



OMA Device Management and Platforms

Mobile Device and the User Experience 08

London 12 November 2008

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- » Overview of the Open Mobile Alliance
- » Current specifications from OMA DM
- » Current Issues Facing the Industry
- » OMA DM Pipeline
- » Summary

» **Vision**

- » No matter what
- » device I have
- » service I want
- » carrier or network I am using
- » I can communicate, access and exchange information

» **Background**

- » International organisation, created in June 2002
- » ~400 members from across the world
 - » mobile operators
 - » device and network suppliers
 - » information technology companies
 - » content and service providers
- » ~100 active work items, ~120 Releases, ~40 published

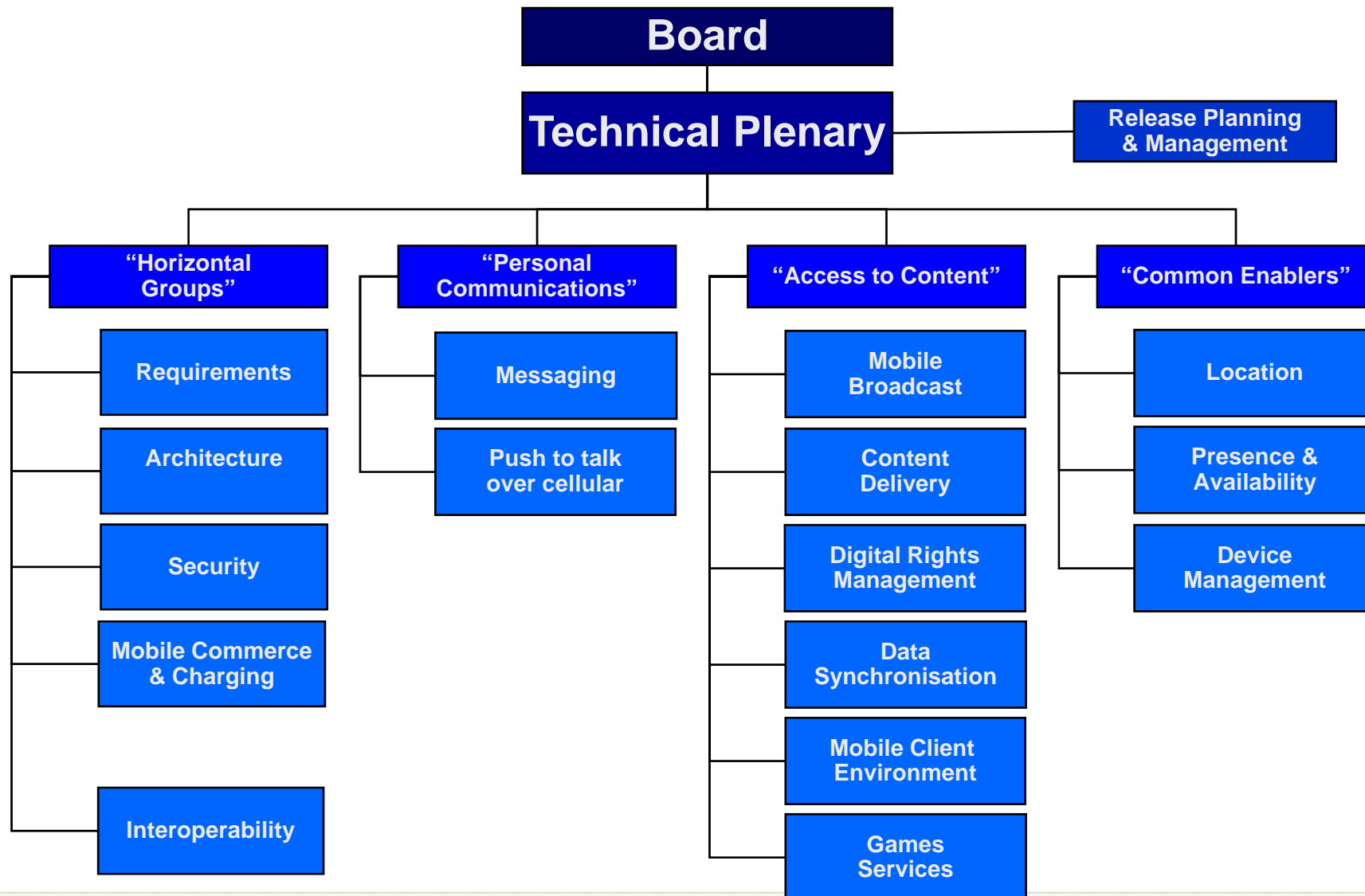
- » **Principal Forum for support of interoperable data services across multiple domains**
 - » Creating specifications driving adoption of multimedia and data services

