



Open Mobile Alliance Mobile Codes

GS1 Mobile Com and Extended Packaging Work Group Meeting

Koln 14 November 2008

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- » Overview of the Open Mobile Alliance
- » Background on Mobile Codes
- » OMA's Mobile Codes
- » OMA and GS1
- » Summary

» **Vision**

- » **No matter what**
- » **device I have**
- » **service I want**
- » **carrier or network I am using**
- » **I can communicate, access and exchange information**

» **Background**

- » **International organisation, created in June 2002**
- » **~400 members from across the world**
 - » **mobile operators**
 - » **device and network suppliers**
 - » **information technology companies**
 - » **content and service providers**
- » **~100 active work items, ~120 Releases, ~40 published**

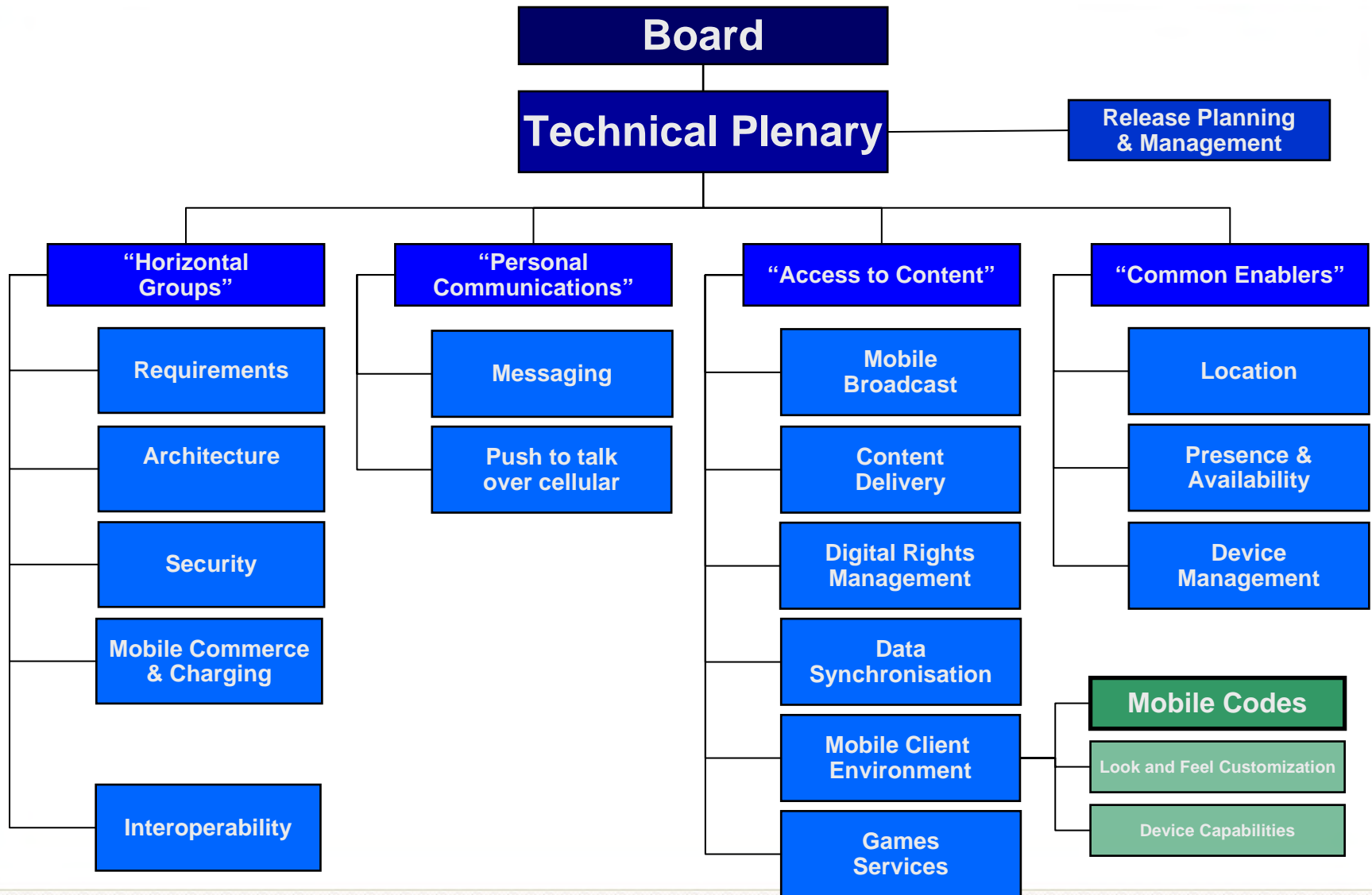
- » **Principal Forum for support of interoperable data services across multiple domains**
 - » Creating specifications driving adoption of multimedia and data services

