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| 3GPP TR ab.cde V0.0.0 (2023-11) | |
| Technical Report | |
| 3rd Generation Partnership Project;  Technical Specification Group Services and System Aspects;  Study on Application enabler for XR Services;  (Release 19) | |
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| ***3GPP***  Postal address  3GPP support office address  650 Route des Lucioles - Sophia Antipolis  Valbonne - FRANCE  Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16  Internet  https://www.3gpp.org |
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# Foreword

This Technical Report has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

**shall** indicates a mandatory requirement to do something

**shall not** indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

**should** indicates a recommendation to do something

**should not** indicates a recommendation not to do something

**may** indicates permission to do something

**need not** indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

**can** indicates that something is possible

**cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

**will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

# Introduction

This clause is optional. If it exists, it shall be the second unnumbered clause.

# 1 Scope

This clause shall start on a new page.

The present document …

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

…

[x] <doctype> <#>[ ([up to and including]{yyyy[-mm]|V<a[.b[.c]]>}[onwards])]: "<Title>".

It is preferred that the reference to TR 21.905 be the first in the list.

# 3 Definitions of terms, symbols and abbreviations

This clause and its three (sub) clauses are mandatory. The contents shall be shown as "void" if the TS/TR does not define any terms, symbols, or abbreviations.

## 3.1 Terms

For the purposes of the present document, the terms given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

Definition format (Normal)

**<defined term>:** <definition>.

**example:** text used to clarify abstract rules by applying them literally.

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

Symbol format (EW)

<symbol> <Explanation>

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

Abbreviation format (EW)

<ABBREVIATION> <Expansion>

# 4 Key issues

## 4.x Key issue #x: <Title>

Editor's Note: Provide a suitable title for the key issue.

Editor's Note: This subclause will describe the key issue.

# 5 Application architecture requirements

## 5.1 General requirements

Editor's Note: This subclause will describe general architectural requirements.

## 5.2 <application layer capability x> requirements

Editor's Note: Provide a suitable title for the requirements.

Editor's Note: This subclause will describe the architectural requirements for the studied application layer capabilities.

# 6 Application architecture for enabling XR services

## 6.1 Analysis of utilizing the SEAL/SEALDD application architecture for enabling XR services

Editor's Note: this subclause will provide the analytics of the possibility of utilizing the SEAL/SEALDD application architecture for enabling the XR service and possible architecture enhancements.

## 6.2 Application enabling layer architecture

Editor's Note: this subclause will illustrate the internal application enabling layer architecture to support the XR service.

## 6.3 Functional Elements

Editor's Note: The functional elements corresponding to the architecture will be presented in this clause.

## 6.4 Reference Points

Editor's Note: The reference points corresponding to the architecture will be presented in this clause.

# 7 Solutions

## 7.1 Mapping of solutions to key issues

Table 7.1-1 Mapping of solutions to key issues

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | KI #1 | KI #2 | KI #3 | KI #4 |
| Sol #1 |  |  |  |  |
| Sol #2 |  |  |  |  |

## 7.x Solution #x: <title>

Editor's Note: Provide a suitable title for the solution.

### 7.x.1 Architecture Impacts

Editor's note: This clause provides the architecture impacts of the solution.

### 7.x.2 Solution description

Editor's Note: This clause will describe the solution. Each solution should clearly describe which of the key issues it covers and how.

### 7.x.3 Solution evaluation

Editor's note: This clause provides an evaluation of the solution. The evaluation should include the descriptions of the impacts to existing architectures.

# 8 Business Relationships

Editor's Note: Provide a description of the involved business relationships.

# 9 Overall evaluation

Editor's Note: This clause will provide evaluation of different solutions.

# 10 Conclusions

## 10.1 General conclusions

Editor's note: This clause will provide general conclusions for the study.

## 10.2 Conclusions of key issue #x

Editor's Note: This clause will provide conclusions for the specific key issue.

# Annex A (informative): Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
|  |  |  |  |  |  |  |  |