



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

T.510

(03/93)

TELEMATIC SERVICES TERMINAL EQUIPMENTS AND PROTOCOLS FOR TELEMATIC SERVICES

GENERAL OVERVIEW OF THE T.510-SERIES RECOMMENDATIONS

ITU-T Recommendation T.510

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation T.510 was prepared by the ITU-T Study Group VIII (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Recommendation T.510**GENERAL OVERVIEW OF THE T.510-SERIES RECOMMENDATIONS***(Helsinki, 1993)***1 Scope**

The T.510-Series Recommendations contains the specifications for implementation requirements (IR) in correspondence with the T.500-Series Recommendations.

This Recommendation provides the necessary definitions required for the establishment of Recommendations within the T.510-Series.

This Recommendation gives the guidelines on how to describe the requirements to DAP implementations to be used by an application. Specific requirements of telematic services are not covered by this series of Recommendations.

This Recommendation defines an abstract implementation model in order to structure the IRs and to qualify the function units depending on the classes of requirements.

This Recommendation defines the structure and the notation which have to be used for the description of IRs and how the tables can be used for support statement purposes.

2 Field of application

This Recommendation may be used as an introduction to the Recommendations of the T.510-Series.

This Recommendation describes how the IRs are to be defined in the T.510-Series Recommendations and how they are to be interpreted.

3 References

- Rec. T.400-Series Recommendations *Document Transfer, Access and Manipulation*.
- Rec. T.500-Series Recommendation *Document Application Profiles*.
- Rec. T.560-Series Recommendation *Terminal Characteristics*.

4 Definitions

The terms between double quote marks are defined in this clause.

application: The word “Application” is used as the generic term to represent the set of features, combining communication and document processing, on which end-users may perform operations. The “Applications” may depend on working methods and on allowed processing of documents. Examples of “Applications” are : open interchange of processable documents, cooperative working, etc.

conversion process: The “Conversion” process is used to convert an ODA based format into another format (standardized format or proprietary format), and vice versa. This process should map the “Function Units” composing an ODA document to the corresponding features performed by the other format, if any.

DAP minimum implementation requirements (DMIR): For each DAP, the DMIR identifies the set of requirements that all the “Implementations” should conform to, regardless of the “Applications”. This DMIR corresponds to the common kernel of requirements which will be implemented, and therefore will ensure interworking between “Applications” selecting the same DAP.

externalization/internalization process: The “Externalization” process is used to encode the ODA based file into an ODIF data stream by using the coding rules expressed by ODIF (Recommendation T.415). Conversely, the “Internalization” process is used to decode an ODIF data stream into an ODA based file.

fall-back: A “Fall-back” is a guideline for an alternative processing of a “Function Unit” that may be used by a particular process when the latter is unable to process directly that “Function Unit”. “Fall-backs” may only be used when they are allowed by IRs and solely by “Implementations” acting as receivers.

function unit (FU): The “Function Units” are DAP constituent constraints, or combination of constraints, that will be used to specify DAP IRs. “Function Units” sometimes correspond exactly to end-user known document processing features.

generation: An “Implementation” supports the “Generation” of a particular “Function Unit” if it can issue a data stream carrying the corresponding DAP constituent constraints.

imaging: When acting as a receiver, an “Implementation” supports the “Imaging” of a particular “Function Unit” if the received “Function Unit” can be further processed by an imaging process according to the imaging information given by the constituents constraints forming that function unit.

implementation: An “Implementation” is an actual realization (combination of hardware and/or software) that satisfies all or part of the requirements of a particular “Application” in terms of communication as well as in terms of document processing.

implementation support statement (ISS): The ISS is a proforma to be used by vendors to state which IRs are actually supported by their “Implementation”.

layout: When acting as a receiver, an “Implementation” supports the “Layout” of a particular “Function Unit” if the received “Function Unit” can be further processed by a layout process according to the layout information given by the constituents constraints forming that Function Unit.

point of control and observation (PCO): A “Point of Control and Observation” is a point available to the user (or the tester) where data can be manipulated and/or observed. This point acts as a point of control when it is used to input some data in the “Implementation” in order to *control* the test procedure. On the contrary, this point acts as a point of observation when, after having performed some *control* on the “Implementation” under test, it is used to *observe* the behaviour of this “Implementation”. It is through the PCOs that the user will *see* the “Function Units”.

qualifier: A “Qualifier” is a term used to specify the level of requirement attached to a particular “Function Unit” depending on the nature of the process to be performed. For example, the processing of a particular “Function Unit” may be *required* for the generation process while it may be *optional* for another process.

reception: An “Implementation” supports the “Reception” of a particular “Function Unit” when it can interpret the corresponding constituents constraints and perform the appropriate processing.

retention: When acting as a receiver, an “Implementation” supports the “Retention” of a particular “Function Unit” if this received “Function Unit” can be further accessed and processed without loss of semantic information.

terminal characteristics: “Terminal Characteristics” represent the complete technical description of an equipment which has to be developed to satisfy any particular CCITT service defined by Study Group 1. This includes the selection of appropriate “Implementation” specifications depending on the “Applications” allowed by the service. Also, “Terminal Characteristics” may specify additional service dependent characteristics to “Applications” and their corresponding “Implementations”.

5 Introduction to the definition of implementation requirements (IRs)

The Document Application Profiles (DAPs) are described in the T.500-Series Recommendations. The prime purpose of a DAP is to define a set of data streams as a subset of all the data streams allowed by the ODA Standard. This is achieved by constraining the constituents and attribute values that may be contained in the data streams that conform to the DAP.

For each DAP, there is need to specify the corresponding IRs. These requirements are concerned with the ability of implementations to generate data streams that conform to a DAP and their ability to correctly interpret the information contained in received data streams so that it can be used by the application or presented to a user.