



Applicability of OMA technical standards to the Russian market

**3G Strategic Leadership Seminar
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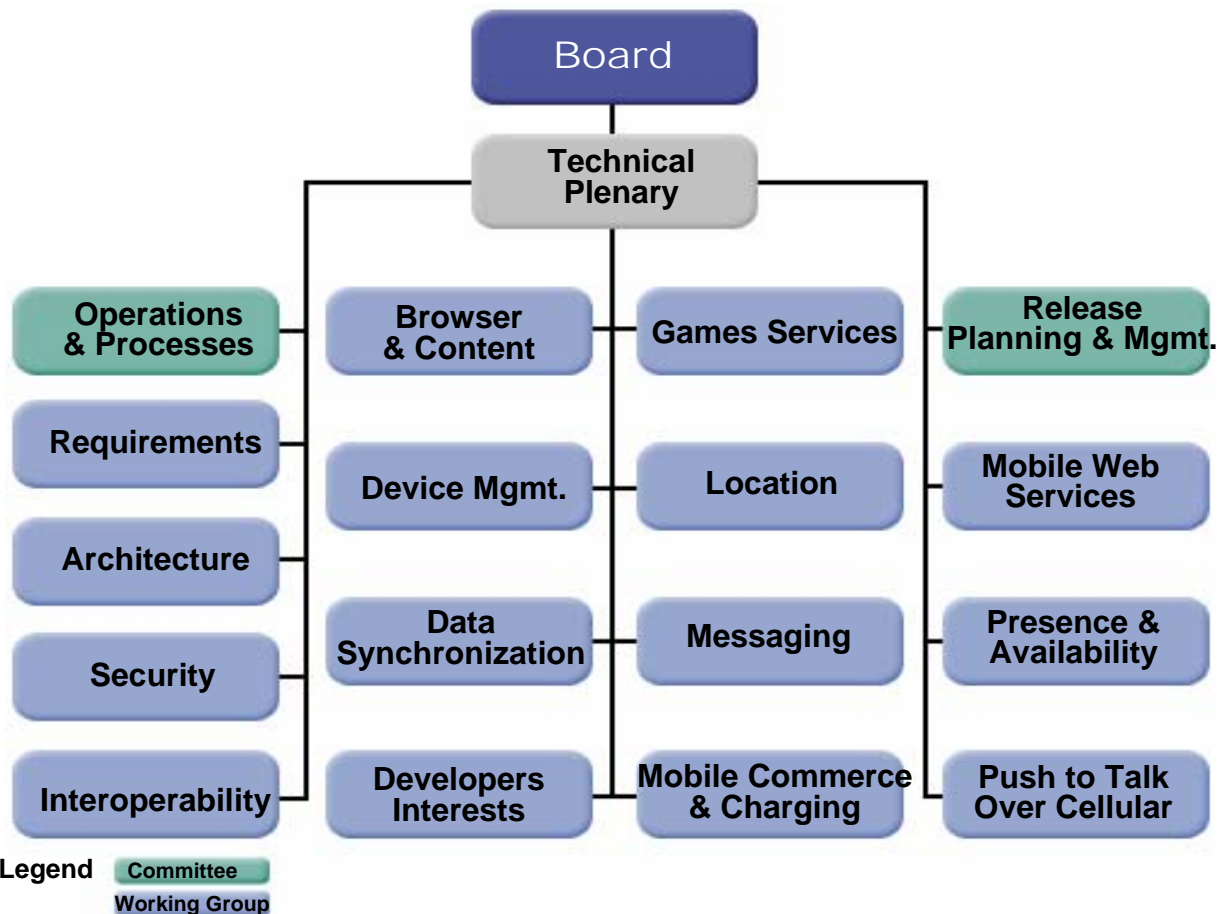
Vice Chairman, OMA Technical Plenary

5 June, 2006

Contents

- Introduction to OMA Working Groups and Scope
- OMA's Application Enabling Technologies
- OMA Enablers in the Russian Market

