers to describe the performance of a system. Maybe the center brightness and a variance? Maybe 5-point, center point and % of the difference.

The Ambient black (AKA Theater Black) is critical to be low and to make for a good environment.

Conclusions:
- It's all about the gain screen - the real world has lots of gain screens
- Ambient (aka Theater) black is really good
- System (former Projector) black was 30-40 mNits
    - iPhone test - adds about 0.2mNit to black
- The eye is amazing at **ignoring** non-uniform illumination during normal image playback
- Pictures look good
    - The goal is to make pictures look good, not the numbers
- Pictures looked better on bigger screens

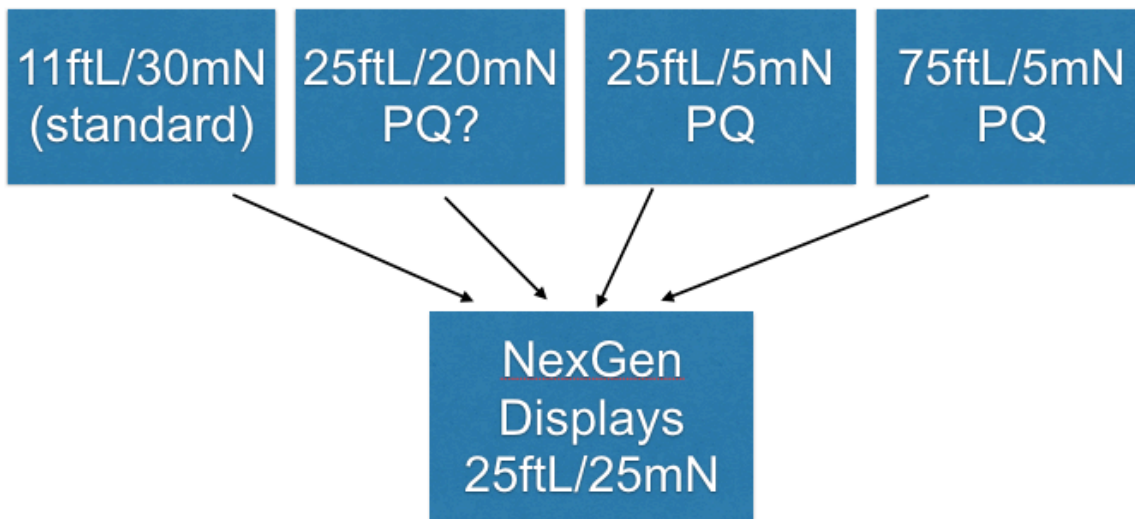- Bigger screens did not need as high light levels to still look good

Maybe the SMPTE "Standard" is 11fL 5 point / 40 mN system black
What makes up a high brightness display? 25fL/25mN?

Today's world:

Shouldn't we use contrast ratio and not system black? We need to look at the numbers again to see if it holds.
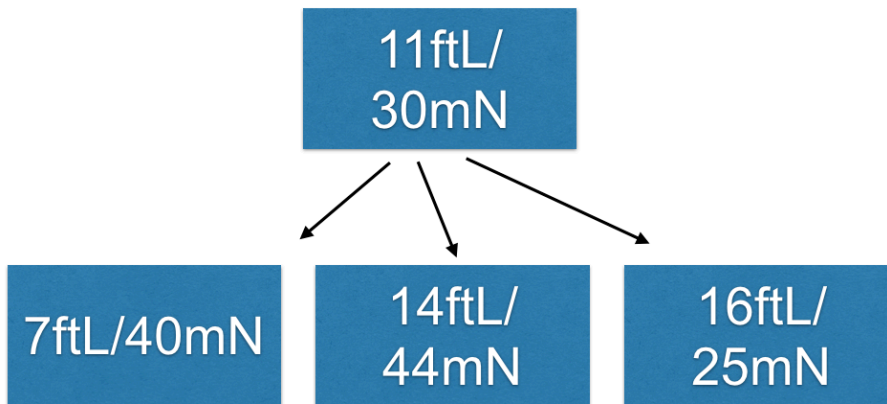
Next steps might be:

There is a lot of data here and we are still learning…

===

Updates:

Curriculum of Non-Technical Cinema Employees
[Technical Training for the Non-Technical – Cinema – Cinema Test Tools](#)

New Checklists and DCPs for Auditorium Cinema Checks
[Tuesday Sound QA Form – Cinema Test Tools](#)

…and perhaps pull down one of the language translations, just do demo.
===

Deviant Aspect Ratios or High Frame Rate Releases

Some 2.0 aspect movies still in process.
===

Review of Action Items from last meeting.

Action Items from January 15, 2020

1. Please Join Inter-Society! https isdcf dot com/ISDCF/membership-status dot html $500 per company per year, $100 individual membership.
2. Fix the colors on the sign-in sheet to match who has paid for 2020 - done
3. Transfer registration of isdcf(dot)com to Intersociety ownership - in process
4. Add link to github language code registry to DCNC site - in process
5. Companies to get permission to fund a higher level of sponsorship to cover the Naming Convention conversion to GitHub registries - some feedback received.
6. Plan get-togethers for CinemaCon for ISDCF/EDCF - done
7. NATO/DCPL to contact projector manufacturers to consider higher brightness projector testing (start of the next phase of the project) - future

From Last Meetings (These items are on long-term hold until the next plugfest and/or standards have been finished.)
8. Make a test package with slightly different content in the CPL Content Title Text, PKL text, etc for testing at the next plugfest or to conduct a field test of systems to see where the user displayed content is from for different TMS/Servers.
9. Post new versions of the framing charts.
10. Get a new version of SMPTE-DCP B2.1 with fixed CPL.

===-Attendance on next page.