



The OMA Perspective On SOA in Telecoms

“Adopting SOA for Telecom Workshop”, Open Standards Forum 2008

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- » Chairman – OMA Architecture Working Group
- » Distinguished Member of Technical Staff – Alcatel-Lucent, Office of the Applications CTO

- » **Overview of the Open Mobile Alliance**
- » OMA Service Environment (OSE)
- » Parlay X Web Services
- » OMA Mobile Web Services
- » Policy Evaluation, Enforcement, and Management
- » OMA and OASIS
- » Summary and Conclusion

OMA - Vision and Background



» Vision

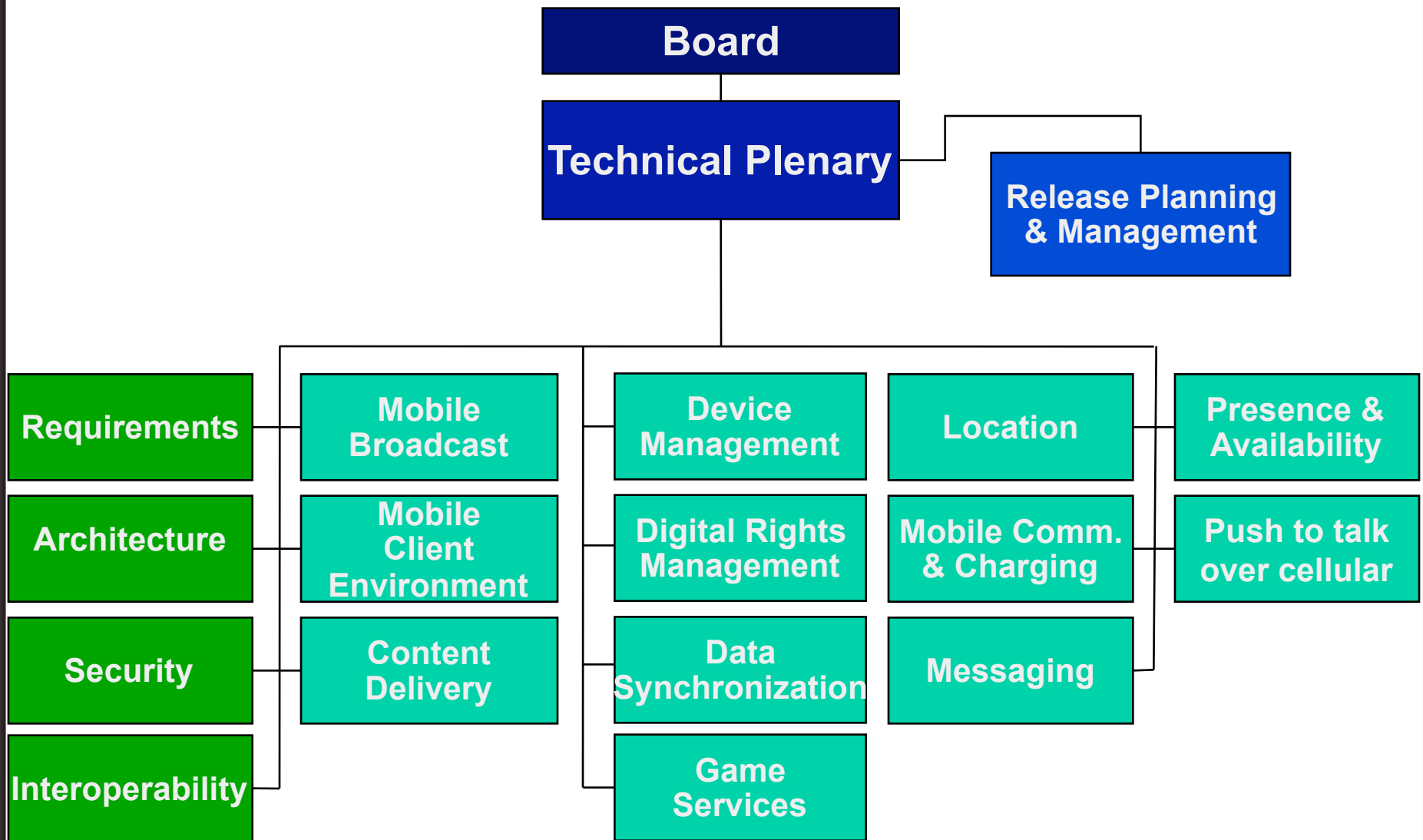
- » **No matter what device I have**
 - » **No matter what service I want**
 - » **No matter what carrier or network I am using**
 - » **I can communicate, access and exchange information**
-
- » **The Open Mobile Alliance is an international organization, developing open, market driven interoperable specifications for global adoption of data services**
 - » **Created in June 2002 by leading mobile operators, device and network suppliers, information technology companies, content and service providers**
 - » **380 Global Members developing open, market driven interoperable specifications for global adoption - representation from across the widening mobile value chain**
 - » **42 Formal Cooperation Agreements avoiding fragmentation and duplication**
 - » **39 Enablers published and over 100 active work items**

