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|  | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2022-2024 | SCV-TD37 |
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| **TD****(Ref.: SG2-LS57)** |
| **Source:** | ITU-T Study Group 2 |
| **Title:** | LS on SCV activity in SG2 |
| **LIAISON STATEMENT** |
| **For action to:** | SCV/CCV/CCT, TSAG, ITU-T SG3, SG5, SG9, SG11, SG12, SG13, SG15, SG16, SG17, SG20 |
| **For information to:** | - |
| **Approval:** | ITU-T Study Group 2 Meeting (Virtual, 22 March 2023) |
| **Deadline:** | - |
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| **Abstract:** | This Liaison Statement informs about current terms and definition activities within SG2. |

ITU-T SG2 thanks SCV/CCV and the ITU-T study groups for the alignment terms and definitions work.

ITU-T SG2 follows the formal structure of definitions given in the Author's Guide for drafting ITU‑T Recommendations (September, 2020), Annex B, Guidance on the development of definitions (extract from Annex B Authors Guide):

A formal definition is a concise, logical statement that comprises three essential elements:

i) The term (word or phrase) to be defined;

ii) The class of object or concept to which the term belongs; and

iii) The characteristics that distinguish it from all others of its class.

Definitions with more than one explanation should be separated with semicolons.

Where abbreviations are used within a definition, an explanation or expansion of those abbreviations must be included. Standard symbols for measurement units should not be defined.

At the ITU-T Study Group 2 meeting (Virtual, 13-22 March 2023) the experts discussed the proposal from different SGs and FGs, and made the following conclusions.

1. The status of definitions developed in informal ITU-T documents, such as Technical reports, Technical papers, Technical specifications, Supplement is not quite clear. Mixing terms in the ITU Database that went through AAP and TAP procedures with terms that have just been agreed in informal documents looks dangerous. SG2 asks TSAG to evaluate possible issues, including possible deletion of Section 3.2 (Definitions developed in this text) from informal document templates.
2. At this meeting, SG2 developing new definitions for the following terms (planned for agreement at the next SG2 meeting):

**Wangiri**: type of telecom fraud when using short or one ring calls (“one ring and drop”) to cheat subscribers to call back a premium rate number with a very expensive rate.

**Premium Rate Numbers**: Special numbers dedicated to a certain service with declared rate higher than usual rate.

SG2 asks interested parties to provide feedback.

1. Working with definition of **Asset** we found out that it was copy-pasted from ISO|IEC 27000:2009 in some ITU-T Recommendations with reference to it, but versions of ISO/IEC 27000:2016 and 2018 (the last one) do not have it at all. It shows us issues that we can not resolve in a fast way. One proposal could be as much as possible to avoid using definitions from outside sources. SG2 asks TSAG to evaluate this issue and amend the Author’s Guide and maybe some Recommendations of A-series if needed.
2. Working with many definitions from **IEEE** for possible inclusion in the new ITU-T Recommendations developed in SG2, SG2 sent a Liaison Statement to IEEE requesting permission to copy paste in ITU-T Recommendations under ITU-T IPR Policy rules. SG2 will inform you about results of this request.
3. SG2 considered terms and definitions from **SG3**:

**OTT voice bypass**: Redirecting of terminating traffic from legitimate mobile calls onto Over-the-Top applications.

SG2 would like to inform SG3 that bypass can work in both directions and proposes to avoid the word “legitimate” in the definition.

1. SG2 considered terms and definitions from **SG5**:

**confidentiality**: Ensuring that information is accessible only to those authorized to have access. EMSEC deals with the risk of losing this confidentiality.

**EM mitigation**: The preparations made to avoid either a malfunction due to a vulnerability caused by high-altitude electromagnetic pulses (HEMPs), high-power electromagnetic (HPEM) emissions or the lack of confidentiality due to insufficient emanation security (EMSEC). The level of the EM mitigation of the equipment can be calculated from the threat level and the vulnerability level.

**customer premises environment**: Physical location in the residential, commercial, public, and light-industrial locations where telecommunication equipment is installed or used. In this environment the electromagnetic disturbance protection and earthing and bonding conditions might be uncontrolled.

**integral antenna base station**: Base station with integral antenna, and antenna is portion of the RF unit. For this type of base station, antenna port and the enclosure ports are equivalent.

**OTA AAS BS:** AAS BS which has ≥ 8 transceiver units for E-UTRA, NR or MSR and ≥ 4 transceiver units for UTRA per cell and has a radiated RF interface only and conforms to the OTA requirements set.

SG2 would like to propose to SG5 to avoid using abbreviations without explanation in a term definition (EM, OTA, AAS, and so on) and try to develop one‑sentence definitions in accordance with the Author’s Guide.

1. SG2 considered terms and definitions from **SG11**:

calling line identification certificate (CLIC): a public certificate issued by CA is used to prove the originating local exchange owns the calling party number.

SG2 would like to propose not to use abbreviations without explanation in the definition in accordance with the Author’s Guide.

1. SG2 considered terms and definitions from **SG13**:

**multi-cloud**: Use of cloud services in public cloud from two or more independent cloud service providers at the same time for business.

NOTE – Multi-cloud, as known as multi-cloud computing is distinguished from multiple cloud which is an environment involving two or more CSPs.

SG2 would like to propose to SG13 to avoid using abbreviations without explanation in a term definition (CSP in this case).

Suggested changes are: **multi-cloud**: Use of cloud services in public cloud from two or more independent cloud service providers (CSPs) at the same time for business.

**evaluation ML pipeline:** chaining of pipeline nodes and simulated network functions (NFs) with served ML models whose goal is to evaluate a particular ML use case.

SG2 would like to propose to SG13 to avoid using abbreviations without explanation in a term definition (ML in this case).

