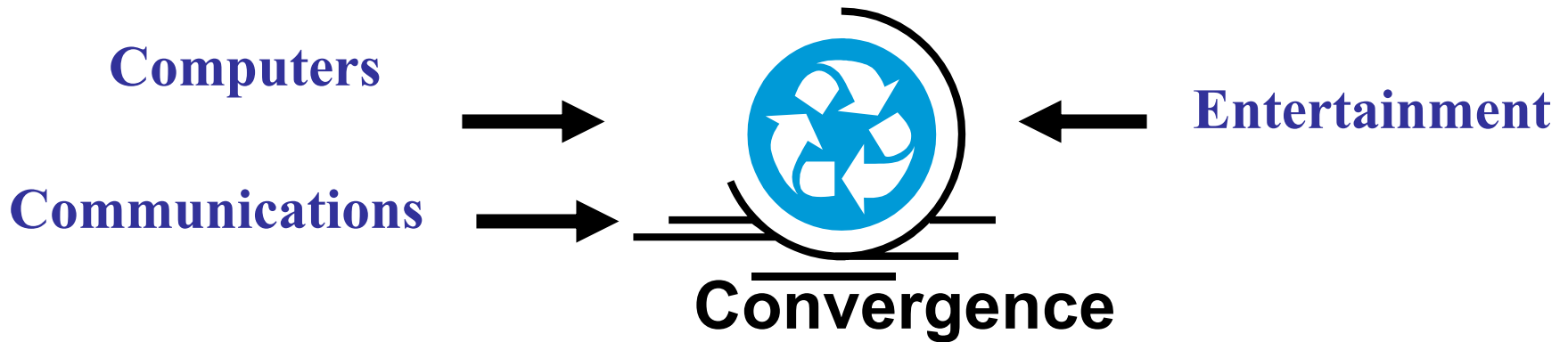# Building an Entertainment Technology "Center"

Thomas MacCalla

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Overview

Entertainment Technology "Center"

Computers

Communications

Entertainment

Convergence

New Technology

Collaboration

Vision

- Leverage the power power of Electronic Electronic Media

- Open New Markets Markets

- Improve Costs

- Secure the future
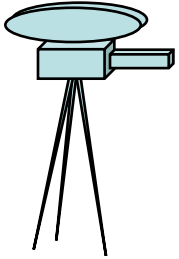
Entertainment Technology
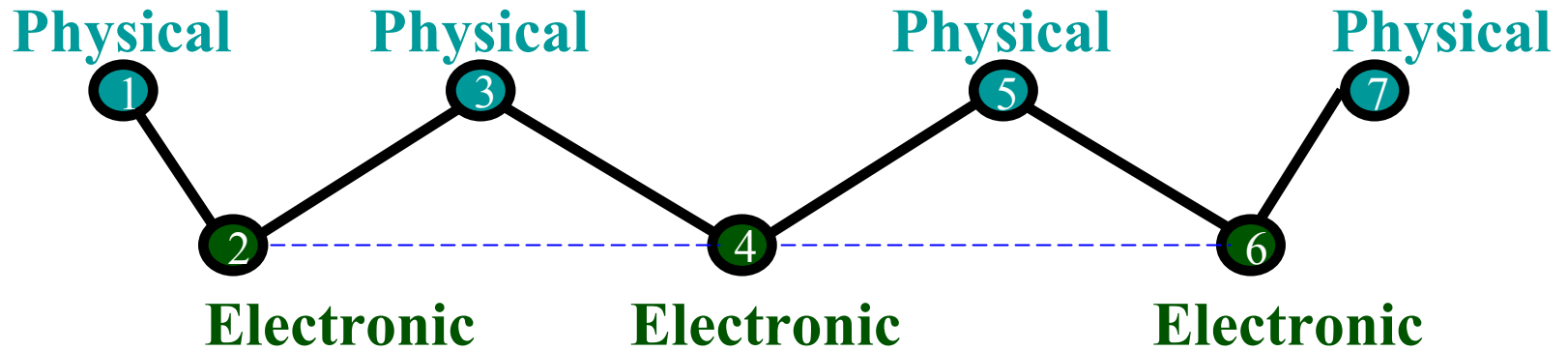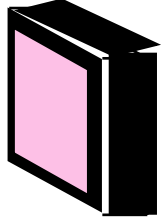
Entertainment Technology "Center" Attributes