- » **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 Working Group Structure



- » **Over 20 Candidate and Approved Enablers Published in the Last 18 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.

What's in the OMA pipeline?

» Personal communications

- » Converged Address Book
- » Converged Messaging
- » Push-to-Talk Enhancement
- » Mobile Email

» Access to content

- » Categorization Based Content Screening
- » Dynamic Content Delivery
- » DS Data Objects
- » Data Synchronization
- » Smart Card Web Server
- » Secure Removable Media
- » Secure Content Exchange
- » SIP Push
- » Browsing
- » Rich Media Environment
- » Device Profiles Evolution
- » SVG in Mobile Domain

» Common service enablers

- » Presence_SIMPLE
- » Scheduling
- » Connectivity Management Object
- » Diagnostics and Monitoring
- » Device Capabilities Management Object
- » Software Component Management Object
- » Lock and Wipe
- » Device Management Smart Card
- » XML Document Management
- » Secure User Plane Location
- » Mobile Location Service
- » Location in SIP
- » Global Location
- » Generic Service Subscription Management
- » WV-SIP Interworking

» Security

- » Common Function

» Charging

- » Charging Data

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Background - What is a Mobile Code?

- » A 1D or 2D barcode as read by camera-equipped handsets
- » E.g.



QR



Datamatrix

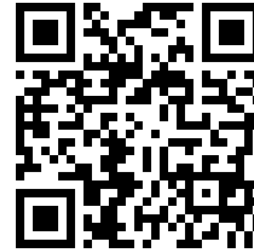


EAN-13

» QR Codes at Tokyo bus stop, 2005



- » Pre-installed on the majority of handsets allowing for widespread use in print and on packaging
- » Symbology
 - » QR (2D) & JAN (1D, see EAN)
- » 2D Data Format
 - » NTT DoCoMo
 - » URL, Business card, Email message, Content e.g. image
- » 2D Direct Method, 1D Indirect Method
 - » All QR codes contain the address of a service or the content itself
 - » Consumers install custom “plug-ins” to obtain e.g. dietary information from JAN codes looked up at server







**Different type of camera for each device (w, w/o autofocus...)
Reader application are not currently pre-installed on devices**



Different symbologies

**Different Data Formats
Data Structure
Numbers**



<http://www.openmobilealliance.org>: Direct access to service

**#TagID: 57893023 -> Redirection Server -> http://.... ->
Indirect Access to service**

» Fragmentation in worldwide market

There is a need of standardization

- » Solution are needed to encourage widespread adoption around the world
 - » Pre-installed handset software conforming to standards
- » **Current Initiatives**
 - » Public trials e.g. BBC, Times newspaper in 2005
 - » 2007: Mobile Codes Consortium. Informal advocacy group (Hewlett-Packard, Publicis, Nokia, Qualcomm, Deutsche Telekom, KPN, Telefónica O2 Europe, Gavitec and Neomedia)
 - » 2007: MC2 companies and partners create OMA Mobile Codes group and GSM Association 2D barcode project
 - » 2008: CTIA Code Scan Action Team created
 - » 2008: White papers from GS1, OMA, GSMA, CTIA
- » **More effort is needed around:**
 - » Convergence between groups
 - » Technical specifications

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- » OMA MC WG was created in Q4 2007.
- » Mission: To develop a White Paper addressing the market fragmentation and performing a gap analysis.



