LIAISON STATEMENT

Title:*	Collaboration on WoT/IoT standardization
Source:*	oneM2M MAS/TP
Date:*	2016-10-21
To:*	W3C Web of Things Interest Group, team-liaisons@w3.org
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In response to:	n/a
Send replies to:*	oneM2M_liaison@list.onem2m.org
List of attachments:	n/a

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1 Overview

oneM2M is happy to announce its Release 2 ratification and share with W3C Web of Things (WoT) Interest Group (IG) the published technical specifications. Based on previous exchange between oneM2M MAS and W3C WoT IG, common areas of interest are already identified including information modelling and semantic interoperability. This liaison statement proposes to create regular liaison exchange between oneM2M and W3C WoT IG to further explore the collaboration on those identified common areas as well as potential new topics (e.g. protocol bindings, security, device management etc.) based on the latest output of oneM2M Release 2 and the ongoing work in oneM2M Release 3 (from the oneM2M side).

2 Details

By the end of August 2016, oneM2M has ratified a new set of technical specifications – referred to as oneM2M Release 2. It's the second release package further developed building on top of its Release 1 published in early 2015.

The new specifications open up the IoT ecosystem to devices using various protocols (e.g. HTTP, CoAP, MQTT, WebSocket) and enable interworking among systems using AllSeen Alliance's AllJoyn, Open Connectivity Foundation's OIC, and the Open Mobile Alliance's Lightweight M2M (LWM2M). In addition, the critical area of security has also been addressed by enabling end-to-end secure information exchange between any devices or servers, as well as implementing attribute and role-based dynamic access control.

Meanwhile, semantic interoperability is another major new feature introduced in oneM2M Release 2 to enable meaningful data exchange between heterogeneous IoT devices and applications, especially in the case of cross-domain business. During the development of semantic enablement feature, oneM2M leveraged several existing standards of W3C Semantic Web (e.g. RDF/OWL/SPARQL) to support semantic annotation and query of IoT data, the semantic discovery of those, and the design of the 'Base Ontology' as an upper ontology to enable generic interworking with external systems.

Additionally, to better support domain-specific business, e.g. Home Domain, oneM2M Release 2 also developed a common information model for home appliances base on Home Gateway Initiative SDT (Smart Device Template). With this, devices using different access technologies and information models can be connected and managed in a unified way via oneM2M APIs.

oneM2M has now started its Release 3 work, continuing the enhancement on aforementioned features including but not limited to ontology management, semantic reasoning, mash-up, refined home appliance information model. oneM2M is also aware of the WoT (Web of Things) related work currently developed in W3C (World Wide Web Consortium) for which we foresee synergies with our ongoing developments.

During our previous exchange in the joint web conference in July, several common interests (including information modelling and semantic interoperability as mentioned above) were already identified between oneM2M MAS (Management, Abstraction & Semantics) WG (Working Group) and W3C WoT IG (Interest Group), and potential collaboration on those areas was proposed. The joint meeting was successful in building a mutual understanding on the related work items in both organizations and a strong intention of further collaboration. However, due to lack of time, further topics (e.g. protocol bindings, security, device management) could not been addressed and detailed follow-up work plan for standard collaboration was not yet developed.

oneM2M would like to take this opportunity of its Release 2 publication to share with W3C the latest progress on aforementioned areas of common interests, and to propose to have further joint discussion and technical collaboration with W3C WoT IG to build a harmonized IoT standard ecosystem. To better support this, it would be beneficial if we can have regular liaison exchange between both organizations. From oneM2M side, we propose MAS WG chair Yongjing Zhang (zhangyongjing@huawei.com) as the Liaison contact. In accordance, we would appreciate W3C WoT IG to provide a Liaison contact as well.

To view oneM2M's Release 2 specifications in full, please visit: http://www.onem2m.org/technical/published-documents. Among those, the following list of specifications are most relevant to our common interests that are already identified, i.e. information modelling and semantic interoperability:

- TS 0001: Functional Architecture
- TS 0004: Service Layer Core Protocol

- TS 0012: oneM2M Base Ontology
- TS 0023: Home Appliances Information Model and Mapping
- TR 0007: Study of Abstraction and Semantic Enablements
- TR 0017: Home Domain Abstract Information Model

2   Requested Action

oneM2M would like to collaborate with W3C regarding WoT area via regular liaison exchange.

oneM2M would like to use the opportunity of the upcoming (face-to-face or web-based) meetings to further jointly discuss with W3C WoT IG respective work on information modelling, semantic interoperability and other potential areas of common interests (may involve other WGs of oneM2M e.g. PRO and SEC), and to form concrete work plan of standard collaboration.

3   Next Meeting Dates

Face-to-face meetings

TP 26	Kobe, Japan	2016-12-05 - 2016-12-09
TP 27	Vancouver, Canada	2017-02-13 - 2016-02-17
TP 28	Europe	2017-03-27 - 2016-03-31

Web conferences

- **oneM2M MAS#25.1: Nov 7 (Monday), 2016 UTC 12:30-14:00**
- **oneM2M MAS#25.2: Nov 28 (Monday), 2016, UTC 12:30-14:00**

About oneM2M

oneM2M is the global standards initiative that covers requirements, architecture, API specifications, security solutions and interoperability for Machine-to-Machine and IoT technologies. oneM2M was formed in 2012 and consists of eight of the world's preeminent ICT standards development organizations: ARIB (Japan), ATIS (North America), CCSA (China), ETSI (Europe), TIA (North America), TSDSI (India), TTA (Korea), and TTC (Japan), together with seven industry fora, consortia or standards bodies (Broadband Forum, CEN, CENELEC, GlobalPlatform, HGI, Next Generation M2M Consortium, OMA) and over 200 member organizations. oneM2M specifications provide a framework to support applications and services such as the smart grid, connected car, home automation, public safety, and health. oneM2M actively encourages industry associations and forums with specific application requirements to participate in oneM2M, in order to ensure that the solutions developed support their specific needs. For more information, including how to join and participate in oneM2M, see: www.onem2m.org.