# ITU-T Technical Specification

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(September 2025)

ITU-T Focus Group on Al Native for Telecommunication Networks

**Vocabulary for Artificial Intelligence Native for Telecommunication Networks** 



#### **Summary**

This Vocabulary as a technical specification provides a set of common terminology, definitions and concepts related to AI Native in association with FG-AINN-O-08 (Study of concepts, characteristics and definitions of artificial intelligence native telecommunication networks). The vocabulary is finalized under the guidance of the "Principles for Building Concepts and Definitions Related to Native Artificial Intelligence in Telecommunication Networks," (see Appendix III) incorporating terms used in different deliverables of FG-AINN and expert opinions through consensus building.

#### **Keywords**

Artificial Intelligence Native for Telecommunication Networks; vocabulary; term; definition

> Xiaomi An Tel: +86 13521644930 Renmin University of China E-mail: anxiaomi@ruc.edu.cn

China

Rui Wang Tel: +86 13060085251

Renmin University of China E-mail: wangrui1998@ruc.edu.cn

China

Kewei Zhang +86 18021073931 Tel:

**Kookmin University** E-mail: <u>zhangkewei@kookmin.ac.kr</u>

Korea

Fuquan Wen Tel: +86 18701309153 Renmin University of China E-mail: wenfuquan@ruc.edu.cn

China

Vishnu Ram E-mail: vishnu.n@ieee.org E-mail: marco.carugi@gmail.com Marco Carugi +49.173.46.36.043 Riccardo Trivisonno Tel:

Huawei Technologies Duesseldorf

E-mail: Riccardo.trivisonno@huawei.com

GmbH

Germany

Jie Huang Tel: +86 18110077873

Renmin University of China E-mail: huangjie2018@ruc.edu.cn

China **Contributors** 

Tel: +86 19861407188 Jing Yin

Renmin University of China E-mail: <u>10431221023@stu.qlu.edu.cn</u>

China

Zhiying Sun Tel: +86 13554309073 Renmin University of China E-mail: sunzy273@163.com

China

Tel: +49 1622078046 Clarissa Marquezan

Huawei Technologies Düsseldorf E-mail: clarissa.marquezan@huawei.com

**GmbH** 

Germany

Antonio De Domenico Tel: +33-673462921

E-mail: antonio.de.domenico@huawei.com Huawei Technologies Düsseldorf

**GmbH** 

Germany

Francesc Wilhelmi E-mail: francesc.wilhelmi@gmail.com Paul Harvey |E-mail: Paul.Harvey@glasgow.ac.uk

+86 17710667126 Xingyu Shang

China Telecom E-mail: shangxy1@chinatelecom.cn

China

Ziqi Chen Tel: +86 15811086221

China Mobile E-mail: chenziqiyiy@chinamobile.com

China

## - 3 -FG-AINN-O-011

# **Table of Contents**

1	Scope	1						
2	References							
3	Terms selection	1						
4	Definitions	5						
5	Abbreviations and acronyms	3						
6	Conventions	3						
Biblio	graphy9	)						
Appen	dix I Steps and processes of vocabulary building	l 1						
Appen	dix II Core concepts and concepts relations (from FG-AINN-O-08)	12						
Appen	dix III Principles for Building Concepts and Definitions Related to AI Native Telecommunication Networks (from FG-AINN-I-037)	14						
Appen	dix IV Recommended terms for adding to the Vocabulary (from FG-AINN-I-036)	19						
Appen	dix V Tracking of Revision	24						

# **Technical Specification**

# Vocabulary for Artificial Intelligence Native Telecommunication Networks

#### 1 Scope

This Technical Specification provides a set of common terminology, definitions and concepts related to Artificial Intelligence Native for Telecommunication Networks (AINN).

The generation of the Artificial Intelligence Native Telecommunication Networks vocabulary follows four steps and processes of vocabulary building as shown in Appendix I:

- (1) Step 1: Based on the delimiting characteristics of AI Native, combined with the core concepts and concept relationships of "Artificial Intelligence Native Telecommunication Network", "AI Native" and "AI Native Network" (*Appendix II, from FG-AINN-O-08*), determine the terms related to AI Native Networks.
- (2) Step 2: Guide vocabulary building based on the "Principles for Building Concepts and Definitions Related to AI Native for Telecommunication Networks" (see Appendix III).
- (3) Step 3: Collect the terms and definitions from the input documents of the all plenary meetings of FG-AINN (see Appendix IV), and further select and determine the terms based on the relevant terms obtained in Step 1 in alignment with FG-AINN-O-08.
- (4) Step 4: Determine the final terms and definitions and related terms and definitions based on expert advice and consensus building through the WG1 meetings and the FG-AINN plenary meetings.

#### 2 References

[ITU-T Y.2091] Recommendation ITU-T Y.2091(2011), Terms and definitions for Next

Generation Networks

[ITU-T M.3080] Recommendation ITU-T M. 3080 (2021), Framework of artificial

intelligence enhanced telecom operation and management (AITOM)

[b-FG-AINN-O-08] FG-AINN-O-08 (2025), Study of concepts, characteristics and definitions of artificial intelligence native telecommunication networks

#### **3** Terms selection

According to the above four steps of the vocabulary building, terms are selected in alignment with its relationships with AI native, AI native networks, or AI native telecommunication networks, shown in Table 1. For specific concept relationships, see *Appendix II (from FG-AINN-O-08)*.

Table 1. Terms relating to AI native telecommunication networks relevant concepts

Terms	Artificial	AI	AI Native	Delimiting characteristics		
	Intelligence Native	Native	Network	Engagement	Architecture	AI-integrated
	Telecommunication			of AI in all	approaches	services as
	Network			stages of		core
				components		components
Agent						
AI Agent	√					
AI/ML inference		$\sqrt{}$				
Artificial						
intelligence (AI)						
ML model lifecycle					$\sqrt{}$	
ML model testing						
ML model training						
Network						
Telecommunication						
Telecommunication	$\sqrt{}$					
network						

AI agent in AI-				
native				
telecommunication				
network				
AI-based evaluation				$\sqrt{}$
AI-driven				$\sqrt{}$
orchestration				
AI for Network		V		
Lifecycle				
management				
value-added service				
Machine learning		$\checkmark$		
(ML)				
Intent				
Multi-modal agents				
Multi-modal data				
fusion				
Knowledge base				
Retrieval augmented				
generation (RAG)				
Split-AI model	V			
Network for AI		V		

#### 4 Definitions

This Technical Specification uses the following terms defined elsewhere:

#### 4.1 Terms defined elsewhere

- **4.1.1 Agent** [b-ETSI GR ENI 004]: Computational process that implements the autonomous, communicating functionality of an application:
  - software agent: software that acts on behalf of a user or another program
  - software autonomous agent: software agent that acts on behalf of the entity that owns it without any communication from the owning entity
  - software intelligent agent: software agent that reasons about its environment and take the best set of actions to satisfy a set of goals

NOTE: This has the connotation of containing AI mechanisms to provide the reasoning and decision-making capabilities.

