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SERIES Q: SWITCHING AND SIGNALLING

Technical Report TRQ.2145: Requirements for a Narrow-band Signalling Syntax (NSS)

ITU-T Q-series Recommendations – Supplement 50

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Supplement 50 to ITU-T Q-series Recommendations

Technical Report TRQ.2145: Requirements for a Narrow-band Signalling Syntax (NSS)

Summary

This Supplement to ITU-T Q-Series Recommendations is a technical report on the requirements for a flexible encoding syntax of narrow-band signalling information to be transferred in protocols that cannot inherently transfer such information.

Source

Supplement 50 to ITU-T Q-series Recommendations was agreed on 12 March 2004 by ITU-T Study Group 11 (2001-2004).

FOREWORD

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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.

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CONTENTS

Introduction

As some call/session control protocols do not include all the narrow-band signalling information necessary to support all PSTN/ISDN services, there is a need to transfer information derived from narrow-band signalling protocols within these signalling systems. Since BICC already has the capability to transfer narrow-band service signalling information, there is no requirement for BICC to transfer information using this encoding syntax.

Supplement 50 to ITU-T Q-series Recommendations

Technical Report TRQ.2145: Requirements for a Narrow-band Signalling Syntax (NSS)

1 Scope

This Supplement specifies the requirements for a flexible encoding syntax of narrow-band signalling information to be transferred in protocols that cannot inherently transfer such information.

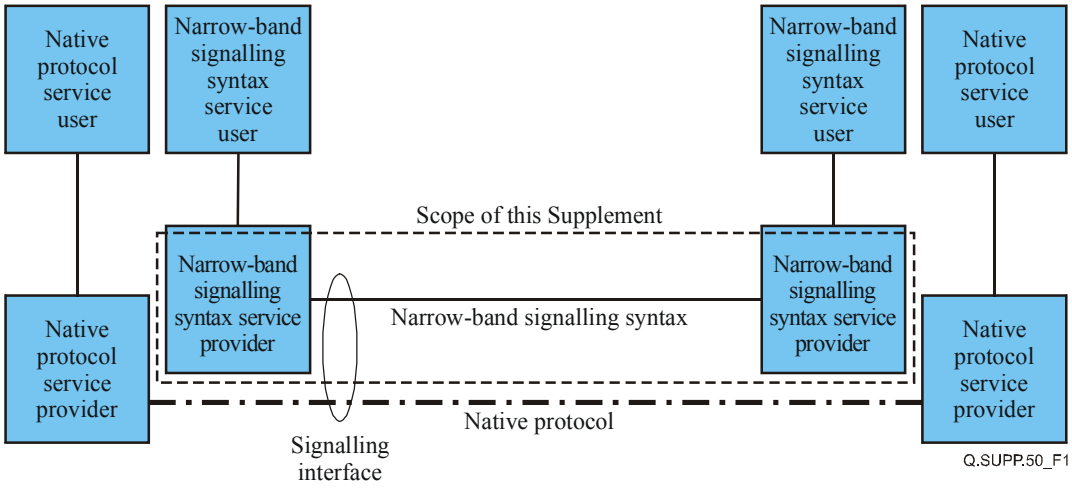

Figure 1 – Scope of this Supplement

2 References

[1] ITU-T Recommendation Q.763 (1999), *Signalling System No. 7 – ISDN user part formats and codes*, plus Amendment 1 (2001), *Coding of the Application Transport Parameter*, plus Corrigendum 1 (2001), plus Amendment 2 (2002), *Support for the International Emergency Preference Scheme*.

[2] ITU-T Recommendation Q.1902.3 (2001), *Bearer Independent Call Control protocol (Capability Set 2) and Signalling System No. 7 ISDN user part: Formats and codes*, plus Amendment 1 (2002), *Support for the International Emergency Preference Scheme*.

[3] ITU-T Recommendation Q.765.5 (2000), *Signalling System No. 7 – Application transport mechanism: Bearer Independent Call Control (BICC)*, plus Amendment 1 (2001), *Bearer Independent Call Control Capability Set 2*.

3 Abbreviations

This Supplement uses the following abbreviations:

BICC Bearer Independent Call Control

ISDN Integrated Services Digital Network

NSS Narrow-band Signalling Syntax

PSTN Public Switched Telephone Network

4 Definitions

This Supplement defines the following terms:

4.1 **narrow-band Signalling Syntax (NSS)**: The syntax required by this Supplement.

4.2 **native Protocol**: The protocol that carries the narrow-band signalling syntax.

4.3 **service Provider**: An entity which provides a service.

4.4 **service User**: An entity to which a service is provided.

5 Requirements

It is assumed that the underlying signalling transport mechanisms ensure error-free data transfer and in-sequence delivery of information.

The following general requirements are applicable to the syntax:

1) The NSS shall support the encoding of all call information in ITU-T Recs Q.763 [1], Q.1902.3 [2] and Q.765.5 [3].
2) The NSS shall be such that the native protocol transferring the information can include parts of narrow-band messages or parameters rather than complete messages or parameters.
3) The NSS shall be efficient to process without placing an unnecessary burden on memory or buffering.
4) There shall be a unique and bidirectional mapping between the NSS and narrow-band signalling information.
5) There shall be no loss, duplication, or modification of information as a consequence of completing the NSS encoding and decoding operation.
6) The NSS shall be independent of the native protocol.
7) The NSS shall include an indication of the type and version (if any) of the protocol from which the information is derived.
8) The NSS shall be readily extensible, in a logical and predictable manner to encompass new information messages and parameters.
9) The NSS shall not cause interpretational confusion.
10) The NSS shall provide forward compatibility mechanisms and backward compatibility rules on all information.

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