**3GPP TSG- Meeting #9SP-251235**

**Beijing, China, 16-19 September 2025 Revision of SP-251123**

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| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **5** | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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|  |
| ***Title:***  | Introducing AI/ML unified terminologies |
|  |  |
| ***Source to WG:*** | Nokia, Huawei, Samsung, Deutsche Telekom |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | DUMMY |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** |  |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | This CR implements in TR 21.905 the unified definitions and abbreviations identified as part of FS\_AIML\_CAL study in SA. |
|  |  |
| ***Summary of change:*** | Adding definitions for: * ML model (without the NOTE from TR 22.850)
* ML model inference
* ML model lifecycle (without the NOTEs from TR 22.850)
* ML model lifecycle management (without the NOTEs from TR 22.850)
* ML model re-training
* ML model testing
* ML model training
* Federated Learning (with updates as per pCR SP-251122)
* Functionality-based lifecycle management
* Horizontal Federated Learning (with updates as per pCR SP-251122)
* Transfer Learning
* Vertical Federated Learning (with updates as per pCR SP-251122)

Adding abbreviations for: * AI/ML
* FL
* HFL
* ML
* VFL

This draft CR does not yet include definitions for ML model activation nor ML model deactivation due to pending editor’s note in TR 22.850. |
|  |  |
| ***Consequences if not approved:*** |  |
|  |  |
| ***Clauses affected:*** | 3, 4 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **N** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **N** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **N** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## =============== First Change =============

## F

**Federated Learning:** A distributed machine learning approach where the AI/ML model(s) are collaboratively trained by multiple participants, including one acting as an FL server and multiple acting as FL clients, iteratively without exchanging data samples.

**File:** A named and hierarchically-classified data set on the UICC.

**File identifier (FID):** The 2-byte name of a file or a directory on the UICC.

**Fixed Network User Rate:** The user rate between IWF and the fixed network.

**FC (Flow Control):** A set of mechanisms used to prevent the network from becoming overloaded by regulating the input rate transmissions.

**Flexible Layer One (FLO)**: GERAN feature that allows the channel coding of the layer one to be configured at call setup.

**Fixed Mobile Convergence (FMC)**: In a given network configuration, the capabilities that provide service and application to the end-user irrespective of the fixed or mobile access technologies and independent of user's location. In the NGN environment, it means to provide NGN services to end-users regardless of the access technology.

**Framework:** A framework defines a set of Application Programming Interface (API) classes for developing applications and for providing system services to those applications.

**Frequency layer:** set of cells with the same carrier frequency.

**Functional group:** A set of functions that may be performed by a single equipment (source: ITU-T I.112).

**Functionality-based lifecycle management:** Signalling procedure where network indicates activation/deactivation/fallback/switching of AI/ML functionality via 3GPP signalling (e.g. RRC, MAC-CE, DCI); operates based on, at least, one configuration of AI/ML-enabled Feature / Feature Group or specific configurations of an AI/ML-enabled Feature/FG.

## =============== Next Change =============

## H

**Handoff Gain/Loss (dB):** This is the gain/loss factor (+ or -) brought by handoff to maintain specified reliability at the cell boundary.

**Handover:** The transfer of a user's connection from one radio channel to another (can be the same or different cell).

**Handove**r**:** The process in which the radio access network changes the radio transmitters or radio access mode or radio system used to provide the bearer services, while maintaining a defined bearer service QoS.

**Hard Handover:** Hard handover is a category of handover procedures where all the old radio links in the UE are abandoned before the new radio links are established.

**Heterogeneous Network:** a 3GPP access network consisting of multiple cells with different characteristics (e.g., for the case of E-UTRA: a variety of e-NodeBs, Home e-NodeBs, e-UTRA Relays).

**HE-VASP:** Home Environment Value Added Service Provider. This is a VASP that has an agreement with the Home Environment to provide services. The Home Environment provides services to the user in a managed way, possibly by collaborating with HE-VASPs, but this is transparent to the user. The same service could be provided by more than one HE-VASP and each HE-VASP can provide more than one service.

**Home Environment:** responsible for overall provision and control of the Personal Service Environment of its subscribers.

**Horizontal Federated Learning:** A federated learning technique without exchanging/sharing local data set, wherein the local data set in different clients for local model training have the same feature space for different samples.

**HNB Name**: The HNB Name is a broadcast string in free text format that provides a human readable name for the Home NodeB/eNodeB.