- Long term view of the world
- Major change in business processes
- Effect multiple stakeholders and market segments-converging on entertainment
- Projects benefits from neutral facilitation
- Business to Business relations- works best
- Requires innovation and invention
- Requires socialization, education, and training
- Constantly working one self out of a job

Image Capture to Initial Release
Production Process
business-to-business communications

Physical   **Physical**   **Physical**   **Physical**

① ③ ⑤ ⑦

② ④ ⑥

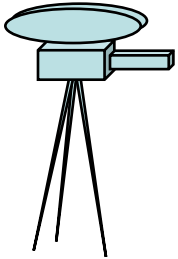**Electronic**   **Electronic**   **Electronic**

1. Image Capture

2. Digitize Image
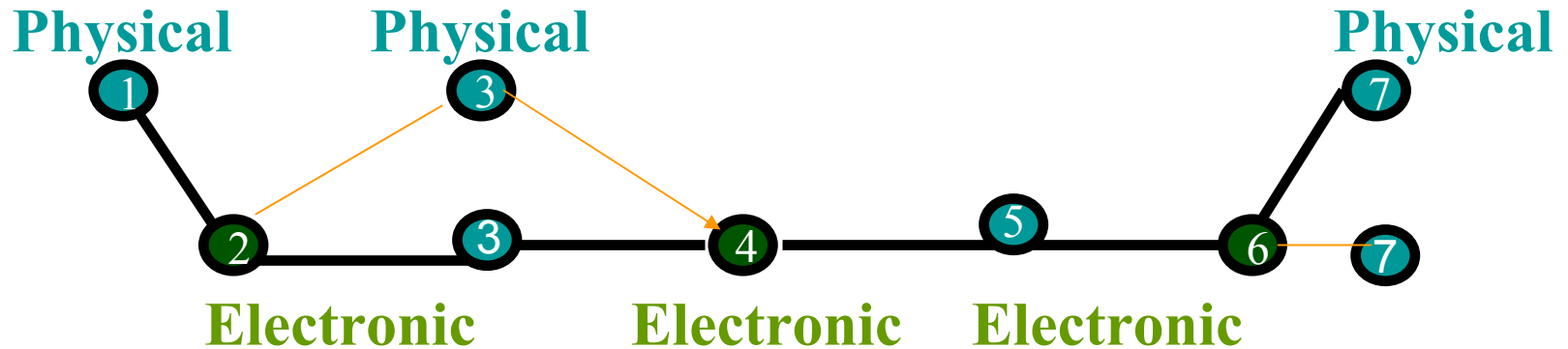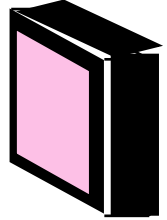3. Review Dailies
4. Off - Line editing
5. Review & Approval of Cuts
6. Edit Changes

7. Initial Release

Image Capture to Initial Release
Process-update
business-to-business communications

Physical   **Physical**   **Physical**

① ③   ⑦

② ③   ④   ⑤   ⑥ ⑦

Electronic   **Electronic**   **Electronic**

1. **Image Capture**   2. **Telecine- 2k/4k**   7. **Initial Release**

  a. **Film**   3. **Dailies-Multi-format**   a. **Film & DCinema**

  b. **Digital**   4. **Editing and F/X**   b. **Television**

                 5. **Digital Intermediate**   c. **DVD & other**

                 6. **Distribution Format**

← **Security** →

New Technology

- Digital Production with Telephony
- Digital Asset Management
- Online- Film Location Database
- Virtual Set and Stage
- Digital Distribution Systems to the Home
- Security
- Digital Cinema

Collaboration

- Dominant Players in multiple markets
- Project requires more resources than a single company can or should provide
- Cooperation is required to make it happen
  - Technical, Legal, Social/Cultural, Education, or any combination of the above