OMA Working Groups



OMA Enabler Release Program

- Market based
- Packaged open specifications
- Ongoing testing

OMA Interoperability Program

- Tests conformance and interoperability
- IOP documents
- Trusted Zone services
- Third party test locations

Analysis, reports, white papers, industry studies

Creating OMA Specifications

- Specifications generated based on market needs
 - Use cases created to verify market needs
 - Requirements Document captures requirements from use cases
 - Architecture Document defined to support requirements
 - Technical Specifications identify functional support of requirements
- Specifications packaged into “Enabler Releases”
- Multiple reviews ensure support of market-driven requirements
 - Requirements review
 - Architecture review
 - Test review
 - Consistency review

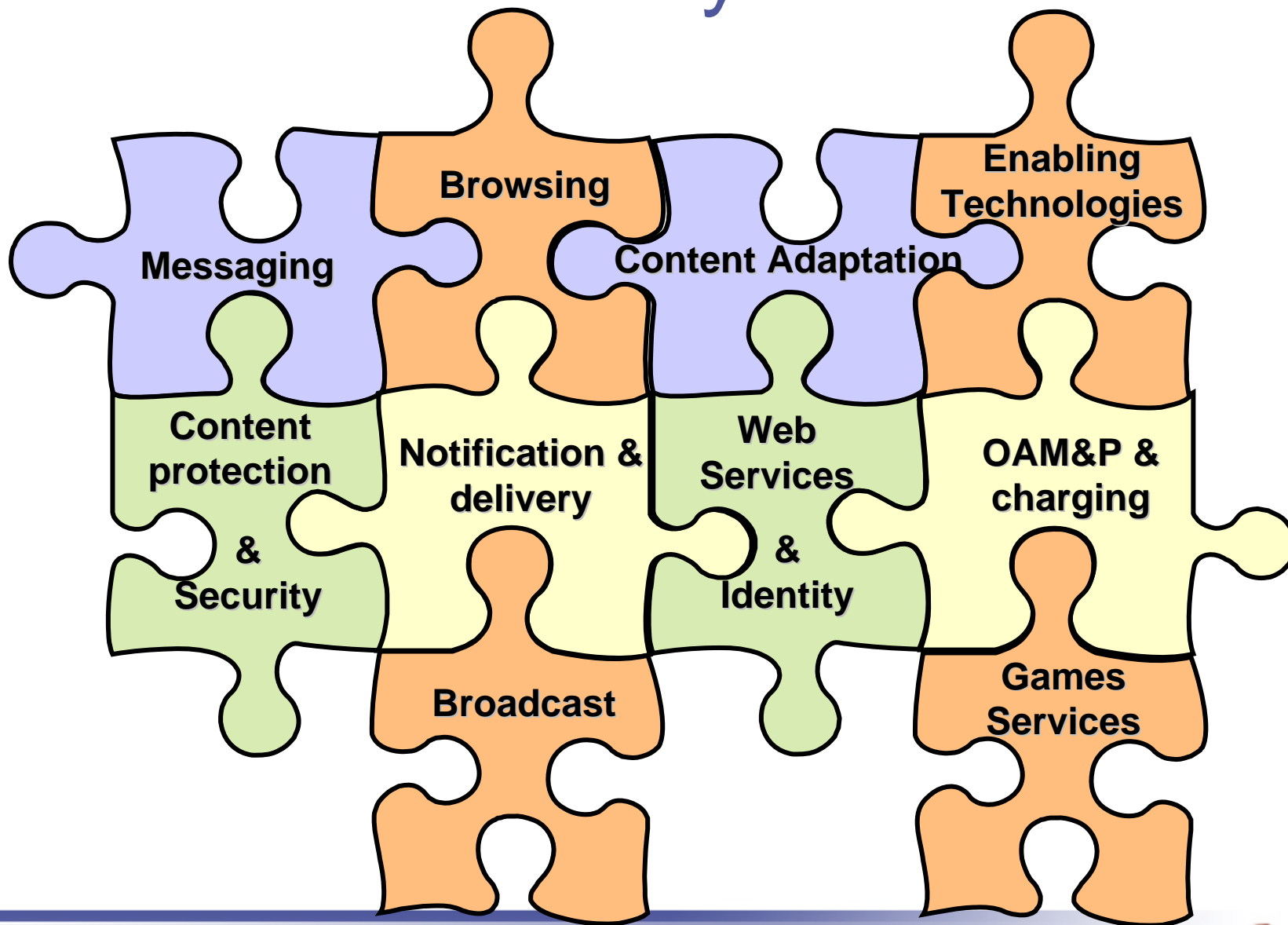
End-to-End Interoperability

- High-quality open specifications
 - Workflow process integrity