- software multi-agent: set of software agents that are physically separate that work together to satisfy a set of goals
- **4.1.2 AI Agent** [b-ETSI GR ENI 051]: autonomous system that can interact with its environment to collect data, learn from the past experiences and subsequently use these to improve its decision-making capability in order to perform specific tasks

Note1: AI Agent can also refer to automated entity that senses and responds to its environment and takes actions to achieve its goals. [b-ITU-T Y.AIA-SH from ISO/IEC 22989:2022]

**4.1.3 AI/ML inference** [b-3GPP TS 28.105]: process of running a set of input data through a trained ML model to produce set of output data, such as predictions.

NOTE 5: The inference represents the process to realize the AI capabilities by utilizing a trained ML model and other AI enablers if needed, hence the AI/ML prefix is used when referring to inference as compared to training and testing.

- **4.1.4** Artificial intelligence (AI) [b-ITU-T M.3080]: Computerized system that uses cognition to understand information and solve problems.
- NOTE 1 ISO/IEC 22989:2022 defines AI as research and development of mechanisms and applications of AI systems (Note 1 to entry: Research and development can take place across any number of fields such as computer science, data science, humanities, mathematics and natural sciences).
- NOTE 2 In computer science AI research is defined as the study of "intelligent agents": any device that perceives its environment and takes actions to achieve its goals.
- NOTE 3 This includes pattern recognition, the application of machine learning and related techniques.
- NOTE 4 Artificial-intelligence is the whole idea and concept of machines being able to carry out tasks in a way that mimics human intelligence and would be considered "smart".
- **4.1.5** Intent [b-ETSI GR ZSM011]: a formal specification of the expectations, including requirements, goals, and constraints, given to a technical system. For example, a user might express an intent for "a low-latency, high-bandwidth connection for a fleet of autonomous vehicles in a specific geographical area," and the Native-AI system would be responsible for translating this "what" into the "how" of network configuration.
- NOTE 1 [b-TMF IG1230] An intent is used to specify what the system is expected to achieve—in terms of target outcomes—without prescribing how to achieve them. [b-FG-AINN-I-123] [b-FG-AINN-I-153]
- **4.1.6 Knowledge base** [b-ITU-T Y.3061]: A subsystem which manages storage, querying, export, import and optimization and update knowledge, including that derived from different sources including structured or unstructured data from various components or other subsystems.
- NOTE 1- Knowledge includes metadata which is derived from the capabilities, status of AN components. This knowledge is stored and exchanged as part of interactions of AN components with knowledge base. Knowledge can be derived from different sources including structured or unstructured data from various actors involved in a use case and/or various experiments in AN Sandbox.
- NOTE 2 managing knowledge includes storing, querying, export, import and optimize the knowledge. AN workflows, including exchange of knowledge between AN components, may in turn result in update of knowledge base.
- NOTE 3 Uses of knowledge stored in knowledge base by other components include to facilitate the deployment and management of controllers in underlays, and selection and optimization of experimentation strategies in the experimentation stage.
- **4.1.7 Machine learning (ML)** [b-ITU-T Y.3172]: Processes that enable computational systems to understand data and gain knowledge from it without necessarily being explicitly programmed. [b-FG-AINN-I-069]/[b-FG-AINN-I-109] [b-FG-AINN-I-070]/[b-FG-AINN-I-111] [b-FG-AINN-I-149]
- **4.1.8 ML model lifecycle** [b-3GPP TR 22.850]: End-to-end process typically consisting of data processing, model training, model testing, model deployment, model inference, model monitoring and model maintenance.
- NOTE 1: Data processing includes collecting and preparing the data for model training and model inference.
- NOTE 2: Model training includes training and validating the model before model deployment.
- NOTE 3: Model testing includes testing the model before model deployment.
- NOTE 4: Model deployment includes making a trained ML model available for use in the target environment.
- NOTE 5: Model monitoring includes observing the performance of the model during the model maintenance process.
- NOTE 6: Model maintenance includes updating the model, retraining the model and (de-)activating the model.

- **4.1.9 ML model testing** [b-3GPP TS 28.105]: Process of evaluating the performance of an ML model using testing data different from data used for model training and validation.
- **4.1.10** ML model training [b-3GPP TS 28.105]: Process performed by an ML training function to take training data, run it through an ML model algorithm, derive the associated loss and adjust the parameterization of that ML model iteratively based on the computed loss and generate the trained ML model.
- **4.1.11 Network** [b-ISO/IEC 20924:2024]: Infrastructure that connects a set of endpoints, enabling communication of data between the digital entities reachable through them.
- **4.1.12 Retrieval augmented generation (RAG)** [b-ITU-T F.748.46]: A technique that combines retrieval models and generative models, which utilizes information from large-scale databases or knowledge bases to improve the accuracy and reliability of generative artificial intelligence models.
- **4.1.13 Telecommunication** [b-ITU-T Y.2091]: Transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (as defined in the ITU Constitution provision 1012 and in the International Telecommunication Regulations, ITR).
- **4.1.14 Telecommunication network** [b-ITU-R V.662-3]: Means of providing telecommunication services between a number of locations where equipment provides access to these services.

#### 4.2 Terms defined in this Technical Specification

This Technical Specification defines the following terms:

Note: The following terms are selected from different WGs to be discussed (*Appendix III*, see FG-AINN-I-036), and the selection criteria are according to *Principles for Building Concepts and Definitions Related to AI Native for Telecommunication Networks (Appendix II, see FG-AINN-I-037*), and are related to *characteristics and concept relations of AINN (Appendix IV, see FG-AINN-O-08*).