**Home PLMN:** This is a PLMN where the MCC and MNC of the PLMN identity match the MCC and MNC of the IMSI. Matching criteria are defined in TS 23.122.

**Hybrid cell:** A cell broadcasting a CSG indicator set to false and a specific CSG identity. This cell is accessible as a CSG cell by UEs which are members of the CSG and as a normal cell by all other UEs.

## =============== Next Change =============

## M

**Macro cells:** "Macro cells" are outdoor cells with a large cell radius.

**Macro diversity handover:** "Macro diversity" is a operation state in which a User Equipment simultaneously has radio links with two or more UTRAN access points for the sole aim of improving quality of the radio connection or providing seamless.

**Management Infrastructure:** The collection of systems (computers and telecommunications) a 3GPP System Organisation has in order to manage a 3GPP System.

**Mandatory UE Requirement:** Regulatory requirement which is applicable to 3G UEs. It is determined by each country/region and beyond the scope of 3GPP specification (e.g. spurious emission in UK).

**Master File (MF):** The root directory of the file system hierarchy on the UICC.

**Maximum Base Station RF bandwidth:** The maximum RF bandwidth supported by a BS within an operating band.

**Maximum output Power:** For UE,this is a measure of the maximum power supported by the UE (i.e. the actual power as would be measured assuming no measurement error) (TS 25.101). For FDD BS, the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition (TS 25.104). For TDD BS this refers to the measure of power when averaged over the transmit timeslot at the maximum power setting (TS 25.105). For LTE: the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition.

**Maximum possible AIUR:** The highest possible AIUR that the multiple TCH/F can provide, e.g. 2 TCH/F using TCH/F9.6 provides a maximum possible AIUR of 19,2 kbit/s.

**Maximum throughput:** maximum achievable throughput for a reference measurement channel.

**Maximum total output power:** sum of the power of all carriers available at the antenna connector for a specified reference condition.

**Maximum Transmitter Power Per Traffic Channel (dBm):** The maximum power at the transmitter output for a single traffic channel.

**MBMS-service-associated signalling:** When M2AP messages associated to one MBMS service uses the MBMS-service-associated logical M2-connection for association of the message to the respective MBMS service in eNB and EPC.

**Mean bit rate:** A measure of throughput. The average (mean) bit rate available to the user for the given period of time (source: ITU-T I.210).

**Mean power:** When applied to E-UTRA transmission this is the power measured in the operating system bandwidth of the carrier. The period of measurement shall be at least one subframe (1ms) unless otherwise stated.

**Mean transit delay:** The average transit delay experienced by a (typically) large sample of PDUs within the same service category.

**Measurement bandwidth:** The bandwidth in which an emission level is specified.

**Medium Access Control:** A sub-layer of radio interface layer 2 providing unacknowledged data transfer service on logical channels and access to transport channels.

**Messaging service:** An interactive service which offers user-to-user communication between individual users via storage units with store-and-forward, mailbox and/or message handling, (e.g., information editing, processing and conversion) functions (source: ITU-T I.113).

**MExE Classmark:** A MExE classmark identifies a category of MExE UE supporting MExE functionality with a minimum level of processing, memory, display, and interactive capabilities. Several MExE classmarks may be defined to differentiate between the functionalities offered by different MExE UEs. A MExE application or applet defined as being of a specific MExE Classmark indicates that it is supportable by a MExE UE of that Classmark.

**MExE executable:** An executable is an applet, application, or executable content, which conforms to the MExE specification and may execute on the ME.

**MExE server:** A node supporting MExE services in the MExE service environment.

**MExE service:** a service enhanced (or made possible) by MExE technology.

**MExE service environment:** Depending on the configuration of the PLMN, the operator may be able to offer support to MExE services in various ways. Examples of possible sources are from traditional GSM nodes, IN nodes, operator-specific nodes, operator franchised nodes and services provider nodes, together with access to nodes external (i.e. vendor-specific) to the PLMN depending on the nature of the MExE service. These nodes are considered to constitute the MExE service environment. The MExE service environment shall support direct MExE UE to MExE UE interaction of MExE services.

**MExE service provider:** an organisation which delivers MExE services to the subscriber. This is normally the PLMN operator, but could be an organisation with MExE responsibility (which may have been delegated by the PLMN operator).

**MExE SIM:** A (U)SIM application that is capable of storing a security certificate that is accessible using standard mechanisms.

