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Open Mobile Alliance

OMA Broadcast Service Enabler Standardisation

3G Strategic Leadership Seminar

Alastair J Angwin, IBM

Chairman, OMA BAC

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Outline of the presentation

- Motivation: Mobile Broadcast Work in OMA
- OMA Work Item: Mobile Broadcast Services
- OMA BCAST Specification structure
- Status of OMA BCAST Specifications
- Future Directions of OMA BCAST

Motivation: Mobile Broadcast Work in OMA

- Broadcast technologies are well established as the means to deliver content to large audiences. Examples are:
  - Radio:
    - AM, FM, Digital (e.g. DAB), Internet
  - Television:
    - Analogue (PAL, NTSC, SECAM etc.),
    - Digital (DVB-T & -S, DVB-H, T-DMB etc.),
    - Internet (IPTV etc.),
  - Information: DAB, via analogue and digital TV (Teletext), etc.

Motivation: Mobile Broadcast Work in OMA

- The existing broadcast technologies are normally just designed to deliver content.
  - Limited or no flexibility. A radio/TV channel delivers a program.
  - Users select the channel when the want a desired program
  - Program details are provided out of band
    - E.g. printed program guides, Teletext informational service, or electronic program guides (for some digital services).
  - Limited or no scope to tailor program content to a user
    - Often no customer relationship or delivery capability to do so.

Motivation: Mobile Broadcast Work in OMA

- The business models, i.e. monetization of the broadcast services, is generally applied at the overall service level, e.g.
  - Regulatory license fee, e.g. the BBC in the UK
  - Sponsored, e.g. PBS in the USA
  - Advertisement funded (commercial breaks in the programs)
  - By virtue of the content, e.g. shopping channels, competitions, etc.
  - Subscription, e.g. Sky. Usually requires conditional access and means to subscribe.
  - Pay per view. Usually requires conditional access and means to subscribe.

Motivation: Mobile Broadcast Work in OMA

- So why has OMA decided to start work on Mobile Broadcast Services?
- Motivation:
  - Mobile broadcast has significant business potential
    - Mobile users are a good opportunity for content consumption
  - Broadcast enables cost-efficient delivery of content to large audiences
    - Ideal to improving the monetization
  - Media industry has content of interest to mobile users
  - Mobile industry has infrastructure for distribution, subscription, interaction, billing and a customer base

Motivation: Mobile Broadcast Work in OMA

- Aims:
  - Based on preliminary study, OMA decided to start work on Mobile Broadcast Services enabler to define a common base for global interoperability of Mobile Broadcast Services and started work.
  - In this context, the technology fragmentation of the existing approaches and lack of interoperability was seen a BIG risk for realizing the globally significant business potential of Mobile Broadcast!

Motivation: Who are involved?

- Stakeholders representing the entire Mobile Broadcast value chain shared the concern of possible technology fragmentation and lack of interoperability:
  - Mobile network operators
  - Mobile service providers
  - Broadcast network operators
  - Broadcasters and media companies
  - Terminal vendors
  - Network and IT infrastructure vendors
- These stakeholders actively contribute now to OMA BCAST work.

OMA Work Item: Mobile Broadcast Services

- What does OMA mean by Mobile Broadcast Services?
  - Services which are made available through broadcast delivery
  - Services which jointly leverage the broadcast and the interaction paradigms
  - Services which can be received, used, and purchased with battery powered, wireless hand held terminals both indoor and outdoor
  - Services where the location of the recipient/receiver may change over time
  - Supporting one-to-many services ranging from the classical broadcast programs to mobile multicast
- Consequently, the BCAST activity was established
  - To specify the requirements, architecture and technical solutions for Mobile Broadcast Services.
  - To package the specifications as Mobile Broadcast Service Enabler (BCAST 1.0), to facilitate global interoperability.