- **4.2.1 AI agent in AI-native telecommunication network**: Entity in the AI-native telecommunication network able of interacting with the AI-native telecommunication network environment and that uses AI task-specific capabilities for achieving the goals of the AI-native telecommunication network and its environment.
- NOTE 1- The AI agent AI task-specific capabilities may include, but are not limited to, decision-making, reasoning, forecasting, clustering, classification, self-learning, acquiring contextual information, natural language processing, and complex tasks decomposition.
- NOTE 2: Interactions may include, but are not limited to, data collection, usage of tools (e.g., search engines, databases, devices, other AI agents external to the network) through related APIs, and sharing the output of the agent decisions with AI-native telecommunication network and its environment through an interface. [b-FG-AINN-I-WG1-AI Agent]
- **4.2.2 AI-based evaluation**: Analysis of collected data using the AI models to make informed decisions. [FG-AINN-I-004]

NOTE: An example is AI Agents that analyze the data, using LLMs to make informed decisions about resource allocation, fault detection, and network optimization. [FG-AINN-I-005]

**4.2.3 AI-driven orchestration**: Orchestration using AI models.

NOTE: AI models allow flexibility of continuously analysing traffic patterns, service demand, and network capacity to, for example, dynamically create, adjust, or deactivate network slices.

This flexibility allows the network to optimize its resource allocation based on real-time needs. [b-FG-AINN-I-010]

- **4.2.4 AI for network**: Work to optimize the telecom network performance by employing AI/ML on telecom network-specified functionalities and capabilities. [adapted by 3GPP TR 22.850] [b-FG-AINN-I-069]
- **4.2.5 Lifecycle management**: Set of systematic and coordinated activities and functions required to manage the creation, maintenance and termination of entities over their life cycle.

NOTE: As an example, AI Native architectures support automated AI model lifecycle management involving continuous, fully automated and context-aware model training, deployment, adaptation, updates, and monitoring.[b-FG-AINN-I-011]

**4.2.6 Multi-modal agents**: Agents capable of cross-modal processing, contextual integrating, adaptive interaction, leveraging the complementary strengths of different modalities to enhance perception, understanding, and interaction.

NOTE: An example of multi-modal agents application is intent-based commands, automated slice configurations, dynamic resource allocation and policy management as per network stance in real time for network slicing of industrial automation. [b-18-FG-AINN-I-WG2-005-R3]

**4.2.7 Multi-modal data fusion**: Data fusion process integrating and combining data from multiple sensory or informational sources modalities to create a unified representation that enhances understanding, decision-making, or prediction accuracy beyond what any single modality could achieve alone.

NOTE: Modalities include but are not limited to text, images, audio, video, sensor readings, or environmental signal. [b-FG-AINN-I-061]

- **4.2.8 Value-added service**: Service other than basic telecommunications services for which additional charges may be incurred. [based on 3GPPTR21.905] [b-FG-AINN-WG1-04]
- **4.2.9** Artificial Intelligence Native Telecommunication Network: Telecommunication networks integrating AI as a core component, enabling novel value-added services, and enhancing the performance of the network and its services.

NOTE1: Integrating AI refers to use AI technologies as enablers through the entire lifecycle of telecommunication network's design, deployment, operation, and maintenance.

NOTE2: Enhance performance refers to higher level of autonomy, efficiency, adaptability resource utilization.

NOTE3: AI-native telecommunication network environment refers to all components and entities external to the network interacting with the AI-native telecommunication network including humans, devices and applications.

NOTE4: AI-native telecommunication network value-added services refer to added-value services integrating AI and leveraging telecommunication network communication and computing capabilities. This extends the definition of value-added services based on [3GPPTR 21.905]. [b-FG-AINN-O-08]

**4.2.10** AI Native networks: Networks in which: all steps in the lifecycle of network services, applications and functions, and AI pipelines, are managed by AI, using AI, with specific aim to make AI integration easier in the network.

NOTE: AI pipelines are machine learning pipelines [ITU-T Y.3172] with enhanced support for AI models. [b-FG-AINN-065]

- **4.2.11 Network for AI**: Enhancements in the network to support AI/ML pipeline and AI/ML services and applications in the network. [b-FG-AINN-I-041]
- **4.2.12 Split AI model:** Artificial intelligence (AI) model partitioned into multiple parts, enabling the distribution of AI services.

Note 1: this extends 3GPP TS 23.700-82 to consider services beyond computation-intensive AI and include key performance indicators such as latency, computational workload and accuracy.

# 5 Abbreviations and acronyms

This Technical Specification uses the following abbreviations and acronyms:

AI Artificial Intelligence

AINN Artificial Intelligence Native for Telecommunication Networks

AN Autonomous Network

#### 6 Conventions

None.

