**3GPP TSG SA WG5 Meeting #156 S5-244660d1**

**Maastricht, The Netherlands 19 - 23 August 2024**

**Title: LS on terminology definitions for AI-ML in NG-RAN**

**Response to: LS in R3-243969 on LS on terminology definitions for AI-ML in NG-RAN from RAN3**

**Release: Rel-18**

**Work Item: AIML\_MGT, 990119**

**Source:** **SA5, meeting #156**

**To:** **RAN3, RAN2**

**Cc: RAN, RAN1, SA, SA2, SA6**

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**Attachments:** None

# 1 Overall description

SA5 would like to thank RAN3 for their LS regarding the AI/ML related terminologies. SA5 would like to inform RAN3 and RAN2 that SA5 has recently discussed and agreed further clarifications to the terminologies in TS 28.105. The corresponding approved CRs have now been reflected in the latest updated specifications in [TS 28.105 v18.4.0](https://www.3gpp.org/ftp/Specs/archive/28_series/28.105/28105-i40.zip).

The updated terms and definitions clause is shown herewith for your convenience:

**\*Start of excerpt from TS 28.105 v18.4.0\***

# *3 Definitions of terms, symbols and abbreviations*

## *3.1 Terms*

*For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].*

***ML model:****a manageable representation of an ML model algorithm.*

*NOTE 1: an ML model algorithm is a mathematical algorithm through which running a set of input data can generate a set of inference output.*

*NOTE 2: ML model algorithm is proprietary and not in scope for standardization and therefore not treated in this specification.*

*NOTE 3: ML model may include metadata. Metadata may include e.g. information related to the trained model, and applicable runtime context.*

***ML model training:*** *a 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.*

***ML model initial training:*** *a process of an initial version of an ML model.*

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

*NOTE 4: a new version of a trained ML model supports the same type of inference as the previous version of the ML model, i.e., the data type of inference input and data type of inference output remain unchanged between the two versions of the ML model, but parameter values might be different for the re-trained model.*

***ML model joint training:*** *a process of training a group of ML models.*

***ML training function****: a logical function with ML model training capabilities.*

***ML model testing:*** *a process of testing an ML model using testing data.*

***ML testing function****: a logical function with ML model testing capabilities.*

***AI/ML inference****: a 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.*

***AI/ML inference function****: a logical function that employs trained ML model**(s) to conduct inference.*

***AI/ML inference emulation****: running the inference process to evaluate the performance of an ML model in an emulation environment before deploying it into the target environment.*

***ML model deployment:*** *a process of making a trained ML model available for use in the target environment.*

**\*End of excerpt from TS 28.105 v18.4.0\***

# 2 Actions

**SA5 kindly asks RAN3 and RAN2 to take the above update in AI/ML terminologies into account. SA5 welcome any follow up request for further clarification or information if needed.**

# 3 Dates of next TSG SA WG 5 meetings

SA5#157 14 October – 18 October 2024 Hyderabad, India

SA5#158 18 November - 22 November 2024 Orlando, US