ISDCF Sponsoring Companies

2024 Sponsoring Companies: AMC, Christie, Barco, Deluxe, Dolby, EIKON, GDC Technologies, Harkins Theatres, Marcus Theatres, Paramount, Pixelogic, Qube, Samsung/Harman, Sharp/NEC, Sony Pictures, Texas Instruments, Universal Pictures, Village Cinemas Australia, Walt Disney Pictures, Warner Bros., Xperi/DTS

## Upcoming Meetings

February 12, 2025 Wednesday 10am - Zoom only
Thursday March 27, 2025  10am Location TBD plus Zoom (maybe jointly with EDCF)
March 31, 2025 CinemaCon - Cinema Systems Summit (9am to 3pm)
April 1, 2025 CinemaCon - Evening ICTA/ISDCF TechTalks
Wednesday May 14, 2025 -

**Part 1: General Reporting**

Housekeeping:
- Zoom meeting (provided by ISDCF)
- Set next meeting dates (above).
- Thank you ISDCF for support of the Chairman.
- Thank you to Dean Bullock for providing general expenses and admin support.
- Meeting notes from November 13, 2024 approved and to post to open website
- 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. Please no social media for discussions held at ISDCF.

Organizational Issues:
**InterSociety Board**:

      President: Steve LLamb
      VP: Reiner Doetzkies
      Secretary / Treasurer: Dean Bullock
      Executive Director: Jerry Pierce - and chairman ISDCF
      Members: Susie Beiersdorf, Mark Collins, Sean Romano, Don Tannenbaum, Mark Waterston

**InterSociety financial status** (about $40K in the bank). Everything is normal. Invoices were sent out and 9 invoices have been paid.

**ISDCF LinkedIn** account has been more active. We encourage participation and cross promotion.

Attendance is at end of these notes.

**Action Items from January 16, 2025**
1. We need to hold votes for InterSociety board members. It will probably be a Google Form. Paid Member companies will vote.
2. Call for a committee under InterSociety to have discussions for requirements for BYOD for the theatrical environment. Steve, Jerry, Howard to lead.
3. Form a committee to discuss requirements for on-screen rendering and suggest a path to solve this going forward. (Dean)
4. Request for presentations for the Cinema Systems Summit at CinemaCon

5. Encourage use of pDCDM for the efficient loss-less storage and transfer of source files. Write up a short description of pDCDM and why vendors should encourage it.

===

**Caption Plug Fest**

| Company Name | Dolby | Built For Good | Earcatch | Evixar / HELLO! MOVIE | Greta and Starks | MLOAD (MAV) | MovieReading (UMA/ Iguale) | Moving Image Technologies/ USL | Hana/MiT | MovieBuff Access - Qube Cinema Inc |
|---|---|---|---|---|---|---|---|---|---|---|
| Base Operations | USA | United Kingdom | Netherlands | Japan | Germany | USA, Brazil and Chile | Italy | USA | USA/Korea | USA and India |
| Active Countries/ Regions | Worldwide | UK | UK, Italy, Spain, Slovakia, and Netherlands | Japan | Europe, and Brazil | Brazil, Italy, Germany, Ukraine, Portugal, Spain, India | Europe and Brazil | Worldwide | South Korea | India |
| Number of Languages | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ |
| Smart phone? | No | No | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Supports: | AD, CC, HI, VI, Sign | CC | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI | AD, CC, HI, VI, Sign | AD, HI, VI. CC |
| Loading Content | Part of DCP | Part of DCP | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Part of DCP | Part of DCP | Part of DCP |
| Encryption | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Watermark | | | Watermark | Watermark | | | Audio Watermark | HI Track Watermark | Watermark | Watermark |
| Secure Communication | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Content retention | NA | NA | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | NA | Deletion of Content after use | NA |
| Content Security | NA | NA | Audio sync required for playback | Audio sync required for playback and Geofencing | | Audio sync required for playback. Geolocation | Audio sync req for playback, IP geofencing, future GPS | NA | NA | NA |
| Camera | No Camera | No Camera | Disable Camera | Disable Camera | Disable Camera | Disable Camera | Stops playing if Camera detected | No Camera | Disable Camera | |
| Sync Method | From Server | From Server | Audio Sync | Audio Sync | Audio Sync | Audio Sync | Audio Sync | From Server | From Server | From Server |
| Preparing Content | Part of DCP | Part of DCP | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, In-House prep | Need full audio, certified partners prepare content | Part of DCP | Need HI audio, In-House prep | Part of DCP |
| AR glasses | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

Monday we held the Caption Device Plugfest. We had 10 demonstrations / discussions over the day. We have up to 70 attendees in the room. THANK YOU to Deluxe for providing a great venue and technical support for this very complex demonstration. More information is posted to https://isdcf.com/plugfest.
As the day progressed we refined what the goal of the day was: Can "Bring you own devices" (BYOD) to the theaters to meet the needs of customers, studios and theaters. We also are able to understand the current state of the art for BYOD devices that are currently in use internationally.