**MExE subscriber:** The owner of a subscription who has entered into an agreement with a MExE service provider for MExE services.

**Micro cells:** "Micro cells" are small cells.

**Minimum transmit power:** The minimum controlled output power of the TDD BS is when the power control setting is set to a minimum value. Thei si when the power control indicates a miminum transmit output power is required (TS 25.105).

**ML model:** A mathematical algorithm that applies AI/ML techniques to generate a set of outputs based on a set of inputs. It may include metadata which consists of, e.g. information related to the model and applicable runtime context.

**ML model inference:** A process of running a set of inputs through a trained AI/ML model to produce a set of outputs.

**ML model lifecycle:** The end-to-end process typically consisting of data processing, model training, model testing, model deployment, model inference, model monitoring and model maintenance.

**ML model lifecycle management:** The management capabilities allowing a producer or consumer to manage different phases of the ML model lifecycle.

**ML model re-training:** A process of training a previous version of an AI/ML model and generate a new version.

**ML model testing:** A process of evaluating the performance of an AI/ML model using test data different from data used for model training and validation.

**ML model training:** A process to train an ML Model by learning the input/output relationship in a data driven manner and obtain the trained ML Model for e.g. inference.

**Mobile Equipment (ME):** The Mobile Equipment is functionally divided into several entities, i.e.one or more Mobile Terminations (MT) and one or more Terminal Equipments (TE)**.**

**Mobile evaluated handover:** Mobile evaluated handover (MEHO) is a type of handover triggered by an evaluation made in the mobile. The mobile evaluates the necessity of handover based on the measured radio environment and based on criteria defined by the network. When the evaluation meets the hand-off criteria the necessary information is sent from the mobile to the network. The network then decides on the necessity of the handover based on the reported evaluation result and other conditions, e.g. uplink radio environment and/or availability of network resources, the network may then execute the handover.

**Mobile Station (MS):** A Mobile Station (MS) corresponds to a User Equipment (UE). See 3GPP TS 24.002.

**Mobile number portability:** The ability for a mobile subscriber to change subscription network within the same country whilst retaining their original MSISDN(s).

**Mobile Termination (MT):** The Mobile Termination is the component of the Mobile Equipment (ME) which supports functions specific to management of the PLMN access interface (3GPP or non-3GPP). The MT is realized as a single functional entity..

**Mobility:** The ability for the user to communicate whilst moving independent of location.

**Mobility Management:** A relation between the mobile station and the UTRAN that is used to set-up, maintain and release the various physical channels.

**MSR Base station:** Base Station characterized by the ability of its receiver and transmitter to process two or more carriers in common active RF components simultaneously in a declared RF bandwidth, where at least one carrier is of a different RAT than the other carrier(s).

**MTC Device:** A MTC Device is a UE equipped for Machine Type Communication, which communicates through a PLMN with MTC Server(s) and/or other MTC Device(s).

NOTE: A MTC Device might also communicate locally (wirelessly, possibly through a PAN, or hardwired) with other entities which provide the MTC Device "raw data" for processing and communication to the MTC Server(s) and/or other MTC Device(s). Local communication between MTC Device(s) and other entities is out of scope of this technical specification.

**MTC Server:** A MTC Server is a server, which communicates to the PLMN itself, and to MTC Devices through the PLMN. The MTC Server can also have an interface which can be accessed by the MTC User. The MTC Server can:

- Provide services for other servers (e.g. The MTC Server is a Services Capability Server [9] for an Application Server [9]), and/or

- Provide services for applications and can host the application (e.g. The MTC Server is an Application Server [x]).

**MTC User:** A MTC User uses the service provided by the MTC Server.

**MTC Subscriber:** A MTC Subscriber is a subscriber, i.e. a legal entity having a contractual relationship with the network operator to provide service to one or more MTC Devices.

NOTE: Typically a M2M service provider is the party holding subscriptions in order to provide connectivity between MTC Devices and the MTC Server. In practise certain roles can collapse, e.g. the network operator acts as the same time as Service Provider.

**Multi-carrier transmission configuration:** A set of one or more contiguous carriers that a BS is able to transmit simultaneously according to the manufacturer's specification.

**Multi mode terminal:** UE that can obtain service from at least one UTRA radio access mode, and one or more different systems such as GSM bands or possibly other radio systems such IMT-2000 family members.

