

# **OMA and Machine-to-Machine (M2M) Communication**

**TIA 2011: Update on Standards Work and Global Harmonization**  
19 May 2011

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## OMA – Overview

### **More than 135 members from across the mobile value chain**

- Founded June 2002
- Operators, terminal and software vendors, content and entertainment providers

### **Primary deliverables - Interoperable Service Enablers**

• OMA Service Enablers consist of software technologies used as building blocks in the development, deployment and operation of applications and services in both fixed and mobile environments. OMA Enablers are defined as specifications that are published by OMA in Enabler Release packages.

**Collaboration with other bodies – 50 strong relationships including ETSI and 3GPP(2) -- reduces fragmentation and duplication of effort**



## OMA and M2M

### **OMA Well Established in Device Management (DM)**

- 15 service enablers for provisioning, monitoring, maintaining and updating devices
- Success and wide deployment allows extension to both fixed and mobile devices
- OMA DM is applicable to health, transportation, utilities and consumer electronics devices

### **New Service Enabler Near Completion – Converged Personal Network Service (CPNS)**

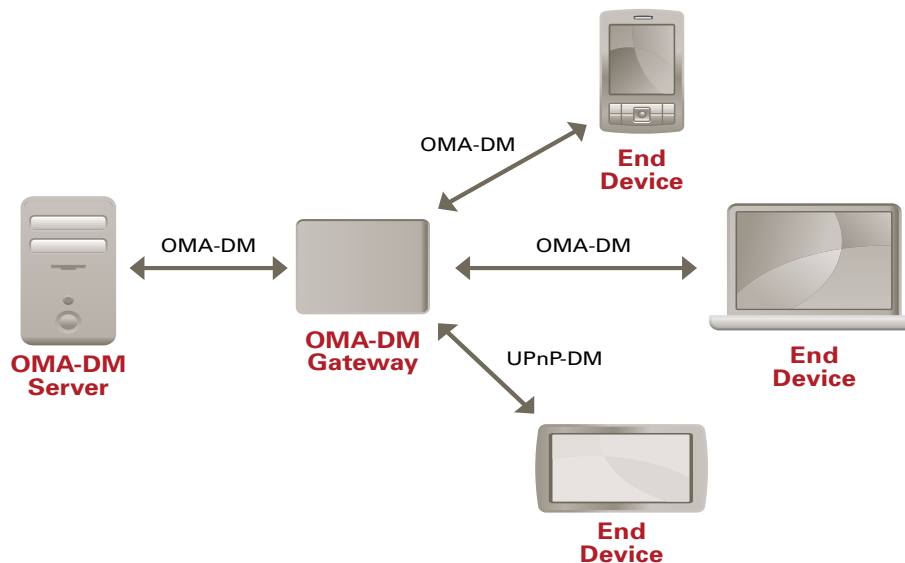
- Allows the creation of a network around non-traditional devices
- Extendable to household appliances, automotive and sensor environments
- Reliable with distributed end points around the globe

### **Cooperation with other industry bodies and OMA M2M**

- GSM Association (GSMA) Embedded Mobile Guidelines
- European Telecommunications Standards Institute (ETSI) acknowledges OMA Enablers as necessary for M2M services
- Universal Plug and Play (UPnP) references OMA in its Device Management and Device Control Protocols
- Co-exists with Digital Living Network Alliance (DLNA) mobile handset work and non-OMA proxies

## New DM Enabler – OMA Gateway Management Object

- Facilitates interaction between a management server and a management client when:
  - Direct and unaided interaction between server and client is not possible
  - Device does not have a publicly routable address
  - Device may be sitting behind a firewall
  - Device supports a management protocol other than OMA-DM
- Enables a single OMA-DM message
  - Issued by a DM Server
  - Sent to multiple end devices
  - Aggregated response sent back to DM Server



## Introduction – What is CPNS?

- OMA CPNS enables universal access to services across a convergence of Personal Networks and Wide Area Networks/Cellular Networks.
- OMA CPNS facilitates the service provision between two different networks that can be interconnected by means of a Personal Network Gateway (PN GW) using a variety of mobile and fixed devices.

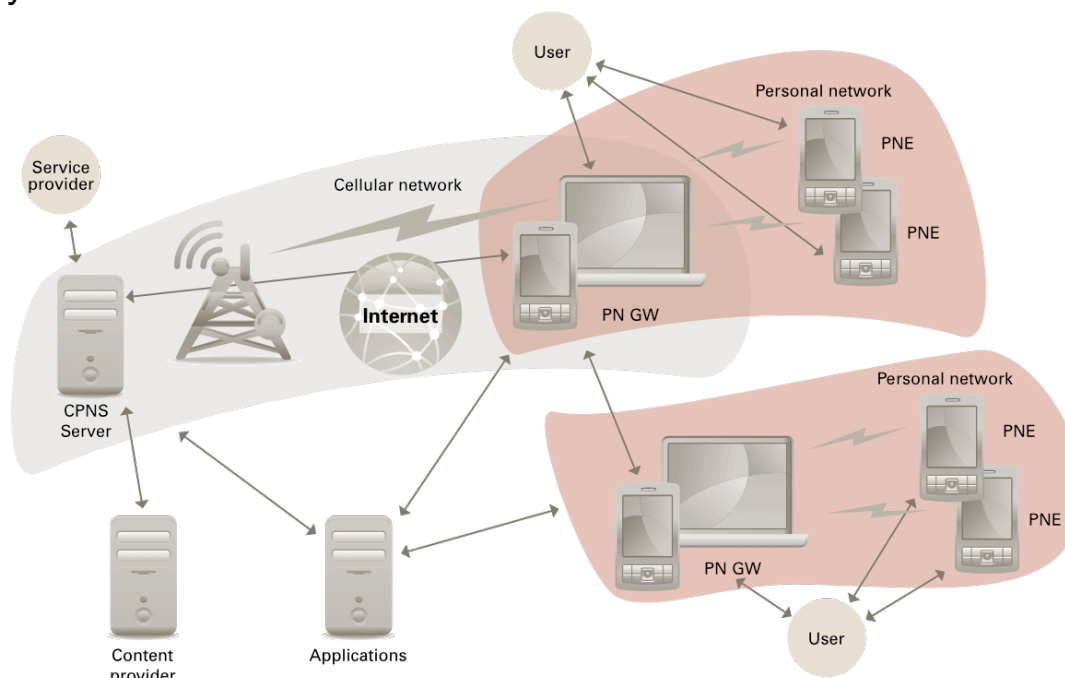


Figure 1: High Level CPNS Diagram

## OMA CPNS Use Cases – e-Health

- OMA CPNS provides an extension for e-health scenarios. Using a PN GW, Health Sensors can access the CPNS server in the global network. This enables regular monitoring and simple daily care.
- Businesses such as hospitals and pharmacies can access information from monitoring devices attached to patients.
- Other e-Health uses could allow parents to access health sensors for their children remotely.

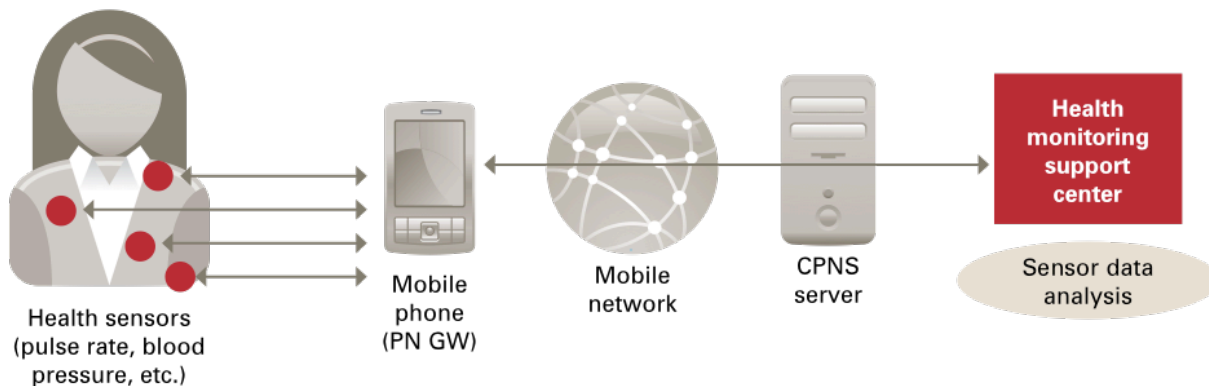


Figure 5: CPNS Application for e-Health Services