



OMA OpenCMAPI presentation

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Content

- CM is everywhere
- Proper CM is needed
- Solution - OpenCMAPI
- OMA OpenCMAPI v1.0 – Scope
- OMA OpenCMAPI – The Concept
- OMA OpenCMAPI v1.0 – Main Features
- OMA OpenCMAPI – potential future features
- OMA OpenCMAPI v1.0 – Status
- OMA OpenCMAPI – Timelines
- Next steps

Connection Manager is everywhere

- **Definition: A Connection Manager is an entity or an application that manages different network connections based on user profiles associated with these connections.**
- The Connection Manager is the centre of control of the connections and the entity responsible of discovering the networks & potential available connections and establishing the appropriate connection by selecting a network and applying the right parameters.
- Basically, **any device** accessing to internet/data networks through wireless/ Mobile networks is using (and is needing) **a Connection Manager**:
 - Laptop: from the OS (ex: Windows Wi-Fi) or by dedicated application
 - Smartphones: OS Wireless and Networks settings or dedicated one (vendors, operators...)
 - M2M: Automotive applications for example
 - ...

Proper Connection Management is needed

- With the multiplicity of possible mobile networks available (2G, 3G, 4G) as well as the regained importance of Wi-Fi (Wi-Fi offload) and the introduction of new or future types of devices such as cloud devices and new types of applications relying even more on the networks and the need for more and more bandwidth or always on connection and ubiquity to meet the customers' expectations, the need for proper management of connectivity becomes critical.
- and OS connectivity far to be fulfilling all expectations (network and user)
- Operators, OEM/ODM & even users (Corporate) have then to develop and use different and dedicated Connection managers.
- But, up to today, there is no existing Standard or de facto Standard for Connection manager leading to negative impacts (costs, TTM, effort) for the industry.

Solution – The OpenCMAPI

- It was proposed, end of 2010, to create a new work item within OMA in order to define an OPEN Connection Management API as the opportunity to resolve the situation and to produce a standard relevant for the whole industry.

The Open CM API v 1.0:

- The Open Connection Manager API Work Item was formally agreed by OMA in February 2011.
- The agreed Open Connection Manager API Work Item Description (WID_0218) can be obtained from the following URL:
http://member.openmobilealliance.org/ftp/Public_documents/TP/Permanent_documents/OMA-WID_0218-OpenCMAPI-V1_0-20110210-A.zip
- Specifies the OpenCMAPI Connection Management component and the interfaces exposed by this component to applications (CM applications or non CM applications) that rely on OpenCMAPI Enabler to work or to provide additional functionalities.

