Open Mobile Alliance

Converged Service Opportunities

Creating Seamless Connectivity, Improving Device Capabilities and Wide Distribution of Content for Africa

AfricaCom 2007

Cape Town, Republic of South Africa

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Chairman of the Board

November 22, 2007

Agenda

- OMA - Who we are and what we do
  - Organization
  - Testing
- Realities in a converged world
- Basics on some OMA Enablers
  - Device Management
  - Content Management
- Summary - Africa and Interoperability

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OMA – The Open Mobile Alliance

VISION

No matter what device I have,

No matter what service I want,

No matter what carrier or network I'm using,

I can communicate, access and exchange information.

The Open Mobile Alliance is an international organization, developing open, market driven interoperable specifications for global adoption

OMA was created in June 2002 by leading mobile operators, device and network suppliers, information technology companies, content and service providers

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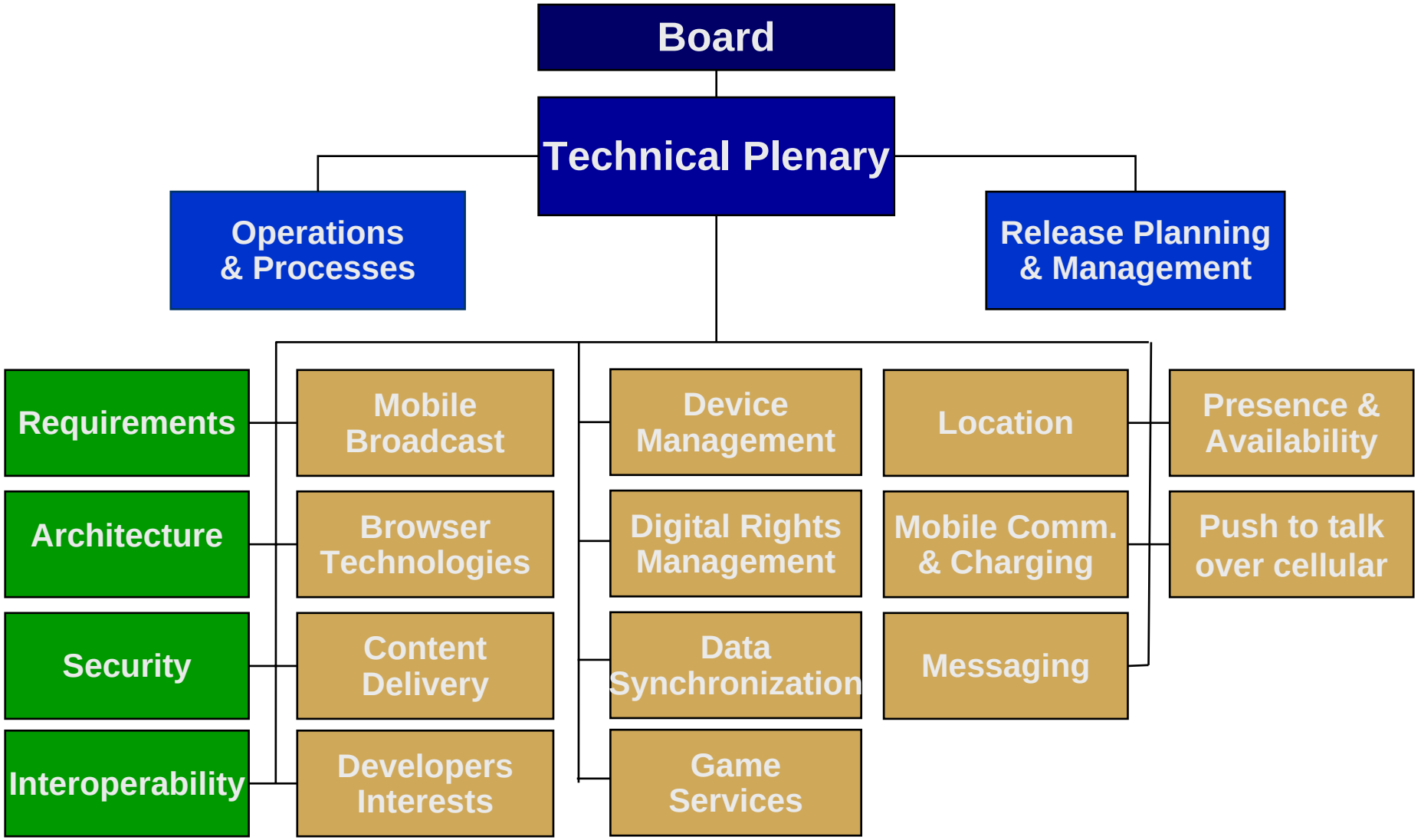
OMA Organization



