



## Digital Rights Management

---

Introduction and relevance for  
SEVECOM



# Contents

*SEVECOM*

- Motivation and “definition”
- Technology
- Products and standards
- Applications
- Conclusions



# DRM in the “News”

SEVECOM

Mouse over to find out more



Network  
Expertise  
Applications  
Service



Download the TaylorMade case study

See what Cingular can  
do for your business



**BusinessWeek** online

Search  **GO**

Advanced Search

**TOP NEWS** | **BW MAGAZINE** | **INVESTING** | **GLOBAL BIZ** | **TECHNOLOGY** | **INNOVATION** | **SMALL BIZ** | **B-SCHOOLS** | **CAREERS**

NOVEMBER 29, 2005 • Editions: N. America | Europe | Asia | Edition Preference

**Get Four  
Free Issues**

Register  
Subscribe to BW  
Customer Service

**NEWS ANALYSIS**  
By Arik Hesseldahl

## Spitzer Gets on Sony BMG's Case

New York's Attorney General has turned his attention to Sony BMG's copyright-protection fiasco

Sony BMG Music Entertainment is getting a lot of unwanted attention for its use of copyright-protection software that left CD users open to computer viruses. It began with the bloggers, who shed light on the matter, and has spread to the scads of consumers who have used the Internet to urge a boycott of Sony BMG CDs.

ADVERTISEMENT



**STORY TOOLS**

- ▶ Printer-Friendly Version
- ▶ E-Mail This Story

**POLL** INSTANT SURVEY >>

Is Microsoft's Xbox 360 on your holiday shopping list?

☐ Yes, I braved the crowds, and already got one

**TODAY'S MOST POPULAR STORIES**

1. Prefab Homes Get Fabulous
2. Cyber Monday, Marketing Myth
3. iMac G5: The Best Gets Better
4. Skype Has People Talking
5. A New Look for Value Stocks

Get Free RSS Feed >>

**PRIORITYCLUB. REWARDS**

Redeem points for any hotel, anywhere. Even our rivals'.  
[Learn More](#)

**BUSINESS DIRECTORY**

Find services and products now.

1. Select Industry  
Technology

**MARKET INFO**

DJIA	10938.34	+47.60
S&P 500	1262.87	+5.41



# DRM in the “News”

SEVECOM

Click Photo Download

[Back to the Flickr photo page](#)

Available sizes: [Square \(75 x 75\)](#) [Thumbnail \(100 x 67\)](#) [Small \(240 x 160\)](#)

[Download the medium size](#)

[Back to the Flickr photo page](#)

**creative commons**  
COMMONS DEED

**Attribution-ShareAlike 2.0**

**You are free:**

- to copy, distribute, display, and perform the work
- to make derivative works
- to make commercial use of the work

**Under the following conditions:**

**BY:** **Attribution.** You must attribute the work in the manner specified by the author or licensor.

**SA:** **Share Alike.** If you alter, transform, or build upon this work, you may distribute the resulting work only under a license identical to this one.

- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

**Your fair use and other rights are in no way affected by the above.**

This is a human-readable summary of the [Legal Code \(the full license\)](#).

[Disclaimer](#)

[Learn how to distribute your work using this license](#)

A [new version](#) of this license is available. You should use it for new works, and you may want to relicense existing works under it. No works are *automatically* put under the new license, however.



