

Recommendation

ITU-T Y.2360 (09/2024)

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

Next Generation Networks – Enhancements to NGN

Requirements for integrating demographic data for new and emerging technologies in developing countries

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

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Recommendation ITU-T Y.2360

Requirements for integrating demographic data for new and emerging technologies in developing countries

Summary

Recommendation ITU-T Y.2360 provides an overview of the problem of not including demographic data (DD) in the development of new and emerging technological systems. The scope of this Recommendation includes a reference model for integrating DD and an architecture for collecting, storing and transforming such DD.

History*

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Introduction

A good number of new and emerging technologies and systems are data dependent. The role of data in the Fourth Industrial Revolution cannot be overemphasized. For developing countries to take full advantage of these systems, there is a need for the data used to capture demographic information within these countries. These demographics include cultural context, accents, disabilities and special needs, environmental, and socio-economic preferences. This Recommendation tries to address the problem of demographic data (DD) not being included in the development and utilization of new and emerging technological systems, by providing requirements and recommendations on how to capture, store and transform demographic information.

Recommendation ITU-T Y.2360

Requirements for integrating demographic data for new and emerging technologies in developing countries

1 Scope

This Recommendation provides a framework for undertaking studies for the standardization of demographic data (DD) for new and emerging technologies in developing countries.

The Recommendation takes into cognizance the framework for data handling defined in [ITU-T Y.3174] and seeks to highlight the challenges of implementing new and emerging technological systems in developing countries.

The scope of this Recommendation includes:

- Requirements for integrating DD for new and emerging technologies.
- Requirements and architecture for the collection, storage and transformation of DD.
- Identification of local demographics in both data collection and application.
- Recommending approaches for integrating a demographic model for new and emerging technologies.

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 Y.3174] Recommendation ITU-T Y.3174 (2020), *Framework for data handling to enable machine learning in future networks including IMT-2020*.

[ITU-T Y.3600] Recommendation ITU-T Y.3600 (2015), *Big data – Cloud computing-based requirements and capabilities*.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 activity [b-ITU-T Y.3502]: A specified pursuit or set of tasks.

3.1.2 artificial intelligence [b-ITU-T F.748.17], [b-ITU-T F.749.4], [b-ITU-T F.749.13]: An interdisciplinary field, usually regarded as a branch of computer science, dealing with models and systems for the performance of functions generally associated with human intelligence, such as reasoning and learning.

3.1.3 data export [b-ITU-T Y.3601]: A process for delivering data.

3.1.4 data import [b-ITU-T Y.3601]: A process for receiving data.

3.1.5 Internet of things (IoT) [b-ITU-T Y.2060]: A global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies.

NOTE 1 – Through the exploitation of identification, data capture, processing and communication capabilities, the IoT makes full use of things to offer services to all kinds of applications, whilst ensuring that security and privacy requirements are fulfilled.

NOTE 2 – From a broader perspective, the IoT can be perceived as a vision with technological and societal implications.

3.1.6 processed data [b-ITU-T Y.3601]: Data produced by processing steps in a big data ecosystem.

NOTE – Processing steps include data collection, data preparation, data visualisation and data analysis.

3.1.7 raw data [b-ITU-T Y.3601]: Data from a data source without any alteration.

NOTE – Raw data is also known as unprocessed data.

3.1.8 role [b-ITU-T Y.3502]: A set of activities that serves a common purpose.

3.1.9 sub-role [b-ITU-T Y.3502]: A subset of the activities of a given role.

3.2 Terms defined in this Recommendation

This Recommendation defines the following term:

3.2.1 data agent (DA): Data agent (DA) is an entity responsible for handling the sets of activities defined in the data processing part of the architecture. This entity also encompasses some roles defined in ITU-T Y.3600 for data provider, data supplier and data broker.

4 Abbreviations and acronyms

This Recommendation contains the following abbreviations and acronyms:

AI	Artificial Intelligence
DA	Data Agent
DD	Demographic Data
IMT	International Mobile Telecommunications
IoT	Internet of Things
ML	Machine Learning
QoE	Quality of Experience
QoS	Quality of Service
UE	User Equipment

5 Conventions

In this Recommendation:

The keywords "**is required**" indicate a requirement which must be strictly followed and from which no deviation is permitted if conformance to this document is to be claimed.

The keywords "**is recommended**" indicate a requirement which is recommended but which is not absolutely required. Thus, this requirement need not be present to claim conformance.