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Cross-Industry & Global Representation

380 (+) Global Members

- Operators who have experience launching new services
- Broadcasters and IT companies that want to sell rich content
- Terminal vendors, IT and network infrastructure vendors

42 Formal Cooperation Agreements around the globe

- Avoids duplication of efforts
- Full representation of geographies, stake holders and markets

39 Enablers published and over 100 active work items

- Such as Broadcast, Advertising, Location Services, Messaging, Browsing and Device Management

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OMA and Interoperability Testing

- Provides confidential neutral environment
- Allows inter-working between competitors
- Provides complete infrastructure in a real world environment
  - 2G and 3G networks (GSM, CDMA, W-CDMA)
  - WAP Gateway, PPG, SMS Centre, IMS System(s)
- Formal testing against Test Specifications
- Results reported anonymously to IOP WG
  - Allows assessment of enabler for approval
- Problems and issues fed back into OMA process through neutral reporting system

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OMA TestFest Achievements

- 23 Test Events with over 1250 product implementations tested
  - 144 in 1st Year (11/02 – 10/03 – 5 events)
  - 178 in 2nd Year (11/03 – 10/04 – 4 events)
  - 263 in 3rd Year (11/04 – 10/05 – 4 events)
  - 429 in 4th Year (11/05 – 10/06 – 5 events)
  - 250 in 5th Year (11/06 – 11/07 – 5 events)
- Over 500 problems and issues raised to OMA
  - All related to specifications and improving them
  - Implementation errors dealt with by participants
- Supporter level membership allows for testing of product implementations

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Realities in a Converged World

- Multiple network access methods are becoming reality
  - Markets will deploy diverse and complex infrastructure
  - Harmonization of user experience will happen in the services and applications, independent of the access method
- Full integration of Internet and Mobile services
  - New services should take advantage of existing functionality, capabilities and services – not reinventing the wheel
- Consistent user experience becomes key in the services and applications
  - Hidden complexity for various access methods
  - Ultimate goal of seamless service access and usability
- Demand for global interoperability and inter-working
  - Equal stake among various elements in end-to-end chain
  - Global demand for quality, open specifications enabling interoperable and conformant implementations

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The Need for Device Management

- Configuration before OMA Device Management (DM)
  - In Factory, Store or Remotely via one-way only configuration
- 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

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OMA and Device Management

- Diagnostic Monitoring Object – In OMA Work Program
  - Detect, report and repair actual or potential troubles
  - Enable terminals to measure and report key performance indicators
  - Query the device for additional diagnostic data
  - Operators or helpdesks can invoke specific repair procedures embedded in a given handset model
- Connectivity Management Object
  - Seamless operation of device over all the various protocols without manual administration of the device
    - UMTS, CDMA2000, 802.11, 3GPP Packet Switch or WAP Proxy settings
  - 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 IT

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OMA and Content Management

- Categorization Based Content Screening (CBCS)
  - Access to content from any device is ever increasing
  - Broadcast and push content now finds users
  - Based on content categorization and screening rules
  - Content is categorized and flagged based on its characteristics
  - Screening rules are applied and action is taken
    - Rules are provisioned by either end-user or service provider
- Device Profiles Evolution (DPE)
  - Applications and services need to address variable network environments
  - Different users with different devices have a wide range of capabilities and features
  - DPE creates an enhanced device profiles mechanism
  - Allows devices to convey real time dynamic device properties to a service provider
  - Enable content delivery best suited to device's capabilities
    - Memory size, cache size, CPU load, battery life

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Africa and Global Interoperability

- Full integration of Internet and Mobile services provides an excellent opportunity for Africa
- Many new mobile users in Africa will have their first access to the Internet via the handset
- Interoperability with expanding global applications and services is essential for investment in Africa's infrastructure to further develop the market
- The World Cup is an excellent opportunity to build an outstanding infrastructure while the world has its eyes focused on Africa

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