It was observed that there was very high interest in seeing these systems. It was also clear that the participating companies were not sure why they came, but seemed to be very

pleased with the resultant conversations and connections they made during the event. Many of these companies are very small and the cost of the trip was challenging for their companies. It was one reason we did not cancel the plugfest in light of the devastation from the LA fires.

It was great seeing all the studios and others participating.

One attendee was hoping for a solution to their caption requirements, but was disappointed that the systems were not ready for prime time. Menu systems were hard to navigate. Was disappointed that the screens were easy to see from surrounding seats in the room, especially off-axis, vs the dedicated devices that protected against that. We hoping for a solution for both caption and audio solutions, but **all BYOD systems using audio correlation sync were out of sync for the hearing impaired track**. (They must remain frame accurate to prevent echo in playback of HI tracks.) It seems for theaters the dedicated "built for" devices still have the advantage for use in theaters.

Question about start-up ability to start the subtitling/audio at the beginning of the feature. We saw most of the systems were able to have initial sync for early subtitles.

The requirement is sub-frame accurate sync.

Bottom line: We need a better sync for BYOD devices than audio correlation OR the current systems must hold this sync.

We need to have BYOD devices to have both sight and sound solutions.

Then the Chairman shared his observations for the plugfest (attached .pdf document).

**1)** Deluxe did an amazing job both during and prior to the plugfest.
**2)** We learned that all BYOD apps needed the same content to create their tracks.

---

Title: Elevation Feature, Reel 1 (22 minutes)

- DCP with 5.1, HI/VI/CCAP/OCAP all in one CPL
    - Elevation_TST-R1_S_EN-XX-CCAP_OCAP_US_51-HI-VI_4K_VERT_20241222_DLX_SMPTE_OV
- Reference quicktime of reel QT
- Audio:
    - 5.1 base, HI, VI
- Caption file
LAS: (Spanish)

---

- Audio
- Caption file

Providing the QuickTime of the feature can be a problem for pre-release. All needed the full sound track, but some wanted the video as well for QC.

**3)** We need to have common terms/language for HI, VI, Amplified Sound, Commentary. Jerry thinks we are missing 3 things:

1) Common out of band delivery of content. Maybe delivery to booth then to devices.
2) We must have a common frame accurate synchronization of BYOD devices for playback suitable for HI track playback. Some people think audio sync is NOT a long term solution.
3) Need for good AR (augmented reality) glasses that can "paint" the subtitles on a particular place on the real screen.

If we can use AR it will require the same creative input as open captions. Current demonstrated glass systems have problems. Users need to be able to customize AR experiences for location, size, color of rendered subtitles.

We need a consistent security requirements from studios and exhibitors that doesn't overreach and meets the needs. Do we really need to have an account to watch a movie? https://movielabs.com/distribution-technology/distribution-security/

For privacy, everyone in the room should have to do the same thing. I.e. if you need to register to use this device, all people in the room should need to have the same registration requirements.

Other feedback/validation was the need for a device/system to provide feedback that the system is working. Something saying "This device is working and this is the volume you will have. Just hang in for the movie to start" and the equivalent for caption devices.

Navigation was different from system to system and it would be challenging for theater staff to help users with their devices. Probably a recommended practice for menu design.

There might be a need to let the whole audience know that these devices are available and may be in use.

Feedback: it was a really good/important plugfest and it has identified new requirements for systems like this. We should not focus on ADA, but focus on the requirements of systems for the theater that can support ADA, but not focus on ADA requirement.

There was a strong preference for long term BYOD since it is well known and is comfortable. If we can integrate buying tickets with getting content. Are theater owners willing to purchase some equipment in the theater? Like a Wifi router? Probably yes, if it meets a need.

Customers need to be comfortable with their equipment and doesn't highlight their need for extra devices. Reduce the stress for coming to the theater. The discussion should be a super-set of ADA plus language flexibility plus bonus tracks. It must NOT focus on ADA since that is US centric (but all US-ADA needs could be met by the system under discussion.)

