

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.3941.1

(06/2011)

SERIES Q: SWITCHING AND SIGNALLING

Signalling requirements and protocols for the NGN –
Testing for NGN networks

**Network integration testing between SIP and
ISDN/PSTN network signalling protocols –
Part 1: Test suite structure and test purposes
for SIP-ISDN**

Recommendation ITU-T Q.3941.1



ITU-T Q-SERIES RECOMMENDATIONS
SWITCHING AND SIGNALLING

SIGNALLING IN THE INTERNATIONAL MANUAL SERVICE	Q.1–Q.3
INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING	Q.4–Q.59
FUNCTIONS AND INFORMATION FLOWS FOR SERVICES IN THE ISDN	Q.60–Q.99
CLAUSES APPLICABLE TO ITU-T STANDARD SYSTEMS	Q.100–Q.119
SPECIFICATIONS OF SIGNALLING SYSTEMS No. 4, 5, 6, R1 AND R2	Q.120–Q.499
DIGITAL EXCHANGES	Q.500–Q.599
INTERWORKING OF SIGNALLING SYSTEMS	Q.600–Q.699
SPECIFICATIONS OF SIGNALLING SYSTEM No. 7	Q.700–Q.799
Q3 INTERFACE	Q.800–Q.849
DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 1	Q.850–Q.999
PUBLIC LAND MOBILE NETWORK	Q.1000–Q.1099
INTERWORKING WITH SATELLITE MOBILE SYSTEMS	Q.1100–Q.1199
INTELLIGENT NETWORK	Q.1200–Q.1699
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR IMT-2000	Q.1700–Q.1799
SPECIFICATIONS OF SIGNALLING RELATED TO BEARER INDEPENDENT CALL CONTROL (BICC)	Q.1900–Q.1999
BROADBAND ISDN	Q.2000–Q.2999
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR THE NGN	Q.3000–Q.3999
General	Q.3000–Q.3029
Network signalling and control functional architecture	Q.3030–Q.3099
Network data organization within the NGN	Q.3100–Q.3129
Bearer control signalling	Q.3130–Q.3179
Signalling and control requirements and protocols to support attachment in NGN environments	Q.3200–Q.3249
Resource control protocols	Q.3300–Q.3369
Service and session control protocols	Q.3400–Q.3499
Service and session control protocols – supplementary services	Q.3600–Q.3649
NGN applications	Q.3700–Q.3849
Testing for NGN networks	Q.3900–Q.3999

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T Q.3941.1

Network integration testing between SIP and ISDN/PSTN network signalling protocols – Part 1: Test suite structure and test purposes for SIP-ISDN

Summary

Recommendation ITU-T Q.3941.1 specifies the test suite structure and test purposes (TSS&TP) for network integration testing to verify the overall compatibility of SIP, ISDN and non-ISDN (PSTN) over the national or international ISDN networks. The TSS&TP specification covers the procedures described in Recommendations ITU-T Q.1912.5 and ITU-T Q.699. For SIP- and SDP-specific terminology, reference shall be made to ETSI TS 124.229 and RFC 3261 respectively.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T Q.3941.1	2011-06-29	11

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). 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

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Recommendation ITU-T Q.3941.1

Network integration testing between SIP and ISDN/PSTN network signalling protocols – Part 1: Test suite structure and test purposes for SIP-ISDN

1 Scope

The present Recommendation is part 1 of a multi-part deliverable covering network integration testing between SIP and ISDN/PSTN network signalling protocols:

- Part 1: Test suite structure and test purposes for SIP-ISDN.
- Part 2: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-ISDN.
- Part 3: Test suite structure and test purposes for SIP-SIP.
- Part 4: Abstract test suite and partial protocol implementation extra information for testing proforma specification for SIP-SIP.

The present Recommendation specifies the test suite structure and test purposes (TSS&TP) for network integration testing (NIT) to verify the overall compatibility of SIP, ISDN and non-ISDN (PSTN) over the national or international ISDN networks. The TSS&TP specification covers the procedures described in Recommendations [ITU-T Q.1912.5] and [ITU-T Q.699]. For SIP- and SDP-specific terminology, reference shall be made to ETSI TS 124.229 and RFC 3261 respectively.