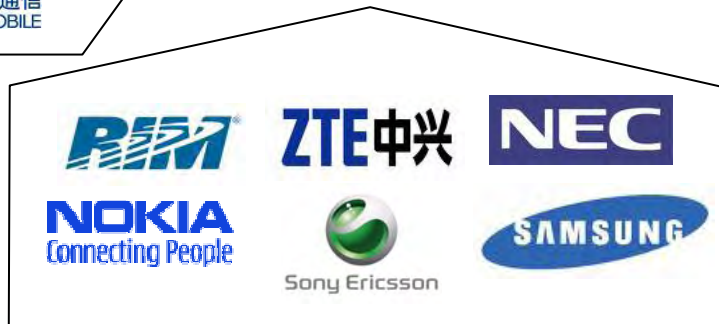
Conclusion:

- There is a need for standardization.
- OMA can perform this task.
- A Complete Technical Specification will be released.

OMA Mobile Codes WG Participants

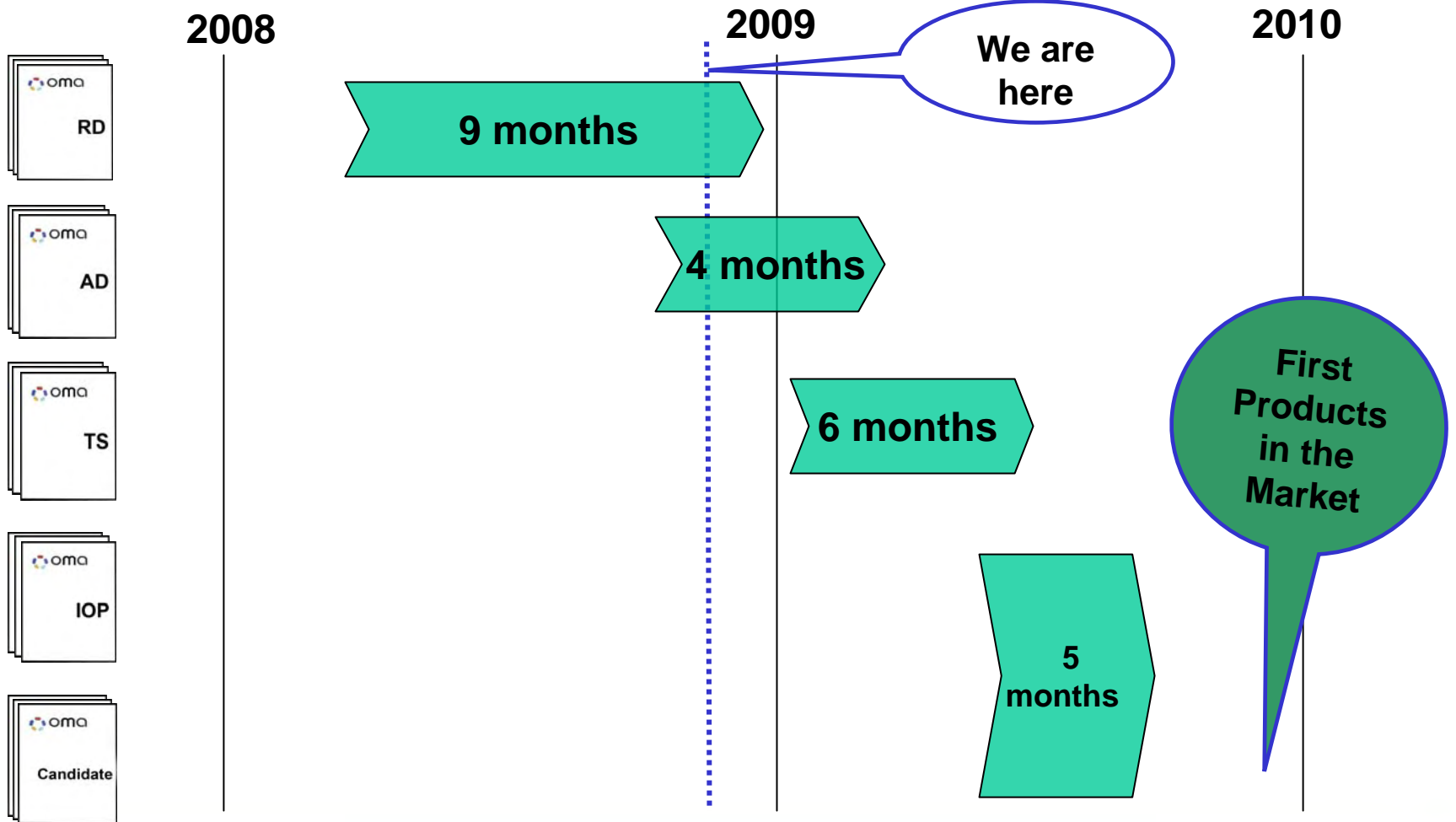


- ~20-25 participants
- Operators
- Device Manufacturers
- Technological Partners

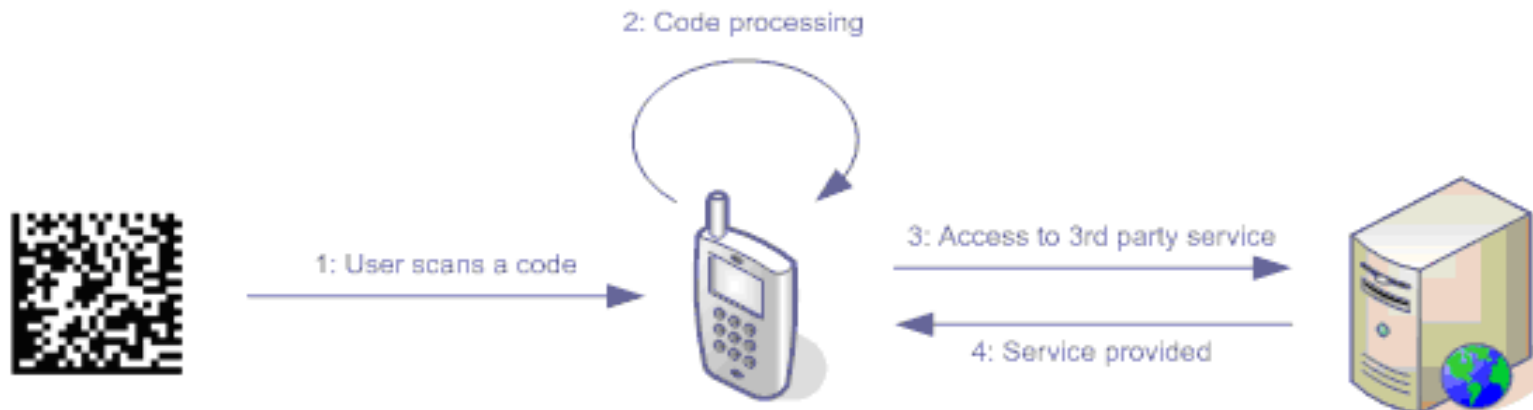


- » Create a standard in which Mobile Codes act as conduits for camera-equipped handsets to access content and services.
- » Choose 2D symbologies, with the goal of reusing existing solutions – “maximizing the modularity of OMA enablers”.
- » Define the format of the data stored in the barcodes.
- » Specify the behavior of the devices when reading barcodes, including behaviors associated with some existing 1D and 2D barcodes.
- » Ensure backwards compatibility with existing and relevant 2D barcode systems.
- » Ensure the full interoperability of the solution developed.

