

Mobile TV Middleware

Overview

The MobileTV middleware fulfils the core functionalities of a MobileTV system.

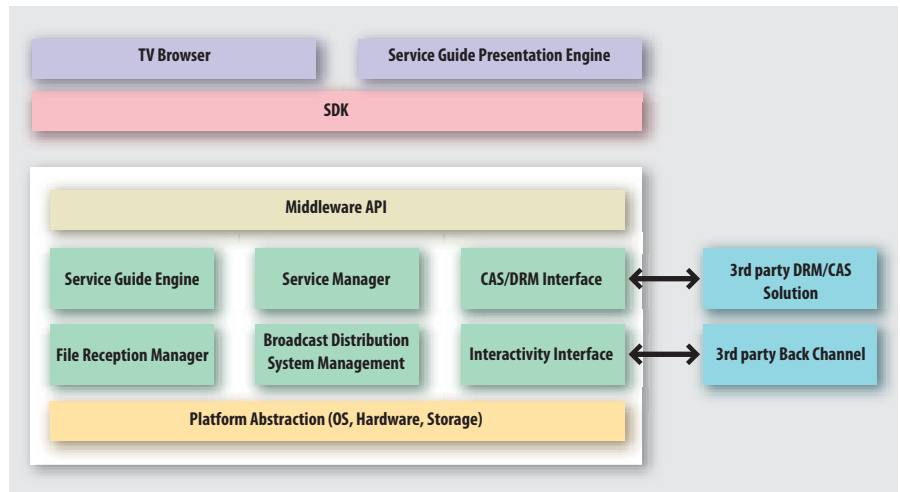
The Tata Elxsi's MobileTV middleware is completely modular in architecture and has been written completely in ANSI-C. Additionally, it is fully Operating System (OS) agnostic, as well as independent of base band processing sub layer. A SDK has been designed to provide abstraction for the underlying technologies like CBMS, OMA-BCAST. It also allows for convenient integration with various multimedia engines, decoders and applications. Finally, a seamless abstraction layer for integration with different CA modules and standards agnostic support for any back channel is present. Currently the middleware has been tested for CBMS compliance. Compliance to OMA-BCAST is in roadmap.

ARCHITECTURE HIGHLIGHTS

- Modular
- Flexible and Scalable
- Portable to various platforms
- ANSI-C compliant

FEATURES

- A SDK layer is provided for convenient integration with various custom applications
- An Operating System Abstraction Layer (OSAL) abstracts operating system calls from the middleware
- A Baseband Abstraction Layer (BBAL) abstracts the middleware from any Baseband sub-layer
- Integration with different back channels is made possible through an abstraction layer
- A SDP parser for media type identification, frame-rate calculation, port and IP address identification
- Support for reception of multiple services simultaneously
- A FLUTE/ALC client for unidirectional reception of ESG data
- A full-fledged Service guide Engine for decoding Service Guide data
- gzip and BiM de-compressors
- Support for download of Offline Content like video, audio, images
- Support for zapping for reduced channel browse time
- Conditional Access (CA) sub-layer allows for easy integration with most Conditional Access systems
- Broadcast distribution system management



Tata Elxsi MobileTV Middleware Architecture

KEY DIFFERENTIATORS

- Abstraction for underlying technologies like CBMS, OMA-BCAST, MBMS
- Fully Operating System agnostic, successfully running on Linux, windows Mobile and windows XP
- Base-band processor-independent
- Can be easily integrated with multiple application engines
- Various CA modules shall be supported
- Undergone extensive and successful field trials including in-car reception, in multiple cities across Europe including Berlin (T-system), Paris (TDF) and Amsterdam (SIDSA) CBMS compliant streams
- Tested for interoperability with SIDSA, THOMSON, SIEMENS at 3GSM 2007, Barcelona

Roadmap

- Compliance to OMA-BCAST
- Integration with security solutions

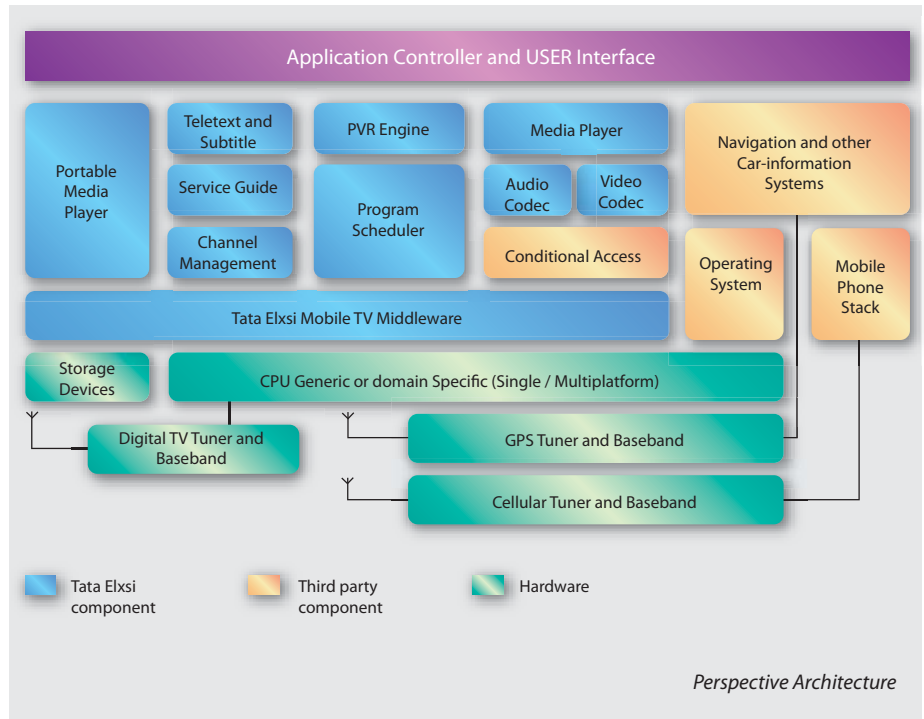
Availability

- Evaluation version of the Mobile TV Middleware on Windows XP.



Customization Options

- The Middleware is portable to most target platforms
- The Middleware may be integrated with most Cell-phones, PDAs, Car-navigation System, Test and measurement system, given the necessary hardware and processing bandwidth.
- Custom applications may be built over the Middleware



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