**Multicast service:** A unidirectional PTM service in which a message is transmitted from a single source entity to all subscribers currently located within a geographical area. The message contains a group identifier indicating whether the message is of interest to all subscribers or to only the subset of subscribers belonging to a specific multicast group.

**Multipoint:** A value of the service attribute "communication configuration", which denotes that the communication involves more than two network terminations (source: ITU-T I.113).

**Multimedia service:** Services that handle several types of media such as audio and video in a synchronised way from the user's point of view. A multimedia service may involve multiple parties, multiple connections, and the addition or deletion of resources and users within a single communication session.

## =============== Next Change =============

## T

**Teleaction service:** A type of telecommunication service that uses short messages, requiring a low transmission rate, between the user and the network (source: ITU-T I.112).

**Telecommunication port:** Ports which are intended to be connected to telecommunication networks (e.g. public switched telecommunication networks, integrated services digital networks), local area networks (e.g. Ethernet, Token Ring) and similar networks.

**Telecommunication service:** What is offered by a PLMN operator or service provider to its customers in order to satisfy a specific telecommunication requirement. (source: ITU-T I.112). Telecommunication services are divided into two broad families: bearer services and teleservices (source: ITU-T I.210).

**Teleservice:** Is a type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users according to standardised protocols and transmission capabilities established by agreement between operators.

**Terminal:** A device into which a UICC can be inserted or embedded and which is capable of providing access to 3GPP System services to users, either alone or in conjunction with a UICC.

**Terminal Equipment (TE):** Equipment that provides the functions necessary for the operation of the access protocols by the user. A functional group on the user side of a user-network interface (source: ITU-T I.112).

**Test environment:** A "test environment" is the combination of a test propagation environment and a deployment scenario, which together describe the parameters necessary to perform a detailed analysis of a radio transmission technology.

Text conversation: Real time transfer of text between users in at least two locations.

**Text Telephony:** An audiovisual conversation service providing bi-directional real time transfer of text and optionally audio between users in two locations. Audio may be transmitted alternating with text or simultaneously with text. (Source ITU-T F.703)

**Transient phenomenon:** Pertaining to or designating a phenomenon or a quantity which varies between two consecutive steady states during a time interval short compared with the time-scale of interest (IEC 60050-161 [6]).

**Throughput:** A parameter describing service speed. The number of data bits successfully transferred in one direction between specified reference points per unit time (source: ITU-T I.113).

**Toolkit applet:** An application on the UICC that generates proactive commands to the ME.

**Total Conversation**: An audiovisual conversation service providing bi-directional symmetric real-time transfer of motion video, text and voice between users in two or more locations. (source ITU-T F.703)

**Total power dynamic range:** The difference between the maximum and the minimum total transmit output power for a specified reference condition (TS25.104).

**Traffic channel:** A "traffic channel" is a logical channel which carries user information.

**Transfer Learning:** A machine learning technique where the knowledge acquired from training one or more AI/ML models is leveraged to enhance the performance or accelerate the training of another AI/ML model.

**Transit delay:** A parameter describing service speed. The time difference between the instant at which the first bit of a protocol data unit (PDU) crosses one designated boundary (reference point), and the instant at which the last bit of the PDU crosses a second designated boundary (source: ITU-T I.113).

**Transmission bandwidth:** Bandwidth of an instantaneous transmission from a UE or BS, measured in Resource Block units.

**Transmission bandwidth configuration:** The highest transmission bandwidth allowed for uplink or downlink in a given channel bandwidth, measured in Resource Block units.

**Transmission Time Interval:** Transmission Time Interval is defined as the inter-arrival time of Transport Block Sets, i.e. the time it shall take to transmit a Transport Block Set.

**Transmitter Antenna Gain (dBi):** The maximum gain of the transmitter antenna in the horizontal plane (specified as dB relative to an isotropic radiator.

**Transmitter exclusion band:** The transmitter exclusion band is the band of frequencies over which no tests of radiated immunity of a transmitter are made. The exclusion band for transmitters is expressed relative to the carrier frequencies used (the carrier frequencies of the base stations activated transmitter(s).

**Transmitter OFF period:** The time period during which the BS transmitter is not allowed to transmit.

**Transmitter ON period:** The time period during which the BS transmitter is transmitting data and/or reference symbols, i.e. data subframes or DwPTS.

**Transmitter transient period:** The time period during which the transmitter is changing from the OFF period to the ON period or vice versa.