Scope of OMA OpenCMAPI

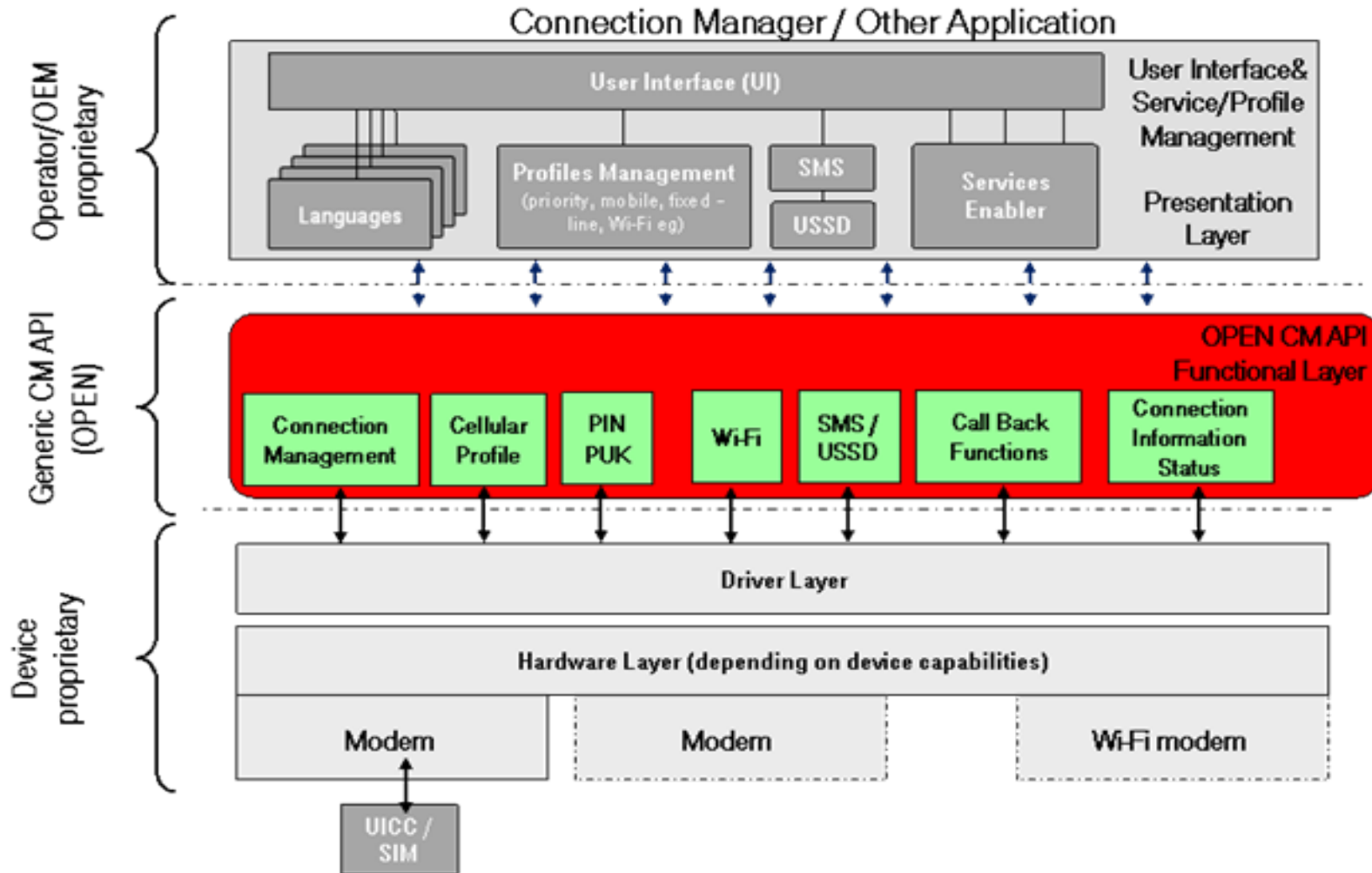
Development and standardization of a commonly supported set of connection management APIs:

- To allow operators, OEM/ODM or any application developers to develop connection manager applications, user experience and services on top of the Connection Manager API independently of the device or the OS used.
- To provide to any non Connection manager Applications, dedicated information status on the connection in order to improve basically the quality of service and the user experience
- To make the APIs applicable to different types of devices requiring access to mobile internet such as Mobile Broadband devices, Wireless routers, M2M, Smartphones, Tablets, Cloud Devices.. in order to facilitate development of services for such devices.

OMA OpenCMAPI – The Concept 1/2

- A Connection manager is basically composed of 2 parts:
 - The hardware & connectivity engine part to manage the device with the necessary functions relevant for the user/customer of the connection manager
 - The user experience presented to the customer and composed mainly of the UI, the profiles and the services offered to the user based on actions and answers from the hardware engine part.
- The Main concept from OpenCMAPI is to separate UI & Settings from the connectivity engine

OMA OpenCMAPI – The Concept 2/2



OMA OpenCMAPI V1.0 – Main Features

- Support of different Network Types (GERAN, UTRAN, CDMA2000, E-UTRAN, WLAN)
- Cellular Network Management
- Device Discovery & Device Service Handling
- PIN/PUK Management & interface with SIM
- Connection Management
- WLAN handling & WLAN authentication
- CallBacks
- Status information handling
- Statistics Management
- SMS service handling
- USSD service handling
- GPS service handling
- Power Management
- Tethering handling
- UICC interface
- PUSH Services

