PRODUCT HIGHLIGHT

MOBILE TV (DVB-H) OMA BCAST SMARTCARD PROFILE

- COMPLETE SERVICE AND CONTENT PROTECTION SOLUTIONS FOR MOBILE TV
- PROVEN SECURITY BASED ON 40 YEARS OF EXPERIENCE IN TELEVISION TECHNOLOGIES
- EXTENSIVE EXPERIENCE LAUNCHING MOBILE TV ACROSS DIFFERENT BROADCAST NETWORKS
- CLOSE PARTNERSHIPS WITH LEADING TECHNOLOGY PROVIDERS TO SUPPORT END-TO-END DEPLOYMENTS

SERVICE & CONTENT PROTECTION FOR MOBILE TV

DVB-H AND MOBILE TV

Digital Video Broadcasting Handheld (DVB-H) is a standard that enables the delivery of live broadcast TV content to mobile devices through a separate, dedicated network. This transmission technology is specifically designed to ensure quality and maximum signal reception while also addressing a number of technical challenges linked with power consumption and with reception in a mobile environment.

ENABLING BUSINESS MODELS FOR MOBILE TV

Mobile TV is quickly turning into a pay-TV business, and operators increasingly want to adopt a business model that combines free-to-air content with subscription pay-TV channels. To meet this objective, operators need to find a robust service and content protection system that will not only protect content rights but also secure revenues. Such a system employs advanced security technology to prevent piracy, ensuring that only paying subscribers can access the mobile TV services. In addition, the system must also support multiple subscription models in order to provide maximum choice and flexibility to subscribers on the way to consume and pay for digital video assets.

KEY BENEFITS

Full compliance with the Open Mobile Alliance™ Broadcasting (OMA BCAST) smartcard profile specification

Standardized interfaces for maximized interoperability

Proven flexibility based on years of experience in the pay-TV environment

User-friendly interfaces for configuration and monitoring, based on the Windows graphical user interface (GUI)

Part of a complete solution offering to maximize content distribution and revenue from digital video assets

Worldwide support and services with Irdeto's global presence

2010-03-001

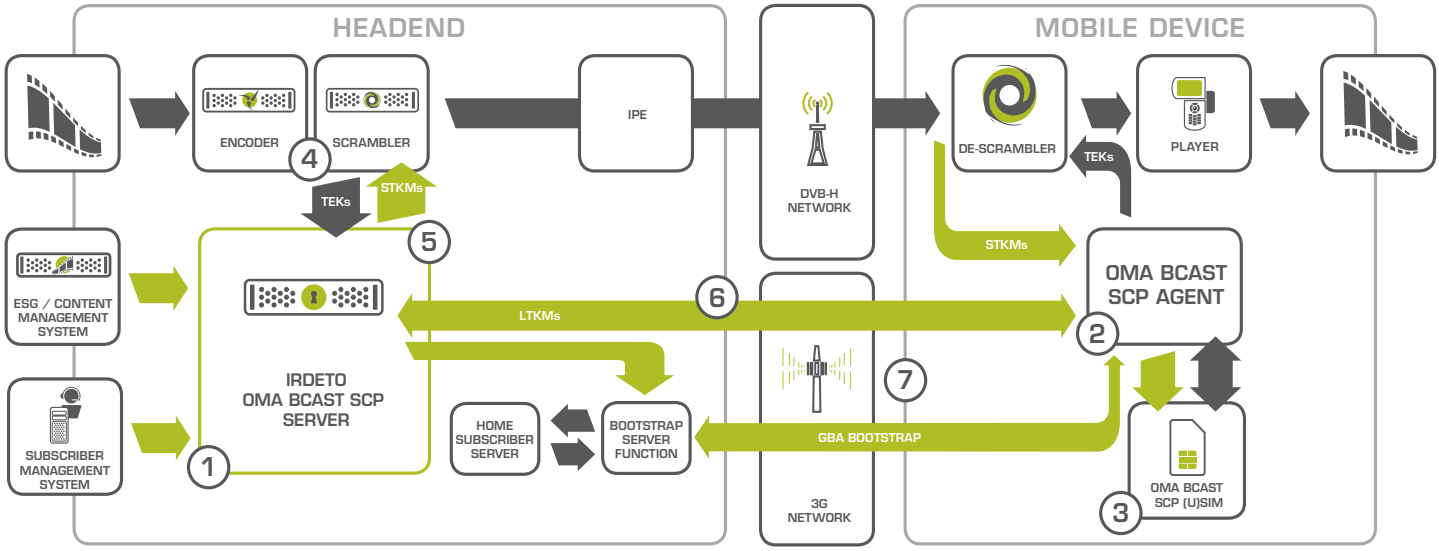
THE SOLUTION

The OMA BCAST smartcard profile specification is based on the existing security framework as defined within the 3GPP multimedia broadcast and multicast service (MBMS). It has been optimized to support DVB-H networks as well as a number of different subscription models (e.g. pay per view, pay per time, recorded content).

The standardized end-to-end OMA BCAST smartcard profile solution consists of a server (1), a device agent (2), and an OMA BCAST SCP (U)SIM card (3). A bootstrapping server function (BSF), a standardized element in the mobile network, is also needed in order to ensure mutual authentication between the user equipment and the SCP server.

The service protection is based on a 4-layer model:

- The content is encrypted by using scrambling methods such as ISMACryp and traffic encryption keys (TEKs). (4)
- TEKs are sent in encrypted messages (STKMs – short-term key messages) using a service or program encryption key (SEK/PEK) via the broadcast network. (5)
- Depending on the service configuration, the long-term key message (LTKM) contains the SEK or PEK, used respectively for subscription or pay-per-view customers. The LTKMs are protected with an subscriber management key (SMK) and delivered over the 3G mobile network. (6)
- The SMK is stored on the (U)SIM and shared with the registration server in the head-end. The SMK is created using the generic bootstrapping architecture (GBA) (7) and the smart card key (SCK) which is stored on the (U)SIM. The SCK is a pre-provisioned secret key.



THE OMA BCAST STANDARD

Irdeto is a member of the Open Mobile Alliance since 2002 and has actively contributed to the creation of several OMA specifications. OMA is committed to promoting interoperable standards across the mobile industry. The Broadcasting Working Group (BCAST WG) focuses on the needs of mobile broadcast services and the environments needed for their delivery. As a result, the BCAST WG has defined a set of necessary enablers for an end-to-end framework for mobile broadcast services, including service discovery, electronic program/service guides, charging and content/service protection. The specifications ensure the interoperability of the various elements of the service delivery chain.

OMA published its comprehensive mobile broadcasting enabler (BCAST 1.0) as a Candidate Enabler Release in June 2007 and as an Approved Enabler Release in March 2009. Enhancements will be available in future releases.

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