INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.1208

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(03/93)

GENERAL RECOMMENDATIONS ON TELEPHONE SWITCHING AND SIGNALLING

INTELLIGENT NETWORK

GENERAL ASPECTS OF THE INTELLIGENT NETWORK APPLICATION PROTOCOL

ITU-T Recommendation Q.1208

(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 Q.1208 was prepared by the ITU-T Study Group XI (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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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.

© ITU 1993

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

CONTENTS

Page

1 Introduction 1

2 Background 1

3 Definition methodology 1

4 Evolutionary requirements 1

SUMMARY

The objective of this Recommendation is to specify the definition methodology to be applied to the intelligent network application protocol Recommendations defined in specific capability sets. This Recommendation is not expected to change greatly in future versions with the possible exception of additional specification mechanisms.

Associated standardization work is contained in all of the Q.12xx IN Recommendations and more particularly in the Q.12x8 INAP Recommendations.

GENERAL ASPECTS OF THE INTELLIGENT NETWORK APPLICATION PROTOCOL

(Helsinki, 1993)

1 Introduction

This Recommendation defines the general aspects of the interfaces and protocols. For the detailed protocols and interfaces supported in each capability set refer to the Q.12x8 Recommendation for that capability set.

2 Background

All the work on interface specifications is based on the IN functional model (INFM). Each capability set will support a number of the interfaces defined in that model appropriate to the requirements placed upon that capability set.

3 Definition methodology

The definition of the protocol can be split into three sections:

- the definition of the service which the protocol provides (primitives etc.);
- the definition of the operations transferred between entities;
- the definition of the actions taken at each entity as a result of performing the operations.

The primitives are defined in a tabular notation and may be omitted. The operation definitions use the MACRO notation of abstract syntax notation 1 (ASN.1, see Recommendation X.208), specifically the OPERATION MACRO defined in Recommendations Q.773 and X.219. The actions are defined in terms of state transition diagrams. Other definition techniques may be used in future capability sets to supplement or replace these if this seems appropriate.

The INAP is a ROSE user protocol (see Recommendation X.219/229). The ROSE protocol is contained within the component sublayer of TCAP (see Recommendations Q.771 to 775) and DSS 1 (Recommendation Q.932). At present the ROSE APDUs are conveyed in transaction sublayer messages in SS No. 7 and in the Q.931 REGISTER, FACILITY and call control messages in DSS 1. Other supporting protocols may be added at a later date.

The INAP (as a ROSE user) and the ROSE protocol have been specified using ASN.1. At present, the only standardized way to encode the resulting PDUs is the basic encoding rules (see Recommendation X.209). The protocols should be defined in such a way that the functional entities defined in the INFM may be mapped into physical entities in any way that operators and manufacturers desire.

4 Evolutionary requirements

The use of the application context negotiation mechanism (as defined in the Q.77x-Series Recommendations) allows the two communicating entities to identify exactly what their capabilities (and therefore the capabilities required on the interface) are. Where possible, this should be used to allow evolution through capability sets.

Capability sets should always be defined as supersets of previous capability sets to ensure successful interworking with previous capability sets is possible. This may not apply where errors are found in previous capability sets.