#### - 9 -FG-AINN-O-011

# **Bibliography**

	Bibliography
[b-ISO/IEC 20924:2024]	ISO/IEC 20924:2024, Internet of Things (IoT) and digital twin —
	Vocabulary
[b-ITU-R V.662-3]	Recommendation V.662-3 (2000), Terms and definitions
[b-FG-AINN-WG1-04]	FG-AINN-WG1-04(2024), Update of the definition of AI-native
	telecommunication network
[b-3GPPTR 21.905]	3GPP SA TR 21.905 V18.0.0 (2024-03), Vocabulary for 3GPP
[0 3011 110 21.903]	Specifications
[b-3GPP TR 22.850]	3GPP TR 22.850; Technical Specification Group Services and System
[0-3011 11( 22.830]	Aspects; Study on 3GPP AI/ML Consistency Alignment (Release 19)
[1- 2CDD TC 20 105]	
[b-3GPP TS 28.105]	3GPP TS 28.105; Technical Specification Group Services and System
	Aspects Management and orchestration; Artificial Intelligence/
E	Machine Learning (AI/ML) management (Release 19).
[b-3GPP TS 23.700-82]	3GPP TS 23.700-82; Technical Specification Group Services and System
	Aspects; Study on application layer support for AI/ML services;
	(Release 19)
[ <u>b-ETSI GR ENI 004</u> ]	ETSI GR ENI 004 V3.1.1 (2023), Experiential Networked Intelligence
	(ENI); Terminology.
[b-ETSI GR ENI 051]	ETSI GR ENI 051 V4.1.1 (2025), Experiential Networked Intelligence
_	(ENI); Study on AI Agents based Next-generation Network Slicing.
[b-ITU-T Y.AIA-SH]	Draft Recommendation ITU-T Y.AIA-SH, "Requirements and capabilities
,	of AI agent system for smart home"
[b-FG-AINN-I-WG1-AI	Agent] FG-AINN-I-WG1-AI Agent (2025), Definition of AI agent in AI-
[	native telecommunication network
[b-FG-AINN-I-036]	FG-AINN-I-036 (2024), Studies about terms and definitions of FG-
[8 1 8 7 11 11 1 1 0 5 0 ]	AINN for Vocabulary
[b-FG-AINN-I-037]	FG-AINN-I-037 (2024), Principles for Building Concepts and
[0-1/G-AINN-1-03/]	Definitions Related to AI Native for Telecommunication Networks
The EC AININI I 0651	
[b-FG-AINN-I-065]	FG-AINN-I-065 (2025), Characteristics, requirements and definitions
T. EC ADDI 1 0701	for AI Native Networks
[b-FG-AINN-I-070]	FG-AINN-I-070 (2025), Use case – AI Training as a Service in AI
	native telecommunication networks
[b-FG-AINN-I-004]	FG-AINN-I-004 (2024), Use cases for AI Native Network
[b-FG-AINN-I-005]	FG-AINN-I-005 (2024), Propose to initiate a new work item on AI
	Agents for AI Native Networks
[b-FG-AINN-I-010]	FG-AINN-I-010 (2024), Proposing Holistic Conceptual Model (HCM)
	for Developing AI-native Telecommunication Networks in Smarter
	Cities Value Chain
[b-FG-AINN-I-011]	FG-AINN-I-011 (2024), Proposing terminology and definitions and
	requirements for AI Native Systems
[b-FG-AINN-I-069]	FG-AINN-I-069 (2025), Use case – AI Inference as a Service in AI
-	native telecommunication networks
[b-FG-AINN-I-109]	FG-AINN-I-109 (2025), Use case – AI Inference as a Service in AI
	native telecommunication networks
[b-FG-AINN-I-110]	FG-AINN-I-110 (2025), Use case – AI Training as a Service in AI
[8 1 8 711 (1 1 1 1 0 ]	native telecommunication networks
[b-FG-AINN-I-111]	FG-AINN-I-111 (2025), Use case – LLMs in AI native
	telecommunication networks
[b-FG-AINN-I-123]	FG-AINN-I-123 (2025), Autonomous AI Agents in AI-Native networks
[b-FG-AINN-I-123]	· , ,
[U-11U-AIININ-1-147]	FG-AINN-I-149 (2025), Draft Technical Specification on use cases for
The ECC AININI I 1527	AI native telecommunication networks
[b-FG-AINN-I-153]	FG-AINN-I-153 (2025), Proof-of-Concept activities

#### - 10 -FG-AINN-O-011

[b-ITU-T Y.3061]	Recommendation ITU-T Y.3061 (2023), Autonomous networks - Architecture framework
[b-ITU-T F.748.46]	Recommendation ITU-T F.748.46 (2025), Requirements and evaluation methods for retrieval augmented generation of large scale pre-trained models
[b-18-FG-AINN-I-WG2-00	05-R3] 18-FG-AINN-I-WG2-005-R3 (2025), <i>LLM agents-</i>
	powered intent-based network slicing for industrial automation-R3
[b-FG-AINN-I-061]	FG-AINN-I-061 (2025), Proactive RAN optimization for embodied intelligence
[b-FG-AINN-I-041]	FG-AINN-I-041 (2025), Terms and definitions for AI Native Network; architecture
[b-ETSI GR ZSM011]	ETSI GR ZSM 011 — Zero-touch network and Service Management
[b-TMF IG1230]	(ZSM); Intent-driven autonomous networks (V1.1.1, 2023-02) TMF IG1230 "Autonomous Networks Technical Architecture", 9
[5 13.22 151250]	December 2022

## Appendix I Steps and processes of vocabulary building

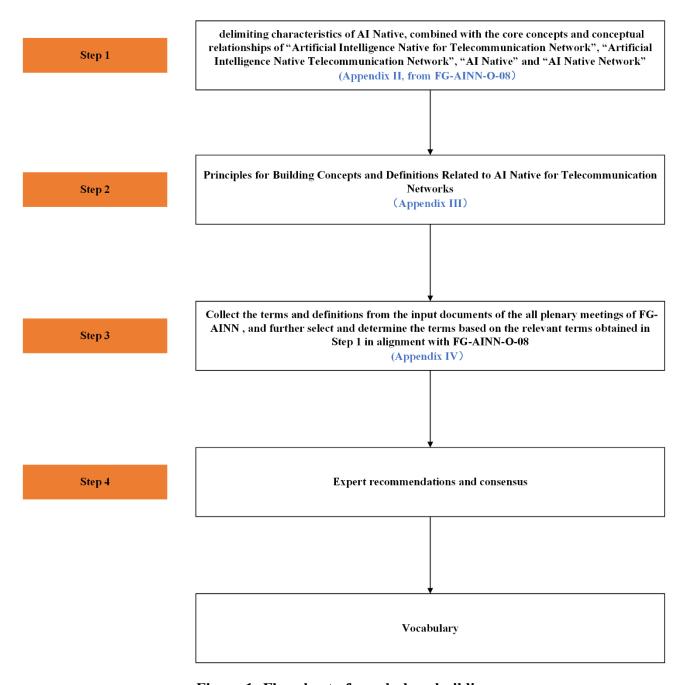


Figure 1: Flowchart of vocabulary building

#### Appendix II Core concepts and concepts relations (based on FG-AINN-O-08)

### 1 Core concepts selected for Vocabulary

Common terminology and the concepts and concept relations in the Vocabulary is shown in Figure 1. The parts with a blue background in the diagram represent the terms that have been selected for the Vocabulary for reasons of their direct or indirect relationships with the delimiting characteristics of AI-native and their commonly used in FG-AINN deliverables.

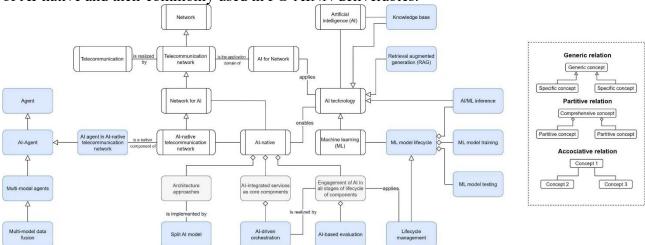


Figure 1: Common terminology, the concepts and the concept relations in the Vocabulary

Table 1 describes the three conceptual relationships applied in the figure: generic relationship, partial relationship, and associative relationship. Among them, direct relationships mainly refer to generic relationships and partial relationships, and the terms involved are mainly essential terms. Indirect relationships mainly refer to associated relationships, and the terms involved are mainly supportive terms.

