

GUIDELINES FOR IMPLEMENTATION
ISUP-SIP INTERWORKING
PROFILE B

Publisher FICORA		DESCRIPTION Date of publication 19.8.2004	
Authors National standardization group for network-to-network signalling		Type of publication GFI	
		Assigned by FICORA	
Name of publication GFI 0303 GUIDELINES FOR IMPLEMENTATION; ISUP-SIP INTERWORKING, PROFILE B			
Abstract The GFI0303 defines the interworking between IETF SIP-standards and national ISUP standards. The basis of the work has been national ISUP3, but the document is applicable also in case of national ISUP2 and ISUP4 standards. This version covers only interworking based on the profile B defined in the ITU-T Technical Report TRQ.2815 'Requirements for Interworking BICC/ISUP Network with Originating/Destination Networks based on Session Initiation Protocol and Session Description Protocol'.			
Keywords SIP, ISUP, interworking			
Serial name Viestintäviraston julkaisuja/suosituksia/GFI-dokumentteja			
Pages, total 8	Language English	Price 4,50 €	Confidence status Public
Distributed by FICORA		Published by FICORA	

Postal address
 PO Box 313
 FI-00181 HELSINKI
 FINLAND

Visiting address
 Itämerenkatu 3 A
 00180 HELSINKI
 Business ID 0709019-2

Telephone
 +358 9 69 661
 Telefax
 +358 9 6966 410

E-mail
 info@ficora.fi
 Homepage
<http://www.ficora.fi>

FOREWORD

GFI 0303 Guidelines for implementation, ISUP-SIP Interworking, Profile B contains clarifications and option selections for ITU-T deliverables covering ISUP-SIP interworking and national additions covering areas of national ISUP interworking not included in ITU-T deliverables. The aim of this document is to ensure the interworking between national ISUP and SIP protocols.

This guideline document has been prepared by the members of the national standardization group for network-to-network signalling. The Steering Group for Telecommunications Standardization has discussed this document and recommends it to be followed when implementing ISUP-SIP interworking.

Contents

FOREWORD	2
1 INTRODUCTION	4
2 REFERENCES	4
3 TRQ.2815	4
4 Q.1912.5	5

1 INTRODUCTION

This specification defines the interworking between IETF SIP-standards and national ISUP standards. The basis of the work has been national ISUP3, but the document is applicable also in case of national ISUP2 and ISUP4 standards.

This version covers only interworking based on the profile B defined in the ITU-T Technical Report TRQ.2815 *'Requirements for Interworking BICC/ISUP Network with Originating/Destination Networks based on Session Initiation Protocol and Session Description Protocol'*.

The specification contains some introductory text related to the profile B from the TRQ.2815 and national comments to the ITU-T recommendation Q.1912.5 *'Interworking Between Session Initiation Protocol (SIP) and Bearer Independent Call Control Protocol or ISDN User Part'*. The comments are made because of national requirements or because they are related to other profiles than profile B.

2 REFERENCES

ITU-T Series Q Supplement 45, Technical report TRQ.2815

Requirements for Interworking BICC/ISUP Network with
Originating/Destination Networks based on Session Initiation Protocol
and Session Description Protocol

ITU-T Recommendation Q.1912.5

Interworking Between Session Initiation Protocol (SIP) and Bearer
Independent Call Control Protocol or ISDN User Part

SFS5869:en

Signalling in the public switched telephone network (PSTN). ISDN User
Part ISUP Version 3 of the national Signalling System No. 7. Application
of ITU-T recommendations Q.730 and Q.761 - Q.766 in Finland.

SFS5779

Signalling in the public switched telephone network (PSTN). ISDN User
Part ISUP Version 2 of the national Signalling System No. 7. Application
of ITU-T recommendations Q.730 and Q.761 - Q.766 in Finland.

SFS5901:en

Signalling in the public switched telephone network (PSTN). ISDN User
Part ISUP Version 4 of the national Signalling System No. 7. Application
of ITU-T recommendations Q.730 and Q.761 - Q.766 in Finland.

3 TRQ.2815

The ITU-T TRQ.2815 is applicable with the following comments:

This GFI covers SIP Profile B for Interworking Between SIP and ISUP according to the following figure:

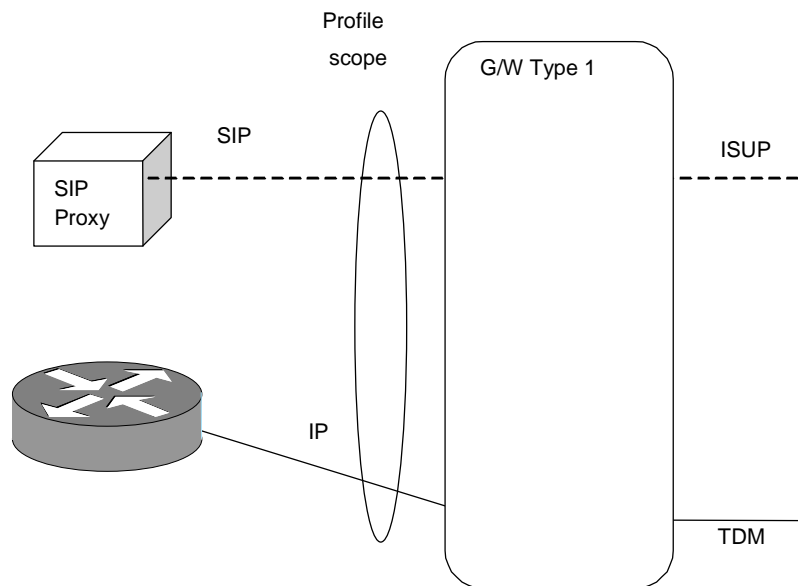


Figure 1 - Profile Scope for SIP Interworking with ISUP with Type 1 Gateways

4 Q.1912.5

The ITU-T recommendation Q.1912.5 is applicable with the following general comments:

- all procedures and information elements related only to BICC are not applicable
- the GFI covers only profile B, i.e. all procedures and information elements related only to profiles A and C are not applicable
- the GFI covers only type 1 gateways, i.e. all procedures and information elements related to type 2, 3 and 4 gateways are not applicable

In addition the following comments related to clauses of Q.1912.5 are applicable:

5.3.3 Interworking of ISUP overlap signalling

The text concerning the recommendation of not using overlap signalling is not applicable i.e. in the national network overlap signalling can be used.

5.4.3 Exclusions/Special considerations

Table 1/Q.1912.5 – ISUP Messages for Special Consideration

Forward Transfer and Continuity Check Request messages are not used in Finland.

Continuity message: The I-IWU can generate COT or it can delay sending the last digit in order to avoid speech clipping. In the interface between operators COT can only be used if it has been agreed by the interconnected operators.

Metering Pulse message: Nationally introduced, MPMs received from the ISUP side are stored in the gateway.

Nationally used messages received from the ISUP side i.e. INR, INF, CQM, CQR, OLM, UCICC and SDM are locally terminated.

6.1.1 INVITE received without an SDP offer

Not applicable (SDP offer always included).

6.1.2 INVITE received with an SDP offer or continuation from clause 6.1.1 (1)

SIP preconditions are in use.

6.1.3.3 Nature of Connection Indicators (Mandatory)

The bits AB are always coded 00 (no satellite circuit in the connection).

6.1.3.6 ISUP Calling Line Identification (CLI) parameters

Table 7/Q.1912.5 - Mapping of SIP From/P-Asserted-Identity/Privacy headers to ISUP CLI parameters

Calling Party Number parameter
Address signals

A network provided E.164 number is included if no "P-Asserted-Identity" header field containing a URI with an identity in the format "+CC"+"NCD"+"SN" is received.

Calling Party Number parameter
APRI
APRI is set to "presentation restricted" in case of a network provided E.164 number.

The case, where no "P-Asserted-Identity" header field containing a URI with an identity in the format "+CC"+"NCD"+"SN" is received, is applicable only in incoming international calls.

6.1.3.9 Hop Counter (Optional)

The factor used is agreed between the interconnecting operators.

6.11.2 Receipt of REL

Table 21/Q.1912.5 - Receipt of the Release message (REL)

Cause values No. 8 (Preemption) and No. 9 (Preemption-circuit reserved for reuse) are not used.

Cause value 24 and the corresponding SIP status code 503 Service unavailable are added.

Cause values 39, 40 and 46 are not applicable.

7.1 Sending of the first INVITE

Only the case B) Sending INVITE with precondition for ISUP IAM/SAM is applicable.

7.1.1 Coding of SDP Media Description Lines from TMR/USI**Table 26/Q.1912.5 - Coding of SDP Media Description Lines from TMR/USI: ISUP to SIP**

Rows related to G.711 μ -law are not applicable.

Rows related to 1536 kbit/s unrestricted and N x 64 kbit/s unrestricted, N from 3 to 29 are not applicable.

In the cases related to T.38 (Group 3 fax), T.38 or G.711 can be used in accordance with the agreement by the interconnected operators.

CLEARMODE is applicable.

ISUP TMR value '64 kbit/s preferred' is handled like value '64 kbit/s unrestricted'.

7.1.3 P-Asserted-Identity, From and Privacy header fields**Table 27/Q.1912.5 - Mapping ISUP CLI Parameters to SIP Header fields**

The case, where a Calling Party Number parameter with complete E.164 number, with Screening Indicator = UPVP or NP, and with APRI = "presentation allowed" or "presentation restricted" has not been received, is applicable only in incoming international calls.

7.1.4 Hop Counter (Optional)

The factor used is agreed between the interconnecting operators.

7.7.6 Receipt of 4XX, 5XX, 6XX Responses To INVITE**Table 40/Q.1912.5 - Receipt of 4XX, 5XX or 6XX at O-IWU**

SIP status code 503 Service unavailable is mapped to REL cause value 127 interworking also in case of ACR.

ANNEX-B.1~B.N**Interworking for ISDN Supplementary Services****ANNEX B.17****Interworking of Multi-Level Precedence and Preemption (MLPP) Supplementary service to SIP networks.**

Not applicable.

ANNEX B.18**Interworking of Global Virtual Network Service (GVNS) Supplementary service to SIP networks.**

Not applicable.

ANNEX B.19**Interworking of International telecommunication charge card (ITCC) Supplementary service to SIP networks.**

Not applicable.

ANNEX B.20
Interworking of Reverse charging (REV) Supplementary service to SIP networks.

Not applicable.

APPENDIX I
Interworking scenarios between SIP and BICC

Not applicable.

APPENDIX III
Interworking scenarios between Profile C (SIP-I) and ISUP

Not applicable.