We need to have a group discussion on the requirements for these systems. We are at a similar time as when MPEG was being proposed for Digital Cinema. We need to set the bar for the requirements at a level to make the best experience for the consumer. We need these new systems and innovation to maintain the quality of the experience.

The Big Next Step Question: **Where should this discussion and establishment of requirement be conducted**?

ISDCF? Subcommittee of ISDCF? CinemaFoundation? DCDC? DCI? SMPTE?

Suggestion to have **InterSociety create new committee**. It's not just ISDCF, bigger group. Need to dive down to requirements and find the right set of solutions for the needs. Possible that Howard K would be the leader of the committee. We must have app developers as part of the committee. Follow the lead that was used to create the digital cinema standards. Wireless delivery for BYOD and sync for user alternate content and accessibility.

===

**Audio Test Material**

New content is being created with new audio that adds rotating pink noise, 7.1 calibration test and new interface with location for process. We expect it to be ready by next meeting.

We will try to schedule a demo before the March ISDCF meeting.



===

## On Screen Text Rendering

Dean offered to form a committee to have the discussion for a long term solution / requirements for moving forward.
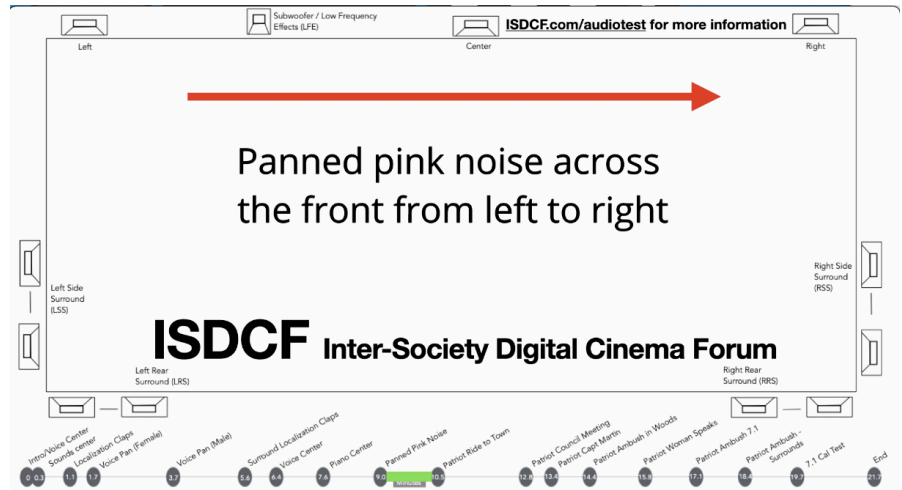
From last meeting: "Given that subtitles are so critical to the presentation of digital cinema it is remarkable that these rendering systems are fairly sloppy on how they present images on the screen. All these systems pass CTP and two of them used the wrong colorspace in rendering PNG images. Which means PNG subtitles would not have the intended color when rendering - yellow would not be the intended yellow - white would be white. The positioning and spacing of the characters was different for all three systems. And some of the text rendering was not as intended (and different) from other systems."

Dean and Tim agreed to meet and discuss.

===

## Global SMPTE Roll out

Korea / Thailand - No update this time

===

## End-of-Life Playback issues

Some CERTs have expired and the Sony Systems were not able to play them. Nothing for us to do at this time. Known problem, known solutions (get your system upgraded for software fix. There may be a problem with some systems that can not be upgraded).

===

## ICTA/InterSociety Conference

ICTA LA Seminar Series - Was all virtual and went as well as can be expected. Missed the in-person networking. Those that attended liked it.

===

**Cinema Systems Summit 2025**

ICTA/ISDCF/Intersociety planning one day conference at the start of CinemaCon. It will run from 9am to 3pm. You are invited to help plan the day and/or make a presentation. Invite below:

---

## Announcing Cinema Systems Summit 2025!

We're excited to announce the *Cinema Systems Summit*, taking place on **Monday, March 31, 2024**, at CinemaCon. This unique event is dedicated to unfiltered, in-depth discussions on the technical side of cinema systems. If you're passionate about cinema technology, systems integration, or simply want to share your experiences, this is your chance to engage with industry peers and experts.

>>**Call for Participation: Submit Your Topic Ideas by January 31, 2025!**
## How You Can Get Involved:

We invite you to propose topics, submit session ideas, or participate in panel discussions. This is an interactive session designed to foster open conversation and knowledge-sharing across the industry. Whether you want to present a topic or simply engage in the discussions, we want to hear from you!