Table 1. Illustration of three types of concept relation in UML graph

No	Type of	Definition	Illustration
	concept relation		
1	generic relation	Concept relation between a generic concept and a specific concept where the intension of the specific concept includes the intension of the generic concept plus at least one additional delimiting characteristic.  Note 1 to entry: Outside the terminology community, 'type of relation' and 'is a relation' are also used instead of "generic relation".  Note 2 to entry: In a generic relation, the subordinate concept is a specific concept and the superordinate concept is a generic concept.  [SOURCE: ISO 1087:2019, 3.2.13]	specific concept 1 specific concept 2 specific concept 3

- 13 -FG-AINN-O-011

2	partitive relation	Concept relation between a comprehensive concept and a partitive concept.  [SOURCE: ISO 1087:2019, 3.2.14]	partitive concept 1 partitive concept 2 partitive concept 3
3	associative relation	Concept relation that exists when a thematic connection can be established between concepts by virtue of experience Note 1 to entry: Associative relations are non-hierarchical.	concept 1  concept 2  concept 3  concept 4

# Appendix III Principles for Building Concepts and Definitions Related to AI Native Telecommunication Networks (from FG-AINN-I-037)

#### 1 Introduction

This document provides principles for building terms, concepts and definitions related to AI native telecommunication networks.

#### 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 particular natural languages. They are, however, influenced by the social or cultural background which often leads to different categorizations.

Note 2 to entry: This is the concept '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 AI native telecommunication networks should be defined and followed, to include general considerations and specific considerations. General considerations are embodied in principles for forming concept systems (adapted from ISO/IEC 5394) (details can be found in clause 6.2),and principles for building terms and concepts related to AI native telecommunication networks (details can be found in clause 6.3); while specific considerations are embodied in principles for building definitions related to AI native telecommunication networks (details in clause 6.4). These are both embodied in principles for creating new terms and definitions related to AI native telecommunication networks (details in clause 6.5).

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

- (1) When building a concept system for AI native telecommunication networks, based on the principles of building concept systems, it was adapted from [b-ISO/IEC 5394].
- (2) After determining the terms, based on the principles of building definitions related to AI native for telecommunication networks, the definition of AI native for telecommunication networks related terms is defined, with reference to [b-ITU-T FG-DPM TR D0.2].
- (3) If a new definition is needed, define it according to the principles of creating new terms and definitions related to AI native for telecommunication networks, with reference to [b-ITU-T FG-DPM TR D0.2] and [b-ISO/TC 46/SC 11 N 1916].

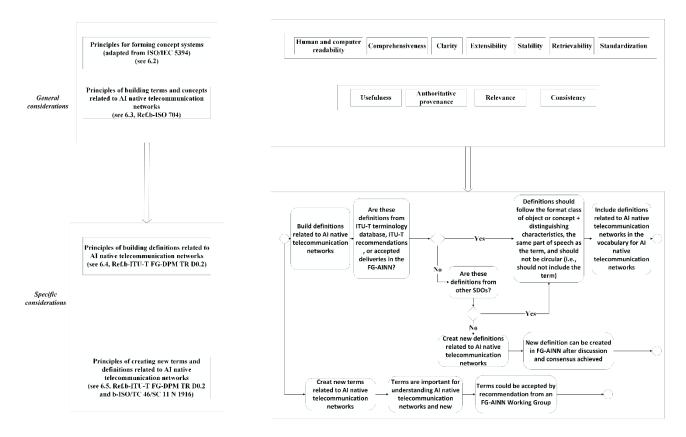


Figure 1: Systemic relationship between the principles

#### 6.2 Principles for forming concept systems (Adapted from ISO/IEC 5394)

#### (1) Human and computer readability

A concept system should not only satisfy human understanding, but also be easy to read by computers. A concept system should be intuitive for humans to read and understand and available in at least one computer representation that can be interpreted by computers such as JSON, CSV, XML or UML.

#### (2) Comprehensiveness

There should be no repetition or obvious omissions of concepts in the subject field that can be relevant to the targeted audience. A concept system should be complete including all or nearly all relevant concepts needed.

#### (3) Clarity

A concept system should be understandable to users. The concept relations and criteria of subdivision used in creating the concept system should be clearly described for users. If the system is too complex it will lose its explanatory power. Complexity can be avoided by reducing the number of concepts and concept relations.

#### (4) Extensibility

A concept system should be easy to expand and modify (see ISO 704), such that new concepts can be introduced to an appropriate position in the concept system. It should also be easy to establish new concept relations with existing concepts. There should be an organization or individual responsible for extensions of the concept system if any omissions are found or new requirements are identified.

#### (5) Stability

A concept system should be stable enough that it will not be easily negated when new theories emerge. It should be possible to always maintain the relative stability and dynamic balance of the whole system.

#### (6) Retrievability

The formation and organization of a concept system should be convenient for humans and information systems to retrieve the concepts they need, such as by using a search engine or information retrieval system.

#### (7) Standardization

Use standards for principles and methods for terminology development including methods for concept designations and definitions according to ISO 704. Related standards should be checked to ensure that existing terms and definitions are used wherever possible.

## 6.3 Principles of building terms and concepts related to AI native telecommunication networks

- (1) Usefulness: All terms and concepts should be used by FG-AINN working groups, task groups, and deliverables.
- (2) Authoritative provenance: Terms are adopted from Clause 3 of FG-AINN plenary meetings input and output documents or recommended by FG-AINN working groups (WGs) or task groups (TGs).
- (3) Relevance: Each concept is related to the AI native telecommunication networks.
- (4) Consistency: FG-AINN deliverables are preferred for the concept of terms. When multiple definitions of the same term appear in FG-AINN deliverables, a consensus of "one term, one definition" should be reached in vocabulary for AI native telecommunication networks. Ensure that the concepts in FG-AINN deliverables are finally consistent with the concepts proposed by the AI native telecommunication networks.

#### 6.4 Principles of building definitions related to AI native telecommunication networks

- (1) Definitions from ITU-T terminology database or ITU-T recommendations or definitions from accepted deliverables in the FG-AINN will be the first priority if they are appropriate and applicable. If other most appropriate definition existed from other SDOs, it can 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).

# 6.5 Principles of creating new terms and definitions related to AI native telecommunication networks

- (1) If no existed definition, or if existing definitions are not appropriate to the AI native telecommunication networks, then a new definition can be created in FG-AINN after discussion and consensus achieved.
- (2) If a term appeared only once in the deliverables however, it is important for understanding AI native telecommunication networks and new, it could be accepted by recommendation from an FG-AINN Working Group.

