NPSTC UPDATE

➢ New work at OMA can be characterized as:
  - Significant advances in IOT Enablers, especially Lightweight M2M
  - A focus on the transition to a virtualized network and the resulting impact on the services space
  - Organic updates to core Enablers such as Device Management and Location
  - Some new Location work items related to indoor navigation.
  - Continuing updates to the protocols and test suites supporting RCS.

OMA Enabler Releases:
http://technical.openmobilealliance.org/Technical/technical-information/release-program/current-releases

- ➢ Virtualization is developing fast in the industry
  - • NFV/SDN is in production and deployed VNFs are rapidly moving up the service stack
  - • ETSI is finalizing Stage 2 specs and working on Stage 3 plans
  - • OPNFV is participating in multi-SDO efforts on Information Modeling, e.g. for VNF Packaging and Lifecycle Management
  - • OPNFV is providing a living testbed for VNF interoperability testing
  - • The next stage, cloud-native microservice architectures, is beginning to take shape
- ➢ This will further disrupt approaches to defining services and related standards
- ➢ OMA is in the final stages of publishing a position paper that is a precursor to
  - • Adoption of NFV SWA concepts into the OMA architecture
  - • Adaptation of OMA Enablers for deployment under NFV

➢ Issues this Work Item aims to solve:

- The need for OMA to help the market avoid fragmentation in OMA Enabler VNF deployment, which could occur in the absence of these guidelines and Network Service Descriptor recommendations for specific OMA Enablers.

➢ Market benefits:

- Establish concrete examples for service virtualization, helping other orgs refine the underlying technical concepts and frameworks
- Avoid fragmentation in the coming marketplace for virtualized OMA Enablers
- Accelerate the readiness of existing OMA Enabler-based services to be deployed in virtual infrastructure
- Provide example VNFs to drive development and test of NFV Infrastructure (NFVI) platforms, e.g. in the OPNFV

COMMUNICATIONS (RCS)

➢ The OMA Communications (COM) Working Group is responsible for the specification of messaging and related enabling technologies. The goal of COM Working Group is to specify a set of basic messaging features that may be used to enable specific messaging paradigms.

➢ Converged IP Messaging - The evolutionary interoperability between future IP-based messaging services and legacy Mobile Messaging Services

➢ Current Work Item in progress - V2.2
  • New features for Group Chat conversations
  • Optimization for concurrent multiple sessions handling
  • Enhancements proposed for Group Chat conversations and optimization for concurrent multiple sessions handling

➢ Aims to Solve - New messaging features are needed in the market based on input received from operators active in GSMA, which are defining the new requirements based on specific market needs.

➢ http://technical.openmobilealliance.org/Technical/technical-information/release-program/current-releases/cpm-v2-1

➢ Also developing TTCN test code to be given to GSMA for test of RCS 5.1.

The OMA Architecture Working Group has an active program on RESTful Network Application Programming Interface (API) specifications including:

RESTful Network API for Message Broadcast

➢ This use case is to leverage mobile network broadcast/multicast capabilities for automotive telematics services to alert other road users or other vehicles of an accident in order to avoid more accidents or to avoid traffic jams. A third-party can alert or notify other registered devices about an activity, such as water flooding, accidents etc.

➢ This API specifically provisions area-based public information such as weather, traffic and other emergency-related information of common interest, which makes it very suitable for the message broadcast use case described in ENCap-M2M Enabler

RESTful Network API for Communication Patterns
➢ This API will allow a third-party to provide a Network Operator with information about communication patterns of individual Devices or groups of Devices, such as time and traffic volume related patterns, then location and mobility related patters etc.
➢ Work Item aims to specify a RESTful Network API for a third party to provide a Network Operator with information about predictable communication patterns (CP) of individual Devices or a group of Devices that are served by this third party.
➢ Aims to specify a common way of exposing this configuration for communication patterns which would enhance the usage of network resources.
➢ 3GPP is developing, for Rel-13, a capability to enable network resource optimizations based on communication patterns (CP) of a Device. While the information about CP may be provided by a third party, the interface is missing.
➢ An M2M Application Provider or M2M Service Provider will be able to leverage existing and future network capabilities to enrich the services or to streamline the operation.