OMA Mobile Codes Timeline



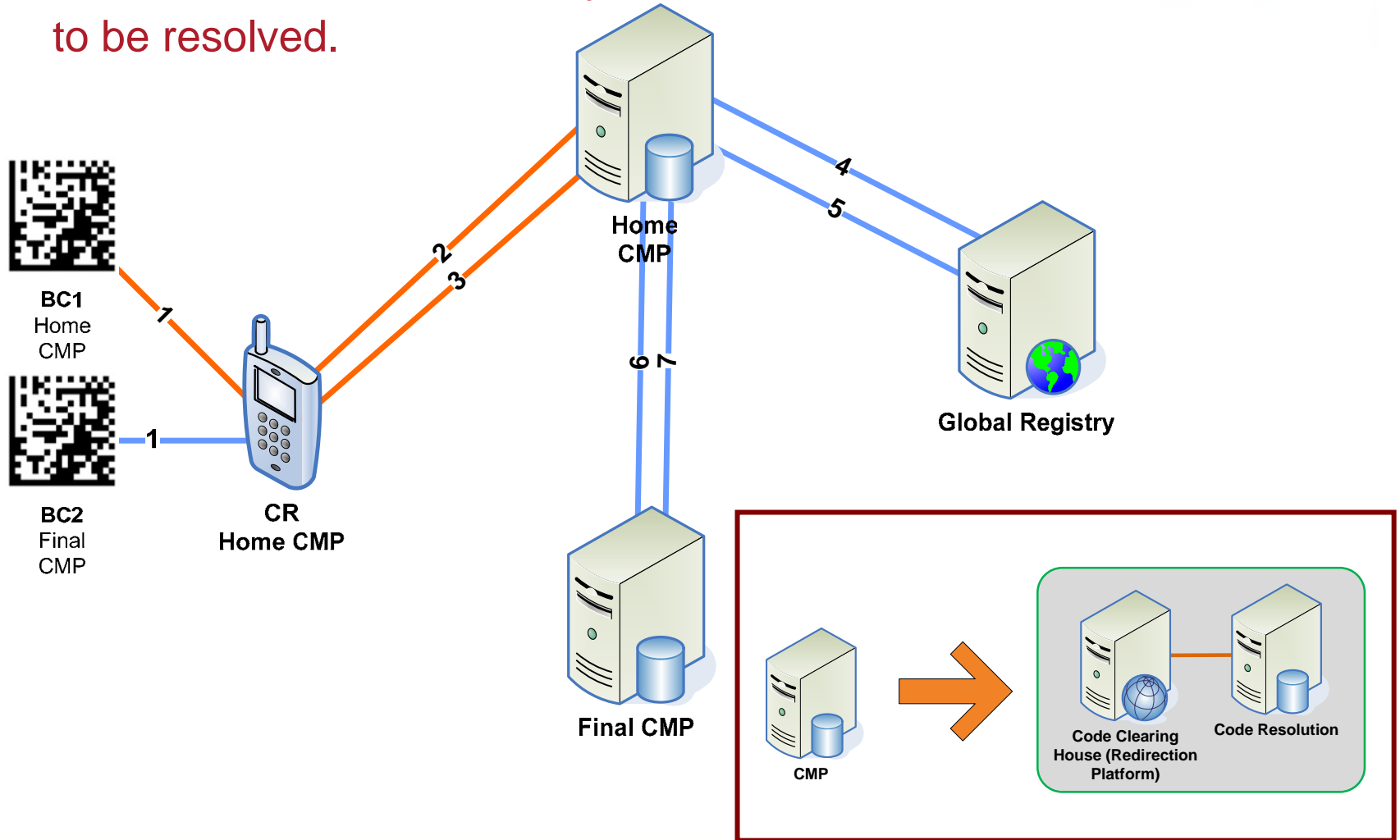
» Direct Mode: service information embedded in 2D code



- » The User scans a code.
- » The Device processes the Code, which contains the information / address of final service.
- » The action is performed:
 - » The User sends an SMS.
 - » The User stores a vCard.
 - » The user accesses a URL: <http://www....>

OMA Mobile Codes Basic Use Cases II

» **Indirect Mode:** The mobile phone contains an 'Identifier' which needs to be resolved.