	Bibliography
[b-ITU-T FG-DPM TR D0.2]	ITU-T FG-DPM TR D0.2 (2019), Data processing and
	management for IoT and smart cities and communities:
	methodology for data processing and management
[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
[b-ITU-T FGMV-21]	Technical Report ITU FGMV-21 (2023), Principles for building
	concepts and definitions related to metaverse

#### - 18 -FG-AINN-O-011

[b- ISO/IEC 5394] ISO/IEC 5394 (2024), Information technology – Criteria for concept systems
[b- ITU-T Y.3172] ITU-T Y.3172 (06/2019), Architectural framework for machine learning in future networks including IMT-2020

**Appendix IV Recommended terms for adding to the Vocabulary (from FG-AINN-I-036)** Table 1 shows the collection of terms and definitions from the input documents of the FG-AINN plenary meeting.

Table 1. Recommended terms for adding to the Vocabulary

Table 1. Recommended terms for adding to the Vocabulary						
	or the Vocabulary in 1st					
Agent [b-b-ETSI GR ENI 004]	AI Agent [FG-AINN-I-060]	AI agent in AI- native telecommunication network	AI-based evaluation [FG-AINN-I-004]	AI-driven orchestration  [FG-AINN-I-010]		
001]		[b-FG-AINN-I- WG1-AI Agent]		[FO THINK FOTO]		
AI-driven security	AI-powered platform	Architecture adaptation	Continuous Learning	Continuous Monitoring		
[FG-AINN-I-010]	[FG-AINN-I-010]	[FG-AINN-I-011]	[FG-AINN-I-004]	[FG-AINN-I-004]		
			[FG-AINN-I-005]			
			[FG-AINN-I-018]			
Data collection	Data-Driven Ecosystem	Data privacy	Densification	Green networks		
[FG-AINN-I-004]	[FG-AINN-I-011]	[FG-AINN-I-004]	[FG-AINN-I-009]	[FG-AINN-I-010]		
[FG-AINN-I-005]						
[FG-AINN-I-018]	TT 1	**		T 0		
Human in the loop	Human on the loop	Human starts the loop	Immersive Experiences	Information security		
[FG-AINN-I-009]	[FG-AINN-I-009]	[FG-AINN-I-009]	[FG-AINN-I-010]	[ITU-T Y.4051]		
Lifecycle management	Multi-access technologies	Network infrastructure	People-Centric Design	Predictive Analytics [FG-AINN-I-004]		
[FG-AINN-I-011]	[FG-AINN-I-009]	[FG-AINN-I-010]	[FG-AINN-I-010]	[FG-AINN-I-010]		
Proactive Response	Proactive Services	Safety	Self-service Interfaces	Predictive Maintenance		
[FG-AINN-I-005]	[FG-AINN-I-010]	[FG-AINN-I-011]	[FG-AINN-I-010]	[FG-AINN-I-005]		
Zero-Touch Capabilities						
[FG-AINN-I-011]						
Terms recommend by	y the opinions of experts	S				
Value added service						
[b-FG-AINN-WG1- 04]						
Terms recommend for	or the Vocabulary in 2nd	d Plenary meeting				
AI for Network	AI/ML inference	ML model testing	ML model lifecycle	ML model training		

[FG-AINN-I-069]	[FG-AINN-I-069]	[FG-AINN-I-069]	[FG-AINN-I-069]	[FG-AINN-I-069]					
[FG-AINN-I-070]	[FG-AINN-I-070]	[FG-AINN-I-070]	[FG-AINN-I-070]	[FG-AINN-I-070]					
[FG-AINN-I-071]	[FG-AINN-I-071]	[FG-AINN-I-071]	[FG-AINN-I-071]	[FG-AINN-I-071]					
Terms recommend by the opinions of experts									
AI Native networks									
[FG-AINN-I-065]									
Terms recommend for	r the Vocabulary in 3rd	l Plenary meeting							
AI-Native Telecommunication	Network Slicing	Dynamic Network Slice Marketplace	Autonomous SLA Negotiation	Machine learning (ML)					
Network	[FG-AINN-I-104]	_	_	, ,					
[FG-AINN-I-104]		[FG-AINN-I-104]	[FG-AINN-I-104]	[FG-AINN-I-109]					
[FG-AINN-I-109]				[FG-AINN-I-110]					
[FG-AINN-I-110]				[FG-AINN-I-111]					
[FG-AINN-I-111]									
Artificial intelligence (AI)	Network for AI	AI service	AI for 6G System	6G System for AI					
	[FG-AINN-I-109]	[FG-AINN-I-122]	[FG-AINN-I-122]	[FG-AINN-I-122]					
[FG-AINN-I-109]	[FG-AINN-I-110]								
[FG-AINN-I-110]									
[FG-AINN-I-111]	[FG-AINN-I-111]								
Foundational Models	Intent								
[FG-AINN-I-125]	[FG-AINN-I-123]								
Terms recommend for	r the Vocabulary in 4th	Plenary meeting							
Explainable AI	Sclice orchestration	Telemetry	Intent						
[FG-AINN-I-153]	[FG-AINN-I-153]	[FG-AINN-I-153]	[FG-AINN-I-153]						

Table 2 shows the selection of terms proposed by experts, based on the following two principles.

Note1: Priority for selection. Definition is available and is used in WG documents and relevant to delimiting characteristics.

Note2: Reasons for not selection. Not used in WG documents or not relevant to delimiting characteristics.

Table 2. Selection of terms proposed by experts

Terms	Selecting	Reasons	Definition	Description	Sources
	or not				

- 21 -FG-AINN-O-011

Intent-based network management	X	No available definition	X	V	[18-FG-AINN-I-WG2-005-R3]
Autonomous Workflow design	X	No term	X	X	Experts
Agentic Workflow	X	No term	X	X	Experts
Agent Coordination and Workload distribution	X	No term	X	X	Experts
Multi-AI agent coordination	X	No term	X	X	Experts
Context aware AI model	X	No available definition	X	V	[16-FG-AINN-I-WG2-006-R3]
RAG mechanism	X	No available definition	X	V	[18-FG-AINN-I-WG2-005-R3]
Multi-modal agents		There are reference cases available	X		[18-FG-AINN-I-WG2-005-R3]: These agents for this proposal are just language models, however, they may be extended to multi-modal agents based on requirements. In this use case, intent-based commands, automated slice configurations, dynamic resource allocation and policy management as per network stance in real time for network slicing of industrial automation are created by the agents that is not currently in action. In addition, the system enhanced with AI capability will automatically (or deeply) keep best practices, policies and configurations for the network slicing, and ensure the network slicing is secure, and the slices are complaint with service