## We're seeking topics like:

- "Why I hate my TMS (Theater Management System) and why I shouldn't"
- "Lessons learned when choosing the right POS (Point of Sale) system"
- "How to protect your cinema network from security breaches"
- "I've grown my theatre from nothing.  This is my technology journey."

…and much more. **Any and all aspects of Cinema Systems are fair game.**

Submit your ideas to **suggestions@cinemasystemssummit.com**. *(Limited sponsorships may be available for some presenters.)*

**Save the Date**: Monday, March 31, 2024, at CinemaCon. Let's design a program that speaks directly to your needs and interests.

We look forward to hearing your suggestions and collaborating on this exciting event!

---

===

**Image Artifact (JPEG2000) issues**

No update, keep on list. The problem is being addressed by pre-detection by service providers and are fixed prior to shipping. The other problem has not been seen recently.

===

**Website and IT updates Naming Convention**

All good. Business as usual.

We added a new registry for general items for ISDCF. https://github.com/ISDCF/general

Barco HDR Labeling - still waiting for Barco to publish on their website. There is some objection to using the term HDR since that is a defined DCI term. If you have an opinion on this issue please add to https://github.com/ISDCF/registries/issues/941 issue discussion.

===

**DCI Update**

CTP 1.4.2 revision on the way.

To DCI - please help vendors with changes since the ripple effect is a formal change process and delays.

===

**SMPTE update**

pDCDM Published. PLEASE use it. Vendors should be encouraged to have pre-sets for pDCDM. Do we need a validator for type of file? Do we need a special extension to differentiate between lossy JPEG and loss-less pDCDM. Pierre will write up a description for posting to reflector.

ST429-16 Additional Composition Metadata and Guidelines (behind a paywall)

27C-10 Study Group on Origins of Digital Cinema - Contact Howard or CJ.

===

**EDCF Update**

EDCF tour before CinemaCon
Maybe hold joint EDCF/ISDCF meeting on March 26
Convention in February.

**Action Items from January 16, 2025**

1. InterSociety Board to review policy of posting ISDCF meeting notes. Keep same policy.
2. Add a pink noise section to the Audio Test material for LED screens. Make some changes to the descriptive images in the test material. Prepare an expectation document for how to listen to the test material. Ready to test.
3. Prepare a new version of the audio test content with suggested changes. Ready to test
4. Revisit the issues with on-screen subtitling. Find approach for fixing the on-screen subtitling issue for International releases. Dean to consider forming subcommittee. Discussed. Still needed
5. Issue announcement and request for participation for the smart phone plugfest in January. Successful plugfest
6. Request for presentations for the Cinema Systems Summit to be held at CinemaCon In process
7. Consider creating an InterSociety news letter to replicate the value of original mission. Not discussed.

===

Attendance on last page.

# ISDCF Meeting 1/16/2025

| | | |
|---|---|---|
| Alex Howard | Jeff Battles \| Block by Block Solutions | Mike Renlund - Dolby |
| Andy Maltz (GenIntel) | Jerry Pierce \| ISDCF | Mike Rosenthal - Deluxe |
| AramLecis | Jesse Chow | Mike.Binder |
| Atsushi "Andrew" Takigawa | Jesus Alvarado - Dolby Laboratories | Paul Silkowski |
| Benjamin Ing | john bishop | Pete Sellar |
| Benjamin Ing | John Robertson | Pierre-Anthony Lemieux |
| Bill Hogan | Justin Kawahara | Randy's iPhone |
| Brian Vessa-unaffiliated | Ketan Mehta \| Qube Cinema | reinerdoetzkies |
| Brittany Lutas | Kevin Draper | Sean Romano - Eikon |
| Cindy Ly | Kevin Posnanski | Shuichi Elvis Tsutsumi |
| Daniel Tan | Kirk Griffin \| Harkins Theatres | Stephen Shapiro (SPE) |
| Dave Cano | Kirsten Mills | Steve Hopkins (EIKON) |
| David Deelo | Kohei Watakabe (Evixar) | Steve LLamb |
| Dean Bullock | Lefko Horner | thomasmaccalla |
| Dickon Neech - Deluxe | Lisa Libatique | Tim Ryan (TI) |
| Drea Avila Weiler  [NBCU] | Lontih Khatami | Tim Weeks (Tim) |
| Erik Anderson | Mark Collins | Toby Glover |
| Frank Tees \| MiT | Mark Waterston - Qube Wire | Trevor Endo |
| Gary Strunk | Martina Berger | Veronica's iPhone |
| Giacomo Olgeni | Matthew Sheby | Wade Hanniball (independent) |
| Harold Hallikainen | Melanie Knox | Weronika Kolodziej |
| James GARDINER | Michael Miller | Yoshi Gonno |
| Jean-Philippe Viollet (Dolby Labs) | Mike Radford | 鈴木 Evixar |