- » **Published specifications only part of OMA story**
 - » Development is market driven with members observing industry demand
 - » Use cases identify market requirements
 - » OMA facilitates market adoption through member-driven specifications

- » **Convergence**
 - » Not just mobile: applicable to fixed AND mobile networks
 - » In 2005 OMA expanded its mandate to include : “...*other present and future wireline and wireless network **standards** supporting the Internet Protocol family*”
 - » OMA enables enhanced seamless and integrated services

- » **Interoperability test programme**
 - » Product testing for conformance in trusted zone key differentiation point for OMA
 - » Verifies specification interoperability
 - » Communicates value to market
 - » Test Specs, TestFests (**25 to date**), 1300+ implementations tested, Test Reports
 - » Facilitates certification outside OMA

OMA Working Group Structure



Highlights of OMA Service Enablers



» Over 20 Candidate and Approved Enablers Published in the Last 18 Months

» Candidate Enabler Releases

- » OMA Push to talk over cellular V2_0
- » OMA Secure Removable Media V1_0
- » OMA SIMPLE Instant Messaging V1_0
- » OMA URI Schemes V1_0
- » OMA XML Document Management V2_0
- » OMA Mobile Broadcast V1_0
- » OMA Download V2_0

» Approved Enabler Releases

- » OMA Email Notification V1_0
- » OMA vObject V1_0
- » OMA Charging V1_0
- » OMA Client Side Content Screening Framework V1_0
- » OMA SUPL Secure User Plane Location V1_0
- » OMA Online Certificate Status Protocol Mobile Profile V1_0
- » OMA Standard Transcoding Interface V1_0
- » OMA Smart Card Web Server V1_0
- » OMA Presence SIMPLE V1_0

» **A Candidate Enabler Release (CER)** delivers an approved set of open technical specifications that can be implemented in products and solutions, and then tested for interoperability.

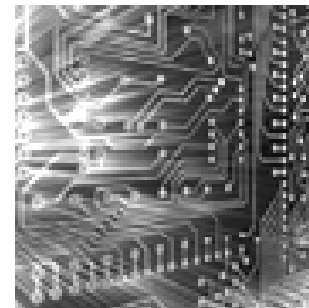
» **An Approved Enabler Release (AER)** represents Candidate Enabler Releases that have gone through the Interoperability Program (IOP) of OMA. The IOP tests interoperability between different member company's implementations – either within the OMA or through other means.

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OMA DM Approved Enablers



- » DM 1.2 moved from Candidate to Approved status in 6 months
- » Many implementations deployed globally
 - » 89% deployment rate of OMA DM according to major handset vendors around the globe
 - » 90% deployment rate of OMA DM in operator implementation of services
- » Firmware Update Management Object (FUMO) 1.0
 - » Completed Interoperability Testing Program
 - » Approved Enabler Release
- » Quality and reliability of these Enablers is well established and bodes well for the future pipeline of OMA Device Management Enablers
- » New applications and developer activities need to consider OMA DM to support global adoption of new services



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The Need for Device Management (1)



The Need for Device Management (2)



- » Before DM was specified, the only way to configure devices was:
 - » In Factory
 - » In Store