- Successful multi-standard interoperability testing in OMA TestFests
 - Specification verification with real product implementations
- Wide adoption of open standards over proprietary alternatives
 - Increased interoperability and decreased fragmentation

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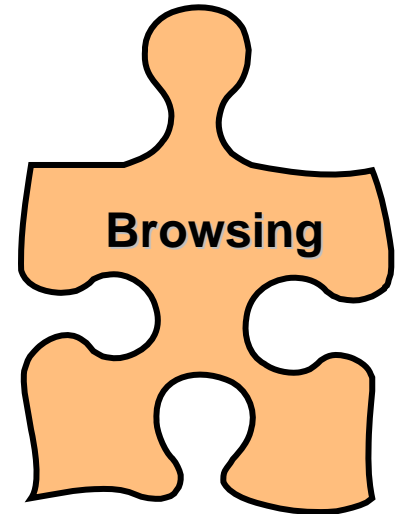
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OMA enablers by theme

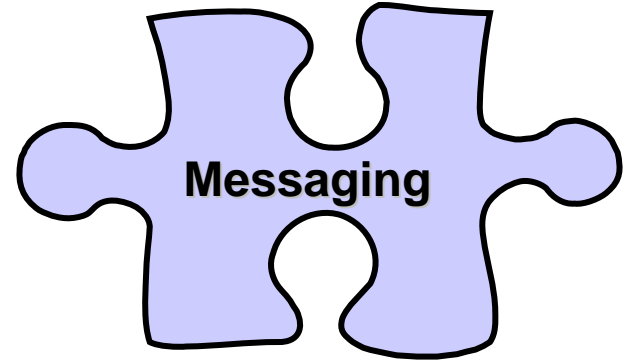


Browsing

- Defines the mobile browser
 - Current release: 2.3
- Very web centric approach
 - ... but with backwards compatibility to WAP
- Current technology base
 - XHTML Mobile Profile (XHTMLMP)
 - Script language support – ECMA Script MP
 - Presentation control: Wireless Cascaded Style Sheets
- Related work in progress:
 - Multimodal/Multi-device, SVG, SMIL, Rich Media Environment
 - Compound Document Format and aspects of web applications are all being pursued