# ISDCF/DCDC Caption Device Plugfest

**January 13, 2025 at Deluxe**

---

## <u>Your Host:</u>

## ISDCF - InterSociety Digital Cinema Forum

Provides a forum to discuss issues for the World Wide launch of Digital Cinema. We have over 250 members participating including Studios, Exhibitors, Integrators, Equipment Manufacturers, Consultants, and other committees.

## Your Co-Host:



## Special Thanks to:
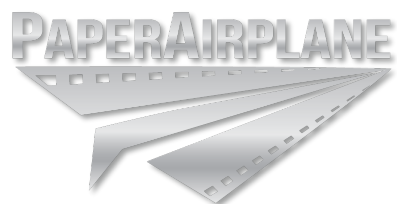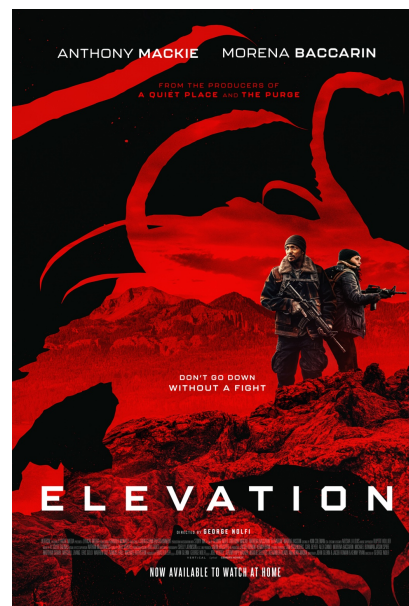
# Thanks for all the hard work:



# Goals and Objectives

To <u>introduce</u> captions, audio languages and sign language utilizing novel methods of transport and presentation

To <u>share between companies</u> information about systems to advance the art and science of caption devices

To provide <u>demonstrations</u> of many devices for exhibitions and studios to understand and become comfortable with these solutions

To provide a <u>discussion forum</u> to talk about challenges and opportunities

# Guidelines

NO discussion of business models!

NO discussion of pricing!

NO discussion of costs!

YES, please build relationships!

YES, please collaborate together!

YES, please contribute and ask good questions!

---

# Agenda for Day
**Challenging timeline!**

- We have estimated 40 minutes per system

- Reality may change the plan

- Systems will go in this order, but if done earlier we will move on OR if later we will push the schedule

WiFi password: A!!isW3llHere

| Time | Event |
|---|---|
| 8:00AM | Doors Open |
| 9:00AM | Plugfest Start / Introductions |
| 9:10AM | **Dolby** |
| 9:40AM | **Hello!Movie (Evixar)** |
| 10:20AM | **Earcatch** |
| 11:00AM | **MiT System** |
| 11:40AM | **Hana-MiT System** |
| 12:20PM | **Greta and Starks** |
| 1:00PM | Lunch Break |
| 1:30PM | **MLOAD (MAV)** |
| 2:10PM | **Built for Good** |
| 2:50PM | **Movie Reading** |
| 3:30PM | **MovieBuff Access (Qube Cinema)** |
| 4:10PM | Scheduled End |
| 4:50PM | |
| 5:30PM | |

| | | |
|---|---|---|
| Dolby | 🇺🇸 | Dolby |
| Hello!/Movie / Evixar | 🇯🇵 | HELLO! MOVIE / evixar |
| Earcatch | 🇳🇱 | EARCATCH |
| MiT Systems/Hana | 🇰🇷 🇺🇸 | MiT |
| Greta and Starks | 🇩🇪 | GRETA |
| M LOAD (MAV) | 🇧🇷 | MAV |
| Built for Good | 🇬🇧 | Built For Good |
| Movie Reading | 🇮🇹 | MR MOVIE READING |
| MovieBuff Access (Qube Cinema) | 🇮🇳 🇺🇸 | QUBE |

# What Was Provided to Participants

Title: Elevation Feature,  Reel 1 (22 minutes)