# Aspects of DRM

**SEVECOM**

## **technical**

- standards
- architecture
- integration
- interoperability
- scalability /  
extensibility
- portability
- migration

## **legal**

- copyright law
- patent law
- competition regul.
- data privacy law
- "BGB" / trade law
- liability
- trademark law
- "Grundgesetz"
- intern. regulations

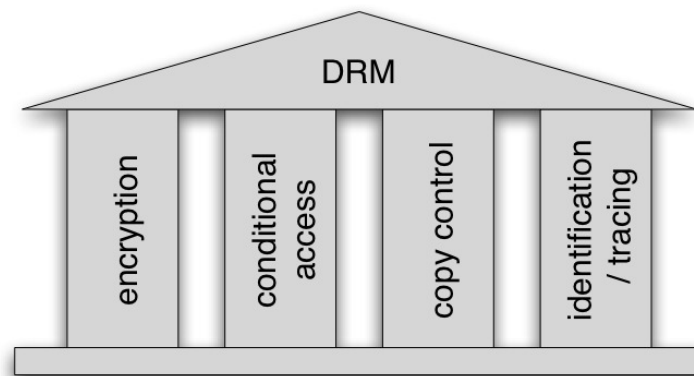
## **economical**

- costs
- investment
- time
- benefits
- risks
- business proces.
- business models
- market /  
competition



## „Definition“

- Commonly understood as methods for controlling (enforcing) and administering rights to digital intellectual property.
- Concerns contracts (licenses) in general and any security policy for accessing information (general access control)
- DRM is more than just copy protection





# Purpose and properties

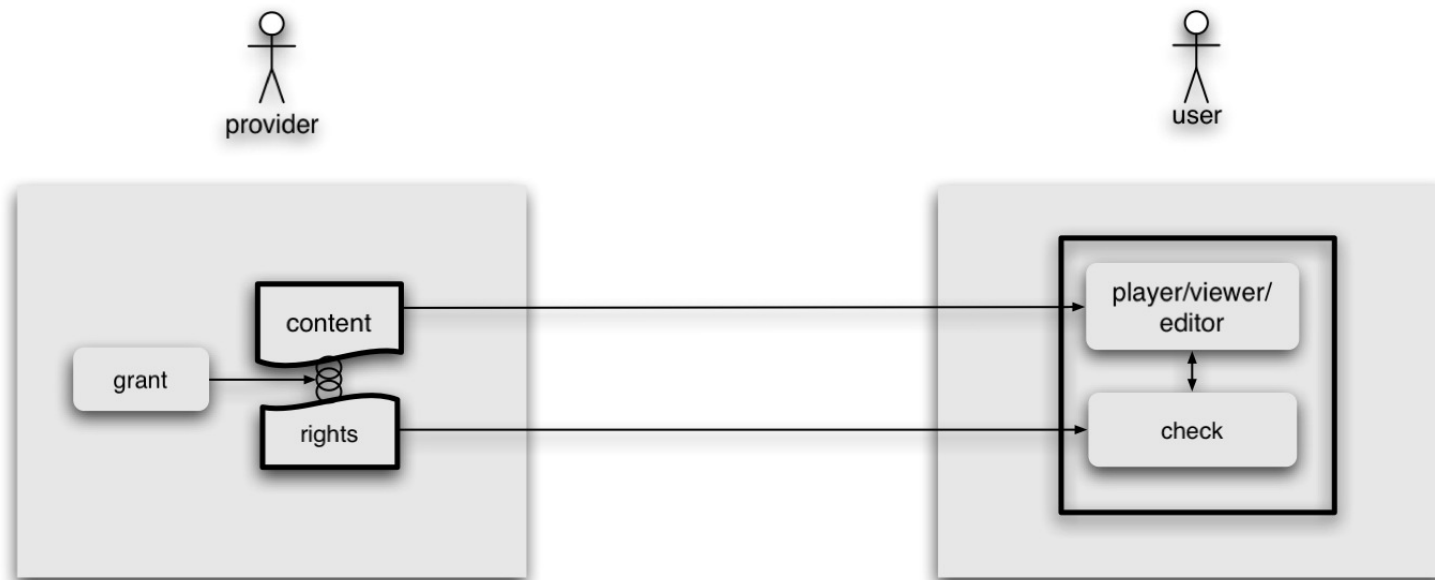
*SEVECOM*

- Identification / Authentication
- Integrity and Authenticity of the content
- Protection and Authorization => Access Control, Usage Control
- Persistence
- Description (Meta-Data)
- Digital Evidence
- Span the whole value chain



