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| MINUTES |
| Meeting title: | RDM 45 e-meeting |
| Chair: | Shane HE, Nokia, shane.he@nokia.com  |
| Vice-Chairs: | TaeHyun Kim, SynchTechno, thyun.kim@synctechno.com Marianne Mohali, Orange, marianne.mohali@orange.com  |
| Secretary: | Peter J. Kim pjk@tta.or.kr Victoria Mitchell vmitchell@tiaonline.orgKatie Bagwill cbagwill@atis.orgKaren Hughes Karen.Hughes@etsi.org  |
| Meeting Date: | 20 April ~ 20 May 2020 |
| Intended purpose ofdocument: | [x]  Decision[ ]  Discussion[ ]  Information[ ]  Other <specify> |

oneM2M Notice

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1 Opening of the meeting

1.1 Welcome

Shane He, RDM Chair, opened the RDM45 meeting on 23 April 2020. Participants were advised to read the oneM2M legal notice on the cover page of the agenda.

1.2 Objectives

The objectives, as listed on the agenda, were reviewed.

1.3 Schedule

1. April 23(Thu) 12:00~15:00 UTC <https://global.gotomeeting.com/join/932479829>

2. April 24(Fri) 12:00~15:00 UTC <https://global.gotomeeting.com/join/637413957>

3. May 6(Wed) 13:30~15:00 UTC (joint with SDS/TDE) <https://global.gotomeeting.com/join/343961541>

4. May 14(Thu) 12:00~15:00 UTC <https://global.gotomeeting.com/join/721172325>

5. May 15(Fri) 12:00~15:00 UTC <https://global.gotomeeting.com/join/497545261>

2 Review & Approval of Agenda

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| [RDM-2020-0037](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31965&fromList=Y) | [RDM45 Agenda](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31965&fromList=Y) | RDM Chair |

RDM-2020-0037 was AGREED

3 Review & Approval of Previous Minutes

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| [RDM-2020-0019R01](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31849&fromList=Y) | [Minutes\_RDM\_44](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31849&fromList=Y) | Victoria Mitchell, Secretariat |

RDM-2020-0019R01 was AGREED.

Comment was made that RDM-2020-0013R02 was agreed at the last meeting and should be reflected in the on the portal.

4 Review of Open Action Status

None

5 Contributions

The RDM Document Allocation ([RDM-2020-0038](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31966&fromList=Y)) will be updated throughout the technical plenary weeks.

5.1 SDT 4.0 discussion

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| [RDM-2020-0028](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31912&fromList=Y) | [SDT 4.0 - Proposed Changes to XSD](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31912&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This contribution overview of SDT Tool status and proses changes to XSD. Suggest to move the tool from GitHub to GitLab. Software license issue needs to be crossed checked with TP and SC leadership before uploading on to Gitlab. Email will be sent by Andreas Kraft.

RDM-2020-0028 was NOTED

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| [RDM-2020-0021](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31825&fromList=Y) | [SDT 4.0 - New documentation](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31825&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This CR proposes an update to the documentation of the SDT version 4.0. It covers all currently agreed CR’s and edit to SDT 4.0.

RDM-2020-0021 was AGREED

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| [RDM-2020-0024](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31858&fromList=Y) | [SDT 4.0 - Renaming Data Types](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31858&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This CR proposes to change the name of the following data type identifiers in order to improve readability as well as alignment with common programming and markup languages. Editorial change (typo) made online.

RDM-2020-0024 was NOTED

RDM-2020-0024R01 was AGREED

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| [RDM-2020-0025](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31860&fromList=Y) | [SDT 4.0 - Removing optional from ModuleClass](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31860&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This CR proposes to remove the “optional” attribute from the ModuleClass definition. The new attributes “minOccurs” and “maxOccurs” were introduced in the contribution “RDM-2020-0001- SDT 4.0 – Proposed Multiplicity for ModuleClasses and SubDevices”. The allow to express the same (and even more fine grain) cardinality as just the “optional” attribute.

RDM-2020-0025 was AGREED

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| [RDM-2020-0026](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31870&fromList=Y) | [SDT 4.0 – Introducing Referenced SubDevices](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31870&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This CR proposes to allow SubDevices to be extended as, for example, ModuleClasses can. It also proposes to allow to define SubDevices directly under a Domain, similar to ModuleClasses and DataTypes in order that SubDevices can be defined in a central place and be extended in a concrete DeviceClass or Product definition. This proposed change is in line with the methodology of TS-0023 where SubDevices are defined separately from DeviceClasses in a different section of the document. SubDevices can be easily identified as well as flexible defined in the SDT. The images referenced in “docs/SDT\_Components.md” etc are NOT updated according with the changes proposed in this CR.