**Transport Block:** Transport Block is defined as the basic data unit exchanged between L1 and MAC. An equivalent term for Transport Block is "MAC PDU".

**Transport Block Set:** Transport Block Set is defined asa set of Transport Blocks that is exchanged between L1 and MAC at the same time instance using the same transport channel. An equivalent term for Transport Block Set is "MAC PDU Set".

**Transport Block Set Size:** Transport Block Set Size is defined as the number of bits in a Transport Block Set.

**Transport Block Size:** Transport Block Size is defined as the size (number of bits) of a Transport Block.

**Transport channel:** The channels offered by the physical layer to Layer 2 for data transport between peer L1 entities are denoted as Transport Channels. Different types of transport channels are defined by how and with which characteristics data is transferred on the physical layer, e.g. whether using dedicated or common physical channels.

**Transport Format:** A Transport Format is defined as a format offered by L1 to MAC for the delivery of a Transport Block Set during a Transmission Time Interval on a Transport Channel. The Transport Format constitutes of two parts – one dynamic part and one semi-static part.

**Transport Format Combination:** A Transport Format Combination is defined as the combination of currently valid Transport Formats on all Transport Channels of an UE, i.e. containing one Transport Format from each Transport Channel.

**Transport Format Combination Set:** A Transport Format Combination Set is defined as a set of Transport Format Combinations to be used by an UE.

**Transport Format Combination Indicator (TFCI):** A Transport Format Combination Indicator is a representation of the current Transport Format Combination.

**Transport Format Identification (TFI in UTRAN, TFIN in GERAN):** A label for a specific Transport Format within a Transport Format Set.

**Transport Format Set:** A set of Transport Formats. For example, a variable rate DCH has a Transport Format Set (one Transport Format for each rate), whereas a fixed rate DCH has a single Transport Format.

## =============== Next Change =============

## V

**Value Added Service Provider:** Provides services other than basic telecommunications service for which additional charges may be incurred.

**Variable bit rate service:** A type of telecommunication service characterised by a service bit rate specified by statistically expressed parameters which allow the bit rate to vary within defined limits (source: ITU-T I.113).

**Vertical Federated Learning:** A federated learning technique without exchanging/sharing local data set, wherein the local data set in different clients for local model training have different feature spaces for the same samples.

**Virtual Home Environment:** A concept for personal service environment portability across network boundaries and between terminals.

**Virtual Machine:** A software program that simulates a hypothetical computer central processing unit. The programs executed by a virtual machine are represented as byte codes, which are primitive operations for this hypothetical computer.

**Visited PLMN:** This is a PLMN different from the HPLMN (if the EHPLMN list is not present or is empty) or different from an EHPLMN (if the EHPLMN list is present).

**Visited PLMN of home country:** This is a Visited PLMN where the MCC part of the PLMN identity is the same as the MCC of the IMSI.

## =============== Next Change =============

# 4 Abbreviations

## A

A-SGW Access Signalling Gateway

A3 Authentication algorithm A3

A38 A single algorithm performing the functions of A3 and A8

A5/1 Encryption algorithm A5/1

A5/2 Encryption algorithm A5/2

A5/X Encryption algorithm A5/0-7

A8 Ciphering key generating algorithm A8

AAL ATM Adaptation Layer

AAL2 ATM Adaptation Layer type 2

AAL5 ATM Adaptation Layer type 5

AB Access Burst

AC Access Class (C0 to C15)

 Access Condition

 Application Context

 Authentication Centre

ACC Automatic Congestion Control

ACELP Algebraic Code Excited Linear Prediction

ACCH Associated Control Channel

ACIR Adjacent Channel Interference Ratio

ACK Acknowledgement

ACL APN Control List

ACLR Adjacent Channel Leakage Power Ratio

ACM Accumulated Call Meter

 Address Complete Message

ACMmax ACM (Accumulated Call Meter) maximal value

ACRR Adjacent Channel Rejection Ratio

ACS Adjacent Channel Selectivity

ACU Antenna Combining Unit

ADC Administration Centre

 Analogue to Digital Converter

ADCH Associated Dedicated Channel

ADF Application Dedicated File

ADM Access condition to an EF which is under the control of the authority which creates this file