# Principle

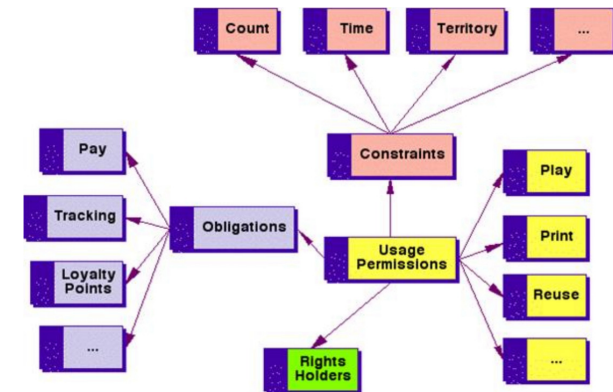
SEVECOM







- Digital Policy Management
  - Identification
  - Rights Expression Languages
  - Rights Administration

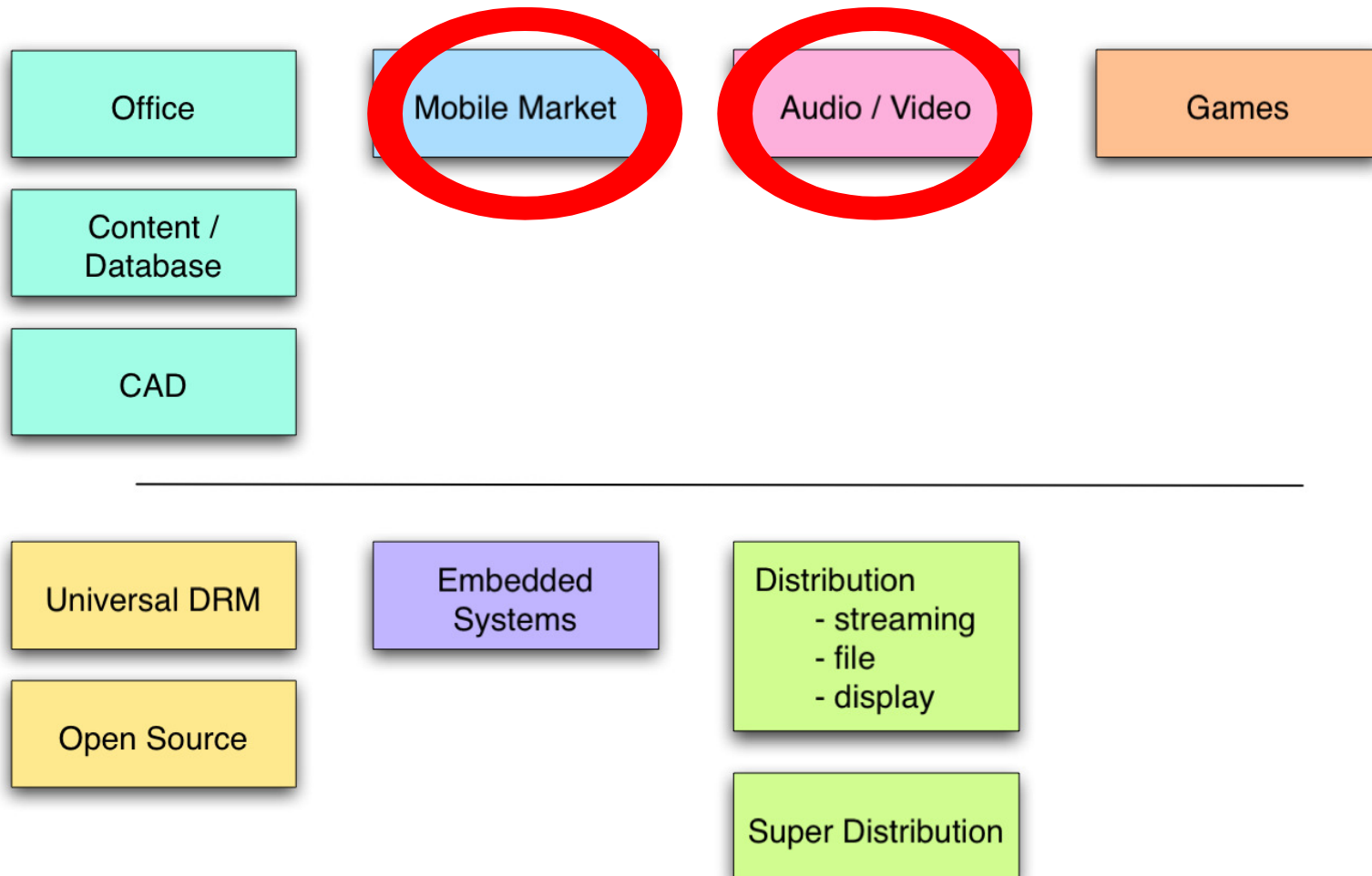


- Digital Policy Enforcement
  - Preventive Measures
    - Conditional Access, Copy Protection Mechanisms
    - Usage Control
  - Detering Measures
    - digital watermarking, fingerprinting, etc.



# DRM market

SEVECOM





# Products and „standards“

**SEVECOM**

- **DTCP** (Digital Transmission Content Protection), **CPRM** (Content Protection for Recordable Media) defined by the „5C“ (Intel, Matsushita, Sony, Toshiba, Hitachi), **HDCP** (High-Bandwidth Digital Content Protection) defined by Intel

QuickTime™ and a  
TIFF (LZW) decompressor  
are needed to see this picture.

- Apple Fairplay
- Microsoft Windows Media DRM 10
- OMA DRM
- Real Helix
- MPEG 21

