

## Recommendation

# ITU-T Y.3117 (2022) Cor. 1 (05/2023)

SERIES Y: Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities

Future networks

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Quality of service assurance-related requirements and framework for smart education supported by IMT-2020 and beyond  
**Corrigendum 1**

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This prepublication is an unedited version of a recently approved Recommendation. It will be replaced by the published version after editing. Therefore, there will be differences between this prepublication and the published version.



## ITU-T Y-SERIES RECOMMENDATIONS

### GLOBAL INFORMATION INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS, NEXT-GENERATION NETWORKS, INTERNET OF THINGS AND SMART CITIES

#### GLOBAL INFORMATION INFRASTRUCTURE

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*For further details, please refer to the list of ITU-T Recommendations.*

# Recommendation ITU-T Y.3117

## Quality of service assurance-related requirements and framework for smart education supported by IMT-2020 and beyond

### Corrigendum 1

#### Summary

Corrigendum 1 to Recommendation ITU-T Y.3117 (2022) replaces the definition of mobile edge computing (MEC) with multi-access edge computing (MEC).

#### History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T Y.3117	2022-09-29	13	<a href="http://handle.itu.int/11.1002/1000/15052">11.1002/1000/15052</a>
1.1	ITU-T Y.3117 (2022) Cor. 1	2023-05-14	13	<a href="http://handle.itu.int/11.1002/1000/15525">11.1002/1000/15525</a>

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\* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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## Recommendation ITU-T Y.3117

### Quality of service assurance-related requirements and framework for smart education supported by IMT-2020 and beyond

#### Corrigendum 1

*Revise the text of clause 2 as follows:*

## 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

~~[ITU-T F.743.10] Recommendation ITU-T F.743.10 (2019), *Requirements for mobile edge computing-enabled content delivery networks*.~~

[ITU-T Y.3102] Recommendation ITU-T Y.3102 (2018), *Framework of the IMT-2020 network*.

[ITU-T Y.3104] Recommendation ITU-T Y.3104 (2018), *Architecture of the IMT-2020 network*.

[ITU-T Y.3106] Recommendation ITU-T Y.3106 (2019), *Quality of service functional requirements for the IMT-2020 network*.

[ITU-T Y.3107] Recommendation ITU-T Y.3107 (2019), *Functional architecture for QoS assurance management in the IMT-2020 network*.

[ITU-T Y.3109] Recommendation ITU-T Y.3109 (2021), *Quality of service assurance-related requirements and framework for virtual reality delivery using mobile edge computing supported by IMT-2020*.

[ITU-T Y.3130] Recommendation ITU-T Y.3130 (2018), *Requirements of IMT-2020 fixed mobile convergence*.

[ITU-T Y.3158] Recommendation ITU-T Y.3158 (2022), *Local shunting for multi-access edge computing in IMT-2020 networks*.

[ITU-T Y.3170] Recommendation ITU-T Y.3170 (2018), *Requirements for machine learning-based quality of service assurance for the IMT-2020 network*.

[ITU-T Y.3172] Recommendation ITU-T Y.3172 (2019), *Architectural framework for machine learning in future networks including IMT-2020*.

[ITU-T Y.3175] Recommendation ITU-T Y.3175 (2020), *Functional architecture of machine learning-based quality of service assurance for the IMT-2020 network*.

[ITU-T Y.4000] Recommendation ITU-T Y.4000/Y.2060 (2012), *Overview of the Internet of things*.

*Revise the text of clause 3.1.3 as follows:*

~~3.1.3 — mobile edge computing [ITU-T F.743.10]: System which provides an IT service environment and cloud-computing capabilities at the edge of an access network which contains one or more type of access technology, and in close proximity to devices.~~

~~NOTE — Based on the definition of multi-access edge computing in [b-ETSI GS MEC 001].~~

3.1.3 multi-access edge computing (MEC) [b-ETSI GS MEC 001]: System which provides an IT service environment and cloud-computing capabilities at the edge of an access network which contains one or more type of access technology, and in close proximity to its users.

*Revise the text of clause 4 as follows:*

## **4 Abbreviations and acronyms**

AF	Application Function
AI	Artificial Intelligence
AN	Access Network
AR	Augment Reality
CEF	Capability Exposure Function
CN	Core Network
DN	Data Network
E2E	End-to-End
FMC	Fixed Mobile Convergence
GIS	Geographic Information System
HD	High Definition
ICM	Interactive Classroom
IMT	International Mobile Telecommunications
IoT	Internet of Things
MEC	<u>Multi-access Edge Computing</u> <del>Mobile Edge Computing</del>
ML	Machine Learning
NACF	Network Access Control Function
NFR	Network Function Registry
NSSF	Network Slice Selection Function
PCF	Policy Control Function
QoE	Quality of Experience
QoS	Quality of Service
RP	Reference Point
SE	Smart Education
SLA	Service Level Agreement
TAL	Teaching and Learning
UE	User Equipment

UPF	User Plane Function
USM	Unified Subscription Management
VR	Virtual Reality

*Revise the text of clause 7.4 as follows:*

## **7.4 QoS optimization**

- SE-IMT2020 is recommended to support QoS optimization enabled by [multi-access edge computing](#) ~~mobile edge computing~~ (MEC) [[ITU-T Y.3158](#)~~ITU-T F.743.10~~]~~[b-ETSI GS MEC-001]~~ [ITU-T Y.3109], machine learning (ML)/artificial intelligence (AI) [ITU-T Y.3170] [ITU-T Y.3172] [ITU-T Y.3175], etc.;
- SE-IMT2020 is recommended to support traffic prediction based on the analysis of collected QoS data;
- SE-IMT2020 is recommended to support routing optimization based on the current smart education traffic status;
- SE-IMT2020 is recommended to support QoS anomaly prediction based on the analysis of QoS data.