OMA Service API standardization
Open Access to Context-aware Service Enablers
Future Network & Mobile Summit 2010
Workshop: Context-awareness in Smart Environments

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Challenges of Future Service World

Next Generation Services to be used in areas of individual, corporation, and society

**Individual: Life Creation**
- Digital Life
- Home network services
- Personalization
- Social & Communities

**Corporation: Business Process Innovation**
- XaaS concept
- Telework (Thin clients)
- Business currency (crossindustrial mileage services)
- Business Continuity & Disaster Recovery

**Society: Safe and Secure Public / Medical Services**
- e-Government
- Emergency services
- Telemedicine
- Energy Management

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NGSI: Next Generation Service Interfaces
Objective and Scope

The objective of the NGSI V1.0 as of the WID:
Extensions for personal communication services, including
• Rich multimedia services
• Access to media/data storages and related control mechanism
Related Context and Personalization within focus for multimedia services

The scope of the NGSI v1.0 is to standardize new functional Network APIs for:
• Data Configuration and Management
• Call Control and Configuration
• Multimedia List Handling Extensions
• Context Management
• Identity Control
• Registration and Discovery functions
(Note: some of those are designed as extensions to existing Parlay interfaces).
OMA Network API work: Positioning of NGSI

<table>
<thead>
<tr>
<th>A market selection</th>
<th>GSMA Profile: One API (Market-specific Parlay API set with REST approach)</th>
<th>OMA PXPROF V1.0</th>
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</thead>
<tbody>
<tr>
<td>Different technologies</td>
<td>OMA Parlay REST V1.0</td>
<td>REST approach</td>
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<tr>
<td></td>
<td>Parlay X → OMA PSA V1.0</td>
<td>SOAP binding</td>
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NGSI going beyond Parlay functionalities, but build upon its inheritance → Next Generation Service Interfaces

- Common functions
- Parlay X Common components (e.g. authentication)
- Functional service APIs
- Extensions
- New

→ OMA’s set of APIs for application development

OMA service enablers | Non-OMA service enablers | Network services | ... |
|---------------------|-----------------------|-----------------|-----|

Service and network layer
- Session / call control
- Identity services
- Preferences
- Media control
- Context
- Data management services
- Group Lists
- ...
Architecture Diagram

Legend

- Indicates use of an interface exposed by an Enabler / Component. The Enabler / Component offering or exposing the interface is indicated by the arrowhead.

- XYZ-n Name of the interface offered or exposed by Enabler / Component XYZ (following the interface naming convention)

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Components and their Interfaces

**Data Configuration and Management**
Management of data of XML documents
Notifications regarding updates to data stored in XML documents
Note: The interface NGSI-3 is an extension to Parlay X Part 13.

**Multimedia List Handling**
Management of a multimedia list composed of Media identifiers or/and any Media types and usage mode
Manage the multimedia list conditions
Note: This interface is an extension to Parlay X 19.

**Registration and Discovery**
Registering resources
Searching for resources
Components and their Interfaces, continued

Call Control and Configuration
Management of media to configure call handling rules and methods
Configuration of multimedia conferencing
Note: These interfaces are extensions to Parlay X Parts 2, 3, 10, and 12.

Context Management
Management of the Context Information about Context Entities
Management of Access to Context Information

Identity Control
Management of the Identities
Control of the Federation of the Identity
Context Management, *detailed*

**Interface Functions**

**Context Entity Discovery Interface (NGSI-9)**

- Register and update the Context Entities, their attributes and their availability;
- Discover (e.g. by query or notification) the Context Entities, their attributes and their availability;

![Diagram showing Context Management Interface Functions]

*continued*
Interface Functions

**Context Information Interface (NGSI-10)**

- Update Context Information associated with Context Entities
- Query for Context Information associated with Context Entities
- Subscribe to Context Information associated with Context Entities, including optionally specifying when to be notified (e.g., on change basis, periodically).
- Notify subscribers about Context Information associated with Context Entities.
Status of the NGSI Standardization Work

**Status**

Work Item start: April 2009  
Requirements Document: approved Sept 2009  
Architecture Document: approved Feb 2010  
Targeted Enabler Completion: Sept 2010

**References**

Requirements Document Latest Version:

http://member.openmobilealliance.org/ftp/Public_documents/ARCH/Permanent_documents/OMA-RD-NGSI-V1_0-20100504-D.zip

Architecture Document Latest Version:

http://member.openmobilealliance.org/ftp/Public_documents/ARCH/Permanent_documents/OMA-AD-NGSI-V1_0-20100401-D.zip