ADN Abbreviated Dialling Numbers

ADPCM Adaptive Differential Pulse Code Modulation

AE Application Entity

AEC Acoustic Echo Control

AEF Additional Elementary Functions

AESA ATM End System Address

AFC Automatic Frequency Control

AGCH Access Grant CHannel

AGV Automated Guided Vehicle

Ai Action indicator

AI Acquisition Indicator

AI/ML Artificial Intelligence / Machine Learning

AICH Acquisition Indicator Channel

AID Application IDentifier

AIUR Air Interface User Rate

AK Anonymity Key

AKA Authentication and Key Agreement

AKI Asymmetric Key Index

ALCAP Access Link Control Application Protocol

ALSI Application Level Subscriber Identity

ALW ALWays

AM Acknowledged Mode

AMF Authentication Management Field

AMN Artificial Mains Network

AMR Adaptive Multi Rate

AMR-WB Adaptive Multi Rate Wide Band

AN Access Network

ANP Access Network Provider

AoC Advice of Charge

AoCC Advice of Charge Charging

AoCI Advice of Charge Information

AP Access preamble

APDU Application Protocol Data Unit

API Application Programming Interface

APN Access Point Name

AR Augmented Reality

ARFCN Absolute Radio Frequency Channel Number

ARP Address Resolution Protocol

ARQ Automatic Repeat ReQuest

ARR Access Rule Reference

AS Access Stratum

ASC Access Service Class

ASCI Advanced Speech Call Items

ASE Application Service Element

ASN.1 Abstract Syntax Notation One

AT command ATtention Command

ATM Asynchronous Transfer Mode

ATR Answer To Reset

ATT (flag) Attach

AU Access Unit

AuC Authentication Centre

AUT(H) Authentication

AUTN Authentication token

AWGN Additive White Gaussian Noise

## =============== Next Change =============

## F

FA Full Allocation

 Fax Adaptor

FAC Final Assembly Code

FACCH Fast Associated Control CHannel

FACCH/F Fast Associated Control Channel/Full rate

FACCH/H Fast Associated Control Channel/Half rate

FACH Forward Access Channel

FAUSCH Fast Uplink Signalling Channel

FAX Facsimile

FB Frequency correction Burst

FBI Feedback Information

FCC Federal Communications Commission

FCCH Frequency Correction CHannel

FCI File Control Information

FCP File Control Parameter

FCS Frame Check Sequence

FDD Frequency Division Duplex

FDM Frequency Division Multiplex

FDMA Frequency Division Multiple Access

FDN Fixed Dialling Number

FDR False transmit format Detection Ratio

FEC Forward Error Correction

FER Frame Erasure Rate, Frame Error Rate

FFS For Further Study

FFT Fast Fourier Transformation

FH Frequency Hopping

FL Federated Learning

FLO Flexible Layer One

FM Fault Management

FMC Fixed Mobile Convergence

FN Frame Number

FNUR Fixed Network User Rate

FP Frame Protocol

FPLMN Forbidden PLMN

FR Full Rate

FRC Fixed Reference Channel

FTAM File Transfer Access and Management

ftn forwarded-to number

## =============== Next Change =============

## H

H-CSCF Home CSCF

HANDO Handover

HARQ Hybrid ARQ, Hybrid Automatic Repeat Request

HCS Hierarchical Cell Structure

HDLC High Level Data Link Control

HE Home Environment

HE-VASP Home Environment Value Added Service Provider

HF Human Factors

HFL Horizontal Federated Learning

HFN HyperFrame Number

HHO Hard Handover

HLC High Layer Compatibility

HLR Home Location Register

HN Home Network

HO Handover

HOLD Call hold

HPLMN Home Public Land Mobile Network

HPS Handover Path Switching

HPU Hand Portable Unit

HR Half Rate

HRPD CDMA2000 High Rate Packet Data

HRR Handover Resource Reservation

HSCSD High Speed Circuit Switched Data

HSDPA High Speed Downlink Packet Access

HSN Hopping Sequence Number

HSPA High Speed Packet Access

HSS Home Subscriber Server

HSUPA High Speed Uplink Packet Access

HTTP Hyper Text Transfer Protocol

HTTPS Hyper Text Transfer Protocol Secure (https is http/1.1 over SSL, i.e. port 443)

HU Home Units

## =============== Next Change =============

## M

M Mandatory

M Mandatory

MA Mobile Allocation

 Multiple Access

MAC Medium Access Control (protocol layering context)

 Message authentication code (encryption context)

