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INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Corrigendum 2

X.701

(04/95)

**DATA NETWORKS AND OPEN SYSTEM
COMMUNICATIONS
OSI MANAGEMENT**

**INFORMATION TECHNOLOGY –
OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT OVERVIEW**

TECHNICAL CORRIGENDUM 2

**Corrigendum 2 to
ITU-T Recommendation X.701**

(Previously “CCITT Recommendation”)

Superseded by a more recent version

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. Some 179 member countries, 84 telecom operating entities, 145 scientific and industrial organizations and 38 international organizations participate in ITU-T which is the body which sets world telecommunications standards (Recommendations).

The approval of Recommendations by the Members of ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, 1993). In addition, the World Telecommunication Standardization Conference (WTSC), which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

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. The text of ITU-T Recommendation X.701, Corrigendum 2, was approved on 10th of April 1995. The identical text is also published as ISO/IEC International Standard 10400.

NOTE

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

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ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

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Summary

This Technical corrigendum provides additional conformance definitions and specifies the meaning of minimum conformance and other conformance aspects specific to Systems Management.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT OVERVIEWTECHNICAL CORRIGENDUM 2
(to Rec. X.701 | ISO/IEC 10040)

- 1) *Add the following further reference to 2.2:*
- ITU-T Recommendation X.296¹⁾, *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements – Requirements and guidance on ICS and ICS proforma.*
 - ISO/IEC 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation Conformance Statements.*

¹⁾ Presently at the stage of draft.

- 2) *Replace first sentence of 3.5 by the following:*
- “This Recommendation | International Standard makes use of the following terms defined in CCITT Rec. X.290 | ISO/IEC 9646-1 and CCITT Rec. X.296 | ISO/IEC 9646-7.”
- 3) *Add the following additional definitions to 3.5:*
- “d) Implementation Conformance Statement (ICS)
 - e) ICS proforma.”
- 4) *Delete 3.6.3 and 3.6.4, renumber 3.6.5 to 3.6.8 as 3.6.3 to 3.6.6, and add the following definitions as subclauses 3.6.7 and 3.6.8:*

“3.6.7 management information conformance statement (MICS): A statement from a supplier about an implementation’s manager role capabilities and options relating to management information which have been implemented and any features which have been omitted.

3.6.8 MICS proforma: A document, in the form of a questionnaire, which when completed by the supplier of an implementation having manager role capability becomes a MICS.”

- 5) *Add the following abbreviations to clause 4:*
- “ICS Implementation Conformance Statement
 - MICS Management Information Conformance Statement”
- 6) *Replace the third and fourth paragraphs of 8.1.1 by the following:*
- “Standards for communication and standards relating to systems management functions shall require for conformance the minimum required to maintain the integrity of the protocol specified by the standards. Collections of useful functionality can be defined in profiles.
- NOTE – Some standards may define a profile.
- It is also a requirement that each standard should express its dependencies on non-mandatory aspects of underlying standards by identifying what elements of a given underlying service are required to support the given protocol. This also requires that each protocol standard should specify the conditional requirements that express, for each element of the service provided by that protocol, which protocol units are required to enable that element of service to be supported.”
- 7) *Replace the second and third paragraphs of 8.1.2 by the following:*

“Standards for communication shall require for conformance only the minimum required to maintain the integrity of the protocol specified by the standards. Such standards may also define a profile within the base standard.

Standards for communications shall also identify which protocol units are required for each element of service that can be provided by the communications standard so that any other standard using the communications service can unambiguously define its requirements.

A system claiming conformance to communications standards shall support the set of elements of protocol that are required for each of the services claimed to be supported.”

8) *Replace the first sentence of the first paragraph of 8.1.3 by the following:*

“Standards that define management information shall state the requirements for static and dynamic conformance in the agent role to the management information definitions and shall provide a MOCS proforma that identifies all the information that shall be provided in claims of conformance.”

9) *Add the following new paragraph to the end of 8.1.3:*

“Standards that define management information shall also state the requirements for static and dynamic conformance in the manager role to the operations and notifications specified in the management information definitions, and shall provide or reference a MICS proforma that identifies all the information that shall be provided in claims of conformance. Conformance in the manager role to operations means that the implementation has the ability to generate the specified operations.

Where relevant, operations can be limited to specified attributes. Conformance in the manager role to notifications means that the implementation has the ability to receive the specified notifications.”

10) *Add the following new paragraph after the fifth paragraph of 8.1.3 (i.e. after the paragraph beginning “Where a function ...”):*

“Standards that define system management function standards shall include a statement advising the supplier of an implementation how to complete the ICS proforma.”

11) *Replace the last 3 paragraphs of 8.1.4 by the following:*

“Standards relating to systems management functions shall require for conformance the minimum required to maintain the integrity of the specification in the standards. The minimum required may vary according to the scope and purpose of the function standard.

For example, in the case of a systems management function standard, such as the State management function, that defines generic attributes, a generic attribute group and notifications to be used in many managed object definitions, the minimum conformance requirement might be simply to any one of the state attributes, the state attribute group or notifications. In other cases, such as Usage metering, minimum conformance might be to one of the objects or packages defined in the systems management function. In yet other cases, such as Test management, the minimum conformance required might include several managed objects as well as sequences of exchanges.

The minimum requirement for a manager role implementation may also differ from the minimum requirement for an agent role implementation. For example, in a manager role implementation, the minimum conformance requirement to a generic attribute (such as a state attribute) might be limited to at least one operation (e.g. Get), on the attribute, whereas in an agent role implementation, the minimum requirement could be support for all operations defined for the attribute.”

12) *Apply the following changes to the first paragraph of 8.1.5:*

Replace “Systems claiming conformance to systems management standards shall document the following:” by the following:

“The supplier of an implementation which is claimed to conform to systems management standards shall follow the instructions for completion of ICS proforma given in that standard. Such instructions can include:”