

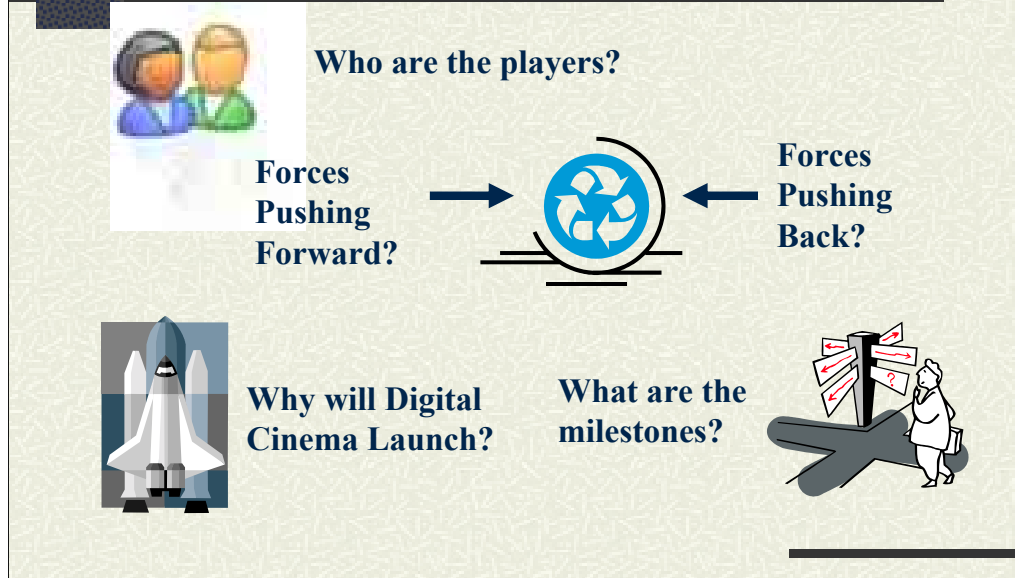


Digital Cinema Overview:
Business Models and the Value Chain for the
Digital Cinema and Large Screen Digital Images

Speaker: Thomas MacCalla
Karagosian MacCalla Partners

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Overview



Business Models and the Value Chain for the Digital Cinema and Large Screen Digital Images, by Thomas Mac Calla

This presentation is designed to provide background information in support of the presentors that are to follow. The goal is to provide a context for discussion and gain a common understanding of the following points:

Who are the players in Digital Cinema?

What are the forces that are moving Digital Cinema forward?

What are the forces that are holding Digital Cinema back?

Why will Digital Cinema launch and what is the impact of Large Screen Digital Images?

What are the milestones that will signal the launch of Digital Cinema?

Gaining an understanding of these questions creates a foundation in which to view the value chain and how both Digital Cinema and LSDI play a role.



The Creative Community

- ▣ Individuals, production companies, and associations around the globe.



Content is the single most important driver in moving the market for any cinema, including the Digital variety. Therefore the first stakeholders to review are those in the creative community. These individuals differ from studios since they determine much of how each cinematic experience is created.

The Directors and Cinematographers create the films vision and seek tools to expand their capabilities. The push is to create an improved experience and not create a more limited tool set by making the change.

DGA and ASC are on board in shaping the technology both for capture as well as distribution. These groups will be critical for the Quality reference.

Lucasfilm, as a creator of content— seems to be a milestone maker for the implementation of Digital Cinema. Their activities in the first two installments of the Star Wars series has influenced the early deployment of global systems.



Major Studios



DCI
DIGITAL CINEMA
INITIATIVES, LLC



MGM

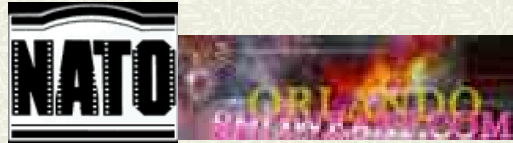
The studios finance, distribute and inventory the content. They determine where it will be used. Digital Cinema Initiatives, LLC is a collaboration of the major studios that has been designed to create the technical specifications for Digital Cinema.