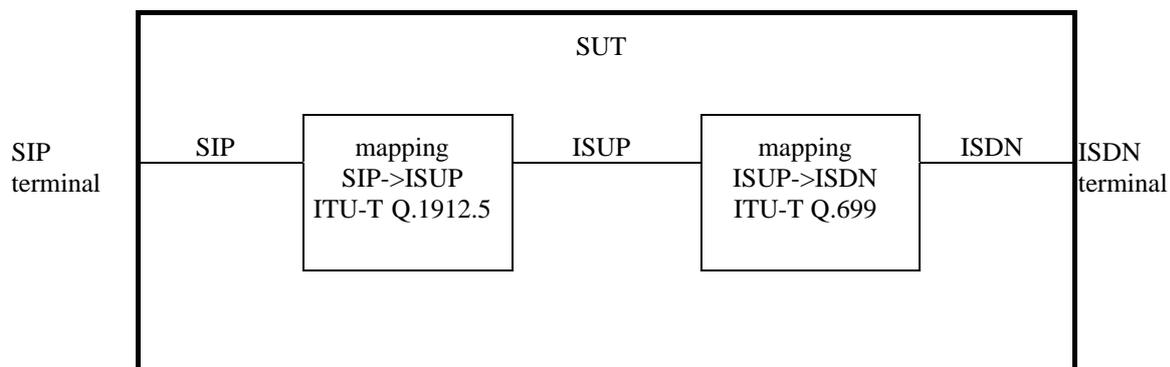


Figure 1 – SIP-ISDN inter-working testing architecture

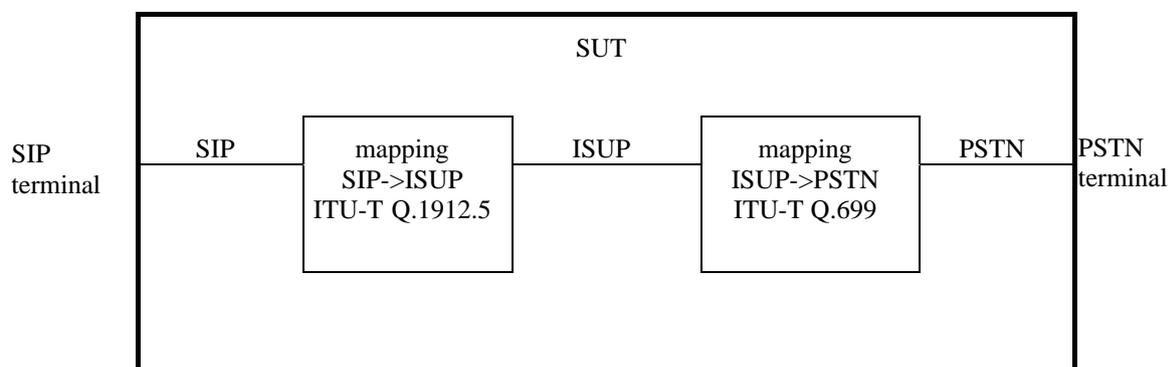


Figure 2a – SIP-PSTN inter-working testing architecture

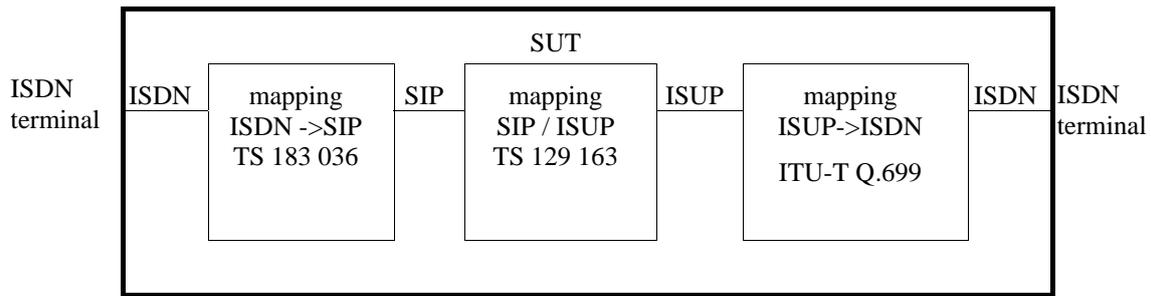


Figure 2b – ISDN-ISDN inter-working testing architecture with ISUP

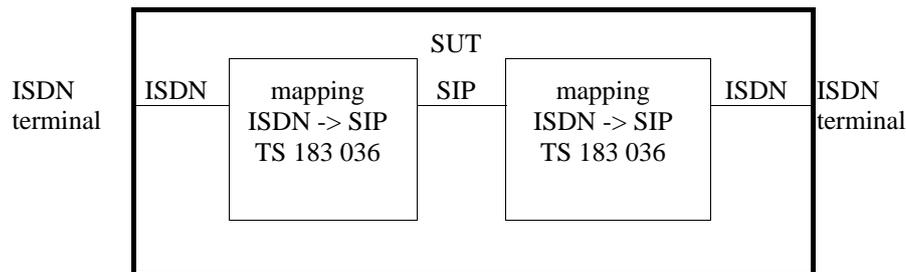


Figure 2c – ISDN-ISDN inter-working testing architecture without ISUP

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T Q.699] Recommendation ITU-T Q.699 (1997), *Interworking between ISDN access and non-ISDN access over ISDN User Part of Signalling System No. 7.*
- [ITU-T Q.1912.5] Recommendation ITU-T Q.1912.5 (2004), *Interworking between Session Initiation Protocol (SIP) and Bearer Independent Call Control Protocol or ISDN User Part.*
- [ETSI TS 124 229] ETSI TS 124 229 (2011), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229 Release 9).*
- [ETSI TS 129 163] ETSI TS 129 163 (2011), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (3GPP TS 29.163 Release 9).*

[ETSI TS 183 036]	ETSI TS 183 036 (2011), <i>Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); ISDN/SIP interworking; Protocol specification.</i>
[ETSI TS 186 001-1]	ETSI TS 186 001-1 (2010), <i>Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Network Integration Testing between SIP and ISDN/PSTN network signalling protocols; Part 1: Test Suite Structure and Test Purposes (TSS&TP) for SIP-ISDN.</i>

3 Endorsement

The text of [ETSI TS 186 001-1] was approved by ITU-T as the basis for Recommendation ITU-T Q.3941.1 as modified below.

4 Modifications

Page 5, Intellectual Property Rights

Delete the whole section.

Page 5, Foreword

Delete the whole section.

Page 6, Scope

Replace the whole clause with the following:

"1 Scope

See clause 1, Scope, of Recommendation ITU-T Q.3941.1."

Page 550, History

Delete the whole section.

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Terminals and subjective and objective assessment methods
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects and next-generation networks
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