- DCP with 5.1, HI/VI/CCAP/OCAP all in one CPL
  - Elevation_TST-R1_S_EN-XX-CCAP_OCAP_US_51-HI-VI_4K_VERT_20241222_DLX_SMPTE_OV
- Reference quicktime of reel QT
- Audio:
  - 5.1 base,  HI,  VI
- Caption file

LAS: (Spanish)

- Audio
- Caption file

| Company Name | Dolby | Built For Good | Earcatch | Evixar Inc. / HELLO! MOVIE Inc. | Greta and Starks | MLOAD (MAV) | MovieReading (UMA/Iguale) | Moving Image Technologies | Hana/MiT | MovieBuff Access - Qube Cinema Inc |
|---|---|---|---|---|---|---|---|---|---|---|
| Base Operations | USA | United Kingdom | Netherlands | Japan | Germany | USA, Brazil and Chile | Italy | USA | USA/Korea | USA and India |
| Active Countries/ Regions | Worldwide | US, Europe | UK, Italy, Spain, Slovakia, and Netherlands | Asia | Europe, and Brazil | Américas, Italy, Germany, Ukraine, Portugal, Spain, India | Europe and Brazil | Worldwide | Asia | India |
| Number of Languages | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ |
| Smart phone? | No | No | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Supports: | AD, CC, HI, VI, Sign | CC | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI | AD, CC, HI, VI, Sign | AD, HI, VI. CC |
| Loading Content | Part of DCP | Part of DCP | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Part of DCP | Part of DCP | Part of DCP |
| Encryption | Encryption | Encryption | Encryption | Encryption | Encryption | Encryption | Encryption | Encryption | Encryption | Encryption |
| Watermark | | | Watermark | Watermark | | | Audio Watermark | | Watermark | Watermark |
| Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication | Secure Communication |
| Content retention | NA | NA | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | NA | Deletion of Content after use | NA |
| Content Security | NA | NA | Audio sync required for playback | Audio sync required for playback and Geofencing | | Audio sync required for playback. Geolocation | Audio sync required for playback, IP geofencing, future GPS | NA | NA | NA |
| Camera | No Camera | No Camera | Disable Camera | Disable Camera | Disable Camera | Disable Camera | Stops playing if Camera detected | No Camera | Disable Camera | |
| Sync Method | From Server | From Server | Audio Sync | Audio Sync | Audio Sync | Audio Sync | Audio Sync | From Server | From Server | From Server |
| Preparing Content | Part of DCP | Part of DCP | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, In-House prep | Need full audio, certified partners prepare content | Part of DCP | Need HI audio, In-House prep | Part of DCP |
| AR glasses | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Company Name | Dolby | Built For Good | Earcatch | Evixar / HELLO! MOVIE | Greta and Starks | MLOAD (MAV) | MovieReading (UMA/Iguale) | Moving Image Technologies/ USL | Hana/MiT | MovieBuff Access - Qube Cinema Inc |
|---|---|---|---|---|---|---|---|---|---|---|
| Base Operations | USA | United Kingdom | Netherlands | Japan | Germany | USA, Brazil and Chile | Italy | USA | USA/Korea | USA and India |
| Active Countries/ Regions | Worldwide | UK | UK, Italy, Spain, Slovakia, and Netherlands | Japan | Europe, and Brazil | Brazil, Italy, Germany, Ukraine, Portugal, Spain, India | Europe and Brazil | Worldwide | South Korea | India |
| Number of Languages | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ | 6+ |
| Smart phone? | No | No | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Supports: | AD, CC, HI, VI, Sign | CC | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI, Sign | AD, CC, HI, VI | AD, CC, HI, VI, Sign | AD, HI, VI. CC |
| Loading Content | Part of DCP | Part of DCP | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Download prior to arrival, Dynamic Updates | Part of DCP | Part of DCP | Part of DCP |
| Encryption | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Watermark | | | Watermark | Watermark | | | Audio Watermark | HI Track Watermark | Watermark | Watermark |
| Secure Communication | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Content retention | NA | NA | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | Deletion of Content after use | NA | Deletion of Content after use | NA |
| Content Security | NA | NA | Audio sync required for playback | Audio sync required for playback and Geofencing | | Audio sync required for playback. Geolocation | Audio sync req for playback, IP geofencing, future GPS | NA | NA | NA |
| Camera | No Camera | No Camera | Disable Camera | Disable Camera | Disable Camera | Disable Camera | Stops playing if Camera detected | No Camera | Disable Camera | |
| Sync Method | From Server | From Server | Audio Sync | Audio Sync | Audio Sync | Audio Sync | Audio Sync | From Server | From Server | From Server |
| Preparing Content | Part of DCP | Part of DCP | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, certified partners prepare content | Need full audio, In-House prep | Need full audio, certified partners prepare content | Part of DCP | Need HI audio, In-House prep | Part of DCP |
| AR glasses | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