Example: Digital Cinema

- Global implications with the most meaningful change since the introduction of sound
- New Technology introduction
  - Interoperability diagram vs 100 year old business
- Collaboration
  - Creative Community
  - Studios
  - Exhibition
  - Standards organizations
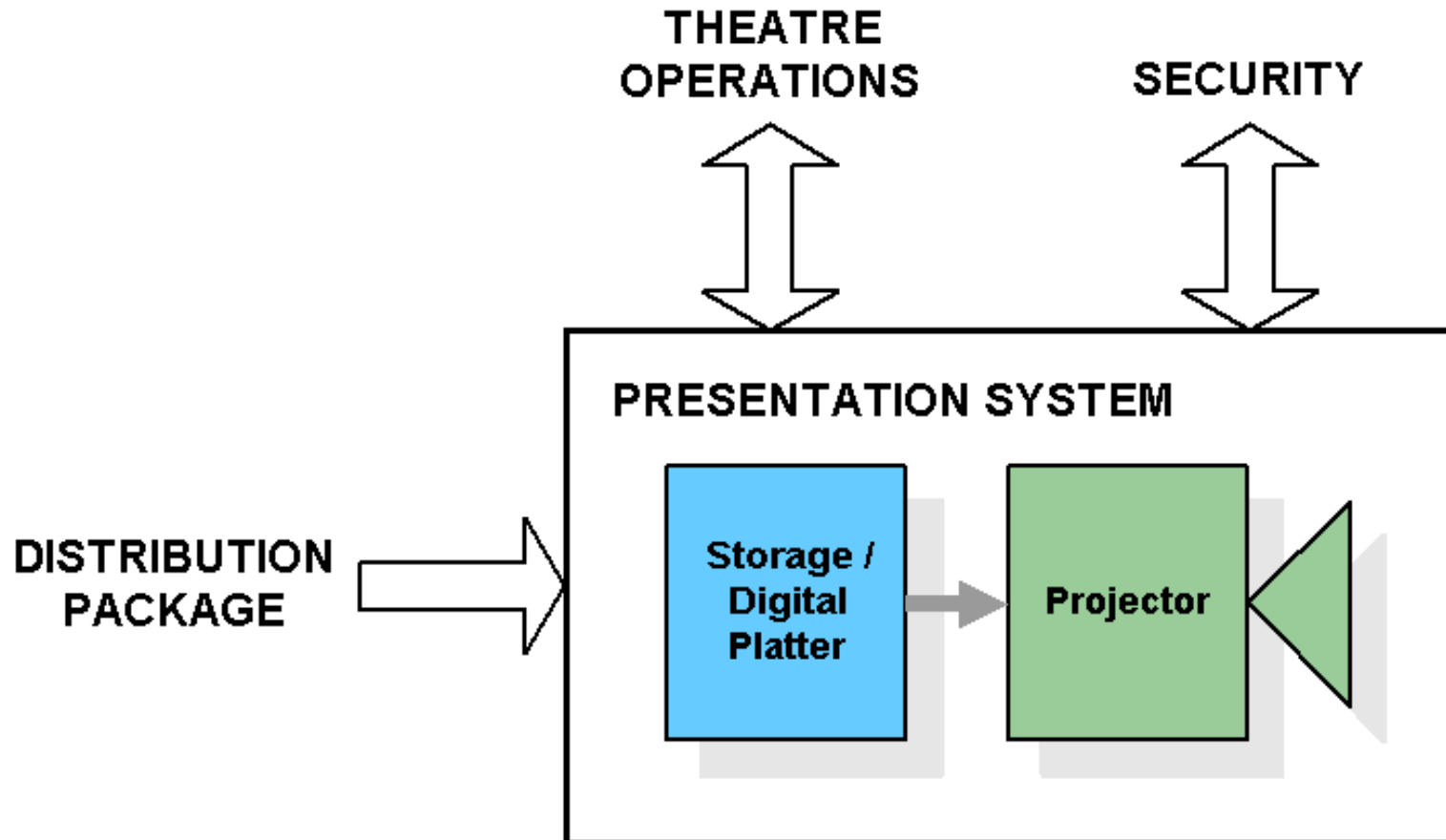 - Technology Providers

Digital Cinema Technology

- Improve cinema experience beyond 35mm film
    - Steady Image
    - Elimination of dirt, scratches and other blemishes
    - Overall uniform quality presentation
- Enhance the capability to distribute content
- Improvements in the production process
- Advantages in cost performance over time

New Technology: Interoperability

THEATRE OPERATIONS

SECURITY

PRESENTATION SYSTEM

DISTRIBUTION PACKAGE

Storage / Digital Platter

Projector

The Creative Community

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

Major Studios
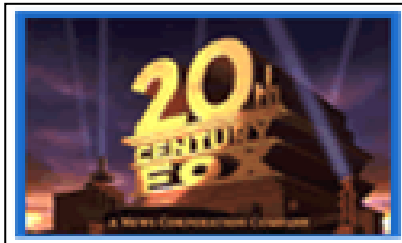
Exhibition- USA

Exhibition- International

Europe…

…And the rest of the world

-Japan and Asia (includes India)

-Canada

-Latin America (Mexico to South America)
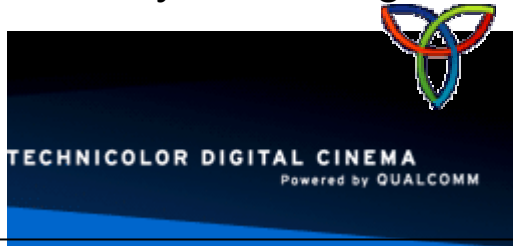
Standards and Facilitating Organizations

…Other organizations to watch

Technology Providers

System Integrators and Projector Companies

TECHNICOLOR DIGITAL CINEMA
Powered by QUALCOMM

CHRISTIE
Project. Present. Perform.