MAC-A MAC used for authentication and key agreement (TSG T WG3 context)

MAC-I MAC used for data integrity of signalling messages (TSG T WG3 context)

MACN Mobile Allocation Channel Number

MAF Mobile Additional Function

MAH Mobile Access Hunting supplementary service

MAHO Mobile Assisted Handover

MAI Mobile Allocation Index

MAIO Mobile Allocation Index Offset

MAP Mobile Application Part

MBB Mobile Broadband

MBMS Multimedia Broadcast and Multicast Service

MBSFN Multimedia Broadcast multicast service Single Frequency Network

MCC Mobile Country Code

MCCH Multicast Control Channel

MCE Multi-cell/multicast Coordination Entity

MCH Multicast channel

MCI Malicious Call Identification supplementary service

MCML Multi-Class Multi-Link PPP

Mcps Mega-chips per second

MCS Modulation and Coding Scheme

MCU Media Control Unit

MD Mediation Device

MDL (mobile) Management (entity) - Data Link (layer)

MDS Multimedia Distribution Service

MDT Minimization of Drive Tests

ME Maintenance Entity

 Mobile Equipment

MEF Maintenance Entity Function

MEHO Mobile evaluated handover

MER Message Error Ratio

MExE Mobile Execution Environment

MF Master File

 MultiFrame

MGCF Media Gateway Control Function

MGCP Media Gateway Control Part

MGT Mobile Global Title

MGW Media GateWay

MHEG Multimedia and Hypermedia Information Coding Expert Group

MHS Message Handling System

MIB Management Information Base

 Master Information Block

MIC Mobile Interface Controller

MIM Management Information Model

MIMO Multiple Input Multiple Output

MIP Mobile IP

MIPS Million Instructions Per Second

ML Machine Learning

MLC Mobile Location Centre

MM Man Machine

 Mobility Management

 Multimedia

MME Mobile Management Entity

MMI Man Machine Interface

mMTC Massive MTC

MNC Mobile Network Code

MNO Mobile Network Operator

MNP Mobile Number Portability

MO Mobile Originated

MO-LR Mobile Originating Location Request

MO-SMS Mobile Originated Short Message Service

MOHO Mobile Originated Handover

MOS Mean Opinion Score

MoU Memorandum of Understanding

MP Multi-link PPP

MPEG Moving Pictures Experts Group

MPH (mobile) Management (entity) - PHysical (layer) [primitive]

MPTY MultiParTY

MRF Media Resource Function

MRP Mouth Reference Point

MS Mobile Station

MSA MCH Subframe Allocation

MSB Most Significant Bit

MSC Mobile Switching Centre

MSCM Mobile Station Class Mark

MSCU Mobile Station Control Unit

MSD Maximum Sensitivity Degradation

MSE MExE Service Environment

MSID Mobile Station Identifier

MSD Maximum Sensitivity Degradation

MSI MCH Scheduling Information

MSIN Mobile Station Identification Number

MSISDN Mobile Subscriber ISDN Number

MSP Multiple Subscriber Profile

MSR Multi-Standard Radio

MSRN Mobile Station Roaming Number

MT Mobile Terminated

 Mobile Termination

MTC Machine-Type Communications

MTCH Multicast Traffic Channel

MT-LR Mobile Terminating Location Request

MT-SMS Mobile Terminated Short Message Service

MTM Mobile-To-Mobile (call)

MTP Message Transfer Part

MTP3-B Message Transfer Part level 3

MTU Maximum Transfer Unit

MU Mark Up

MUI Mobile User Identifier

MUMS Multi User Mobile Station

MVNO Mobile Virtual Network Operator

## =============== Next Change =============

## V

V Value only

V2X Vehicle-to-Everything

VA Voice Activity factor

VAD Voice Activity Detection

VAP Videotex Access Point

VASP Value Added Service Provider

VBR Variable Bit Rate

VBS Voice Broadcast Service

VC Virtual Circuit

VFL Vertical Federated Learning

VGCS Voice Group Call Service

VHE Virtual Home Environment

VLAN Virtual LAN

VLR Visitor Location Register

VMSC Visited MSC

VoIP Voice Over IP

VPLMN Visited Public Land Mobile Network

VPN Virtual Private Network

VR Virtual Reality

VRB Virtual Resource Block

VSC Videotex Service Centre

V(SD) Send state variable

VTX host The components dedicated to Videotex service

## =============== End of Change =============