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| **oneM2M**  **Technical Report** | |
| Document Number | oneM2M-TR-0072 |
| Document Name: | Bridging Metaverse and Physical World via oneM2M system |
| Date: | 2023-08-16 |
| Abstract: | The document details how oneM2M system can bridge the Metaverse to the Physical World, enhancing various virtual services in the Metaverse. This technical report explores key use cases and requirements for utilizing oneM2M to Metaverse services to determine feasibility. Based on the result of the technical report, it will identify possible advanced features and enhancements which the next oneM2M release(s) could support. |
| Template Version: January 2017 (Do not modify) | |

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The present document has not been subject to any approval process by the oneM2M Partners Type 1. Published oneM2M specifications and reports for implementation should be obtained via the oneM2M Partners' Publications Offices.

About oneM2M

The purpose and goal of oneM2M is to develop technical specifications which address the need for a common M2M Service Layer that can be readily embedded within various hardware and software, and relied upon to connect the myriad of devices in the field with M2M application servers worldwide.

More information about oneM2M may be found at: http//www.oneM2M.org

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# Scope

The document details how oneM2M system can bridge the Metaverse to the Physical World, enhancing various virtual services in the Metaverse. This technical report explores key use cases and requirements for utilizing oneM2M to Metaverse services to determine feasibility. Based on the result of the technical report, it will identify possible advanced features and enhancements which the next oneM2M release(s) could support.

# References

The following text block applies.

References are either specific (identified by date of publication and/or edition number or version number) or non- specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

## Normative references

Normative references are not applicable in the present document.

## Informative references

Clause 2.2 shall only contain informative references which are cited in the document itself.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] oneM2M Drafting Rules.

NOTE: Available at <http://www.onem2m.org/images/files/oneM2M-Drafting-Rules.pdf>.

# Definitions, symbols and abbreviations

Delete from the above heading the word(s) which is/are not applicable.

## Definitions

Clause numbering depends on applicability.

* **A definition shall not take the form of, or contain, a requirement.**
* **The form of a definition shall be such that it can replace the term in context. Additional information shall be given only in the form of examples or notes (see below).**
* **The terms and definitions shall be presented in alphabetical order.**

For the purposes of the present document, the [following] terms and definitions [given in ... and the following] apply:

Definition format

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

If a definition is taken from an external source, use the format below where [N] identifies the external document which must be listed in Section 2 References.

**<defined term>**[N]: <definition>

**example 1:** text used to clarify abstract rules by applying them literally

NOTE: This may contain additional information.

## Symbols

Clause numbering depends on applicability.

For the purposes of the present document, the [following] symbols [given in ... and the following] apply:

Symbol format

<symbol> <Explanation>

<2nd symbol> <2nd Explanation>

<3rd symbol> <3rd Explanation>

## Abbreviations

For the purposes of the present document, the [following] abbreviations [given in ... and the following] apply:

Abbreviation format

<ABREVIATION1> <Explanation>

<ABREVIATION2> <Explanation>

<ABREVIATION3> <Explanation>

# Conventions

The key words "Shall", "Shall not", "May", "Need not", "Should", "Should not" in the present document are to be interpreted as described in the oneM2M Drafting Rules [i.1].

# Introduction

*Editor’s Note: This section provides the introduction of this technical report.*

# Background and Gap Analysis

*Editor’s Note: The section summarizes defines a concept of Metaverse from IoT perspective. This section also provides background and motivation of this technical report. State of the art for existing Metaverse related standards and gap analysis will be investigated.*

* 1. Background
  2. Gap Analysis of Existing Metaverse related Standards

# Potential MetaIoT Use Cases

*Editor’s Note: The section collect potential uses cases relating IoT with Metaverse services.*

*.*

## Use Case #1

## 7.1.1 Description

## 7.1.2 Scope

## 7.1.3 Actors

## 7.1.4 Pre-conditions

## 7.1.5 Triggers

## 7.1.6 Normal Flow

## 7.1.7 Alternative Flow

## 7.1.8 Post-conditions

## 7.1.9 High Level Illustration

## 7.1.10 Potential Requirements

# Key Issues

*Editor’s Note: The section identifies key issues that need to be tackled by oneM2M system.*

# Conclusions

*Editor’s Note: This section provides a summary of the conclusions drawn during the study.*

# Annexes

Each annex **shall** start on a new page (insert a page break between annexes A and B, annexes B and C, etc.).

Use the **Heading 9** style for the title and the Normal style for the text.

Annex <A>:  
Title of annex *(style H9)*

<Text>

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# History

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