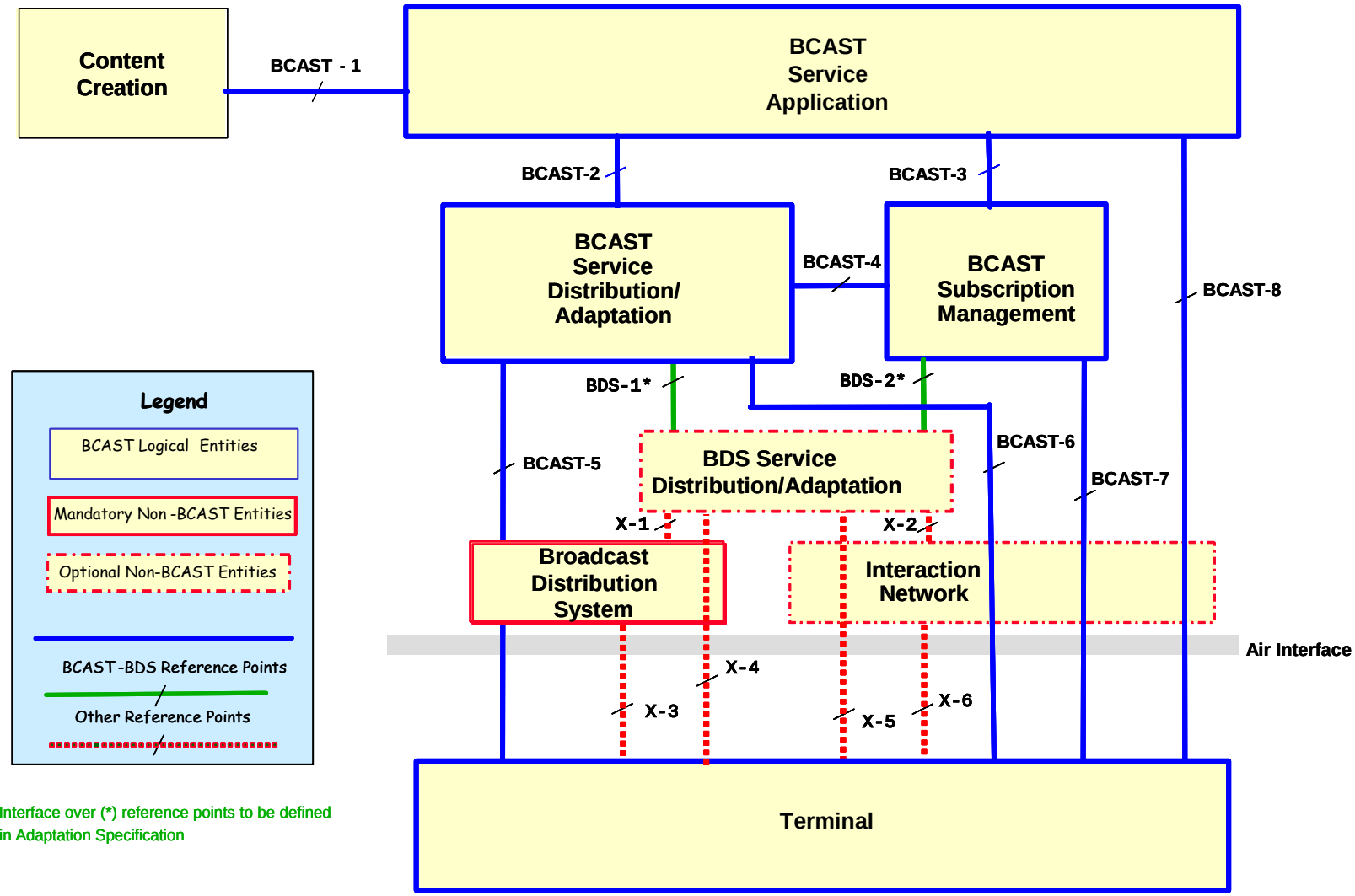
OMA BCAST: Aims

- The aims are to provide the following capabilities:
  - Service Guide
    - Users can see services, select etc.
  - Personalised services
    - E.g. targeted advertisements, language, subtitles……
  - File and stream distribution over multiple broadcast technologies
    - Via broadcast channel or interaction channel.
  - Content protection
    - Content and service protection of delivery. Content protection may have rights associated with it
  - Service Interaction
    - Enables supplementary services, e.g. voting, betting, subscriptions ...
  - Service Provisioning
    - Primary service subscription, payment functions, content selection …