BARCO
Visibly yours

BOEING DIGITAL CINEMA

NEC

Kodak

New Service Providers

Satellite and Telco

Security Systems

Theater Management Systems

Alternative Content Systems

Core Image Technology

TEXAS INSTRUMENTS

NTTグループ
ブロードバンドで、未知の自由へ。

JVC

SARNOFF® Corporation

Compression

QUALCOMM

QuVIS

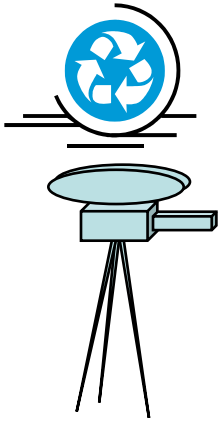Other Non-MPEG

ISO/IEC JTC1/SC29 WG11
MPEG
MOVING PICTURE EXPERTS GROUP

USC/ETC Digital Cinema Lab

- "Stone Soup"
  - Pacific Theater- Exhibition
  - Content- Studios
  - Leading Edge Equipment- Technology Companies
- Activities
  - Demonstrations and Proof of Concept
  - Measurement and Testing
  - Neutral Ground for Education and Socialization of Concepts

Summary- Convergence
Process Improvements
business-to-business communications

Physical
Physical
Physical

1
3
7

2
3
4
5
6
7

Electronic
Electronic
Electronic
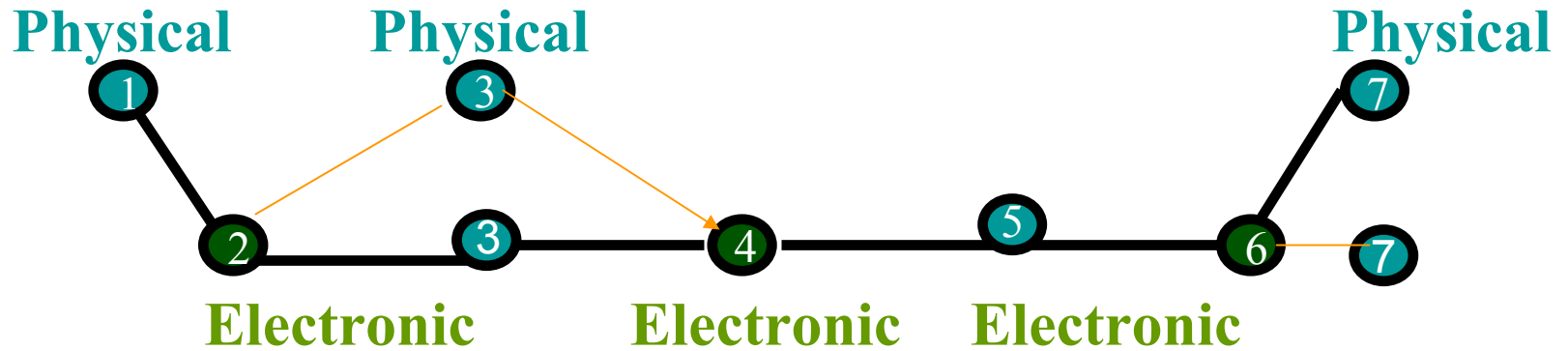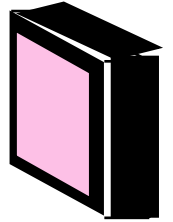
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3. **Dailies-Multi-format**
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5. **Digital Intermediate**
6. **Distribution Format**

7. **Initial Release**
   a. **Film & DCinema**
   b. **Television**
   c. **DVD &other**

Security

Summary-
New Technology

There will continually be new emerging technologies.

Look for technologies that will significantly impact business to business process.

Summary-Collaboration

- Facilitate the resources of multiple stakeholders to a long term vision.
- Creates opportunities for
  - Innovation
  - Education
  - Experimentation
  - Implementation

Thank You

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