

# Report of Workshop D on Content Security

*Sandro Etalle*

## Participants

This list is not 100% complete, also due to people that switched from one workshop to the other one.

### Industry:

Tony van der Togt - VirtuosoMedia  
Hamers – HITT BV  
Huib Vellekoop - LogicaCMG  
Rob Koenen - Intertrust.  
Led Hilderink - Kahuna  
Dr. Martijn Springer - PNO Consultants  
Paul Schendelaar - PNO Consultants  
Otto Bernsen – Senter

### University:

Inald Lagendijk - TUD  
Yee Wei Law – UT  
Roel Wieringa UT  
Marcin Czenko – UT  
N. Meratnia – UT.  
Jeroen Doumen - UT  
W. Kowalczyk – VU Amsterdam  
B. J Overeinder IIDS group - VU Amsterdam,  
Ronald Heinen - UT  
Richard Brinkman - TU

## Presentation of Rob Koenen (Intertrust)

Main arguments touched in the presentation:

Requirements for modern DRM systems

- transparency and ease of use for consumers;
- leverage service-oriented paradigms (e.g. p2p, online services);
- appropriate protection and governance at different places in the value chain.

Short introduction to the Marlin DRM system

The problem of DRM interoperability (different approaches to this)

Short intro to the coral approaches to interoperability:

**Open problems identified during the presentation and in the discussion which followed:**

- Usage model is still too inflexible.
- Present DRM system do not allow to re-sell the content.
- Defining a DRM system for protecting content also when this is legitimately modified by authorized parties (e.g. a DRM system for health dossiers or judiciary dossiers).

**Presentation Frank Kamperman (Philips).**

Identity (person based) DRM

PED concept.

Problems with user interaction.

Problem with identity management (privacy and anonymity).

**Open problems identified during the presentation and in the discussion which followed:**

- Ubiquitous content access is still not possible.
- The definition and enforcement of a trust infrastructure for content exchange is still an open problem.
- Defining a DRM system that would allow the user to protect the content (s)he produced (e.g., music, but also private data).
- Privacy issues in DRM.
- applying DRM technology to p2p networks

**Some remarks from the following discussion.**

Inald Legendijk pointed out two ambitions:

(1) security in P2P

(2) content swapping together with content manipulation (from the signal processing side).

Someone from the VU remarked the importance of user acceptance and of appropriate business models.

Yee Wei Law noticed that there is still no common agreement over what to expect from DRM

Huib Vellekoop (LogicaCMG) remarked the need of bringing protection to the user, i.e. of moving from the DRM concept to that of content protection.

Ronald Heinen (UT) would like to see proof of concept for 2 frameworks for privacy and information hiding.

Martijn Springer (PNO) noticed that Philips and Intertrust are developing something without knowing the market yet; it has been replied that there is no other way of doing this.

Richard Brinkman: Content Security is more than DRM. We have to consider the user perspective: how does the user remains in charge of data that (s)he might outsource.

Overeinder: A relevant open problem is that of electronic documents in courts; managing tailored access to parts of a document.

Led Hilderink Kahuna: organization requirements. Challenge: more flexible access control systems; binding the identity of users to these organizations. Some data is role-base access some data is identity-based; both within and inter-business.

## **Summary: Common challenges identified in workshop D**

- from DRM to content protection: bringing content protection to the user/institutions.
  - defining a DRM system for protecting user-defined data (e.g., music, but also private data).
  - content control: coping with content transfer, content manipulation, etc.
    - Huib Vellekoop – LogicaCMG
    - Kamperman – Philips
    - UT TUD
- content protection within organizations and in cross-organizational context
  - applying DRM and content protection technology to other domains, like the healthcare or the legal domain.
  - Definition of a sound trust management supporting cross-organizational access control.
    - Led Hilderink – Kahuna
    - VU - UT
- Content protection in p2p networks.
  - Kamperman – Philips
  - TUD UT
- Secured data manipulation
  - signal processing in encrypted domain
  - data management in encrypted domain
    - TUD UT
- Privacy issues in DRM (and content protection)