International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.1902.1

Amendment 2

(01/2006)

SERIES Q: SWITCHING AND SIGNALLING

Specifications of signalling related to Bearer Independent Call Control (BICC)

Bearer Independent Call Control protocol (Capability Set 2): Functional description

Amendment 2: Support for the International Emergency Preference Scheme

ITU-T Recommendation Q.1902.1 (2001) – Amendment 2

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ITU-T Recommendation Q.1902.1

Bearer Independent Call Control protocol (Capability Set 2): Functional description

Amendment 2

Support for the International Emergency Preference Scheme

Summary

This amendment was produced to meet the need for the implementation of the International Emergency Preference Scheme (IEPS) for disaster recovery operations as specified in ITU-T Rec. E.106. It contains the modifications to ITU-T Rec. Q.1902.1 (2001) in order to accommodate these needs. This amendment should be read in conjunction with Amendment 3 to ITU-T Rec. Q.1902.2, Amendment 3 to ITU-T Rec. Q.1902.3, and Amendment 3 to ITU-T Rec. Q.1902.4. This amendment incorporates Amendment 1 to ITU-T Rec. Q.1902.1 and provides enhancements.

Source

Amendment 2 to ITU-T Recommendation Q.1902.1 (2001) was approved on 27 January 2006 by ITU-T Study Group 11 (2005-2008) under the WTSA Resolution 1 procedure.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. 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 Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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.

NOTE

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

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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ITU-T Recommendation Q.1902.1

Bearer Independent Call Control protocol (Capability Set 2): Functional description

Amendment 2

Support for the International Emergency Preference Scheme

1) Clause 1 – Scope

Insert the following paragraph at the end of this clause:

The International Emergency Preference Scheme is described in ITU-T Rec. E.106, International Emergency Preference Scheme (IEPS) for Disaster Relief Operations [64]. The associated BICC general functions of messages and parameters, formats and codes, and procedures are to be found in ITU-T Recs Q.1902.2 [14], Q.1902.3 [15], Q.1902.4 [16] and Q.1950 [61].

2) Clause 2 – References

Add the following new references:

[64] ITU-T Recommendation E.106 (2003), *International Emergency Preference Scheme (IEPS) for disaster relief operations*.

[65] ITU-T Recommendation Q.767 (1991), *Application of the ISDN User Part of CCITT signalling system No. 7 for international ISDN interconnections*.

3) Clause 3 – Definitions

Insert the following new terms alphabetically and renumber the subsequent terms accordingly:

3.13 **ISUP'92**: 1993 publication of ISUP Recommendations.

3.14 **ISUP'97**: 1997 publication of ISUP Recommendations.

3.15 **ISUP'2000**: 1999 publication of ISUP Recommendations.

4) Clause 8 – Capabilities supported

Insert the following new entry into Table 1/Q.1902.1:

Table 1/Q.1902.1 – Signalling capabilities for basic call

Function/service	National use	International
International Emergency Preference Scheme	√ (Note 4)	√
NOTE 4 – The procedures specified here for the international signalling network can be applied in national networks also. It is essential that the call is set up in the originating and destination national networks with utmost priority.		

5) New Appendix II

Insert the following new Appendix II:

Appendix II

BICC enhancements to support IEPS

II.1 Introduction

There is an urgent need for enhancements to BICC implementations in support of the International Emergency Preference Scheme (IEPS) as specified in ITU-T Rec. E.106 [64]. The intent is to increase the probability of call completion in congested network situations for authorized callers. These enhancements only apply to the international interface. Administrations, and network operators are encouraged to support these, or similar capabilities, in their domestic networks.

II.2 Scope

This appendix provides an overview of the signalling needed to support IEPS. The BICC enhancements to the other ITU-T Recommendations of this series relating to basic call are provided in corresponding amendments to ITU-T Recs Q.1902.2, Q.1902.3, and Q.1902.4. To provide a viable IEPS capability, it is required to implement all the amendments to the ITU-T Recommendations of this series.

II.3 Approach

The implementation of IEPS support may take place in a phased approach in a forward compatible manner. This phased approach facilitates and expedites the introduction of IEPS. The phases are:

a) The minimum implementation relies on the transfer in BICC of a specific IEPS call marking in the forward direction for preferential call set-up in the international network. In an international exchange, any call attempt with this IEPS call marking shall bypass restrictive call handling procedures (for example, network management controls as specified in ITU-T Rec. E.412 [35]).

b) An improved implementation provides the generation of an early ACM. The aim of this mechanism is to reduce call set-up failures due to timer expiration caused by, for example, queuing delays for trunk allocation on congested routes.

c) An additional information transfer mechanism, based on a new parameter in conjunction with the IEPS call marking, is used to facilitate enhancements of IEPS in the areas of identification and priority levels.

II.4 BICC versions and ISUP protocols

As the BICC CS-2 specifications ([14], [15], [16] and [61]) are published in different ITU-T Recommendations, these amendments to BICC provide all necessary information for support of IEPS in international exchanges. The support of IEPS by BICC CS-1 [13] is covered by the amendments to the ISUP'2000 series of Recommendations [6], [7], [8] and [9].

ITU-T Rec. Q.767 [65] and the ISUP'2000 series of Recommendations [6], [7], [8] and [9] are also being amended in support of IEPS. IEPS can be implemented on the previous versions ISUP'92 and ISUP'97 by the identical amendments made for the ISUP'2000 series of Recommendations.

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