RDM-2020-0026 was AGREED

5.2 TS-0023 discussion

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| [RDM-2020-0027](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31875&fromList=Y) | [TS-0023 4.3.0 SDT](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31875&fromList=Y) | Andreas Kraft (Deutsche Telekom) |

This contribution is for informational purpose. Suggestion was made to bring this discussion to the joint session with SDS and TDE.

RDM-2020-0027 was NOTED

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| [RDM-2020-0040](https://member.onem2m.org:443/Application/documentApp/documentinfo/?documentId=31978&fromList=Y) | [TS-0023 - New containerDefinition values and XSD name spaces](https://member.onem2m.org:443/Application/documentApp/documentinfo/?documentId=31978&fromList=Y) | Andreas Kraft (Deutsche Telekom), Cyrille Bareau (Orange) |

This CR presents new rules for TS-0023, clause 5.2.2 “Description rules for Module Classes and Device models”, clause 6.4 “containerDefinition values”, and clause 6.5 “XSD definitions”.

The new separation of ModuleClasses, DeviceClasses, etc. in different vertical domains was not reflected so far in the rules how to name containerDefinition for the respective <flexContainer> specializations. Also, the naming of XSD files and definitions is updated.

Change 1, Rule 7 introduces a new structuring of enumeration types in TS-0023. If this CR is accepted, then a follow-up CR will introduce this re-structuring.

Revision expected.

RDM-2020-0040 was NOTED

Andrew has asked that review of the updated TS-0023 baselines (RDM-2020-0022, RDM-2020-0023) be reviewed during the 14 May RDM meeting. He found some inconsistencies and has asked for additional time.

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| RDM-2020-0023 | TS-0023-V3\_9\_0\_New\_baseline | Andrew Min-gyu Han (Hansung University) |

This technical specification includes oneM2M defined information model for home appliances and the mapping with other information models from external organization for Rel3.

RDM-2020-0023 was AGREED

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| RDM-2020-0022 | TS-0023-V4\_4\_0\_New\_baseline | Andrew Min-gyu Han (Hansung University) |

This technical specification includes oneM2M defined information model for home appliances and the mapping with other information models from external organization for Rel4.

Section number links are not properly aligned. The baseline within this document is pre-agreed as is but links will be fixed by the next e-meeting for final review.

RDM-2020-0022 was AGREED

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| RDM-2020-0040R01 | TS-0023 - New containerDefinition values and XSD name spaces | Andreas Kraft (Deutsche Telekom), Cyrille Bareau (Orange) |

This CR presents new rules for TS-0023, clause 5.2.2 “Description rules for Module Classes and Device models”, clause 6.4 “containerDefinition values”, and clause 6.5 “XSD definitions”, as the new separation of ModuleClasses, DeviceClasses, etc. in different vertical domains was not reflected so far in the rules how to name containerDefinition for the respective <flexContainer> specializations. Also, the naming of XSD files and definitions is updated.

RDM-2020-0040R01 was AGREED

5.3 TR-0049 discussion

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| [RDM-2020-0036](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31932&fromList=Y) | [TR-0049\_conclusion](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31932&fromList=Y) | Hitachi |

Comment/Issue: The contribution has been postponed till May session due to contributor’s personal issue.

RDM-2020-0036 was POSTPONED till May session

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| [RDM-2020-0036R01](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31932&fromList=Y) | [TR-0049\_conclusion](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31932&fromList=Y) | Hitachi |

This contribution is about the use case of the industrial semantics defined by Plattform Industrie 4.0 which could realize capabilities e.g. Plug & Produce for Field Devices in an Adaptable Factory scenario. The contribution is seeking oneM2M to support semantics features of reasoning, etc., in the industrial domain.

RDM-2020-0036R01 was AGREED

5.4 TR-0001 use cases for new WI: semantic discovery

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| [RDM-2020-0030R01](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31975&fromList=Y) | [Healthcare network and clinical knowledge administration](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31975&fromList=Y) | INRIA, TIM (results from ETSI SmartM2M STF 589) |

This use case looks at the semantic discovery requirements through a networking environment between people with disease (patients), the elderly, who want to live an independent life while remaining in their homes, special invalid people with a high risk of falling in their homes, doctors/care taking people, people practicing fitness exercises to improve their health, and institutions/organizations, who manage a clinical knowledge & information data basis or analyses of patient data.

Some modification in wording in the beginning and adding potential requirements in future document was suggested. Further discussion to be held in the future.

Potential requirements section will be updated. Revision expected.

RDM-2020-0030R01 was NOTED

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| [RDM-2020-0030R03](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31920&fromList=Y) | [Healthcare network and clinical knowledge administration](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31920&fromList=Y) | INRIA, TIM (results from ETSI SmartM2M STF 589) |

Comment/Issue: Editorial changes made online along with document numbering correction. Modification made online and R04 will be uploaded.

RDM-2020-0030R03 was NOTED

RDM-2020-0030R04 was AGREED

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| [RDM-2020-0031R02](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31973&fromList=Y) | [Facility management of a supermarket chain](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31973&fromList=Y) | INRIA, TIM (results from ETSI SmartM2M STF 589) |

This use case assumes a facility manager working for a supermarket chain and being responsible of dozens of buildings, who has to deal with energy efficiency strategies to all buildings and to compare buildings to detect leaks, adjust the heat and the lighting according to forecast or predictive models, assessing the warehouses stocks to refill in time, centralized fault detection to take countermeasures.

Revision expected.

RDM-2020-0031R02 was NOTED

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| [RDM-2020-0031R04](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31922&fromList=Y) | [Facility management of a supermarket chain](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31922&fromList=Y) | INRIA, TIM (results from ETSI SmartM2M STF 589) |

Comment/Issue: None

RDM-2020-0031R04 was AGREED

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| [RDM-2020-0032R01](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31974&fromList=Y) | [Semantic Recommendation in CSEs for Discovery](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31974&fromList=Y) | INRIA, UPM |

Additional information supporting SDS-2020-0039.

This use case looks at the semantic discovery requirements illustrates illustrating an Hospital that has a large number of IoT devices from different domains, which have different goals in the infrastructure. In this scenario, it is necessary to perform a discovery task of suitable devices relying on fine-grained discovery criteria. In addition, the discovery must cope devices belonging to different administrative domains.

These (0030, 0031, 0032) use case documents, have many similarities. Having requirements that address them as a group may be beneficial.

Possible approaches to semantic discovery:

* Build a new section in the document that shows these use cases, simplifying as much as possible, and provide a section outlining the combined requirements to inclusion in TR-0001.
* The original document has many sections that address different vertical use cases. Could be included in Section 12. Include in the introduction, additional information and link to other related sections. Note they’re all related to semantic discovery.

Chair would prefer to have each use case remain as a separate contribution.

Updates to the “potential requirements” section of the contribution will be made.

Revision expected.

RDM-2020-0032R01 was NOTED

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| [RDM-2020-0032R03](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31927&fromList=Y) | [Semantic Recommendation in CSEs for Discovery](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31927&fromList=Y) | INRIA, UPM |

Comment/Issue: None

RDM-2020-0032R03 was AGREED

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| [RDM-2020-0035R01](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31972&fromList=Y) | [Semantic discovery with multiple M2M SP](https://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31972&fromList=Y) | INRIA |

Additional information supporting SDS-2020-0039.

This use case could be considered as either the “use-case zero”, or a “parametric use-case” for Advanced Semantic Discovery because it is suitable to be instantiated in many concrete cases. It shows the importance of fixing, formalizing and extending:

1. Formal Graph Topologies to capture most common scenarios involving networks of M2MSP;
2. Formal Semantic Discovery Routing Mechanism (SDRM) to route a Semantic Query between M2MSP with exhaustivity/non exhaustivity constraints and iterative vs. recursive routing modality;
3. Formal Semantic Discovery Query Language (SDQL) to express a large type of queries;
4. Formal Semantic Resolution Query Mechanism (SRQM) necessary to reduce locally a complex query into a number of simpler queries

This use case shows how things work. This provides more precise requirements and may be the contribution that includes the introduction to the other semantic discovery use cases.

Revision expected.

RDM-2020-0035R01 was NOTED

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| [RDM-2020-0035R03](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31930&fromList=Y) | [Semantic discovery with multiple M2M SP](http://member.onem2m.org/Application/documentApp/documentinfo/?documentId=31930&fromList=Y) | INRIA |

Clarification on the term ‘routing job’ was requested.

RDM-2020-0035R03 was AGREED

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| RDM-2020-0039R01 | INRIA presentation - for RDM-2020-0035R01 | INRIA |

Comment/Issue:

RDM-2020-0039R01 was NOTED

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| [SDS-2020-0039](https://member.onem2m.org:443/Application/documentApp/documentinfo/?documentId=31542&fromList=Y) | [Synchronized Links between Node, AE, CSEBase, and flexContainer](https://member.onem2m.org:443/Application/documentApp/documentinfo/?documentId=31542&fromList=Y) | Deutsche Telekom, Orange, Chordant |

Presentation provides a simulation of what semantic discovery routing could be.

Are there any other publications within ETSI STF that contain this type of information? We need to ensure there is no conflict.

See SDS-2020-0035R01 for supporting information.

SDS-2020-0039 was NOTED

6 Planning for next Meetings

6.1 Next Conference Calls

RDM# 45.1 June 12, 2020, 12:00-13:30 UTC

RDM# 45.2 June 25, 2020, 12:00-13:30 UTC

6.2 Face to Face Meetings

6-10 July 2020, TP46 e-meeting

7 Any other business

8 Closure of meeting

The final RDM45 session was held on 15 May 2020.