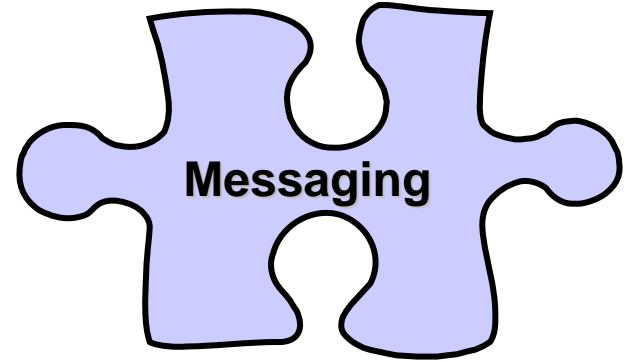


Messaging



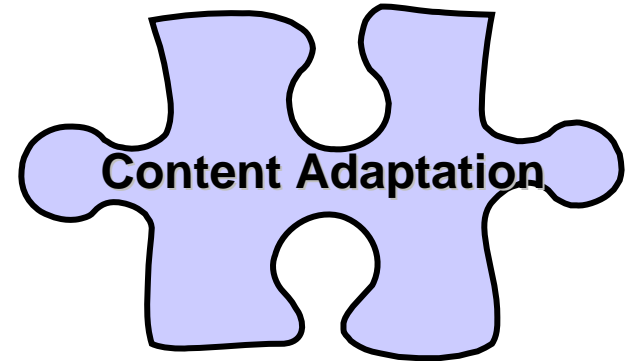
- **MMS**
 - Current release: MMS 1.3.
 - Cooperative work with 3GPP & 3GPP2
 - Primarily person to person rich messaging
 - Utilises store and forward mechanisms for messages
 - Can also be used for value add services
 - Text + images/photos/video + sound clips.
- **IM**
 - Current release: IMPS 1.3
 - Updated version of the Wireless Village OMA affiliate.
 - Provides IM based on simple messages, e.g. SMS
 - Management of, and presence information for, contacts and groups
 - IM based on SIP/SIMPLE being developed

Messaging -2



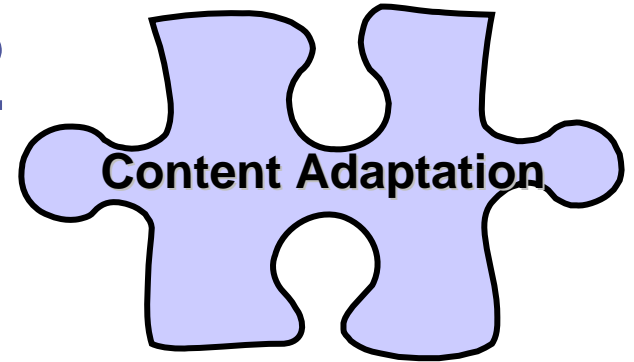
- PoC
 - Current release: PoC 1.0
 - Provides voice messaging: one-to-one and one-to-many (groups)
 - Akin to voice IM/SMS or CB/PMR over cellular with press to talk UI.
 - Utilises contact and group lists and presence information for them
 - Additional functionality being specified
- Other messaging activities
 - OMA email notification
 - Uses Push to notify of email arriving at the mailbox.
 - Messaging interworking
 - addressing; different source/destination technologies, incompatible media types
 - Mobile email

Content Adaptation



- UAPROF
 - Enables services, e.g. browsing based services, MMS etc, to know a device's capabilities and provide optimal content.
 - Current release: UAPROF 2.0
 - Defines a protocol for the exchange of
 - Pointer (URI) to the static device profile suitable for the device
 - Differential profile descriptors to override the static profile
 - Defines the profile schema language
 - Profile validation tool, profile repository now and schema suggestion/registration tool provided by OMA

Content Adaptation -2



- STI
 - Current release: STI 1.0
 - Provides common interface to allow media types to be converted by services, e.g. browsing, MMS...
 - Enables users to receive content compatible with their devices, e.g. graphics type conversion
 - Currently limited to non-realtime media: realtime being investigated
- Futures:
 - Post STI 1.0 activities being defined
 - Device Profile Evolution

Content Protection

- **DRM**
 - Current version: DRM 2.0
 - Defines a Rights Expression Language
 - The “rights” associated with the content defines what can be done with the content
 - 3 basic models: do-not-forward, combined rights and content, separate rights and content.
 - Content may be encrypted for combined and separate rights
 - Supports super-distribution
- **Client-Side Content Screening Framework**
 - Current version: 1.0
 - Framework to allow antivirus and other protection software to be integrated into the device



Content Protection -2

- Security Mechanisms
 - Transport level security provides secured delivery
 - Wireless Transport Layer Security (WTLS) for the WAP Protocol Stack
 - WAP TLS Profile and Tunnelling (W-TLS) spec for the Internet centric stack
 - Application data can be encrypted using the “WMLScript Crypto Library” or “ECMAScript Crypto object”
 - Certificate profile can be used with W-TLS
 - Certificate profile and identity module can be used for authentication
 - On-board key generation enabler provides added capability



Content Protection -3

- Futures:
 - DRM
 - Being enhanced to support OMA's Broadcast activities
 - Improving content domain management & removable media support
 - Security
 - Further security work is in progress.
 - Classification Based Content Screening
 - A technique to classify content and screen if not suited to the user's profile
 - More later in this presentation



