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| 3GPP TR 23.700-30 V0.0.0 (2025-08) | |
| Technical Report | |
| 3rd Generation Partnership Project;  Technical Specification Group Services and System Aspects;  Study on Architecture support of Ambient power-enabled Internet of Things (AIoT);  Phase 2;  (Release 20) | |
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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.

# 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 22.369: "Service requirements for Ambient power-enabled IoT".

[3] 3GPP TS 23.369: "Architecture support for Ambient power-enabled Internet of Things; Stage 2".

[4] 3GPP TS 23.501: "System Architecture for the 5G System (5GS); Stage 2".

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

[6] 3GPP TS 23.503: "Policies and Charging control framework for the 5G System; Stage 2

[7] 3GPP TR 23.700-13: "Study on Architecture support of Ambient power-enabled Internet of Things".

# 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 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

## 4.2 Architectural Requirements

# 5 Key Issues

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

Editor's note: After approval of a Study Item Description by TSG SA the Key Issues to be included in the TR should be prepared.

- The rapporteur takes the lead to ensure input on draft Key Issues to the first meeting

- The rapporteur can draft these themselves, or ask for volunteers for each

- These should be distributed before the meeting for discussion during a conference call (if organized) or via email (this is not mandatory, but is advised)

- Companies are allowed to submit their own proposals for the Key Issues

It is recommended that the Key Issues are based on the Work Tasks documented in the Study Item Description.

Updates of these Key Issues, or addition of Key Issues, are allowed as required but this should be done as early as possible during the study.

# 6 Solutions

## 6.0 Mapping of Solutions to Key Issues

Table 6.0-1: Mapping of Solutions to Key Issues

|  |  |  |
| --- | --- | --- |
|  | Key Issues | |
| Solutions | <Key Issue #X> | <Key Issue #Y> |
| #1 |  |  |
| #2 |  |  |

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

### 6.X.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.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.2 Procedures

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

### 6.X.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.

## 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 Conclusions

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

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.

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

The Overall Evaluation clause previously used in TR skeletons should not be used.

There should be a Topics for further consideration clause per Key Issue. It is recommended that this is used e.g. to capture common issues that need to be resolved for multiple solutions.

Annex A:  
Change History

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
| 2025-08 | SA2#170 | S2-25xxxxx | - | - | - | Proposed skeleton agreed at SA2#160AH-e | 0.0.0 |
| yyyy-mm |  |  |  |  |  |  |  |