Digital Cinema is defined as an experience that exceeds that of the current feature film product. The goal is to support the delivery of major films in that important first release window.

The studios own many media categories including sports, television series, made for television movies, home video & dvd and other entertainment formats. They are generally supportive of exploration in the exhibition space required for Large Screen Digital Images. However, they have made a clear distinction between this type of activity and Digital Cinema.



Exhibition- USA



Exhibition is the next link in the value chain. Estimates have the number of screens world wide as a little over 100,000. The United States represents about 1/3 of world wide screens. This has prompted a continuous dialogue between Studios and the National Association of Theater Owners (NATO). NATO represent most of the exhibition in the United States, AMC being the one large non-NATO theater chain.

A great deal of attention has been placed on Digital Cinema. Both NATO and the studios do not want a repeat of the format wars that occurred in sound, i.e. Digital Surround, Dolby Digital, DTS and SDDS. This was costly, but it would pale in comparison to the same thing happening to the picture on the screen. The first release window is important to exhibition, since this is the only place that they make money on the content.

The term Other Digital Stuff came from NATO, to describe some of the activities of member organizations Landmark and Regal Cinema. These would also be examples of LSDI. Landmark is providing an outlet for small independent films and Regal is exploring the impact of pre-show advertising, a relatively new concept in the United States, has been a staple in Europe.



Exhibition- International

Europe...



...And the rest of the world

- Japan and Asia (includes India)
- Canada
- Latin America (Mexico to South America)

The relationship between NATO and the European exhibition community has strengthened. UCI and Kinepolis are key as pilot programs for Digital Cinema. Many of the digital theaters internationally have been dark do to a slow down in the rate of new digital cinema releases. There is a keen interest in the progress that NATO and DCI/Studios are making in their conversations.

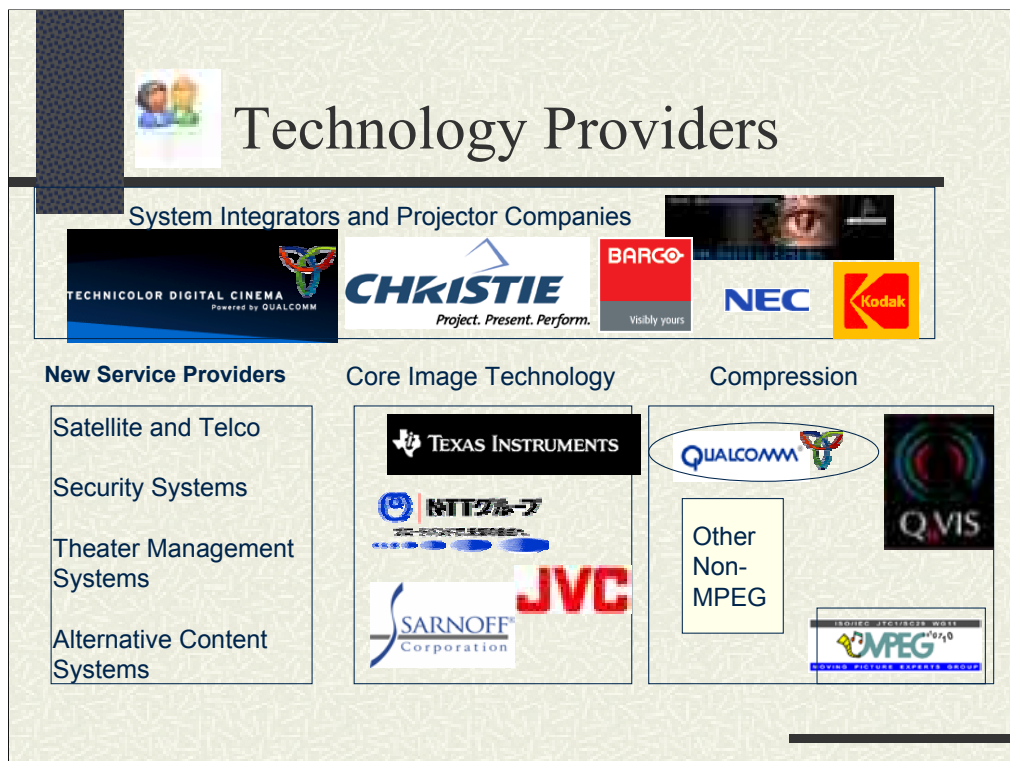


Standards and Facilitating Organizations



...Other organizations to watch





Technology providers have been instrumental in pushing this process forward:

- Sony, Hughes, Pacific Bell who created the Cinema of the Future demos in the early '90's,
- TI, for development of the DLP Cinema projector,
- Boeing, Technicolor Digital Cinema have created the first commercial roll outs.

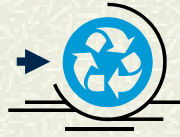
Significantly, the projector has improved to meet the quality demand:

- 2k – Higher than High Def,
- Color, contrast also important (quality and cost).

For servers, interoperability is important at the following interfaces:

- Distribution Package
- Presentation System (Digital Platter)
- Security
- Theater Operations Systems

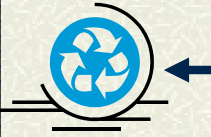
Selecting a common compression for playback in Digital Cinema is also a key issue.



What forces are pushing Digital Cinema?

- # To support the creative intent with a presentation experience better than 35mil film
 - # Flexible secure content with rapid delivery.
 - # Cost savings with critical mass of screens.
 - # Opportunity for Other Digital Stuff (ODS)
 - # Technology companies seeking new markets.
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Digital Cinema creates an opportunity to improve the cinema experience for motion pictures. LSDI can become the foundation for new revenue from new sources of content, and thus push the market forward.



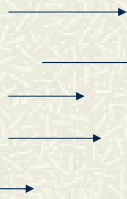
What Forces are holding Digital Cinema back?

- High cost of equipment (especially projectors).
 - Cost 3-4x current technology, plus shorter lifetime.
- Studios and Exhibitors have to sort out the business issues.
- Quality: What is good enough?
 - Resolution, color space, contrast.
- Standards
- No immediate cost savings
 - *In fact, digital distribution today is expensive

The issues around both cost and achieving a consensus on a technical and business vision are being addressed and slowly making progress, impacting the overall pace to market. However, these are also the elements that focus on doing it right vs doing it fast.

Why will Digital Cinema come to market?

Content Creators
Studios
Exhibition
Technology Providers
Consumers



INERTIA

A well conceived implementation of Digital Cinema has benefits for all and with momentum of the past 5 years we eagerly await the official launch.

What are the Milestones?



Which way is it
going and
when will it
happen?

It is difficult to set a date on when the official launch will take place, but the milestones are much easier to define.

Milestones to Launch

- # Creative community sees the quality
 - # Digital Cinema Initiative (DCI) confirms requirements and recommended practices.
 - # SMPTE reviews practices & creates standards
 - # Exhibition and studios agreement.
 - # Experience with Other Digital Stuff (ODS)
 - # Technology becomes affordable
 - # The audience enjoys the benefit
-

The creative community and DCI are working on the quality elements currently. We can expect some feedback from DCI shortly. SMPTE has reorganized to streamline the documentation process and exhibition and studios have been in official discussion since March of this year. ODS launches have occurred in the USA and programs continue in Europe. Technology companies are reviewing pricing...

Digital Cinema



Preparing for lift off

... It is getting close. Organizations all over the world are preparing for the launch.

Grazie



kmp

Karagosian MacCalla Partners