Notification & Delivery



- Protocol Stacks
 - WAP 1.x and 2.0 internet centric protocol stacks
 - Used by many enablers, e.g. Browsing, Messaging
 - Current version: OMA Browser Protocol Stack 2.1
 - Service update to the WAP 2.0 protocol stack suite of specifications.
- PUSH
 - Current version: 2.1
 - Provides secure/insecure, acknowledged/unacknowledged async push to devices of content or indicators (URI's)
 - Supports use with the WAP 1.0 and 2.0 protocol stacks.
 - Used by “OMA Email Notification” and “MMS”

Notification & Delivery -2



- OMA Download
 - Current version 1.0
 - Uses a download descriptor to describe the downloadable media object (meta information re content, size, location etc)
 - Descriptor is used to determine whether to download.
 - Can be downloaded via the Protocol Stack etc
- Futures:
 - PUSH
 - Enhanced PUSH security & PUSH over SIP under development
 - Download
 - Download is being enhanced
 - Dynamic Content Delivery
 - Async content delivery in the background for idle time applications, e.g. screen savers, as well as foreground applications

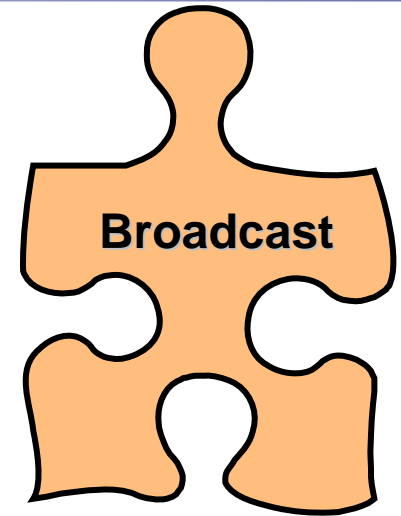
Web Services & Identity

- OMA Web Services Network Identity
 - Current version 1.0
 - Defines network identity for web services
 - Based on Liberty 1.1
- OMA Web Services (OWSER)
 - Current version: 1.1
 - Defines a web services framework
 - Supports registration, discovery, etc.
 - Profiles existing web service standards



Broadcast

- Allows mobile use of broadcast content
 - Allows users to know
 - What content is available
 - When it will be available
 - Allows content to be requested/subscribed
 - Defines how broadcast content is received
 - Allows a degree of service personalisation



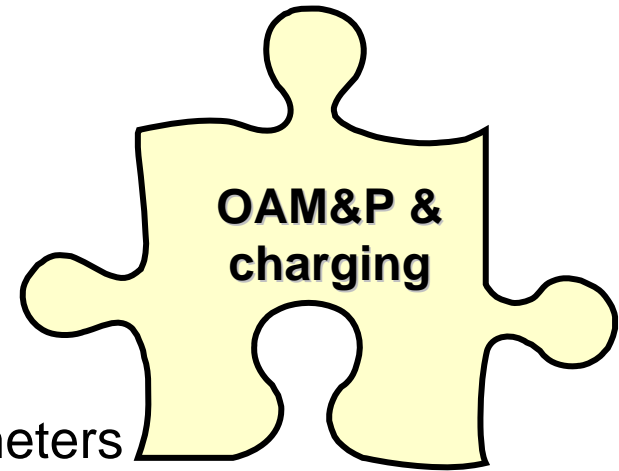
Games Services



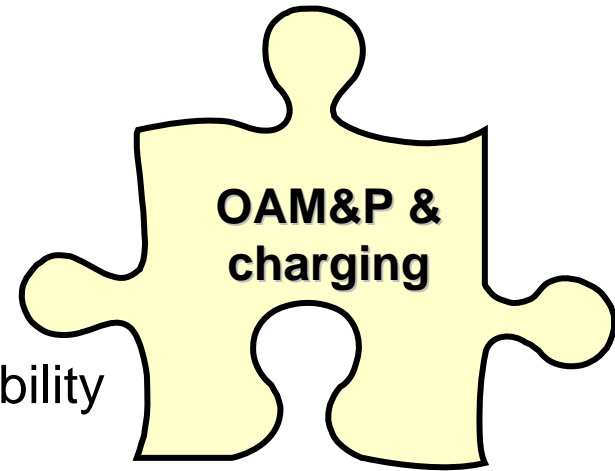
- **Games Services**
 - Current release: 1.0
 - Defines a gaming support platform
 - Defines support for
 - Session management, Connectivity, Metering, Score and competition management, Timers (for game scheduling), Logging (for problem solving etc)
- **Games Services Client Server Interface**
 - Current Version: 1.0
 - Extends GS support to the client server exchange and more
- **Futures:**
 - Enhancements in progress

