|  |  |
| --- | --- |
| 3GPP TR 23.801-01 V0.0.0 (2025-08) | |
| Technical Report | |
| 3rd Generation Partnership Project;  Technical Specification Group Services and System Aspects;  Study on Architecture for 6G System  Stage 2  (Release 20) | |
|  | |
|  |  |
|  | |
| The present document has been developed within the 3rd Generation Partnership Project (3GPP TM) and may be further elaborated for the purposes of 3GPP. The present document has not been subject to any approval process by the 3GPPOrganizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPPonly. The Organizational Partners accept no liability for any use of this Specification. Specifications and Reports for implementation of the 3GPP TM system should be obtained via the 3GPP Organizational Partners' Publications Offices. | |

|  |
| --- |
|  |
| ***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  http://www.3gpp.org |
| ***Copyright Notification***  No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.  © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).  All rights reserved.  UMTS™ is a Trade Mark of ETSI registered for the benefit of its members  3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners LTE™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners  GSM® and the GSM logo are registered and owned by the GSM Association |

Contents

Foreword 5

1 Scope 7

2 References 7

3 Definitions of terms, symbols and abbreviations 7

3.1 Terms 7

3.2 Symbols 7

3.3 Abbreviations 8

4 Architectural Assumptions and Requirements 8

4.1 Architectural Assumptions 8

4.2 Architectural Requirements 8

5 Key Issues 8

5.X Key Issue #X: Key Issue Title 8

6 Solutions 8

6.0 Mapping of Solutions to Key Issues 8

6.X Solutions to KI#X 9

6.X.Y Solution #X.Y: <Solution Title> 9

6.X.Y.0 High-level solution Principles 9

6.X.Y.1 Description 9

6.X.Y.2 Procedures 9

6.X.Y.3 Impacts on Services, Entities and Interfaces 9

7 Interim agreements 9

7.1 Agreed Principles 9

7.1.Y Agreed Principles for KI#Y 9

7.2 Topics for further consideration 10

7.2.Z Topics for further consideration for KI#Z 10

8 System architecture(s) for 6G 10

9 Conclusions 10

Annex A: Work Tasks 11

A.X Work Task X 11

Annex B: Change History 12

# 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.

# 1 Scope

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".

[2] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[3] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[4] 3GPP TS 23.503: "Policies and Charging control architecture; Stage 2".

[5] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[6] 3GPP TS 23.167: "3rd Generation Partnership Project; Technical Specification Group Services and Systems Aspects; IP Multimedia Subsystem (IMS) emergency sessions".

…

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

# 3 Definitions of terms, symbols and 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> <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 Architectural Assumptions and Requirements

## 4.1 Architectural Assumptions

Editor's Note: This clause documents the common architecture assumptions identified for the study.

## 4.2 Architectural Requirements

Editor's Note: This clause defines the architectural requirements that serve as the foundation for the study.

# 5 Key Issues

Editor's Note: This clause identifies key issues to be addressed.

## 5.X Key Issue #X: Key Issue Title

# 6 Solutions

## 6.0 Mapping of Solutions to Key Issues

Editor’s note: Solutions are documented in separate sub-clauses per Key Issue (see 6.X) to structure the solution descriptions and get a reasonable overview when there are many solutions (similar to how TRs for 4G and 5G were structured). A separate mapping table is thus not needed.

## 6.X Solutions to KI#X

### 6.X.Y Solution #X.Y: <Solution Title>

#### 6.X.Y.0 High-level solution Principles

Editor's note: Where possible similar/overlapping solution proposals should be documented as a single solution in the TR.

Documentation of more than one solution from the same company for the same KI is allowed but it shouldn't be expected that all of them will be documented in the TR.

#### 6.X.Y.1 Description

Editor's note: This clause will describe the solution principles and architecture assumptions for corresponding key issue(s). Further (sub-)clause(s) may be added to capture details.

#### 6.X.Y.2 Procedures

Editor's note: This clause will describe the high-level procedures and information flows for the solution.

#### 6.X.Y.3 Impacts on Services, Entities and Interfaces

Editor's note: This clause captures impacts on existing services, entities and interfaces.

# 7 Interim agreements

## 7.1 Agreed Principles

### 7.1.Y Agreed Principles for KI#Y

Editor's note: This clause will include the principles that are agreed as work progresses for the specific KI#Y. This may be populated directly or e.g. also when a topic in clause 7.2.Y gets resolved and a principle is agreed.

Where there is consensus, interim agreements (e.g. solution principles descriptions) should be documented in the TR as soon as possible during a study.

These can be documented in the TR as "7.1.Y Agreed Principles for KI#Y" in the "Interim Agreements" clause. If the interim agreement has impacts on another clause in the TR and if there is consensus, that TR clause can be updated.

## 7.2 Topics for further consideration

### 7.2.Z Topics for further consideration for KI#Z

Editor's note: This clause will include the topics for further consideration as work progresses for the specific KI#Z. Eventually this clause should only contain topics for further consideration that did not result in agreements (i.e. in agreed principle(s) in a clause 7.1.Z) and can either be then marked as not pursued or postponed to a future release.

# 8 System architecture(s) for 6G

Editor's Note: This section will be used to consolidate system architecture option(s) based on solutions proposed in Clause 6. This section is to be consolidated and refined later during the study.

# 9 Conclusions

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

By consensus interim agreements can become part of the final conclusions of the study.

Annex A:  
Work Tasks

Editor's note: This Annex will capture updates to WT scope based on the 6G SID in SP-250806. The plan is to update the Study Item Description with updated Work Task descriptions from this Annex.

This Annex contains clarifications of Work Task scope, as preparation for Key Issue drafting.

## A.X Work Task X

Editor's note: Description of Work Task X. Sub-clauses can be used if needed.

Annex B:  
Change History

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
| yyyy-mm |  |  |  |  |  |  | 0.0.0 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |