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| CHANGE REQUEST |
| Meeting ID:\* | RDM#49 |
| Source:\* | Cyrille Bareau, Orange, cyrille.bareau@orange.comAndreas Kraft, Deutsche Telekom, Andreas.Kraft@t-systems.comMarianne Mohali, Orange, marianne.mohali@orange.com |
| Date:\* | 2021-02-02 |
| Reason for Change/s:\* | See the introduction. |
| CR against: Release\* | Release 4 |
| CR against: WI\* | [x]  Active WI-0084[ ]  MNT maintenance / < Work Item number(optional)>Is this a mirror CR? Yes [ ]  No [ ] mirror CR number: (Note to Rapporteur - use latest agreed revision)[ ]  STE Small Technical Enhancements / < Work Item number (optional)>Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0023 4.7.0 |
| Clauses \* | Clauses 5.8.3, 5.8.5, 5.8.6, 6.2.4, 6.3.4 |
| Type of change: \* | [ ]  Editorial change[ ]  Bug Fix or Correction[x]  Change to existing feature or functionality[ ]  New feature or functionalityOnly ONE of the above shall be ticked |
| Other TS/TR(s) impacted | N/A |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES [x]  NO [ ] This CR may break backwards compatibility with the last approved version of the TS? YES [ ]  NO [x]  |
| Template Version: January 2020 (do not modify) |

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GUIDELINES for Change Requests:

Provide an informative introduction containing the problem(s) being solved, and a summary list of proposals.

Each CR should contain changes related to only one particular issue/problem.

If this is a correction, and the change applies to previous releases, a separate “mirror CR” should be posted at the same time as this CR

Mirror CR: applies only when the text, including clause numbering are exactly the same.

Companion CR: applies when the change means the same but the baselines differ in some way (e.g. clause number).

Follow the principle of completeness, where all changes related to the issue or problem within a deliverable are simultaneously proposed to be made e.g. a change impacting 5 tables should not only include a proposal to change only 3 tables. Include any changes to references, definitions, and abbreviations in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar.

Use change bars for modifications.

The change should include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change. Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the proposed new clause is located.

Multiple changes in a single CR shall be clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.

When subsequent changes are made to the content of a CR, then the accepted version should not show changes over changes. The accepted version of the CR should only show changes relative to the baseline approved text.

## Introduction

Enumerated Types defined for SDT datapoints were disseminated between different domains, although they could be used by different module classes from different domains. Furthermore, they were mostly defined in a ‘hd’ domain, which no longer exists.

In order to rationalize this, we gather all enumerated types in a specific, dedicated domain, called Horizontal Domain with prefix ‘hd’.

R01: in 6.5.1 is completed with more details on domain names and in particular to ease distinction between “*Common*” and “*Horizontal*”

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### Description rules for Module Classes and Device models

* Rule 7: Enumeration type:
* When describing the meaning of values for enumeration type elements, they may be described under clause 5.6.
* The enumeration types for the harmonized information model are based on <xs:integer>, and the numeric values are interpreted as specified in clause 5.6.
* The name of an enumeration type shall start with the prefix “enum”. This prefix shall not be used with non-enumeration type names.
* All enumeration types are defined under the same domain called Horizontal Domain, which does not contain any other entity. They also must use the same XSD name space identifier as defined in clause 6.5.1. Even if an enumeration type is used in multiple module classes from different domains, this enumeration type is defined only once.

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 5.6 Enumeration type definitions

All enumeration types are defined in the same domain, Horizontal Domain, prefix ‘hd’.

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change 3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 5.6.52 hd:enum3DDisplayType

Used for the “3DDisplayType” DataPoint of the “3DDisplay” ModuleClass.

Table 5.6.52-1 Interpretation of hd:enum3DDisplayType

|  |  |  |
| --- | --- | --- |
| Value | Interpretation | Note |
| 1 | Stereoscopic Display | Use “binocular disparity” method to implement 3D display. The technology uses 3D glasses to make the binocular disparity. |
| 2 | Light Field Display | The technology build barriers or lenticular lens on a RGB panel to make binocular disparity effect. It does not need 3D glasses. |
| 3 | Volumetric Display | The technology uses the interference ray as the light source. The 3D image is formed as a set of pixels that the pixels are generated as a bright point in the position of constructive interference is made. This technology does not need 3D glasses. |
| 4 | ETC |  |

### 5.6.53 hd:enum3DScannerType

Used for the “3DScannerType” DataPoint of the “3DScanner” ModuleClass.

Table 5.6.53-1 Interpretation of hd:enum3DScannerType

|  |  |  |
| --- | --- | --- |
| Value | Interpretation | Note |
| 1 | TOF | Use “Time Of Flight” method to scan 3D object. The technology calculates time gap between shooting and return of the reflected laser light. |
| 2 | Phase Shift | The technology uses “Phase shift waveform analysis”. It analysises the distance gap between two reflected laser beam phase which are shot from the scanner. |
| 3 | Waveform | The technology uses “Triangulation method”. Based on the triangulation method, it uses pointbeam or TOF method. |
| 4 | MPT | The technology uses “Miniaturized Projection Technique” to scan. It projects specific pattern of White light, indicates the size and depth by analysis of the reflected pattern on the object. |
| 5 | ETC | The other technology is used to scan an object. |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change 3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change 4 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 6.5 XSD definitions

### 6.5.1 Introduction

The present clause specifies how to name the files which define data types in XSD for Device and SubDevice models, ModuleClasss, Actions and enumerated types.

Seven SDT domains correspond to different vertical, economic domains (*Agriculture, Smart City, Health, Home, Industry, Railway, Vehicular*), they contain devices and modules that are specific to these domains.

*Management* domain contains transversal, Device Management modules, *Horizontal* is only for enumerated types and *Common* is the domain that gathers devices and modules that do not pertain to a specific domain but are re-usable anywhere.

The following table defines the short names for XML name spaces and file name prefix:

|  |  |  |  |
| --- | --- | --- | --- |
| **Domain** | **XML Name Space** | **Domain Prefix** | **URI** |
| Agriculture | xmlns:agd | AGD | http://www.onem2m.org/xml/protocols/agriculturedomain |
| City | xmlns:cid | CID | http://www.onem2m.org/xml/protocols/citydomain |
| Common | xmlns:cod | COD | http://www.onem2m.org/xml/protocols/commondomain |
| Health | xmlns:hed | HED | http://www.onem2m.org/xml/protocols/healthdomain |
| Home | xmlns:hod | HOD | http://www.onem2m.org/xml/protocols/homedomain |
| Horizontal | xmlns:hd | HD | http://www.onem2m.org/xml/protocols/horizontaldomain |
| Industry | xmlns:ind | IND | http://www.onem2m.org/xml/protocols/industrydomain |
| Management | xmlns:mad | MAD | http://www.onem2m.org/xml/protocols/managementdomain |
| Railway | xmlns:rad | RAD | http://www.onem2m.org/xml/protocols/railwaydomain |
| Vehicular | xmlns:ved | VED | http://www.onem2m.org/xml/protocols/vehiculardomain |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change 4 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of change 5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 6.5.6 XSD definitions for Enumerated Types

The XSD definitions for enumerated types are specified upon the following rule.

* Rule: HD-enumerationTypes-v<TS-version>.xsd where the string '<TS-version>' shall be interpreted as the version of the present document.

This file contains the definitions of all enumerated types, and nothing else.

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of change 5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*