OMA - Deliverables



- » **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 - Current Evolved Organization



Highlights of OMA Service Enablers



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

Agenda



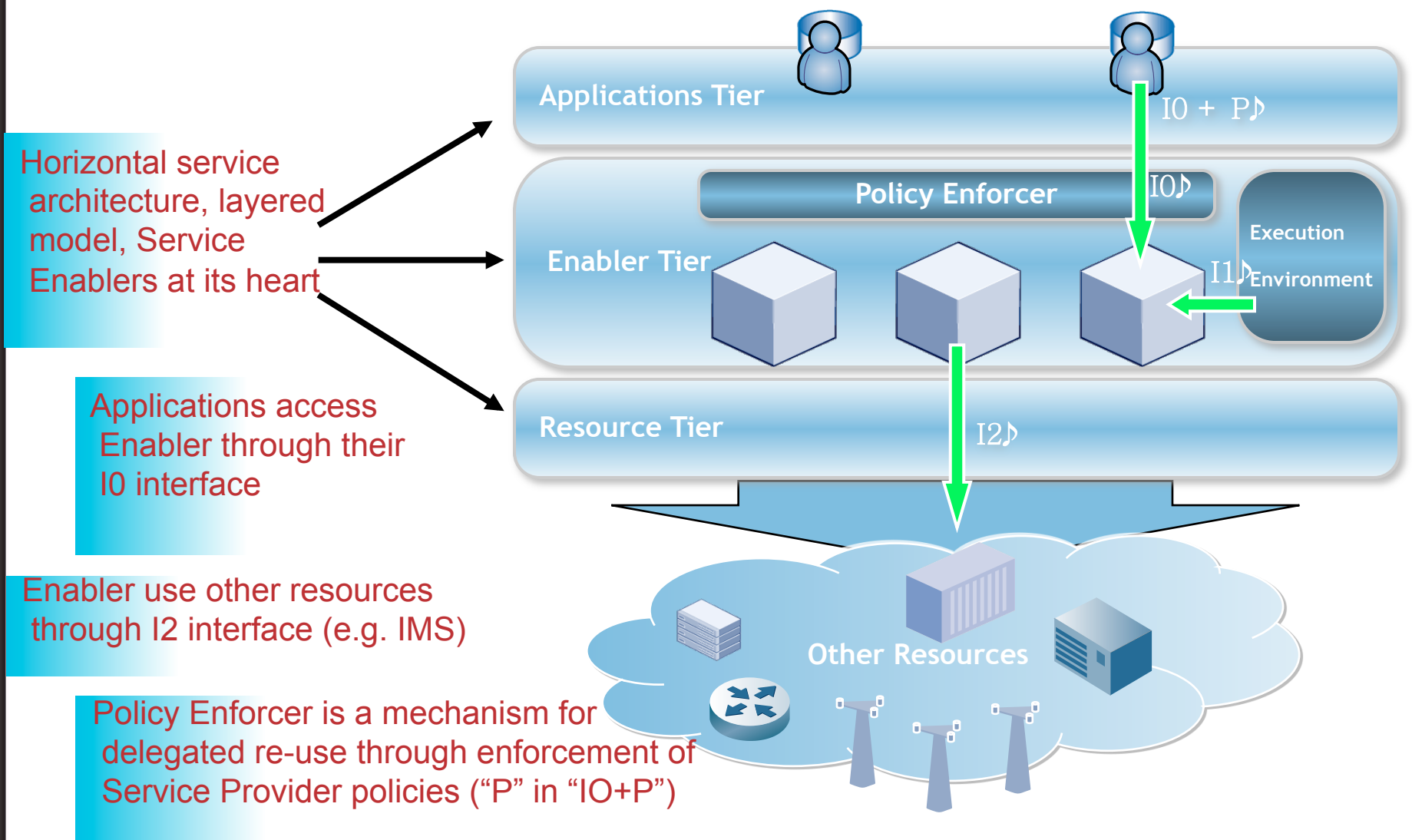
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OMA Service Environment (OSE)



- » The OSE is the horizontal service environment for the development and deployment of OMA service enablers.
- » OSE embraces the SOA principle of loose coupling
 - » OMA specifies Enablers, not end2end services
 - » OSE defines interfaces to these Enablers' intrinsic functions
 - » OSE interfaces are designed for re-use / designed for unanticipated use cases
 - » OSE supports various protocol bindings, including Web services
- » OSE concept is being socialized with and adopted by various other SDO's
 - » E.g. TM Forum Service Delivery Framework, ITU-T NGN open service environment

OMA Service Environment (OSE)



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Parlay X Web Services - Intro



