**3GPP TSG- Meeting #5**

**, 15-24 Aug 2022**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.105** | **CR** | **0004** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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 | **x** | Core Network | **x** |

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|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Huawei, Intel | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-08-05 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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 can be 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Fix incorrect AimlNrm.yaml, genericNrm.yaml & comDefs.yaml name in the TS 28.105 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Fix it accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect specification leads to wrong implementation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | B.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **x** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | Code in Forge is correct. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| --- |
| **Start of 1st Change** |

## B.2.1 OpenAPI document " TS28105\_AiMlNrm.yaml "

openapi: 3.0.1

info:

title: AI/ML NRM

version: 17.0.0

description: >-

OAS 3.0.1 specification of the AI/ML NRM

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externalDocs:

description: TS 28.105; AI/ML Management

url: http://www.3gpp.org/ftp/Specs/archive/28\_series/28.105/

paths: {}

components:

schemas:

#-------- Definition of types-----------------------------------------------------

AIMLEntityList:

type: array

items:

$ref: '#/components/schemas/AIMLEntity'

AIMLEntity:

type: object

properties:

aIMLEntityId:

type: string

inferenceType:

type: string

aIMLEntityVersion:

type: string

expectedRunTimeContext:

type: string

trainingContext:

type: string

runTimeContext:

type: string

RequestStatus:

type: string

enum:

- NOT\_STARTED

- TRAINING\_IN\_PROGRESS

- SUSPENDED

- FINISHED

- CANCELLED

PerformanceRequirements:

type: array

items:

$ref: '#/components/schemas/ModelPerformance'

ModelPerformance:

type: object

properties:

inferenceOutputName:

type: string

performanceMetric:

type: string

performanceScore:

type: number

format: float

decisionConfidenceScore:

type: number

format: float

TrainingProcessMonitor:

description: >-

This data type is the "ProcessMonitor" data type defined in "TS28623\_GenericNrm.yaml" with specialisations for usage in the "AIMLTrainingProcess".

type: object

properties:

aIMLTrainingProcessId:

type: string

status:

type: string

enum:

- RUNNING

- CANCELLING

- CANCELLED

- SUSPENDED

- FINSHED

progressPercentage:

type: integer

minimum: 0

maximum: 100

progressStateInfo:

type: string

enum:

- COLLECTING\_DATA

- PREPARING\_TRAINING\_DATA

- TRAINING

resultStateInfo:

type: string

#-------- Definition of abstract IOCs --------------------------------------------

#-------- Definition of concrete IOCs --------------------------------------------

SubNetwork-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

$ref: 'TS28623\_GenericNrm.yaml#/components/schemas/SubNetwork-Attr'

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/SubNetwork-ncO'

- type: object

properties:

SubNetwork:

$ref: '#/components/schemas/SubNetwork-Multiple'

ManagedElement:

$ref: '#/components/schemas/ManagedElement-Multiple'

AIMLTrainingFunction:

$ref: '#/components/schemas/AIMLTrainingFunction-Multiple'

ManagedElement-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

$ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedElement-Attr'

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedElement-ncO'

- type: object

properties:

AIMLTrainingFunction:

$ref: '#/components/schemas/AIMLTrainingFunction-Multiple'

AIMLTrainingFunction-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

aIMLEntityList:

$ref: '#/components/schemas/AIMLEntityList'

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

AIMLTrainingRequest:

$ref: '#/components/schemas/AIMLTrainingRequest-Multiple'

AIMLTrainingProcess:

$ref: '#/components/schemas/AIMLTrainingProcess-Multiple'

AIMLTrainingReport:

$ref: '#/components/schemas/AIMLTrainingReport-Multiple'

AIMLTrainingRequest-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

allOf:

- type: object

properties:

aIMLEntityId:

type: string

candidateTraingDataSource:

type: array

items:

type: string

traingDataQualityScore:

type: number

format: float

trainingRequestSource:

type: string

requestStatus:

$ref: '#/components/schemas/RequestStatus'

expectedRuntimeContext:

$ref: 'TS28623\_ComDefs.yaml#/components/schemas/DateTime'

performanceRequirements:

$ref: '#/components/schemas/PerformanceRequirements'

cancelRequest:

type: boolean

suspendRequest:

type: boolean

AIMLTrainingProcess-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

allOf:

- type: object

properties:

aIMLTrainingProcessId:

type: string

priority:

type: integer

terminationConditions:

type: string

progressStatus:

$ref: '#/components/schemas/TrainingProcessMonitor'

cancelProcess:

type: boolean

suspendProcess:

type: boolean

trainingRequestRef:

$ref: 'TS28623\_ComDefs.yaml#/components/schemas/DnList'

trainingReportRef:

$ref: 'TS28623\_ComDefs.yaml#/components/schemas/Dn'

AIMLTrainingReport-Single:

allOf:

- $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

- type: object

properties:

attributes:

allOf:

- type: object

properties:

aIMLEntityId:

type: string

areConsumerTrainingDataUsed:

type: boolean

usedConsumerTrainingData:

type: array

items:

type: string

confidenceIndication:

type: integer

modelPerformanceTraining:

type: array

items:

$ref: '#/components/schemas/ModelPerformance'

areNewTrainingDataUsed:

type: boolean

#-------- Definition of JSON arrays for name-contained IOCs ----------------------

SubNetwork-Multiple:

type: array

items:

$ref: '#/components/schemas/SubNetwork-Single'

ManagedElement-Multiple:

type: array

items:

$ref: '#/components/schemas/ManagedElement-Single'

AIMLTrainingFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/AIMLTrainingFunction-Single'

AIMLTrainingRequest-Multiple:

type: array

items:

$ref: '#/components/schemas/AIMLTrainingRequest-Single'

AIMLTrainingProcess-Multiple:

type: array

items:

$ref: '#/components/schemas/AIMLTrainingProcess-Single'

AIMLTrainingReport-Multiple:

type: array

items:

$ref: '#/components/schemas/AIMLTrainingReport-Single'

#-------- Definitions in 3GPP TS 28.104 for 3GPP TS 28.532 ---------------------------------

resources-AiMlNrm:

oneOf:

- $ref: '#/components/schemas/SubNetwork-Single'

- $ref: '#/components/schemas/ManagedElement-Single'

- $ref: '#/components/schemas/AIMLTrainingFunction-Single'

- $ref: '#/components/schemas/AIMLTrainingRequest-Single'

- $ref: '#/components/schemas/AIMLTrainingProcess-Single'

- $ref: '#/components/schemas/AIMLTrainingReport-Single'

|  |
| --- |
| **End of change** |