- » **Main Architectural Entities for Indirect Mode**
- » **Code Management Platform (CMP):**
 - » **Performs a resolution service pertaining to Indirect Mobile Codes.**
 - » **Code Registration:** assigning them to a specific Code Publisher
 - » **Code Routing:** sending codes to another CMP, with/without asking the Registry
 - » **Code Resolution:** mapping the Code into either content or the address of content / service
- » **Mobile Code Registry:**
 - » **Authoritative body that allocates and administrates the identifiers used in the Indirect Code ecosystem.**
 - » **Responsible for allocating and registering CMP Routing Prefixes**
 - » **Responsible for providing a look-up service to the MC Enabler to determine routing information for the CMP responsible for resolving a particular Indirect Code Identifier**

- » **Symbologies:** Choice of symbologies, symbol creation, physical aspects, robustness and reliability
 - » **An Open Standards Symbology will be mandated to ensure a common entry point into the Mobile Codes Enabler.**
 - » **It will be possible to update Mobile Clients with additional symbologies depending on market need and device capabilities.**

- » **Service Aspects Online:** How to perform Mobile Code resolution when an interaction with the network is needed?
 - » **Global Registry: only one**
 - » **Manage a list of Code Management Platforms**
 - » **Assign blocks of Codes to the CMP's**

- » **Service Aspects Offline:** Aspects of MC enabling services without network interaction:
 - » Encoding, recognition and processing of vCards, email, Phone numbers, http URIs, SMS URIs, IM URIs, etc...
- » **System requirements:** Any additional requirements, including:
 - » Invocation of concrete applications upon MC processing
 - » Security requirements
 - » User information data collection and reporting
 - » Tracking and logging of user scanning behaviours
- » **1D Barcode requirements:**
 - » OMA MC Enabler shall be able to process EAN/UPC Barcodes
 - » The processing will be common to the 2D Indirect Mobile Codes

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- » GS1 is currently a **SUPPORTER** member of OMA
- » This level of membership:
 - » Allows participation in meetings if invited by the corresponding WG
 - » Does not allow technical contributions, decision making, voting etc...
- » Updating to the **ASSOCIATE LEVEL** of membership within the OMA
 - » Allows automatic participation in meetings (F2F, conf. calls, email)
 - » Allows technical contributions to be made and participation in decision making
 - » Benefits and opportunities for greater collaboration between the GS1 and the OMA with Associate Level Membership

- » Why it could be interesting to have GS1 participating actively?
 - » OMA includes 1D barcodes on its enabler, in which GS1 is a key player
 - » OMA will need a resolution infrastructure, and GS1 has one
 - » Some other organizations could be interested in take part on the resolution infrastructure, and OMA could be the best framework to discuss and make decisions

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- » OMA is well established and reliable in the mobile value chain.
- » Interoperability is the key to seamless maintenance and integration of devices, services and applications - now and in the future.
- » Mobility is for everyone, everywhere, and has to be easily accessible
 - » At home, in the office, on the road, consumer and enterprise applications must work with evermore complex multi-use devices in multiple environments across a variety of networks and regions.
 - » Interoperable and standardized OMA MC will give a basic yet robust and flexible solution to use Mobile Codes as an enabling technology to access services and / or content.
- » OMA MC Working Group is the place for the industry to best address the challenges of development with a goal of global adoption.
 - » OMA MC has gathered previous experiences on Mobile Codes, analyzed the gaps; got together all actors involved to work towards a satisfactory technological solution.

- » **Topic Experts for OMA interaction**
 - » Bobby Fraher, bfraher@omaorg.org
 - » Iñaki Martínez de Lizarrondo, imli@tid.es
- » **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>

Thank You