

A SIM based OMA DRM v2 Platform

Creating a widespread, standardized and high-quality DRM (Digital Rights Management) system establishes a secure business model for mobile content and applications. More content can then be distributed and sold when an appropriate DRM system is in place to protect against piracy. This is DRM Solution.

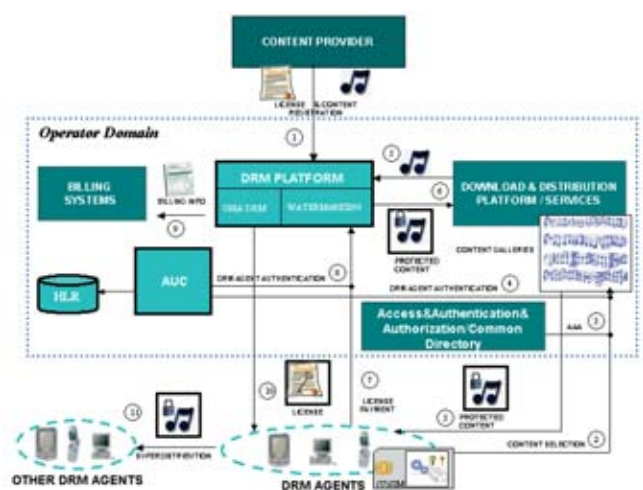
Main focus

DRM is a technology that allows to provide services and enables content providers to distribute, promote and sell digital contents in a secure way.

This technology can be used to distribute digital media content like, for example, music, ring tones, wallpapers, and other types of digital information. All these contents must be protected from illegal copying and should offer to the content provider and to the end-user enough flexibility to sell or to buy it.

Content protection could be achieved by defining different usage rights for the contents. By defining these rights over the same content, content providers have flexibility in publishing and selling contents. This new way of publishing and selling content in a revenue-generating manner will encourage content providers and operators to provide attractive content, which in turn benefits users.

DRM Solution will implement a platform based on the OMA DRM standards and SIM based security for controlling the distribution and consumption of digital contents (music, video, images, games, etc.) on the mobile environment. A peer-to-peer services scenario (user-to-user communication and user to locally deployed service) will be developed to exemplify the strength of this technology.



 **DRM Solution**

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Partners

Bantry Technologies, Ireland

Ericsson Spain, Spain

Gemplus, France

M-Systems, Israel

Open Bit, Finland

Telefonica Moviles España, Spain

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Project web site

www.celtic-initiative.org/projects/drm-solution

Approach

DRM Solution will focus on the implementation of the DRM architecture proposed by the Open Mobile Alliance (OMA), integrating this architecture in an open environment, as the service layer is, and including peer-to-peer services in the use cases. The project plans to integrate this platform with the authentication nodes and subscriber databases of a PLMN network; such as Authentication Center (AuC) and Home Location Register (HLR).

The different components of the system that will be developed include:

- The DRM Platform that enables the controlled consumption of digital media objects by allowing content providers to express the usage rights, like the ability to preview content, to prevent downloaded content from being illegally copied and forwarded to other users, and to enable super-distribution of DRM content among other functionalities.

- The DRM Agent based on SIM. This is considered as the strongest enforcement point to reach a good level of security and trust. The DRM Agent consumes the content applying the set of permissions

and constraints specified in the rights associated to the content. The high level of security reached in the mobile device is due to the use of SIM cards in combination with the AuC/HLR nodes of the PLMN, and this high level of security can be used to manage the digital rights.

The DRM infrastructure would allow peer-to-peer service access. A content download service to sell multimedia contents through a content provider portal will be developed. As can be seen in this project there are huge convergences of several technologies working together to reach one goal, the protection of the contents.

Main results

DRM Solution will contribute to solve one of the most important problems in the multimedia content market: the piracy.

The major results will be:

- A pre-commercial platform with a DRM platform server open to be integrated in a service layer infrastructure, together with the development of a certificate applications agent in the mobile device. This system will be enforced by SIM authentication based on the AuC/HLR.

- On the device side it is expected to produce a pre-commercial product where the mobile device could use the DRM to be used within the device itself or use this device as a trust entity to read the content sent to a computer via Bluetooth, infrared, or another transmission technology.

- A content download service

- An analysis of P2P communications and how it can benefit from the use of a DRM system. Peer to peer communication is responsible for 75% of the traffic on the Internet and this way of communication is moving to the mobile network.

- A testbed integrating this concept and a DRM system will be provided.

Impact

This project has strategic relevance in different areas:

- From a strategic point of view, the DRM solution will be one of the cornerstones of the service architecture of the mobile operator due to the fact that the content providers and the mobile operators need to prevent piracy in the multimedia content business in mobile Internet, with the purpose of avoiding the enormous losses of the members of the multimedia content value chain caused by piracy.

- Furthermore, by using the mobile device with the SIM as a token to use the multimedia content, a new market opportunity is opened to the operators, mobile-phone manufacturers and SIM-card manufacturers.

- A main contribution to standards will be done in the Open Mobile Alliance and in the Liberty Alliance.

- The project will contribute to the CELTIC "Pan-European Lab" by allowing the integration of its full-scale pilot installations with others pilots around Europe.

About CELTIC

CELTIC is a European research and development programme designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. CELTIC is the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

Timeframe: 5 years, from 2004 to 2008

Cluster budget: in the range of 1 billion euro, shared between governments and private participants

Participants: small, medium and large companies from the telecommunications industry, universities, research institutes, and local authorities from 33 countries

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