- 22 -FG-AINN-O-011

					level agreements and regulatory mandates.
Multi-modal data fusion		There are reference cases available	X		[FG-AINN-I-061]: Unlike traditional AI systems that operate solely on abstract data, embodied intelligence learns and adapts through direct sensorimotor experiences with multi-modal data fusion (e.g., signal from cameras, LiDAR, microphones, force/torque sensors), and thus imposing stringent demands on wireless communication, particularly on RAN, due to its reliance on high-throughput and low-latency data transmission, real-time decision-making, and high-reliability connectivity.
Edge-cloud continuum	√ ·	This term has a definition	V	√ 	[16-FG-AINN-I-WG2-006-R3]: This use case focuses on deploying an integrated, resource-shared edge-cloud continuum network that efficiently manages and utilizes computing resources across edge networks during disaster scenarios.
Local AI learning	X	No available definition	X	X	[19-FG-AINN-I-054-R1]
Distributed Machine Learning Models	X	No available definition	X	X	[19-FG-AINN-I-054-R1]
Intelligent Closed Loop	X	No term	X	X	Experts
Reaction Rate of Closed Loop	X	No term	X	X	Experts

Based on the analysis in Table 2, the three terms, namely "Multi-modal agents", "Multi-modal data fusion" and "Edge-cloud continuum", were ultimately selected to be included in the vocabulary.

#### Appendix V Tracking of Revision

NOTE: Contributions to this Vocabulary Technical Specification will have following steps and processes:

- (1) Developing principles for building concepts and definitions related to AI-native networks (FG-AINN-037) supporting the standards development process of the Vocabulary. Contributions to FG-AINN-037 are welcome for its improvement and agreed to use it as the expected TR output file at the FG-AINN WG1 meeting.
- (2) Developing a unified definition for AI-native networks based on semantic definition analysis of objects, essential characteristics and delimiting characteristics of AI-native networks from existed definitions (FG-AINN-038) following the above Principles. Exported as TR output document, number FG-AINN-O-08.
- (3) Identifying and defining a minimal set of core concepts, terms and definitions which are necessary for harmonization and collective standardization to be shared and reused across different working groups along deliverables of FG-AINN, based on continuously studies about understanding about AI-native networks from input documents of FG-AINN and elsewhere (FG-AINN-036) and the representation of core concept systems of AI-native networks in Metamodel(FG-AINN-045). To be generated as TR output documents to WG1.

Table 1. Tracking of Revision

Version R1	Revision Date	Content of Revision
R1	2024 12	
	2024-12-02	According to expert opinions, the part of the metaverse in the scope has been changed to AINN.
R2	2025-01- 08	Propose the definition of Artificial Intelligence Native for Telecommunication Networks and add the content of Contributions to this Vocabulary Technical Specification that will have following steps and processes.
R3	2025-02- 09	<ol> <li>Adding contribution from FG-AINN-I-038-R7 / FG-AINN-WG1-04.</li> <li>Updating the definition of Artificial Intelligence Native for Telecommunication Network.</li> <li>Adding the definitions of security, safety, and Artificial Intelligence Native</li> </ol>
		08 R3 2025-02-

Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R4	2025-04-02	1.According to expert opinions, on the basis of the recommended vocabulary for FG-AINN-I-036-R6 Input_WG1_02/04_2025_Vocabulary deliverable, 31 additional terms such as Agent will be added.  2. Update the definitions of Artificial Intelligence Native for Telecommunication Network and Artificial Intelligence Native Telecommunication Network based on the FG-AINN-I-038-R10 Input_WG1_02/04_2025_Vocabulary deliverable.	
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R5	2025-04- 09		
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R6	2025-04-30	Based on the recommendations in the FG-AINN-I-036-R8 deliverable, in combination with the documents from the second plenary session, we have added the five terms "AI for Network", "AI/ML inference", "ML model testing", "ML model lifecycle", and "ML model training" to the vocabulary.	
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R7	2025-05-	<ol> <li>Move "Tracking of Revision" to Appendix D, and add Appendix A (Principles for Building Concepts and Definitions Related to AI Native for Telecommunication Networks (FG-AINN-I-037)), Appendix B (Recommended terms for adding to the Vocabulary), and Appendix C (Core concepts and concepts relations of "AI-native for telecommunications networks" and "AI-native telecommunications networks".</li> <li>Add "Flowchart of vocabulary building" to the Scope section.</li> <li>According to expert opinions, adjust the positions of the terms in the vocabulary. Place "input documents and the WG1 documents" in 3.2 Terms defined in this Technical Specification.</li> <li>Based on Vishnu Ram's opinions and the principle in Appendix A that "Relevance: Each concept is related to the AI native for telecommunication networks", delete the following terms: Information security, AI-powered platform, Architecture adaptation,</li> </ol>	

Deaft Taskwiss 1	D0	2025.05	Continuous Learning, Data-Driven Ecosystem, Data collection, Data privacy, Densification, Green networks, Human in the loop, Human on the loop, Human starts the loop, Immersive Experiences, Network infrastructure, People-Centric Design, Predictive Maintenance, Proactive Response, Proactive Services, Safety, Self- service Interfaces, Zero-Touch Capabilities, Predictive Analytics.  5. According to expert opinions, add the term: AI Native networks.
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R8	2025-05-28	Revise according to Vishnu Ram's editors note and the suggestions made at the 14th WG1 meeting.  Including the modification of 2 references, the modification of Agent definition, and the addition of Section 6 Vocabulary of terms.
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R9	2025-06- 04	<ol> <li>Adding note in section 3.2.</li> <li>Making core concepts to be selected for vocabulary to be transparent and traceable, relevant to characteristics of AINN, and to be useful for all WGs.</li> <li>Checked all the sources.</li> <li>Deleting section 6 Vocabulary of terms.</li> </ol>
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	R10	2025-07- 02	Modify the generation process of the vocabulary of Artificial Intelligence Native for Telecommunication Networks     Add FG-AINN-I-038 deliverable to References     Add chapter 3 Terms selection     Add Appendix A
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R1	2025-07-23	<ol> <li>For the terms appearing in the deliverables of the third and fourth plenary session, based on the Steps and processes of vocabulary building, three additional terms, namely AI Ethics, Machine Learning (ML) and Intent, have been added to the vocabulary for further discussion.</li> <li>Update Appendix C Recommended terms for adding to the Vocabulary</li> </ol>
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R2	2025-07-	1. Change the original positions of Step 1 and Step 2, and synchronize the modifications in Appendix A: Steps and processes of vocabulary building.  2. Check the relationship between existing terms and AI native, AI native networks, or AI

