ITU Workshop on “Service Delivery Platforms (SDP) for Telecommunication Ecosystems: from today’s realities to requirements and challenges of the future”

(Geneva, Switzerland, 17 October 2011)

WEB and IMS Convergence (wIMS)

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Agenda

- Why do we need web and IMS Convergence (wIMS)
- Introduction of wIMS
- Deployment of wIMS in China Mobile
- Use Case of wIMS
Convergence between Telecom and Internet may bring new user experience

Example of some telecom and Internet converged apps:
- Check the location of your friends, and click to call or text him/her
- Select the text or Pics on the webpage and click to send the selected content to your friends
- Post your footprint on the Google map, and your friend may call or message you on the map
- You may initiate a video call with your friend from the webpage

SMS  IM
MMS  MAP
Voice  Search
Video  Content
LBS  Prs
Conf  Blog
......  ......
How to achieve the convergence between Telecom and Internet

What we need from operator side

- IP based network Architecture to provide telecom service capabilities, such as Voice, Video, MMS, SMS, Presence, address book, Conference, Charging etc
- Open APIs for different service capabilities, such as Parlay APIs, Restful APIs
- Authorization, authentication, security, and management functions for the apps, third party service provider, and developers

Operators may benefit from IMS/NGN and SDP technologies

- IMS/NGN is an IP based network, which provides various service capabilities and carrier class operating and management functions
- SDP is an platform to support the open APIs, and app developing environment etc
Introduction of WEB and IMS Convergence (wIMS)

Combination of different kinds of service capability
- IMS, 2G, 3G, LTE
- 3rd party service capability
- Internet
What can we benefit from wIMS

APP development without wIMS

APP development with wIMS

- Complex Protocol and interface, bring extra difficulty to developers, especially to Internet APP developers
- Bring too much risk and security issue to the network
- No APP access control and management
- ...

- By Using APIs and middleware technology, network complexity is transparent to developers
- Unified APIs are easy to use
- High level Security
- ...

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Functional Architecture of wIMS (1/2)

- Application
  - Widget Apps
  - ICT Apps
  - Web2.0 Apps

- Service Composition Environment (SCE)
  - Composition
  - Composed APIs
  - Interface

- Application Access Gateway (AAG)
  - SSL/TLS
  - AAA
  - Digital Signature
  - XML Firewall
  - OAuth

- Open Service Gateway (OSG)
  - SIP Engine
  - RESTful Engine
  - WS Engine

- Network & Service Enabler
  - SMS GW
  - MMS GW
  - CSCF
  - Group
  - HSS/HLR
  - Centrex
  - MMTEL
  - Presence
  - IM
  - Conf
  - IVR

- APIs (REST/Soap)

- Communication Protocol

- Interface for management

- Application & System Management

- BOSS
- CCF
- OMC

- Dev management
- Test Box
- APP Publish

- wIMS Community
- Q&A

- SDK
- SSL/TLS
- Dev management
- Test Box
- APP Publish

- Application & System Management

- RESTful/SOAP
The main functions of wIMS include:

- **Application Access Gateway (AAG):**
  - Authentication & Authorization (SSL, HTTP basic auth)
  - Service Virtualization (Service discovery and publishing)
  - Data protection (Digital Signature, XML Firewall)

- **Service Composition Environment (SCE):**
  - Different service capabilities may be composed to be the new service capability through this function

- **Open Service Gateway (OSG):**
  - Interface with service enablers and networks
  - Protocol transformation
  - APIs
Progress of IMS deployment in China Mobile

The global largest commercial IMS system has been developed in China Mobile

- IMS network were deployed in the whole country at 2010, and could be able to support 20M+ users
- At 2011, China Mobile also deployed several IMS service enablers, such as MMTEL, converged IP Centrex, PGM etc. Now China Mobile has around 8M+ IMS subscribers
- The prototype of wIMS (wIMS1.0) was also deployed at 2011

**Scale and Status**

- Completed
- Under construction

Until AUG 2011
wIMS1.0 is the prototype of wIMS

- wIMS1.0 is deployed in China Mobile to support the open APIs of Voice, SMS and MMS
  - Similar as a SDP without SCE
  - Support the basic voice and message capability, such as Click to Dial, SMS, MMS etc
  - Support the RESTful API, it’s easy to use for the internet app developers
Use Case 1: Enterprise Conference Mobile widget

Alex is on a business trip. He needs to book a conference between Bob and Nick for emergency.

The conference goes on very well. When the last one leave, the conference is over.

Alex use his mobile, pad or pc to run the app, login into the OA and initiate a conference quest with Bob and Nick.

The AS calls all the contact info listed in the API parameters. Mobile, POTS and PC client are all supported.
Use Case 2: Internet Business Advertisement

Bob wants to rent out his apartment. Put this information on the Facebook with a click-to-dial name card to hide his mobile number.

Nancy browses the information, and wants to rent Bob’s apartment. She clicks the icon to make a call. Here the SMS API can also be used for security.

When Bob answer the call, Nancy and Bob may talk to each other.

Firstly AS calls Nancy, the IVR is coming to tell Nancy to wait for Bob joining in.
Thanks!

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