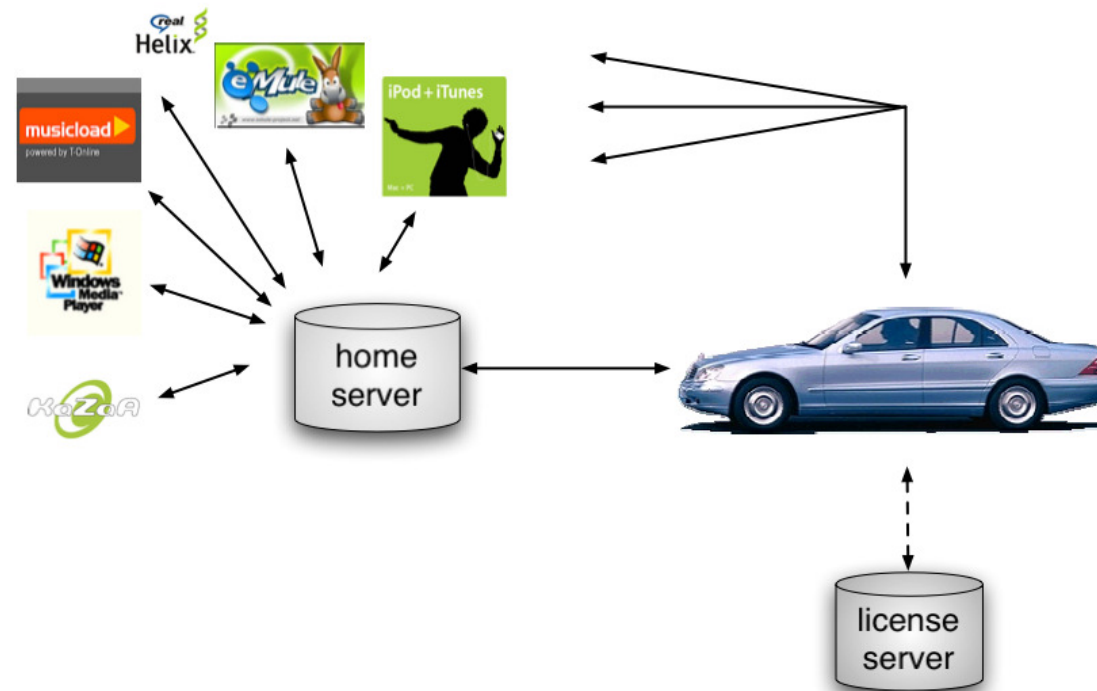
Source: Intel



# Applications

SEVECOM

## ■ Digital Media



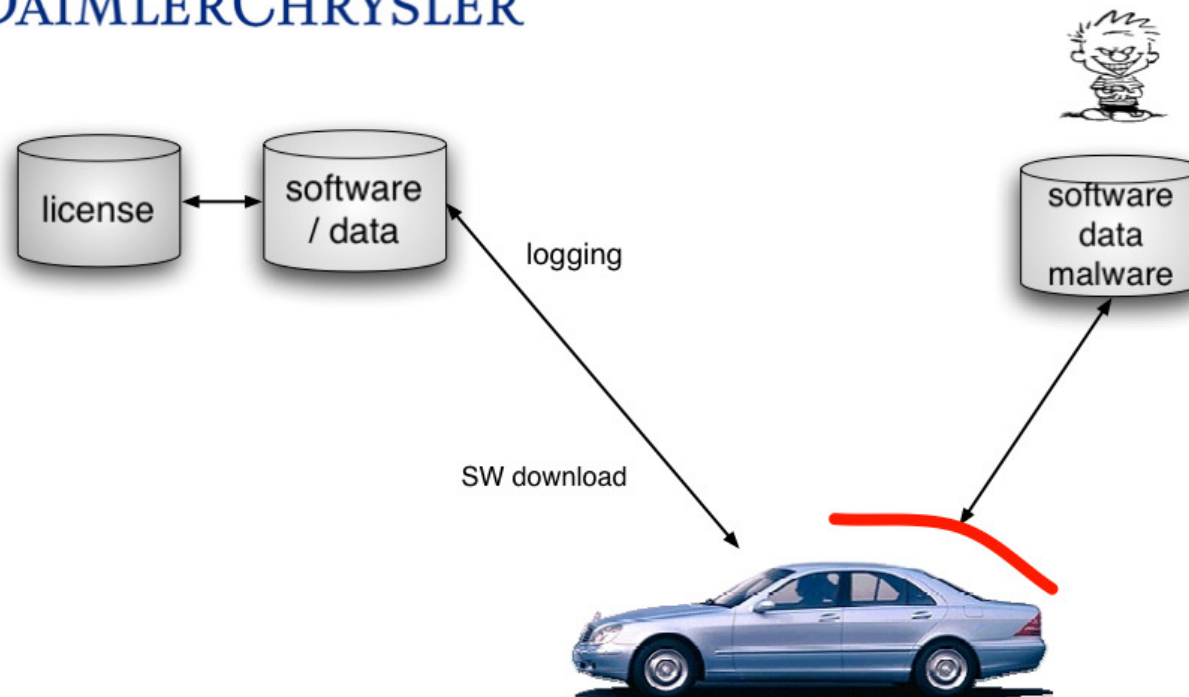


# Applications

SEVECOM

- Software/data download/activation

DAIMLERCHRYSLER





## DRM status

*SEVECOM*

- Lots of isolated applications
- No interoperability
- No common standards
- Legal background different in D, F, ... , EU, U.S.A., RoW
- Missing customer/consumer acceptance
- Multiple disciplines involved (economical, legal, technical aspects)



## Conclusion

**SEVECOM**

- DRM offers a possibility to securely transmit data to a vehicle and to control the usage of this data
- Digital Media is not in the scope of SEVECOM
- Software/data download/activation is an important application in SEVECOM
- Concepts based on DRM should be investigated

