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Principles for building concepts and definitions related to metaverse

Working Group 1: General

Technical Report ITU FG-MV-21

Principles for building concepts and definitions related to metaverse

Summary

This document establishes the principles for building terms, concepts and definitions related to metaverse, as the foundation for developing technical specification of vocabulary for metaverse.

Keywords

Metaverse, concepts, definitions, principles.

Note

This Technical Report is an informative ITU-T publication. Mandatory provisions, such as those found in ITU-T Recommendations, are outside the scope of this publication. This publication should only be referenced bibliographically in ITU-T Recommendations.

Change Log

This document contains Version 1.0 of the ITU Technical Report on "*Principles for building concepts and definitions related to metaverse*" approved at the 4th meeting of the ITU Focus Group on metaverse (ITU FG-MV), held on 4-7 December 2023 in Geneva, Switzerland.

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Additional information and materials relating to this report can be found at: https://www.itu.int/go/fgmv. If you would like to provide any additional information, please contact Cristina Bueti at tsbfgmv@itu.int.

Editor & Task Group Chair:	Xiaomi An Renmin University of China China	Tel: +86 13521644930 E-mail:anxiaomi@ruc.edu.cn
Editor:	Rui Wang Renmin University of China China	Tel: +86 13060085251 E-mail:wangrui1998@ruc.edu.cn
Editor:	Jie Huang Renmin University of China China	Tel: +86 18110077873 E-mail:huangjie2018@ruc.edu.cn
Editor & WG1 Chair:	Leonidas ANTHOPOULOS University of Thessaly Greece	E-mail: lanthopo@uth.gr

WG1 Acting Chair: Radia Funna
Build n Blaze, LLC.
E-mail: rfunna@buildnblaze.com

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1 Introduction

This document provides principles for building terms, concepts and definitions related to metaverse.

2 References

None.

3 Terms and definitions

3.1 Terms defined elsewhere

This Technical Report uses the following terms defined elsewhere:

3.1.1 Characteristic [b-ISO 1087]: Abstraction of a property.

EXAMPLE: ‘Having a cable for connecting with a computer’ as a characteristic of the concept ‘cord mouse’.

Note 1 to entry: Characteristics are used for describing concepts.

3.1.2 Concept [b-ISO 1087]: Unit of knowledge created by a unique combination of characteristics.

Note 1 to entry: Concepts are not necessarily bound to natural languages. They are, however, influenced by the social or cultural background which often leads to different categorizations.

Note 2 to entry: This refers to the concept of ‘concept’ as used and designated by the term “concept” in terminology work. It is a very different concept from that designated by other domains such as industrial automation or marketing.

3.1.3 Definition [b-ISO 1087]: Representation of a concept by an expression that describes it and differentiates it from related concepts.

3.1.4 Object [b-ISO 1087]: Anything perceivable or conceivable.

Note 1 to entry: Objects can be material (e.g., ‘engine’, ‘sheet of paper’, ‘diamond’), immaterial (e.g., ‘conversion ratio’, ‘project plan’) or imagined (e.g., ‘unicorn’, ‘scientific hypothesis’).

3.1.5 Property [b-ISO 1087**]:** Feature of an object**.**

EXAMPLE 1: ‘Being made of wood’ as a property of a given ‘table’.

EXAMPLE 2: ‘Belonging to person A’ as a property of a given ‘pet’.

EXAMPLE 3: ‘Having been formulated by Einstein’ as a property of the equation ‘$E = mc^2$’.

EXAMPLE 4: ‘Being compassionate’ as a property of a given ‘person’.

EXAMPLE 5: ‘Having a given cable’ as a property of a given ‘computer mouse’.

Note 1 to entry: One or more objects can have the same property.

3.1.6 Term [b-ISO 1087]: Designation that represents a general concept by linguistic means.

EXAMPLE: “laser printer”, “planet”, “pacemaker”, “chemical compound”, “¾ time”, “Influenza A virus”, “oil painting”.

Note 1 to entry: Terms may be partly or wholly verbal.

3.1.7 Vocabulary [b-ISO 1087]**:** Terminological dictionary that contains designations and definitions from one or more domains or subjects.

Note 1 to entry: The vocabulary may be monolingual, bilingual, or multilingual.

3.2 Terms defined here

None.

4 Abbreviations

None

5 Conventions

None.

6 Principles

6.1 Systemic relationship between the principles

Principles for building concepts and definitions related to metaverse should be defined and followed, to include general considerations and specific considerations. General considerations are embodied in principles for building *terms and concepts* related to metaverse (details in 6.2); while specific considerations are embodied in principles for building *definitions* related to metaverse (details in 6.3). These are both embodied in principles for creating new terms and definitions related to metaverse (details in 6.4).

The systemic relationship between the principles is shown in Figure 1 from general considerations about terms and concepts building related to metaverse to specific considerations about how to give a definition and create a new term with reference to the standards best practice of terminology work. The practical work adheres to the following steps according to Figure 1:

(1) Identify terms related to metaverse based on the principles of building terms and concepts related to metaverse, with reference to b-ISO 704.

