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OF ITU

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**GENERAL RECOMMENDATIONS ON TELEPHONE  
SWITCHING AND SIGNALLING  
INTELLIGENT NETWORK**

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**INTRODUCTION TO INTELLIGENT NETWORK  
CAPABILITY SET 1**

**ITU-T Recommendation Q.1211**

(Previously "CCITT Recommendation")

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## 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.1211 was prepared by the ITU-T Study Group XI (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

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## 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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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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## SUMMARY

Intelligent network capability set 1 is the first standardized stage of the intelligent network (IN) as an architectural concept for the creation and provision of telecommunications services. This Recommendation gives an introduction to capability set 1 (CS-1) by providing an overview and definition of CS-1 and by describing its main characteristics and overall capabilities. It defines the service aspects, network aspects and functional relationships that form the basis of the CS-1 capabilities.

This Recommendation is the first in the Q.121x-Series Recommendations devoted to CS-1. It builds on the architectural principles of IN as described in the Q.120x-Series Recommendations.

The CS-1 Recommendations (Q.121x-Series) form a useful basis for achieving implementation experience. As with any project of this size and complexity, it can be anticipated that there may be some difficulties in interworking the various implementations of IN CS-1 physical elements. In order that the IN objective for working in a multi-vendor environment may be fully achieved, the IN CS-1 Recommendations text may go through some future revision in the light of implementation experience.

# INTRODUCTION TO INTELLIGENT NETWORK CAPABILITY SET 1

(Helsinki, 1993)

## 1 Introduction

Intelligent network capability set 1 is the first standardized stage of the intelligent network (IN) as an architectural concept for the creation and provision of telecommunications services. This Recommendation gives an introduction to capability set 1 (CS-1) by providing an overview and definition of CS-1 and by describing its main characteristics and overall capabilities.

## 2 Phased standardization

The intelligent network (IN) is an architectural concept for creation and provisioning of new services which is characterized by:

- a) extensive use of information processing techniques;
- b) efficient use of network resources;
- c) modularization and reusability of network functions;
- d) integrated service creation and implementation by means of modularized, reusable network functions;
- e) flexible allocation of network functions to physical entities;
- f) portability of network functions among physical entities;
- g) standardized communications between network functions via service independent interfaces;
- h) service subscriber's control of some subscriber-specific service attributes;
- i) service user control of some user-specific attributes;
- j) standardized management of service logic.

The implementation of the IN architecture will facilitate the rapid introduction of new services. Its architecture can be applied to various types of telecommunications networks, which include: public switched telecommunications network (PSTN), public switched packet data network (PSPDN), mobile, and integrated services digital networks (N- and B-ISDN).

The ultimate IN is an evolving target, therefore in order to take full advantage of the technological possibilities at a given point in time it is necessary to define specific phases in the evolution to a target architecture. This phased approach is shown in Figure 1.

This Recommendation provides the description of CS-1 at time T<sub>1</sub> as represented in Figure 1.

## 3 General description and scope of CS-1

### 3.1 Criteria for CS-1

CS-1 defines an initial subset of IN capabilities that meet the following general criteria:

- a) CS-1 is a subset of the target intelligent network architecture;
- b) CS-1 is a set of definitions of capabilities that is of direct use to both manufacturers and network operators;

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