OMA and Mobile Social Networks


Axel Ferrazzini, OMA Board of Directors and Vice-Chair
OMA Device Management Working Group
Agenda

» OMA Overview

» What is a Mobile Social Network?

» OMA Enablers and Social Networking

» Summary
OMA - Vision and Background

» **Vision**

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

» **Open Mobile Alliance**
» international organisation, developing open, market driven interoperable specifications for global adoption of data services

» **Created June 2002**
» by leading mobile operators, device and network suppliers, information technology companies, content and service providers

» ~400 global members
» developing open, market driven interoperable specifications for global adoption - representation from across the widening mobile value chain

» 40+ formal cooperation agreements
» increased cooperation, avoid fragmentation / duplication

» ~100 active work items, ~120 Releases, ~40 published Releases
OMA - Deliverables

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

» Published specifications only part of OMA story
  » Market driven development, members observing industry demand
  » Use cases identify market requirements
  » OMA facilitates market adoption through member-driven specifications

» Mobile and fixed services convergence
  » Mandate expanded to include: “…other present and future wireline and wireless network standards supporting the Internet Protocol family…”
  » OMA enables integrated services and cooperates with fixed line organisations

» Interoperability test programme
  » Product testing in trusted zone - key OMA differentiator
    » verifies specification interoperability
  » Communicates value to market
  » Test Specs, TestFests (24 to date), 1300+ implementations tested, Test Reports
  » Facilitates certification outside OMA
OMA – Organisational Structure

Board

Technical Plenary

Release Planning & Management

“Horizontal Groups”

Requirements

Architecture

Security

Mobile Commerce & Charging

Interoperability

“Personal Communications”

Messaging

• Identity Management Framework
• Supervision, support and review for groups’ requirements, architecture, security, and charging activities

• These groups may also draft specifications on behalf of other working groups

• OMA Service Environment

• Categorisation Based Content Screening

• Supervision and support group for all interoperability activities

• Preparations and support of TestFests

• OMA Global Service Architecture

“Access to Content”

• Mobile Location Protocol
• Mobile Location Service
• User Plane Location Provisioning
• Secure User Plane Location Management

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“Common Enablers”

• Mobile Broadcast Location

• Browsing

• Multimodal and Multi-device Services

• URI Schemes

• Mobile SMIL

• SVG for mobile domain

• vObject

• User Agent Profile

• Games Services

• Client Server Interface

• Mobile Gaming Evolution

• Mobile Gaming Centric Functions

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• OMA Service Environment

• Categorisation Based Content Screening

• Supervision and support group for all interoperability activities

• Preparations and support of TestFests

• OMA Global Service Architecture

• Web Services Interface for DM

OMA – Organisational Structure

Mobile Social Networking - OMA Presentation, Axel Ferrazzini
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Mobile Environment Ideal for Social Networking

» What is a social network?
  » Connecting people with common interests, goals or ideas
» Many people with common interests are already connected
  » On multiple networks, using multiple devices, moving across different locations and access points
» Social networks are a natural extension of mobile networks
  » What is a “friends and family plan” if not a social network?
» Connect from anywhere on any device
  » A natural evolution of today’s online social networking communities
» More handsets connected to the Internet than computers
  » Device manufacturers and operators understand the value of these new communities
  » Majority of users will not leave home or office without their mobile device
» Interoperability between networks, devices and geographies
  » Seamless migration between fixed and mobile environments is crucial to the global scalability of social networks
Marketing Existing Capabilities?

» Many OMA Enablers and other technologies already in the market

» An increasing percentage of devices are capable of surfing the internet, downloading applications and content, and receiving messages
  » Presence information built into the mobile environment
  » Group management already created for the mobile environment

» New Application Service Providers, Vendors and Operators can leverage existing technology to establish social networks onto the handset
  » Completely new mobile social networks for sharing and communicating
  » Extension of existing online social networks

» Create demand in the market for mobile social networking capabilities
  » Increase ARPU and change consumer behaviour

» User expectation and interaction
  » Differentiate services and customize
  » Underlying technology is there or in development
Agenda

» OMA Overview

» What is a Mobile Social Network?

» OMA Enablers and Social Networking
  » Messaging
  » User Profiling
  » Personalization
  » Group Management and Presence

» Summary
Many different capabilities and technologies needed to support a social network

- Messaging protocols
- Profiling of users and devices
- Personalization and customization
- Group management and presence

Each of these areas has a variety of choices for customizing or branding a social networking experience on the handset

OMA offers a toolkit of over 40 Enablers and technologies that support social networking

Global scalability of mobile social network depends upon the interoperability of data applications and services

- Duplication and fragmentation hinder adoption across geographies, networks and devices
- Modular and reusable components are crucial to growth and deployment
- Understanding existing capabilities and improving performance and capabilities of existing infrastructure provide the quickest path to market
OMA Enablers and Social Networking

» Messaging
  » Challenges of fragmented messaging environments
  » OMA, messaging and fixed/mobile convergence
Mobile Messaging Challenge

Today’s fragmented messaging systems

<table>
<thead>
<tr>
<th>Experience</th>
<th>Media</th>
<th>Network</th>
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<tbody>
<tr>
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<td>MMS</td>
<td>IP</td>
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<td>email</td>
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Mobile Social Networking - OMA Presentation, Axel Ferrazzini
OMA Converged IP Messaging

» Specifies future messaging functionalities
  » Enable messaging needs of IP-based services, using reusable components
  » Target IP mobile, home and internet services domains
  » Interoperability of future IP-based messaging with legacy mobile messaging

» Builds on existing user experiences
  » Text/multimedia messaging
    » SMS, IMPS, SIMPLE IM, Email, MMS
  » Voice-enabled services
    » PoC, VoIP, video-o-IP

» Features include
  » User addressing, multiple devices
  » Conversation handling and media support
  » Group communication / management
  » Interworking with legacy services and other systems
  » Network-based storage
  » Application support (ANI)
OMA Converged Address Book

» Extensible address book
  » Incorporates fields from existing formats: Vcard, etc
  » Defines organisation of information related to contacts
  » Integrates other information (e.g. to contact information like bookmarks)
  » Integrates existing device based address book applications and services

» Address book access
  » Access from different networks and services
  » Share up-to-date contact information to additional address books
  » Synchronise multiple devices registered by same user across multiple IP networks
  » Support different views of content based on context, device parameters etc.

