| Work Item | Work Item |
| --- | --- |
| Work Item Title: | Enablement of IoT in the metaverse (MetaIoT) |
| Document Number | WI-0110 |
| Supporting Members or Partner type 2 | Hansung University, Nokia, KETI, Sejong University |
| Date: | 2022-09-28 |
| Abstract: | Propose a Work Item for enabling Metaverse services on IoT |
| ’Template Version: January 2020 (do not modify) | ’Template Version: January 2020 (do not modify) |

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# 1 Title (abbreviation)

Enablement of IoT in the metaverse

# 2 Justification

Current metaverse services are mostly focusing contents which look like the early stage of internet.

As the internet has been extended to Internet of Things, the metaverse will expand its scope to connect the real physical world. It means oneM2M is on the connecting point between the metaverse services and the real world.

Since oneM2M offers its new features of IoT as the element technologies of Release 5, the metaverse will be a good candidate of a key feature of Release 5.

This Work Item will consider as follows:

* Definition of “IoT in the metaverse” in the context of oneM2M
* Use cases to show clearly that the metaverse services based on IoT
  + Potential Common Service Functions that enable metaverse services based on IoT
  + Interworking with considering the status of other SDOs
  + Information Model of metaverse devices
* Cooperation with other SDOs, forums, associations (e.g., ETSI Augemted Reality Framework (ARF), Metaverse Standards Forum)

# 3 Intended Output

**Tick all the appropriate cases**

| Check | Case |
| --- | --- |
| X | Change request(s) to existing Technical Specification(s) |
| X | Change request(s) to existing Technical Reports(s) |
|  | New Normative Technical Specifications(s) |
| X | New Permanent Technical Reports(s) |
|  | New Temporary Technical Reports(s) |

# 4 Impact

## 4.1 oneM2M Work Items

WI-0001: Requirements that enabling metaverse services based on IoT, will be suggested to TS-0002.

WI-0104: Defining Information Model and Mapping of metaverse devices will be added to TS-0023.

# 5 Scope

The scope of the Work Item is feasibility study including key use cases and requirements for enabling metaverse services based on IoT. This WI also defines the metaverse-IoT concept and potential solutions for the metaverse enablement. Especially, the Work Item focuses on the metaverse devices and defines their information model as a part of oneM2M SDT based Information model specification.

# 6 Schedule and impacted specifications

## 6.1 New Specifications (if any)

| Document Type | Document Number\* | Title | Schedule (TP No.) Start | Schedule (TP No.) Change Control | Schedule (TP No.) Freeze | Schedule (TP No.) Approval | Lead WG | Impacted WGs | Comments |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TR |  | Bridging Metaverse and Physical World via oneM2M system | TP 61 | TP 65 | TP 66 | TP 67 | RDM |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

\* The first versions will be assigned by the secretariat (WPM Secretary)

## 6.2 CRs to existing specifications (if any)

| Impacted TS/TR | CR number (when known) | Subject of the CR | Approved at plenary# | Impacted WGs | Comments |
| --- | --- | --- | --- | --- | --- |
| TS-0002 |  | Suggests requirements to enable metaverse services based on IoT | TP 58 | RDM |  |
| TS-0023 |  | Defines information model of metaverse devices which are potentially included in IoT systems | TP 60 | RDM |  |

# 7 Work Item Rapporteur(s)

JaeSeung Song, Sejong University, jssong@sejong.ac.kr

SeungMyeong Jeong, KETI, sm.jeong@keti.re.kr

Shane He, Nokia, shane.he@nokia.com

# 8 History

**Document history**

| Version | Date | Description |
| --- | --- | --- |
| V0.0.1 | 2022-09-28 | Initial proposal |
| V0.0.1 | 2022-09-29 | Uploaded as a permanent document following approval of TP-2022-0082R01 |
| V0.1.0 | 2023-08-16 | Updated rapportures, schedule and the title of working technical report |