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**TELECOMMUNICATION  
STANDARDIZATION SECTOR**

STUDY PERIOD 2017-2020

**SG2-LS104**  
**STUDY GROUP 2**  
**Original: English**

**Question(s):** 7/2

(Ref.: [SG2-TD714-R1](#))

**Source:** ITU-T Study Group 2

**Title:** LS/r cooperation on methodology harmonization and REST-based network management framework (reply to [3GPPTS GSA5-S5-185553](#) and [3GPP TSG SA5 - S5-187340](#))

**Purpose:** Action

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**LIAISON STATEMENT**

**For action to:** 3GPP TSG SA5

**For comment to:** -

**For information to:** -

**Approval:** ITU-T Study Group 2 meeting, (Geneva, 28 February 2019)

**Deadline:** 17 April 2019

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This liaison answers [3GPPTS GSA5-S5-185553](#) and [3GPP TSG SA5 - S5-187340](#).

ITU-T Study Group 2 would like to thank 3GPP SA5 for sending us the liaisons related to our interface methodology and REST-based management work.

During our SG2 meeting, we reviewed your liaisons as well as the related attachments.

Regarding [3GPPTS GSA5-S5-185553](#), we accepted the information and explanations in your liaison, and we will keep our ITU-T M.3020 to be aligned with 3GPP TS 32.150, 32.156 and 32.157 as much as possible in the future.

Regarding [TSG SA5 - S5-187340](#), we reviewed your latest version of 32.158 and 32.160, and we would like to provide the following feedback to you.

(1) Comments and suggestions for 3GPP TS 32.158 (V15.0.1)

- Clause 4.2.3 Mapping of DN to URIs, we would suggest that you may also consider the approach specified in our X.rest, combining the attribute name and attribute value in one node, instead of two nodes.
- Consider defining a generic object class (ManagedObject) in JSON schema or YANG format for inheritance.

- Consider providing the presentation forms of inheritance, containment and association relationships.
- Consider providing Group accessing method for resources in future versions.

For your information, the latest version of ITU-T draft Recommendations related to REST-based network management framework can be found in the attachments to this liaison, which will be further developed in our future meetings.

## (2) Questions and comments for 3GPP TS 32.160 (V16.2.0)

### Stage 1

#### Guidelines

The approach selected in SA5 to reference the relevant parts in M.3020 is appreciated.

The clarifications added in 32.160 are reasonable, e.g. in clause R4.b:

*Note on the Use case template: All occurrences of "(\*)" in the first column "Use Case Stage" of the Use case template in table A.2, as well as the last row with a NOTE at the end of the table, shall not be included in the requirements TS as these are only template instructions to the TS author. For example, "Goal(\*)" shall be converted to "Goal" in the TS. Likewise, for all occurrences of "(M/O)", a choice of M or O shall be made, leaving it as either "(M)" or "(O)" in the TS. For example, "Step n (M/O)" shall be converted to "Step n (M)" or "Step n (O)" in the TS.*

We suggest that similar guidelines are incorporated in M.3020 and will add these to the next revision of M.3020.

#### Choice of templates

In M.3020, the alternative template (A.4) is introduced for cases where the complete template (A.2) is not required:

“The simplified requirements template is an alternative template for use in cases when only the textual requirements are required.”

The rationale for selecting the simplified template for all Management Specifications (MnS) is not obvious and we would like to understand more of the background for these decisions.

### Stage 2

The rationale for identifying groups of Management Services (type A, type B and type C) is not obvious and we would like to understand more of the background and needs for these categories.

For attributes (W4.3.a.2), a slightly modified approach is now used in 32.160 compared to the previous 32.157.

In particular, the attribute support where T and F are introduced, e.g. this example:

Attribute name	Support Qualifier	isReadabl e	isWritab le	isInvaria nt	isNotifyab le
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eNodeBId	M	T	F	T	T
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It is not completely clear what values are allowed – or their semantic – for the attribute support, ref. the following example where isReadable is marked as optional.

Attribute name	Support Qualifier	isReadable	isWritable	isInvariant	isNotifyable
password2	O	O	T	F	F

We suggest to retain the “classic” value set of M, O, - unless there are strong reasons for a change.

### Stage 3

In case of NRM Stage 3, two alternative description techniques are introduced; both JSON schema and YANG.

The rationale for selecting both alternatives is not obvious and we would like to understand more of the background for these decisions.

Section 6.3 contains quite detailed mappings from Stage 2 to YANG. Is a similar mapping planned between Stage 2 and JSON schema?

Are more detailed guidelines for the use of JSON schema planned or in progress?

What alignment of JSON schema rules are planned between 32.160 and 32.158 (the REST based SS)?

ITU-T SG2 is looking forward to co-operaitng with 3GPP SA5 on harmonizations on methodology as well as REST-based management interfaces.

Attachments:

[SG2-C161](#) : Draft X.rest: Guidelines for defining REST-based managed objects and management interfaces

[SG2-C164](#) : Draft Q.rest: REST-based management services

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