

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 Augmented 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)

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Document Type	Document Number	Document Title	Schedule			Lead WG	Impacted WGs	Comments
			Schedule (TP No.) Start	Change No.	Schedule (TP No.) Freeze			
TR		Bridging Meta- verse and Phys- ical World via oneM2M sys- tem	TP 61	TP 65	TP 66	TP 67	RDM	

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

## 6.2 CRs to existing specifications (if any)

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Impacted TS/TR	CR number (when known)	Subject of the CR	Approved at plenary#	Impacted WGs	Comments
TS-0002		Suggests require- ments to enable metaverse services based on IoT	TP 58	RDM	

Impacted TS/TR	CR number (when known)	Subject of the CR	Approved at plenary#	Impacted WGs	Comments
TS-0023		Defines in- formation model of metaverse devices which are potentially included in IoT systems	TP 60	RDM	

## 7 Work Item Rapporteur(s)

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## 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