Suggested changes are: **evaluation ML pipeline:** chaining of pipeline nodes and simulated network functions (NFs) with served machine learning (ML) models whose goal is to evaluate a particular ML use case.

Without explaining the term “pipeline” itself, it is recommended to refer to the definition of the artificial intelligence pipeline in [ITU-T M.3080] and modify the pipeline nodes to logical nodes.

**simulation component metadata:** data describing the characteristics of a particular simulation component.

NOTE – Examples of simulation component metadata are capabilities of simulated NFs, configurable parameters, performance indicators, monitored parameters and interfaces.

SG2 would like to propose to SG13 to avoid using abbreviations without explanation in a term definition (NF in this case).

Suggested changes are: NOTE – Examples of simulation component metadata are capabilities of simulated network functions (NFs), configurable parameters, performance indicators, monitored parameters and interfaces.

The concept or meaning of “simulation component” is not explained and the term cannot be explained by itself.

**simulation environment metadata:** data describing the characteristics of a particular simulation environment.

NOTE 1 – Simulation environment metadata can contain information such as installation/execution requirements, simulation component metadata, performance indicators, connections, and maturity indicators (e.g., alpha/beta versions).

NOTE 2 – Examples of format for representing simulation environment metadata are JavaScript object notation (JSON) [b-JSON], comma-separated values (CSV) [b-CSV], or extensible markup language (XML) [b-XML].

SG2 agreed that the concept or meaning of “simulation environment” is not explained and the term cannot be explained by itself.

1. SG2 considered terms and definitions from **SG16**:

**over-the-top (OTT)**: An application accessed and delivered over the public Internet that may be a direct technical/functional substitute for traditional international telecommunication services.

NOTE – The definition of OTT is a matter of national sovereignty and may vary among Member States.

SG2 would like to propose to SG16 to change in this definition wording “Public Internet” to “IP (Internet Protocol)” to be more precise and correct.

**Smartphone Infotainment Assistant**: A Smartphone Infotainment Assistant is an application allowing to combine smartphone and vehicle resources and utilize them within the car infotainment system, thus allowing usage of some smartphone functionalities with the vehicle HMI, by the driver, while keeping attention to the driving task, avoiding thus distraction

**HF processing SW Module:** Hands Free processing Software Module, including digital signal processing algorithms for speech signal enhancement, like for instance: Echo Cancelling, Echo Suppression, Equalisation, Dynamic Range Compression, Limiters, Noise Reduction, Beamforming, Comfort Noise injection …

**T-Box (Telematics-Box):** Is a functional unit in the vehicle responsible for the remote connection of the different vehicle functions, including multimedia, through WAN or LAN

SG2 would like to propose to SG16 not to use abbreviations without explanation in the definition in accordance with the Author’s Guide

1. SG2 considered terms and definitions from **FG-AN**:

**AN Sandbox:** An environment in which controllers can be deployed, experimentally validated with the help of (domain specific) models of underlays, and their effects upon an underlay evaluated, without affecting the underlay.

NOTE 1- AN Sandbox generates reports regarding the experimental validation of controllers. These reports are collated by the Experimentation controller and the Knowledge Base is updated.

NOTE 2- The domain specific models of underlays are generated using inputs from underlays. These inputs are used in configuring simulators in AN Sandbox. For example the packets per second to be used to simulate a real world scenario. In addition, AN Sandbox simulates scenarios which are rarely or never seen in underlays. For example a burst of traffic which rarely occurs in real network.

**Knowledge base:** 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.

SG2 would like to propose to FG-AN not to use abbreviations without explanation in the definition (AN in these cases) in accordance with Author’s Guide

**Autonomy Engine:** A collection of subsystems where trial and error process is applied on controllers to generate new candidate controllers and validate them.

NOTE – For example, the grouping of the evolutionary exploration subsystem and the real-time responsive online experimentation subsystem together forms Autonomy Engine.

SG2 would like to inform FG-AN that the explanation of the “engine” differs from that of the “artificial intelligence engine” in [ITU-T M.3080], and it is recommended to refer to the existing definition of the “artificial intelligence engine”, which can be explained to “the realization and mechanization”.

1. SG2 considered terms and definitions from **FG-AI4EE**:

**artificial intelligence (AI) and machine learning (ML) input and output**:Independent of the definitions of AI and ML, mathematical algorithms can be developed and/or trained on input data in order to provide actionable knowledge.

**input data**: Can be timeseries of Internet of things (IoT) sensors (temperature, CO2 level, humidity, noise, particulate matter (PMx), nitrogen oxides (NOx), sulphur oxides (SOx), pressure, power consumption etc.); remote pictures of satellites; video streams of online, closed circuit television (CCTV); light detection and ranging (LIDAR) footage; tagged or untagged pictures; handwritten text; structured and unstructured online accessible text; natural language soundtracks of songs; phone calls; home assistant devices; and so on. Most of the input data is geolocalizable with some degree of precision and can thus be displayed and visualized for human inspection.

**output data**:The purpose of ML and AI algorithms is to solve complex problems by providing recommendations with uncertainty range and/or actionable information. The recommendations and information are thus the outputs of the algorithms. The outputs can be smoother and filtered timeseries showing short-term and long-term predictions; IoT commands to controllers such as video game controllers or house automation and heating ventilation air conditioning (HVAC); synthetic images, video streams and soundtracks; chess or go game steps; probability contours of sea level rise, deforestation or avalanche; heatmaps of urban heat islands; urban, industrial and traffic pollution prediction, and so on. Most of the output can be geolocalized with some degree of precision.

It was agreed that all three definitions do not comply with ITU-T requirements.SG2 would like to invite ITU-T experts to follow the Author’s Guide requirements when dealing with terms and definitions.

SG2 looks forward to collaborating closely with all the relevant parties.

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