(2) After determining the terms, based on the principles of building definitions related to metaverse, the definition of metaverse related terms is defined, with reference to b-ITU-T Editing Guidelines and b-ITU-T FG-DPM TR D0.2.

(3) If a new definition needs to be defined, define it according to the principles of creating new terms and definitions related to metaverse, with reference to b-ITU-T Editing Guidelines, b-ITU-T FG-DPM TR D0.2 and b-ISO/TC 46/SC 11 N 1916.

(4) Create new terms related to metaverse based on the principles of creating new terms and definitions related to metaverse, with reference to b-ITU-T Editing Guidelines and b-ISO/TC 46/SC 11 N 1916.

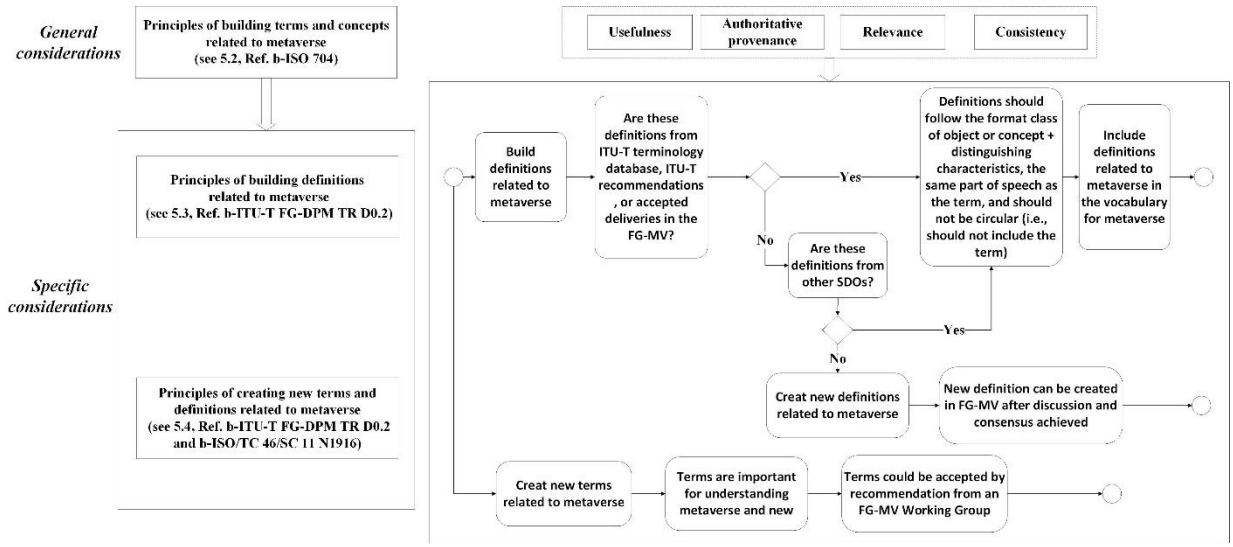

Figure 1: Systemic relationship between the principles

6.2 Principles for building terms and concepts related to metaverse

(1) Usefulness: All terms and concepts should be used by the Focus Group on metaverse (FG-MV) working groups (WGs), task groups (TGs), and deliverables.

(2) Authoritative provenance: Terms are adopted from Clause 3 of FG-MV deliverables or recommended by FG-MV WGs or TGs.

(3) Relevance: Each concept is related to the metaverse.

(4) Consistency: FG-MV deliverables are preferred for the concept of terms. When multiple definitions of the same term appear in FG-MV deliverables, a consensus of "one term, one definition" should be reached in vocabulary for metaverse. Ensure that the concepts in FG-MV deliverables are finally consistent with the concepts proposed by the vocabulary for metaverse.

6.3 Principles for building definitions related to metaverse

(1) Definitions from ITU-T terminology database or ITU-T recommendations or definitions from accepted deliverables in the FG-MV will take priority if they are appropriate and applicable. If more appropriate definitions exist from other Standards Developing Organizations (SDOs), they may be considered for discussion.

(2) If there is no definition from ITU-T, then definitions from other SDOs will be the second priority to be applicable.

(3) Definitions should follow the format class of object or concept + distinguishing characteristics, the same part of speech as the term, and should not be circular (i.e., should not include the term).

6.4 Principles for creating new terms and definitions related to metaverse

(1) If no definition exists, or if existing definitions are not appropriate to the metaverse, then a new definition can be created in FG-MV after discussion and consensus achieved.

(2) Even if a term appears only once in FG-MV deliverables, if it is important for understanding metaverse and is new, it may be accepted by recommendation from an FG-MV WG.

7 Conclusion

Although this Technical Report focuses on principles for building terms and concepts within the FG-MV, these principles may also be applied in similar environments well beyond.

Bibliography

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[b- ISO 1087] ISO 1087:2019, Terminology work and terminology science — Vocabulary

[b-ISO 704] ISO 704:2022, *Terminology work — Principles and methods*

[b-ISO/TC 46/SC 11 N 1916] ISO/TC 46/SC 11 N 1916 (2020), *Terminology consistency guidance for convenors and project leaders*

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