Sun's Approach to Digital Rights Management: Project DReaM

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What We Believe:

• Innovation flourishes through openness: reference architectures, open standards, open source.
• Compensation for creators.
• All creators are users, many users are creators.
• Users' privacy will be key.
• Code --- laws and technology* --- should encourage innovation.

Greg Papadapoulos's blog: 19 July 2005
www.openmediacommons.org/about.html
What this Means:

- Interoperable systems
- Open source
- Network centric
- Identity-based systems
- DRM where the user matters
Open Media Commons

Trust is the currency of the Participation Age.

You are invited to participate in the Open Media Commons and develop royalty-free open solutions for digital content. We're seeking your help to drive cross-industry growth and prosperity as well as promote both intellectual property protection and user privacy.

Features

OMC Community Workshop
March 15-16, 2006
Santa Clara, California

This Open Media Commons Workshop is the first opportunity for the global community of developers to come together and hear about Sun's initial contributions as well as discuss how the various DRM and codec open source projects should progress going forward. We're interested in hearing your views and accepting your contributions to the efforts as well as providing you the opportunity to analyze Sun's contributions.

Contact Us

Get involved:
- Participate
- Forums

Resource Links:
- About OMC
- News
- Documentation
- FAQ's
- Key Resources
- Projects

Related Links:
- Creative Commons
- Java.net
- Liberty Alliance
- ODRL Initiative
- OpenSolaris.org
- Sun Microsystems
- SunSource.net
DReaM Architecture

Tom Jacobs
Gerard Fernando
Viswanathan Swaminathan

DReaM Client Side

DRM Specific Player
DReaM Agent

DReaM Service Side

Content Delivery Service
Licensor
DReaM Licensing Conductor
Authentication Service
Shopping Service
DReaM Contracts Manager
Packager
DReaM Catcher

DReaM Technology

DRM Specific Technology
MMI Protocol:

- Very simple mechanism to:
  - Request and obtain rights
  - Release unused rights
  - Aggregation of requests and release
- Rights are stored on the network and accessible to any networked client.
- Rights are identity based.
- Mobility – rights accessible for any client
- Supports tethered devices.
- Supports occasionally disconnected mode.
Major Technologies of DReaM

- **DReaM-D15N**: Architecture for decoupling back-end infrastructure from content protection technology.
- **DReaM-CAS**: Content protection technology for securing content for IPTV and similar applications.
- **DReaM-MMI**: Network centric protocol for rights negotiation and management.

Gerard Fernando
Vishy Swaminathan
Current Status

- DReaM-CAS & DReaM-MMI Specs Available
- All DReaM Source Code on java.net.
  - Includes reference Web portal
  - Identity based Rights
  - Rights Transfer
  - Fair Use Concept Demo
- Workshop Held in March 2006
- Patent Analysis - Completed for DReaM-CAS
- Over 350 companies now have specs
- Contributed DReaM-CAS to ATIS-IIF
- Java Standards Work – ongoing: JSR 300 (Java support for DRM)
  http://www.jcp.org/en/jsr/detail?id=300
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www.openmediacommons.org/about.html
Users Matter: Creative Commons

Attribution  BY:
Noncommercial  ☢
No Derivative Works  ≠
Share Alike  ☀

www.creativecommons.org
Implementing Creative Commons Licenses in DReaM

- What does it mean to implement a CC license?
- Which licenses can you implement?
- Issues we needed to consider:

  anonymity
  specification of rights
Implementing Creative Commons licenses in DReaM

• Enforcement only makes sense for certain licenses: Attribution and No Derivative Use.
• For all other licenses, only notification.
• How do you handle enforcement? Remember CC licenses are about “sharing.” Only enforce when on a trusted device; do not require enforcement on an untrusted device --- sharing trumps enforcement.
• CC licenses can only be implemented in an environment that supports fair use.
• There is no endorsement by Creative Commons of this work.

spec work by Seth Proctor
Susan Landau
Challenges

• Technical: interoperability
• Legal: royalty-free, open source (e.g., GPL and CDDL present interesting challenges)
• Policy: privacy, differing legal regimes around the world
• How do you build fair use in? How do you protect users' privacy and appropriately compensate?

Convenience = Consumption
Fair Use Complexities

- First Sale --- DReaM/MMI can handle this...
- Snippets
- Personal space
- Watermarking: where is it done and who pays?
Next Steps for DReaM -- Specification & IPR Analysis

- DReaM-MMI V1.0, DReaM-CAS V1.1 specifications
- Security analyses of DreaM technologies and architecture
- Robustness rules
- Completion by CY2007
Next Steps - Community

- Identify governance bodies for DReaM specifications:
  - *Liberty Alliance, DMP (Digital Media project)*
- Solicit support from ecosystem of companies
- Activities
  - Evangelization (get “buy-in” from content community)
  - Compliance & Certification
Rights Management Domains

Dynamicy of Licenses

- Many -> Few
- Static -> Highly Dynamic

- Life
- Enterprise
- Health Care

# of Content Producers

- Few

Infotainment

Binding of Licenses

- Devices
- Groups
- Identity