# Guidelines

- Tight schedule!! We will be firm on schedule for first few presentations. We MAY be more flexible on later ones.
- Questions are encouraged!
  - PLEASE identify yourself and company. Speak SLOWLY and use a microphone. (This is not an ISDCF meeting)
- Consider joining ISDCF to encourage events like this!
- Antitrust - NO BUSINESS!

# Agenda for Each System

Total of 40 minutes per system

- 0 min Start - Setup confirmation
  - If a smartphone, we assume everyone has downloaded the APP to their personal device
- 3 min Presentation by Company (10 minutes)
- 13 min Playback of content (start 10 min into clip)
- 28 min Discussion
- 40 min End

## Download Apps

**Greta and Earcatch require registration**

**You will need to download content as well**



ISDCF plugfest

---
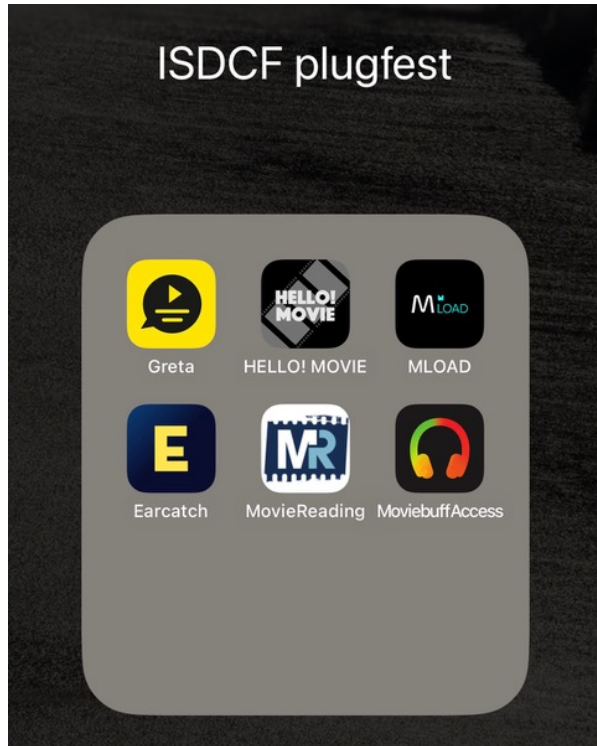
# The Show…

| | | | |
|---|---|---|---|
| | | 9:10AM | **Dolby** |
| | | 9:40AM | **Hello!Movie (Evixar)** |
| | | 10:20AM | **Earcatch** |
| | | 11:00AM | **MiT System** |
| | | 11:40AM | **Hana-MiT System** |
| | | 12:20PM | **Greta and Starks** |
| | | 1:00PM | Lunch Break |
| **1:15PM** | | ~~1:30PM~~ | **M LOAD (MAV)** |
| | | 2:10PM | **Built for Good** |
| | | 2:50PM | **Movie Reading** |
| | | 3:30PM | **MovieBuff Access (Qube Cinema)** |
| | | 4:10PM | Open Summary Discussion |
| | | 4:50PM | Scheduled End |

# Open Summary Discussion
**Opportunity to summarize the event**

What did you learn?

What is needed for the industry to better embrace these solutions?

What are the main obstacles to adoption?

Other?

# Jerry Questions

- Should there be a recommended menu structure for APP?
  - Like DVD had structure, easier for in-theater instructions from staff
- Is it based only on preferred language? (Learning second language?)
- Are combos allowed (HI + CC tracks) at same time?

Caption device plugfest summary (Jerry's Version)

**Preamble**

Never sure what to expect for a plugfest. You need to be open to any result when you get smart, passionate, creative people in an open environment and collectively share experiences and focus on one problem/topic. The caption device plugfest did not let us down.

We had nine companies/groups from around the world visit LA to show their solution to providing enhancement to the theater/cinema experience via sight and sound solutions. These companies had not met each other and while working on the same problem, it did not seem like they were competitors – rather unconnected people collaborating.