- ➤ The OMA Location Working Group develops specifications to ensure interoperability of Mobile Location Services on an end-to-end basis.
- ➤ OMA LPP Extensions (LPPe) - The evolutionary interoperability between future IP-based messaging services and legacy Mobile Messaging Services.
- ➤ Current Work Item in progress - V2.0
  - Support Pedestrian Dead Reckoning (PDR) as new positioning method.
  - Support Image Recognition Based Positioning (IRBP) as new positioning method
  - Enhance positioning accuracy and availability in WLAN environments
- ➤ Aims to increase service quality, particularly for indoor environments, by introducing support for new positioning methods
  - Allow transmission of UE MAC address over LPPE
  - Add granularity to height positioning
- ➤ Also socializing work item for [indoor] Navigation Service Framework.
- ➤ Includes Public safety use cases:
  - Routing information to the responder for reaching the rescue requester.
  - Routing information from the national public safety agency to shelter for each citizen based on their current position

OMA Open Mobile Alliance For a Connected World

➢ The Device Management Working Group defines management protocols and mechanisms that enable robust management of the life cycle of the device and its applications over a variety of bearers.

➢ LightweightM2M - This Enabler defines the application layer communication protocol between a LWM2M Server and a LWM2M Client, which is located in a LWM2M Device. The OMA Lightweight M2M Enabler includes device management and service enablement for LWM2M Devices. The target LWM2M Devices for this Enabler are mainly resource constrained devices. Therefore, this Enabler makes use of a light and compact protocol as well as an efficient resource data model.

• Current in Progress – LWM2M v1.1 to enhance Firewall Traversal, Security Enhancements, LPWAN support, CoAP PubSub, Resource Directory, HTTP2/QUIC & Object Versioning

➢ OMA is hosting an incubator group (groups of interested member and non-member stakeholders) to develop an understanding of the gaps in communication protocol work related to the automotive industry, and specifically the connected car.

➤ Establish a venue for discussion between telecom and automotive at a technical and industry level to establish ***any network, any automobile*** communication

➤ Create a path for the Automotive industry to interface with the rest of IoT via standardized enablers

➤ Bridge existing Telco standards with standardization efforts in the Automotive sector

  • Identify select established telecom specifications to optimize for the needs of the Automotive market

➤ Output coming in October 2016 – technical report on the current array of automotive communications standards efforts with recommendations on how to achieve interoperability
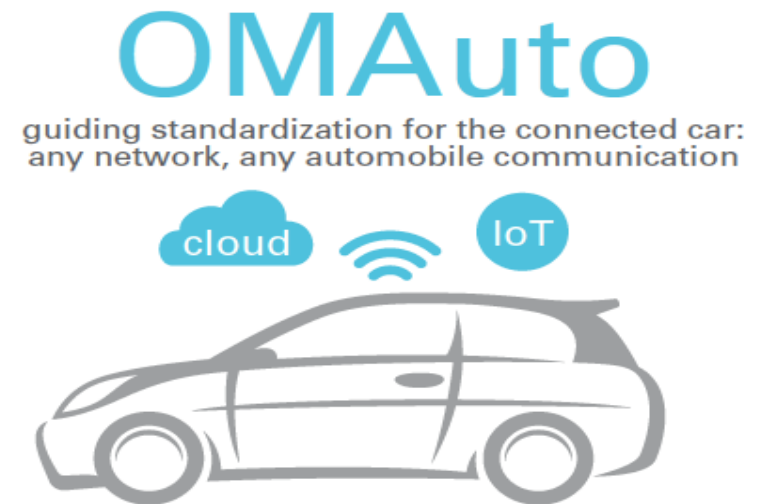
➢ As networks becoming increasing virtualized, we are seeing increasing importance of open source implementations and open source projects across the board in the services space.

➢ A number of high profile SDO have held seminars on the topic of the confluence of Open Standards and Open Source. OMA has completed a survey on the topic.

➢ We expect this topic to become increasingly important.

Thank You