OpenCMAPI – Potential future Features

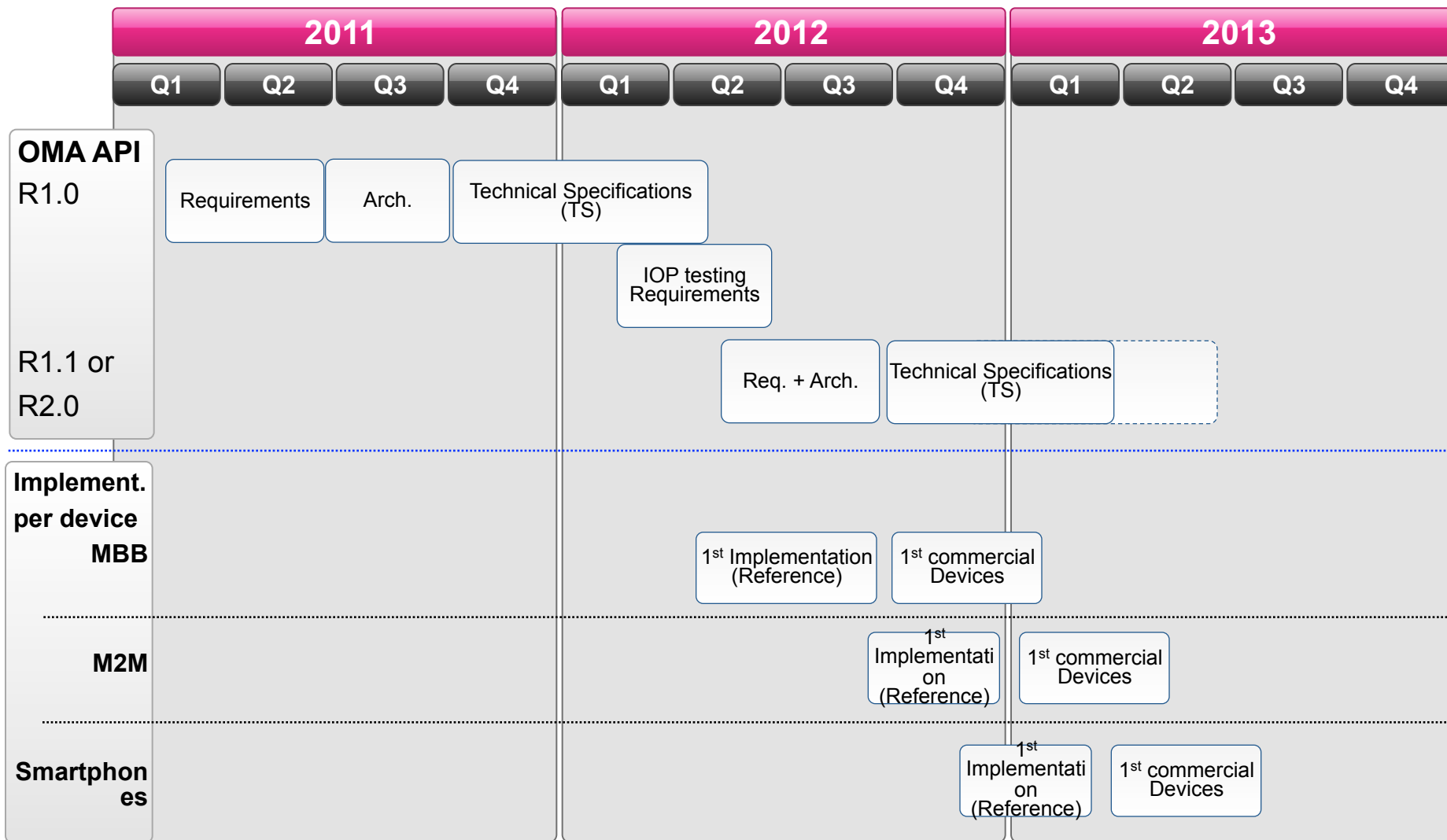
- Support of Hotspot 2.0
- Automatic best bearer / Network Selection improvement (ANDSF...)
- Network performances – Quality of Service
- Application performances
- Interactions with OMA DM
- Phone Book /Contacts management support
- IMS
- Mobile IP
- VPN hooks
- Corporate & Enterprise support
- Single Sign On (SSO)

...

OpenCMAPI V1.0 – Status

- The OpenCMAPI V1.0 RD approved as candidate the 12th Jul 2011.
 - http://member.openmobilealliance.org/ftp/Public_documents/CD/OpenCMAPI/Permanent_documents/OMA-RD-OpenCMAPI-V1_0-20111101-C.zip
- The OpenCMAPI V1.0 AD approved as candidate the 01st Nov 2011.
 - http://member.openmobilealliance.org/ftp/Public_documents/CD/OpenCMAPI/Permanent_documents/OMA-AD-OpenCMAPI-V1_0-20111101-C.zip
- The Technical Specification of the Open Connection Manager API is in good progress in OMA and should be technically finalized by Mid April 2012 => Enabler Release 1.0 to be proposed as candidate.

OpenCMAPI – Timelines



Next Steps

- Better understanding of the IETF MIF API
- How OpenCMAPI can help and provide efficient features for MIF
- Effective collaboration between IETF MIF & OMA OpenCMAPI:
 - Preparation of the next releases (requirements capture & alignment)
- Engagements to start with OS vendors to implement OpenCMAPI within OS (Collaboration may be useful)