- » Evolving devices and services creates the need to manage the devices remotely
 - » Firmware update
 - » Diagnosis and monitoring
 - » Individual installation of software
 - » Device configuration
 - » Scheduling of all of these tasks

- » Why standardize these functions?
 - » Uniform visibility into the resources and functionality of all devices
 - » Network operators can manage devices, conduct diagnosis and update devices remotely and without direct vendor support
 - » Interoperability directly impacts consumer experience

- » Adoption of mobile data services on a global scale demands standardization and interoperability

- » **Preparing for increase in number of data-enabled mobile devices**
 - » Emerging markets will find low cost devices that provide first time internet access to new users
 - » Maintaining these devices becomes necessary over the air vs. in person -- whether due to accessibility of users or awareness of the need to update devices

- » **Coping with many new players in the market**
 - » Emerging businesses in emerging markets
 - » Consumer Electronics and PC industries have DM needs
 - » DSL Forum interested in OMA DM

- » **Reducing time to market with well-devised standard**
 - » New products and services only find global adoption possible with standardized approach

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- » **Connectivity Management Object -- In OMA Work Program**
 - » Seamless operation of device over all the various protocols without manual administration of the device
 - » UMTS, CDMA2000, WiFi
 - » 3GPP Packet Switch or other Proxy settings
 - » Wireless data connectivity
 - » Specification of a set of data management object schema
 - » Exposure by an OMA DM client
 - » Targeting by an OMA DM server from operator or corporate infrastructure

- » **Software Component Management Object SCOMO - in OMA Work Program**
 - » Operator and corporate IT departments can manage software inventory such as libraries and user interface elements
 - » Allows operators and corporate IT departments to ensure compatibility of old and new software.
 - » Remove and update existing software and install new software

- » **Diagnostic Monitoring Object – In OMA Work Program**
 - » Detect and repair actual or potential troubles
 - » Report faults to the network
 - » Enable terminals to measure and report key performance indicators
 - » Query the device for additional diagnostic data
 - » Operators or corporate helpdesks can also use the diagnostic enabler
 - » Invoke specific repair procedures embedded in a given handset model
 - » Use case
 - » Subscriber reports an error indicator or problem to operator or helpdesk
 - » Customer care server or help desk agent queries device for more information
 - » Cause of error or problem is identified
 - » Action taken to repair or correct

- » **DM Smart Card - Portability of Management Objects**
 - » Management objects can be stored on the (U)SIM card
 - » Users can switch between devices and take security and other settings with them from device to device

- » **Additional Enablers in Development within OMA DM**
 - » Lock and Wipe Management Object – allows deactivation of the device over the network.
 - » Device Capabilities Management Object – allows activation or deactivation of hardware on the device, such as WiFi access or other capabilities.
 - » Taken from Asian market and brought to OMA for specification and standardization

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Summary



- » OMA DM is well established and reliable in the mobile value chain.
- » Interoperability is the key to seamless maintenance and integration of devices, services and applications - now and in the future.
- » OMA DM helps operators and IT departments manage access capabilities, diagnose problems, fix and update devices over the network.
- » The future of OMA DM will see increased security and maintenance capabilities.
- » **Mobility is for everyone, everywhere**
 - » At home, in the office, on the road, consumer and enterprise applications must work with evermore complex multi-use devices in multiple environments across a variety of networks and regions.
 - » Interoperable and standardized OMA DM has the agility and complexity to meet the demands of this environment.
- » OMA DM Working Group is the place for the industry to best address the challenges of development with a goal of global adoption.
 - » OMA DM Working Group is exploring Converged DM

- » **Topic Experts for Device Management interaction**
 - » Bobby Fraher, bfraher@omaorg.org
- » **Interested in joining the OMA**
 - » <http://www.openmobilealliance.org/Membership/default.aspx>
- » **Full list of OMA Enablers**
 - » <http://www.openmobilealliance.org/Technical/releaseprogram.aspx>
- » **List of upcoming test events and plenaries**
 - » <http://www.openmobilealliance.org/TestFests/overview.aspx>