OAM&P & Charging

- Provisioning
 - Current release: Client provisioning 1.1
 - Provisions connectivity and access parameters
 - Defines bootstrapping for “out of the box” situations
 - Supports SIM based provisioning
 - Supports continuous provisioning (updates)

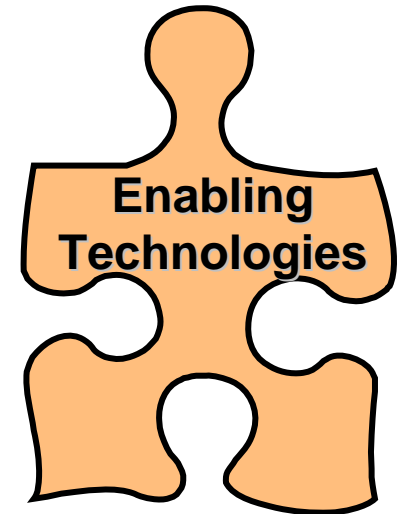


OAM&P & Charging -2



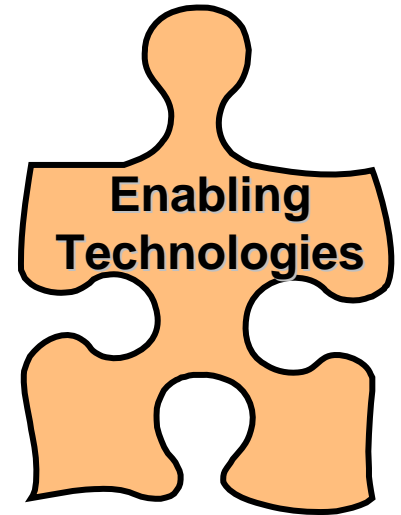
- Device Management
 - Current release: 1.2
 - Defines comprehensive management capability
 - Device and application parameters
 - Install/upgrade of software
 - Defines the protocol and management mechanism, data object and policy
 - Supports multiple transport protocols through bindings
 - Defined in the OMA SyncML Common Specification 1.2
- Futures:
 - DM
 - Enhancement for firmware upgrade etc in progress
 - Charging
 - The requirements for the charging enabler are defined
 - Technical work in progress

Enabling Technologies



- Other technologies not described elsewhere
- Mobile Location Protocol
 - Current version: 3.1
 - Defines the protocol for location information access of a device
- Mobile Location Service
 - Current version: 1.1
 - Defines the core of a location information service.
- Secure User Plane for Location
 - Current version: 1.0
 - Defines a terminal >< Location platform protocol for exchange of location information

Enabling Technologies -2



- **Data Synchronisation**
 - Current version: 1.2
 - Data sync mechanism between end points
 - Supports OMA DM
- **Presence**
 - Current version: 1.0
 - Provides the user/device's presence & availability for IM, PoC ...
 - e.g. not/present, un/available to all or some
- **OMA XML Document Management (XDM)**
 - Current version: 1.0
 - Allows remote manipulation of application data stored in XML form, e.g. lists of users, groups, etc.
- **Futures**
 - Enhancements for Location, Presence and XDM in progress

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OMA Enablers in the Russian Market

- OMA Specifications are designed with market driven requirements across the value chain and commitment to global interoperability
- OMA network agnostic and operating system approach supports implementations based on various network technologies
- OMA technical collaboration with many organizations throughout the world ensure common approaches avoiding divergence and overlaps
- Russian markets rapid growth of mobile users and enhanced services benefit from OMA's global approach and wide range of application enabling technologies