OMA BCAST: Aims

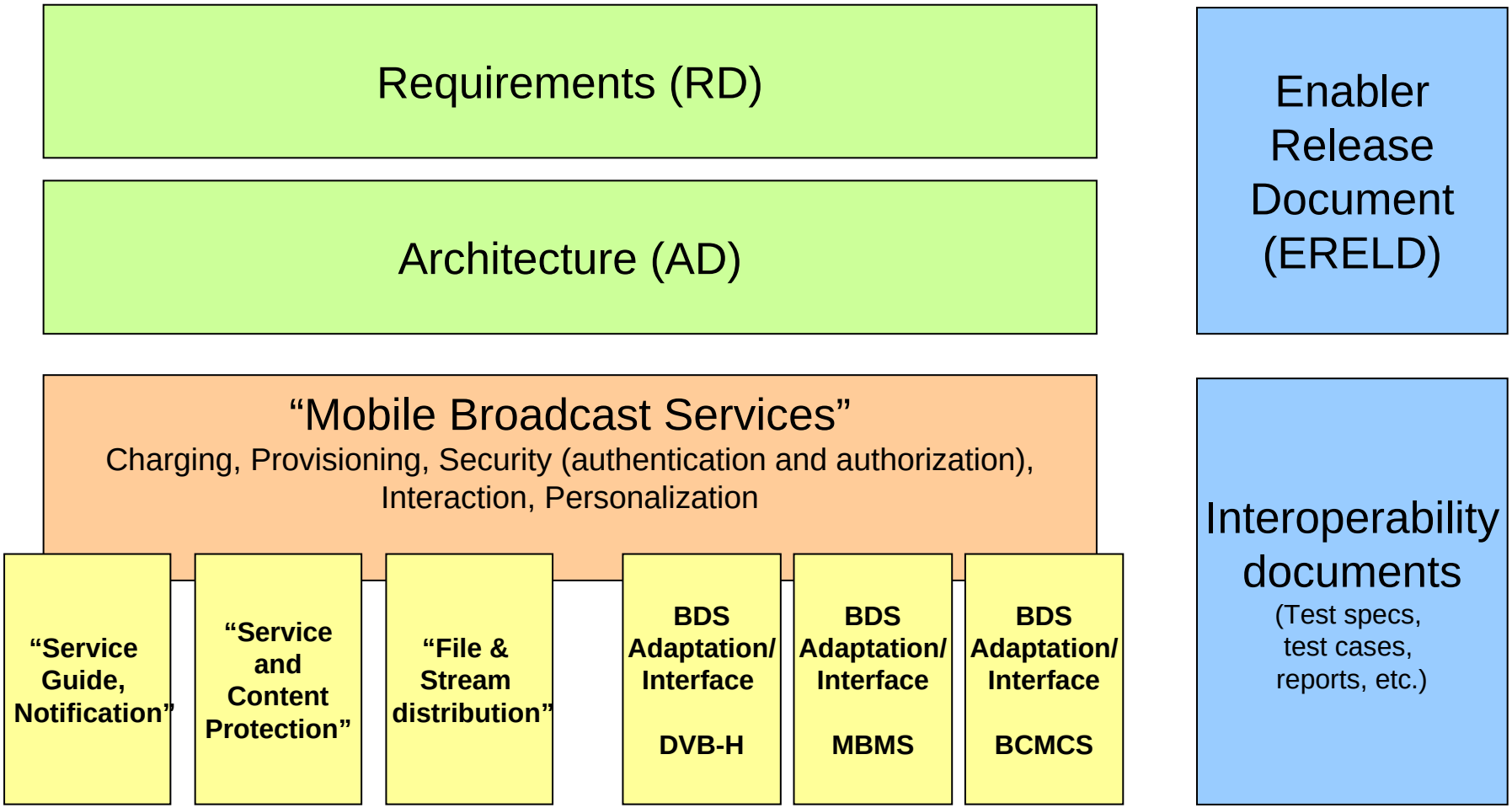
- The aims are to provide the following capabilities:
  - Terminal Provisioning
    - Basic configuration parameters and management object.
  - Notification
    - Informs of upcoming event

OMA BCAST: Architecture



Note : Interface over (*) reference points to be defined in Adaptation Specification

OMA BCAST: Specification structure



OMA BCAST Specifications (1/2)

- Requirements Document (BCAST 1.0):
  - Contains requirements from 3GPP MBMS, 3GPP2 BCMCS and “IPDC over DVB-H”.
  - Also contains new requirements from OMA BCAST
  - Current status: Candidate

- Architecture Document (BCAST 1.0):
  - Contains overall BCAST architecture, function-level architectures and function-related message flows.
  - Current status: Draft (Formal Review Completed)

OMA BCAST Specifications (2/2)

- Technical Specifications (BCAST 1.0):
  - Mobile Broadcast Services
  - Service Guide for Broadcast Data Services
  - File and Stream Distribution for Broadcast Data Services
  - Service and Content Protection Specification for Broadcast Data Services
  - OMA DRM V2.0 Extensions for Broadcast Support
  - Broadcast Distribution System Adaptation for DVB-H
  - Broadcast Distribution System Adaptation for 3GPP/MBMS
  - Broadcast Distribution System Adaptation for 3GPP2/BCMCS
  - Current status: All draft and under formal review
- Schedule (BCAST 1.0):
  - Enabler Package to be approved as Candidate mid 2006.

Future Directions of OMA BCAST

- OMA BCAST 1.0 is designed to be agnostic to broadcast distribution technology.
  - Facilitates the use any broadcast distribution system
  - Currently three such adaptations are under work (3GPP/MBMS, 3GPP2/BCMCS and DVB-H/IPDC)
- In the future it is very likely that other broadcast delivery systems are to be included, subject to input from OMA membership.

Thank You.

Links

- Open Mobile Alliance main web page
  - http://www.openmobilealliance.org
- OMA BCAST Work Item and description
  - http://member.openmobilealliance.org/ftp/Public_documents/TP/Permanent_documents/OMA-WID_0093-BCAST-V1_0-20040420-A.zip
- Publicly available OMA BCAST Specifications
  - http://member.openmobilealliance.org/ftp/public_documents/bac/BCAST/