Interoperable Business Model
Enabled by Interoperable DRM

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Analogue Media

- Analogue Media – Content depends on Medium
  - Text and image on paper
  - AV on tape, CD, VCD, DVD
  - TV on analogue frequency
  - Movie on Film

- Content exiguity (medium exiguity in fact) is the core of analogue media business
Digital Media

- Content can exist independently
  - More easy usage without the control of medium
  - More convenient to Create, Process, Delivery, Store and Use content

- Digital Media Business
  - Medium cost draw up to zero
  - Copy cost draw up to zero
  - Delivery cost draw up to zero
  - Copyright royalty should less than that of analogue (more copies possible for each content)

- DRM infrastructure is foundation of Digital Media Business
Outline

- A/D Media Ages
- Analogue Media Business
- Present Digital Media Business
- INTEROPERABILITY
- Possible New Business Model
- Linked DCI – A Practical Case
- Conclusion
Traditional Publishing Case

C: Author or Creator
U: User / Subscriber

Price
Commission
Royalty

Book, Record, CD, DVD…
Traditional Open Broadcasting Case

- **C1**: Broadcaster
- **C2**: Network
- **Cm**: Copyright Trade
- **U1**: Transmission Cost
- **U2**: Advertise-ment
- **Un**: Copyright Trade

Diagram showing relationships between broadcasting entities and cost transmission.
Toll Television Case

Copyright Trade

Share Model (Dominated by Network)

Subscription Pay for View

Share Model (Dominated by Broadcaster)
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P2P without governed copyright

C1

C2

Cm

Internet

U1

U2

Un

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iTunes Case

Share Model

M: Media/Content Company

C

iPod1

iPod2

iPodn

M1

Mm

iTunes

Internet

0.99$/song

0.99$/song

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Mobile Music Case

Half-half or Royalty

Subscribe or Pay per Song

2/3 vs. 1/3

Mobile Operator

SP: Service Provider

SPa

PU1

PU2

PUn

C

M1

Mm

M1

Mm

SPb
Mobile Music Case
(Dominated by Operator)

Central Music Platform

Mobile Operator

Subscribe or Pay per Song

Half-half or Royalty

C

PU1

PU2

PU

M1

Mm

M1

SPb

C
Universal diffusion needs more

- The representation of content and the protocols for distributing content and the associated rights are not standardized so that other than transmitting unformatted text special devices and/or specific software to be implemented for a given piece of content to terminate its lifecycle are required.

- One of the most intriguing aspects of digital media technology is that the ability to code for a device is available to all and more so for software devices.

- This broad ability is what has made necessary the need to create industry standards to provide at least a basic technological infrastructure that allows for the establishment of sustainable business activity.
De-centralized Digital Media
Creation & Distribution

Internet & INTEROPERABILITY for Content and Copyright
La Central Digital Case

- Developed by sDae
- Automated one stop B2B audio and audiovisual distribution platform from content owners and creators to web based distribution platforms (www.lacentraldigital.com).
- Coupled with the distribution is access to XML based (MI3P) B2B licensing and business rule representation and messaging called “Electronic Licensing Overall Service” (eLOS).
- Through the Global Connector tool la Central provides access to a growing network of over 22 Collective Management Societies’ databases
- All content benefits from the sDae DRM services that provide digital based methods for protecting all content use and reporting for both digital and analogue uses
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Standards for DRM

- There is no universal DRM system, only implementations of DRM systems that satisfy the needs of specific value chain users.

- It is **impossible** to standardise *Functions* performed in:
  - **Existing** value-chains (we do not know how today’s value-chains will evolve)
  - **Future** value-chains (we do not know what they will be)

- It is **possible** to standardise protocols for lower-level functions (*Primitive Functions*) between value-chain players:
  - **Existing** Functions are implemented as a combination of Primitive Functions
  - **Future** Functions can be combinations of existing and new Primitive Functions

- This approach supports the possibility to inject continuous **innovation** in the system

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The Digital Media Project

- Launched as **Digital Media Manifesto** in Jul 2003
- Manifesto published in Sep 2003
- **Digital Media Project** established in Dec 2003
- The basic DMP position
  - Digital technologies are an **asset** of mankind
  - Creators, intermediaries and end-users should all **benefit** from them
  - This is achieved by **standardising** appropriate **Protocols** between value-chain users supporting the **Functions** they execute

- **First end to end Interoperable DRM Platform**
What happened in these ~3 years?

- **Primitive Functions** identified, requirements developed
- **Phase I specifications** for Portable Audio and Video (PAV) approved in April 2005
- **Phase II specifications** for Stationary Audio and Video (SAV) approved in April 2006
- **Phase III** is developing
Benefits of DMP specifications

- DMP ADs offer a non-application-specific DRM “tool-kit”
- Value Chains (AD #4) are application specific, but implemented with the same “tools”
- Different business models can be implemented by properly assembling IDP “tools” supplied by an ecosystem of competing providers to set up value chains
- The functionalities of an existing IDP-enabled value-chain can be augmented in a scalable way by adding more “tools”
- Interoperability between value-chains is enhanced by the use of common “tools”
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A New Model: Finance Relationship

Revenue Account

Payment Account

e-Business accounting

C1

Cn

M

U1

U2

Un

P2P

Governed Content

Diffusion

Portal

vBlog

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A New Model: Copyright Relationship

C: Author or Creator
M: Media Company
U: User / Subscriber

P2P

Diffusion

Portal

vBlog

Governed Content
A New Model: No Central Control

- e-Business accounting
- Content Registration
- Licensing Agency
- Device Registration
- P2P
- Portal
- vBlog
- Governed Content Diffusion
- Licensing Agency
- Device Registration

Nodes:
- C1
- Cn
- M
- U1
- U2
- Un

Arrows:
- Agency
- Sale

Date: 2006-11-11
A New Model: Procedure

1. License Request
2. Content Authentication
3. Payment Request
4. License grant

Licensing Agency

C1, Cn, M

Device Registration

U1, U2, Un

Content Registration

P2P, Governed Content Diffusion, Portal, vBlog
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E2E Content based Licensing

CMS Services
- DCI Registration Agency
- DCI Licences
- Work DCI Creation and Distribution
- Linked DCI Creator distribution
- IP Promotion (Piazzolla, Stephan, etc.)
- DRM Services (Watermarking, pattern recog.)

Note CMS can charge %/transaction

Stephan
DCI Work
Adaptation of Milonga
Linked DCI Creation
DCI Adaptation
ER Adaptation Distribution

Young Foo
Linked DCI Creation
DCI Performance
ER Performance Distribution

Producer
Linked DCI Creation
DCI Product
ER Production Distribution

Distribution
Linked DCI Creation
Event Report (ER) Work-End User Distribution

Linked DCI Business Model
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ER Work Distribution
DCI Work
Adaptation of Milonga
Linked DCI Creation
DCI Adaptation
ER Adaptation Distribution

Piazzolla
Milonga del Angel

Stephan

Young Foo

Producer

Distribution

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http://www.digitalmediavalue.com/Final Web/IP Entity Representation and Linking Showcase Example.htm
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Conclusion

- Digital technology benefits the process of adaptation to create an unprecedented market of content
- Digital technology decreases the diffusion cost near to zero
- De-centered digital media business is the direction
- INTEROPERABLE DRM is the necessary infrastructure to achieve plenitude in governed digital content creation and distribution
- DMP is the foremost initiative providing the fundamental blocks for representation and licensing of any content based value chain modality
- A possible business model and a practical practice shows the potential of interoperable DRM
Question or Comment?

Thanks