We all learned a lot.

This event would not have taken place without the enthusiasm and support of Deluxe. They provided multiple people full-time for the day. Plus an amazing amount of prep work to create the content and distribute to the different participants. Hats off to Deluxe and thank goodness they're part of our community.

The problem to be solved is split into two classes: Sight and Sound.

**Sound**: Providing alternative or enhanced audio to a patron. This can be:
1. Dubbed into a different language;
2. HI (hearing impaired) enhanced for those with loss of hearing. It can be a voice-only track or a new mix with voices at a higher loudness from the standard mix, on some apps called "Amplified Sound";
3. VIN (visually impaired narration) or descriptive track. A narrative describing what is happening on Screen.;
4. Commentary or alternative track. Directors comments, film, school or other enhancement track.

**Sight**: Captions: readable text/images intended to be seen/read at the same time as main picture. This can be:

1. For the hard of hearing (text of spoken dialogue);
2. Deaf captions (text and descriptions of sound effects);
3. Alternative language;
4. Video or avatar of a sign language interpretation.

For technical reasons, we will break these into text and sign language. But they both have the same issues for presenting to patrons.

Since there are so many uses of these tracks, our perspective is there are only three tracks.

1. audio.
2. caption text.
3. sign language

If you "solve" the audio track, it solves it for all of the possible audio tracks. Ditto for 2 or 3.

It should be noted that some patrons want more than one track at the same time. Some might want HI audio track and captions simultaneously. Sign language and captions, HI and alternate language captioning. It should be allowed. IMHO.

**The GAP**

There are two gaps in the system at this time. We have a reliable method of sending content to theaters via DCP delivery and to patrons over old systems. It is clear the community/world wants more and more flexibility.

**GAP-1** We must find a method of sending content to Theaters/patrons not using the DCP - an out of band delivery. We will need this moving forward. At the plugfest, many used file delivery to smart phones, but it would be a problem in many theater locations for consumers.

**GAP-2** We don't have a reliable "standard" way of synchronization of non-connected devices in the theater. Many solutions used audio correlation, but this can be problematic and presents challenges for some content. Some used WiFi for both sync and data delivery. I'm thinking that some RF solution for both content and sync delivery will be needed to have a common solution that is not proprietary, but open.

**Big picture summary from Jerry's perspective:**

Audio can be solved (except for the identified gaps). The use of sound correlation to provide sync is NOT going to work for in-sync audio tracks (HI). It MUST be frame accurate and consistent for the entire presentation. Functionally the use of personal headphones and a smart phone can meet all needs of the community. Many providers fill the gap with Internet, download and audio sync and a challenging user navigation experience on the app.

Sight is further away. The real solution would be in the form of a device that virtually paints the text on the screen through a pair of smart glasses – augmented reality or AR glasses. The solution of "open caption" (captions that are rendered on screen for all to see) is the best solution for the hearing impaired community and is a problem for the rest of the audience.
One company (built for good) did a study and found that a patron with a separate device that provided captions spent 50% of their eye time looking at the device, not the screen. Their solution: AR glasses and it is much better than a separate device.

The "state of the art" in smart glasses is not good enough. The current glasses have the captioning at a fixed position relative to your head, not the screen. Many are dark glasses, limiting size windows, are heavy, expensive and fragile. But glasses will be the future of the best solution for sight enhancements. Until AR glasses are closer to match the needs, marginal solutions are the only answer.

**GAP-3** are improved AR glasses for the system that includes tracking the screen that can place the rendered image to the screen, not the head. The good news is that consumer electronic companies are working on developing

better AR glasses for the masses. And have been doing so for at least the last 10 years… it's slow going!

**The Plugfest:**

Amazing collection of solutions to the needs of the community. All the systems worked, some more flexible, some easier to use.

**Security issues.**
Studios and exhibitors need to come up with a realistic set of requirements for apps that address real world threats for content of this type. After release date, anyone can get a good audio track and a transcription of the movie. Don't lock the barn gate when the barn is wide open.

**Navigation**
In-app navigation was all over the map. Very creative with various degrees of ease of use. But all very different from one-another. I believe there needs to be a recommended practice of navigation of content on apps so Theaters could easily help patrons get what they want.

**Privacy**
Requirement to log into an app is heavily frowned on, there should be no barriers (implied or implicit) for differently abled persons to be able to participate in watching the movies! Screen light levels don't SEEM to bother people at least in our controlled environment, but perhaps privacy filters will help in most cases.