» Developing a framework that allows interworking with available messaging and email services using standard data formats
OMA Enablers and Social Networking

» User Profiling
» Device Profiling
OMA User Agent Profile

» Approved OMA Enabler Version 2.0.1 in June 2007
  » Ongoing testing and evolution from early days of OMA
  » Highly functional client side profile for tailored interaction
» End-to-end flow of a User Agent Profile (UAProf)

device ➔ intermediate network points ➔ origin server

» Relevant device capability information shared with all parties
» Origin servers, gateways, and proxies access capability information
» User receives content tailored to presentation environment
» Machine readable schemas
  » Automated profile validation
» Applications and services need to address variable network environments

» Different users with different devices have a wide range of capabilities and features

» OMA DPE creates an enhanced device profiles mechanism

» Allows devices to convey real time dynamic properties to an ASP
  » Support in service adaptation during consumption

» Enable any ASP to provide content best suited to device’s capabilities
  » Memory size, cache size, CPU load, battery life
OMA Enablers and Social Networking

» Personalization
  » Device Management
  » Data Synchronization
  » Look and Feel Customization
OMA Device Management

» DM 1.2: Provisioning the right parameters to any device
  » Over-the-air exchange of settings regardless of bearer network
» FUMO/SCOMO: Over-the-air deployment of new applications and services
  » Firmware Update Management Object allows help desks and operators to support new functionality on existing devices
  » Software Component Management Object allows update, removal and installation of software components to support social networking
» LAWMO: Lock and Wipe secure group information
  » Storage of critical contact and other data on the network
» 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
Shared data scenarios for social networking require advanced and complex capabilities to enable both client and server side support

- Thin device side client for full or partial synchronization
- Forwarding and reply capabilities with attachments
- Server side storage and optional synchronization capabilities

Traffic reduction through data compression, combined commands and packaging

- Reduces overhead for network and device capabilities
- Fewer round trips
- Smaller messages

Always-on views of data

- Merged notification scenarios
- Customizable and continuous transparent synchronization of data stores

Enhanced Security

- Proliferation of devices and access to data requires new security parameters
- Binding and protocol level encryption and authentication
- Optional solutions for both users and operators
OMA Look and Feel Customization

- Allows all stakeholders in a mobile environment to customize the user experience
  - Operators, service providers, manufacturers and users themselves
- Branded and customized mobile social network environment
  - Migration of Web based networks to handsets
  - Launch of new mobile social networks
- Comprehensive customization of user elements
  - Background, wallpaper and screensaver
  - Sounds and ring tones
  - Start up and shut down experience
  - Status and notification indicators and messages
  - Menus, homepages and bookmarks
- Modular interoperability with other OMA Enablers
  - Download over the air
  - Device Management
  - Others
- User elements can be packaged
  - Commonality across all devices
  - Customized or featured on specific devices
  - Render a full set of element parameters across single or multiple devices
» Group Management and Presence
OMA XDM (XML Document Management)

» Highly interoperable across multiple OMA Enablers and technologies
  » Push-to-Talk, IM, Presence, more as needed

» Simple and reusable documents for group management
  » Includes semantics and usage guidelines

» Reusable across a variety of applications and services
  » Store, access and change list information in the network

» Apply other properties to the list or members of it
  » Customize end-user access to certain list members or information
  » Authorize access to documents and lists for specific Enablers or end-users

» Documents can be created for use by multiple Enablers or for one specific Enabler or application
OMA Presence Simple

» Collect and distribute presence information
  » Wide variety of status, availability and device capability information crucial to the functioning of a social network

» Interoperability among fixed and mobile environments is crucial for the extension of existing networks to handsets

» IETF and Wireless Village standards and dependencies
  » RPID, CIPID, XML Configuration Access Protocol, IP Multi-Media Subsystem, Multi-Media Domain
  » Support for SIP signalling protocol and IP traffic

» Agnostic to underlying network
  » Both 3GPP and 3GPP2 specification support
  » Others as well

» Presence Document Creation and Dissemination
  » Publication of availability and capability
  » Authentication of watchers
  » Notification of watchers

» Sharing of preference information among end users
  » Most suitable or preferred means of interaction at any given time according to the Presence Document
Other OMA Uses

» Secure User Plane Location
  » Adds the ability to take location into consideration
  » Social networks can connect content or data to a user’s specific location

» OMA Push
  » Push content, data or messages to users of a social network

» Other Enablers Under Discussion
  » User Generated Content Sharing

» Requirements and features of OMA Enablers driven by market needs
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Summary

» OMA is a global organisation, represented by members from the whole value chain
  » Data services for fixed and mobile devices
  » Wide availability of technologies that support Mobile Social Networking

» The fixed and mobile worlds are increasingly converging
  » Opportunity for mobile vendors and operators

» Participation in OMA can help define the extension of service Enablers that support Mobile Social Networking
  » OMA welcomes participation for as low as $600 per year to participate in testing events
  » Social Networking applications tested within OMA will contribute to the further definition of OMA Enablers