	1	ı	
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R3	2025-08-06	native telecommunication networks in the third Terms selection section.  3. Delete Artificial Intelligence Native for Telecommunication Network and modify its definition to be consistent with the latest version of FG-AINN-O-08. There are currently 24 terms in the terminology list.  4. Appendix B Principles for Building Concepts and Definitions Related to AI Native Telecommunication Networks Update and revise.  Considering that it has already been done in Step 1 identifying terms and concepts related to AI native telecommunication networks, Therefore, delete 6.3 Principles of identifying terms and concepts related to AI native telecommunication networks, Ensure the logic of steps and processes of vocabulary building. And update Figure 1: Systematic relationship between the principles in the appendix synchronously.  5. Add a section to Appendix C Recommended terms for adding to the Vocabulary (from FG-AINN-I-036)—— Discussion on whether the terms proposed by Vishnu has been added to the vocabulary based on the process of Artificial Intelligence Native  Telecommunication Networks vocabulary.  6. Appendix D Core concepts and concept relations (from FG-AINN-O-08) adds FG-AINN-I-142-R2 section, Core concepts to be selected for Vocabulary (142-R2) needs further update.  Based on the terms provided by Vishnu Ram, a total of 53 terms were analyzed from 8 FG-AINN input documents. After screening, 15 terms related to the features were obtained, they are: Intent-based network management, Autonomous Workflow design, Agentic Workflow, Agent Coordination, Multi-AI agent coordination, Context aware AI model, RAG mechanism, Multi-modal agents, Multi-modal data fusion, Semantic
			coordination、Context aware AI model、RAG
			_
			Extraction, edge-cloud continuum, Local AI
			learning, Distributed Machine Learning
			Models 、Intelligent Closed Loop, Reaction Rate of Closed Loop

Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R4	2025-08-27	1. Update step 3 of the steps and processes of vocabulary building and update the flowchart of vocabulary building diagram in Appendix A.  2. Analyze the definitions of terms proposed by Vishnu Ram and determine the addition of three terms, "Multi modal agents," "Multi modal data fusion," and "Edge cloud continuation," to the vocabulary. At present, there are a total of 27 terms in the vocabulary.  3. The detailed analysis process table is presented in Appendix C. Further analysis is conducted on the 15 terms related to AINN proposed by expert Vishnu Ram, and Table 3 is added.  4. In Appendix D, the "Core concepts to be selected for Vocabulary" figure is updated based on the latest vocabulary. Explanations for direct relationship, indirect relationships, essential terms, and supportive terms in the figure are added.
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R5	2025-09-	Check the definitions of terms in the vocabulary and mark the definitions that need to be discussed at the WG1 meeting in yellow.
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R6	2025-09-	According to expert opinions, the definitions of terms have been revised, and currently there are a total of 25 terms in the vocabulary.
Draft Technical Specification on vocabulary for Artificial Intelligence Native for Telecommunication Networks	142-R7	2025-09-	1.Checked the appendix and adjusted its order. 2.The concept relationship diagram in the appendix has been updated to be consistent with the latest glossary.
Vocabulary for Artificial Intelligence Native for Telecommunication Networks	175-R1	2025-09-	In accordance with the terminology recommendations provided by WG3, add the four terms knowledge base, retrieval augmented generation (RAG), split-AI, and network for AI, and update the concept relationship diagram.
Vocabulary for Artificial Intelligence Native for Telecommunication Networks	175-R2	2025-09-23	According to the discussion at the 5th plenary meeting, the following updates have been made:  1. Remove the terms AI ethics and AI driven security.  2. Update Split AI to Split AI model.  3. Update the definition of Network for AI.  4. Update the concept relationship diagram in Appendix II.

- 29 -FG-AINN-O-011

Vocabulary for Artificial 175-F		2025-09-	Update the definition of Intent based on the
Intelligence Native for		24	discussion results of the meeting on September
Telecommunication			24th and remove "Draft" from the title.
Networks			
Vocabulary for Artificial	175-R4	2025-09-	It was agreed upon and approved at the 5th
Intelligence Native for		25	plenary meeting on September 25th.
Telecommunication			
Networks			

#### Appendix VI

# A.13 justification for proposed new ITU-T TR.VOC-AINN " Technical Specification -Vocabulary for Artificial Intelligence Native for Telecommunication"

<b>Question:</b>	Q20/13	Proposed new ITU-T Technical report	Tashkent, Oct 28-Nov 6			
Reference and title:	ITU-T TR.VOC-AINN " Technical Specification -Vocabulary for Artificial Intelligence Native for Telecommunication"					
Base text:	- <b>Timing:</b> 2027-03					
Editor(s):	Rui Wang	n, Renmin University, email: <a href="mailto:anxiaomi@ruc.edu.cn">anxiaomi@ruc.edu.cn</a> g, Renmin University, email: <a href="mailto:anxiaomi@ruc.edu.cn">anxiaomi@ruc.edu.cn</a> government of the state of the st	Approval process:	Agreement		

**Purpose and scope** (Define what this document will address and its intent or objectives in order to indicate the limits of its applicability):

Building on the progress made by ITU-T FG AINN WG1, this draft technical specification establishes a comprehensive set of common terminology, definitions, and key concepts related to AI Native networks. The terms and definitions provided in this draft are intended to support standards development within SG13 and serve as a reference for other standards development organizations (SDOs) working on AI-Native frameworks.

**Summary**: This draft technical specification presents a unified vocabulary of key terminology, definitions, and concepts associated with AI Native networks, in direct linkage to the study of concepts, characteristics and definitions of artificial intelligence native telecommunication networks. It has been finalized under the guidance of the "Principles for Building Concepts and Definitions Related to Native Artificial Intelligence in Telecommunication Networks" (see Appendix III), and carefully incorporates terms found in diverse FG-AINN deliverables, alongside expert consensus from multiple contributors. The vocabulary aims to support harmonized standards development within ITU-T SG13 and enable consistent understanding among other standards development organizations (SDOs) advancing AI-native approaches.

Relations to ITU-T Recommendations or other documents (approved or under development):

ITU-T Y.3102, ITU-T Y.3172, YSTR.AN-PoC

Liaisons with other study groups or with other standards bodies:

ITU-T SG2, SG11, SG16, IEEE, ETSI ENI, ETSI ZSM, TMF, 3GPP, NGMN

Supporting members that are committing to contributing actively to the work item:

Renmin University of China, Huawei Technologies Duesseldorf GmbH