- » *Why Parlay slides in an OMA presentation?*
- » **After having successfully published several releases of Web Service specifications, the work of the Parlay Group will move to the OMA.**
 - » Affiliation is a program in OMA whereby external industry fora are consolidated under the OMA umbrella organization.
 - » In this case, the respective Boards of Directors of both Parlay and OMA along with the joint working groups of 3GPP and ETSI have agreed to move the continuing work to OMA.
 - » 3GPP have transferred their Parlay activities to OMA ARC
 - » ETSI and OMA signed a License Agreement for use with the ETSI specifications associated with the Parlay work
- » **OMA is now the premier organization in the industry where Telco Web Services are being specified, published and maintained**

Parlay X Web Services - Technology



- » Parlay X provides simple, abstracted Web Services based use of network functionality, features and enablers
- » Parlay X Web Service specifications
 - » Use of SOAP, XML, HTTP, UDDI, WSDL as per WS-I BP 1.0
 - » Authentication as per WS-Security 1.0
 - » Transport Level Security using HTTP over TLS as per WS-I BP 1.0
- » Common namespace, XML data types, service exceptions and policy exceptions
- » Common WSDL style guide and naming conventions
- » Common backward compatibility guidelines

- » OASIS Telecom Member Section may provide input here, such as:
 - » Should OMA consider newer versions of WS-I BP for Parlay X?
 - » Are there additional profiles that OMA should consider?
 - » Are the style guide, exceptions, etc in line with industry best practices?

Parlay X Suite of Specifications



- » Part 1: "Common"
- » Part 2: "Third party call"
- » Part 3: "Call Notification"
- » Part 4: "Short Messaging"
- » Part 5: "Multimedia Messaging"
- » Part 6: "Payment"
- » Part 7: "Account management"
- » Part 8: "Terminal Status"
- » Part 9: "Terminal location"
- » Part 10: "Call handling"
- » Part 11: "Audio call"
- » Part 12: "Multimedia conference"
- » Part 13: "Address list management"
- » Part 14: "Presence"
- » Part 15: "Message Broadcast"
- » Part 16: "Geocoding"
- » Part 17: "Application driven QoS"
- » Part 18: "Device Capabilities and Config"
- » Part 19: "Multimedia streaming control"
- » Part 20: "Multimedia multicast session mgnt"
- » Part 21: "Content management"
- » Part 22: "Policy"

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- » Goal: Develop an infrastructure framework and a set of best practices so that OMA working groups can develop their own Web Service enablers in a consistent and interoperable manner
 - » This framework is called the OMA Web Services Enabler Release (OWSER)
- » OWSER addresses
 - » Transport (HTTP as per WS-I BP 1.0)
 - » Messaging (SOAP, XML as per WS-I BP 1.0)
 - » Description (WSDL, XML as per WS-I BP 1.0)
 - » QoS (WS-Security, SAML)
 - » Discovery (UDDI as per WS-I BP 1.0)
- » OWSER and Parlay X share the use of the Common WSDL style guide as well as the WS-I Basic Profile
- » OWSER was published in 2006. As no further phases were envisioned, the technical activities have stopped and the Mobile Web Services working group has been closed down. As a result, OWSER is somewhat dated

- » Question to OASIS Telecom Member Section:
 - » Is producing a Telecom SOA Infrastructure Framework part of your charter?

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- » The Policy Evaluation, Enforcement and Management enabler (PEEM) provides a standardized way to offer processing and management of service provider policies for other enablers created within OMA. Policies are applied to requests to, or responses from resources, or when explicitly called by a resource
- » The PEEM enabler is a way to realize the Policy Enforcer functionality in the OSE
- » PEEM defines a Policy Expression language. One of the language options is OASIS BPEL, for business process based policies
- » OASIS Telecom Member Section may provide input here, such as:
 - » There are some concerns in OMA regarding the real-time, carrier-grade performance of BPEL, when policy processing is transparently applied to all requests in the OSE
 - » Are these valid concerns, and if so, is producing a real-time carrier grade version of BPEL part of your charter?

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- » In 2002, OMA and OASIS have put in place a **Cooperation Framework**, to encourage **collaboration** between the two organizations, bringing standardized technologies to market in a timely and interoperable manner, avoiding duplication of effort that would lead to technology fragmentation. The Cooperation Framework addresses specific guidelines regarding the sharing of documents and the attendance by members of one organization at certain working group sessions of the other organization
- » Examples of OMA specifications using and referencing OASIS technologies:
 - » The use of BPEL as one of the two options for the PEEM Policy Expression Language
 - » The use of UDDI, SAML, WS-Security and XACML in OWSER

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Summary and Conclusion



- » OMA and OASIS already have synergies. A Cooperation Framework is in place, and OASIS technology is being referenced and used in OMA specifications
 - » For their Web Services related activities, OMA may benefit from the input and WS expertise of the OASIS Telecom Member Section
 - » For their Telecom SOA activities, OASIS may benefit from the input and Telecom expertise of the OMA
- » OMA is looking forward to a fruitful cooperation with OASIS Telecom Member Section

More Information

- » **OMA Communications Contact**
 - » Bobby Fraher, External Communications Manager
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>