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NICC Document

IP Multimedia Call Control based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) for UK Interconnect

NICC

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Normative Information

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Intellectual Property Rights

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Foreword

This NICC Document (ND) has been produced by the NICC TSG AP Working Party.

Introduction

This UK specification of the Session Initiation Protocol (SIP) and the Session Description Protocol (SDP) has been produced by the Technical Steering Group (TSG) of the Network Interoperability Consultative Committee (NICC). This specification is intended for use in the architectural environment described in the NGN Voice Line Control Interconnect architecture document ND1620 [3]. This document specifies the SIP and SDP required within public electronic communications networks (PECNs) in the UK to support services between customers. The services supported shall be those described in the associated release document.

“In the UK” is defined as the UK network up to and including the National component of an International Switching Centre or equivalent. The actions at an International Gateway are beyond the scope of this document. Text describing any such actions is included for information only.

This issue of the specification contains the functionality of ETSI ES 283 003 Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 [3GPP TS 24.229] [1] modified to include additional functionality which is required for the UK.

Note: ETSI ES 283 003 endorses 3GPP TS 24.229 IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 (Release 7)" this document is also published by ETSI TISPAN as ETSI TS 124 229 Digital cellular telecommunications system (Phase 2+);Universal Mobile Telecommunications System (UMTS); Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3(3GPP TS 24.229)”

This specification is written as an endorsement to the ETSI documents. This is done by endorsing the ETSI documents and listing those sections of the ETSI documents that require a UK exception.

1 Scope

The present document endorses ETSI ES 283 003 Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 [1], the contents of which apply together with the addition of the modifications being covered herein.

Note: Underlining and/or strike-out are used to highlight detailed modifications where necessary.

2 References

For the particular version of a document applicable to this release see ND1610 [5].

2.1 Normative references

[1] ETSI ES 283 003 Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3.

[2] RFC3966 The tel URI for Telephone Numbers

[3] ND 1620 NGN Voice Line Control Interconnect architecture document

[4] RFC 3261 Session Initation Protocol

[5] ND1610, Multi-Service Interconnect of UK Next Generation Networks

2.2 Informative references

[i.1] TSG 010 “United Kingdom Call Preference Arrangements Policy and Requirements Statement Cabinet Office January 2006” Note 1

Notes

1. This document is published on NICC TSG website and hence only available to NICC members.

3 Abbreviations

3GPP	3rd Generation Partnership Project
ASCII	American Standard Code for Information Interchange
AVP	Audio/Video profile
BCD	Binary Coded Decimal
CPC	Calling party’s category
DTMF	Dual Tone Multi-Frequency
ETSI	European Telecommunications Standards Institute
GVNS	Global virtual network services
IETF	Internet Engineering Task Force
IP	Internet Protocol
ITU-T	International Telecommunication Union - Telecommunication standardisation sector
ND	NICC Document
NICC	Network Interoperability Consultative Committee
Ofcom	Office of Communications (The Regulator for the UK Communications Industries)
PECN	Public Electronic Communications Network
PSTN	Public Switched Telephone Network
RFC	Request For Comments
SDP	Session Description Protocol
SIP	Session Initiation Protocol
SIP-I	Session Initiation Protocol with encapsulated ISUP

TBW	To be written
TISPAN	Telecommunications and Internet converged Services and Protocols for Advanced Networking
TSG	Technical Steering Group
UA	User Agent
UAC	User Agent Client
UAS	User Agent Server
UK	United Kingdom of Great Britain and Northern Ireland
URI	Uniform Resource Identifier
USA	UK Specific Address

4 Global modifications to TISPAN ES 283 003

Replace references as shown below

Reference in ES 283 003 [1]	Modified reference
ETSI ES 282 007: Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Subsystem (IMS); Functional architecture (Note 1)	ND 1620 Voice Line Control Interconnect architecture document .
Note 1: The reference in [1] is replaced by the document listed on the right column. This replacement is applicable to all occurrences of the reference throughout the present endorsement.	

5 Modifications to TISPAN ES 283 003

Annex ZA

Replace the entire Annex with the following:

Annex ZA (normative): Cpc parameter definition

ZA.1 Introduction

This annex defines the use of the "cpc" URI parameter for use within SIP URI and Tel URI of the P-Asserted-Identity header.

The Calling Party's Category is represented as a tel URI or SIP URI parameter in a SIP request. The ABNF syntax is as follows:

```
cpc = cpc-tag "=" cpc-value
cpc-tag = "cpc"
cpc-value
= "ordinary" / "test" / "operator" /
"payphone" / "priority" / "data" /
"cellular" / "cellular-roaming" / "ieps" / "unknown" /
"oss" / "admin-div-ord" / "admin-div-pay" / "admin-div-ordp" / "admin-div-payp"
/

genvalue

genvalue = 1*(alphanum / "-" / "." )
```

The Accept-Contact header shall be used to express the language of the operator.

The semantics of these Calling Party's Category values are described below:

ordinary: The caller has been identified, and has no special features.

test: This is a test call that has been originated as part of a maintenance procedure.

operator: The call was generated by an operator position.

payphone: The calling station is a payphone.

priority: Calling subscriber with priority.

data: Data call (voice band data).

cellular: The calling station is a radio-telephone operating in its home network.

cellular-roaming: The calling station is a radio-telephone roaming in another network

ieps: This call is an ieps call

unknown: The CPC could not be ascertained.

oss : The call was generated by the Operator Services System

admin-div-ord: The caller has been subject to Administration controlled diversion

admin-div-pay: The payphone has been subject to Administration controlled diversion

admin-div-ordp: A Calling subscriber with priority has been subject to Administration controlled diversion

admin-div-payp: A payphone with priority has been subject to Administration controlled diversion

6 UK Additions to TISPAN ES 283 003

6.1 Priority Calls

6.1.1 Introduction

This section specifies the signalling formats, codes and procedures to support Priority Calls. Priority Calls are a general class of calls that requires the use of certain call features, which are described in this section. Priority Calls include the following:

Public access to an emergency answering point (e.g. 999/112)

Emergency answering point forwarding a call to an Emergency Authority

The Enhanced Government Telephone Preference Scheme (EGTPS) service.

Note:The EGTPS service is described in TSG 010 “United Kingdom Call Preference Arrangements Policy and Requirements Statement Cabinet Office January 2006” [i.1].

This sub-section describes only the signalling protocol requirements. It does not describe any additional nodal attributes that some Priority Calls may enjoy such as continuous re-try and access to reserved network resources.

6.1.2 Coding

Calls with Priority shall include the cpc parameter of the P- Asserted-Identity header.

The cpc value shall be set as “priority”.

6.1.3 Procedures

The originating network shall decide that a call is a Priority Call based on either analysis of the digits received from the access signalling system (e.g. 999/112) or based on the attributes of the originating access type (EGTPS or Emergency Answering Point).

Calls including a P-Asserted-Identity header with a cpc parameter with a value of “priority” shall not be subject to network management controls.

Subsequent networks shall maintain the indication of priority throughout the call

6.2. UK non-E.164 Numbers

Where numbers that are not suitable for representation in the <global-number> format (e.g. 999, 118xxx, 8xxx etc) have to be conveyed in tel URIs (including tel URIs carried within sip URIs in accordance with section 19.1.6 of RFC 3261 [4]) , the local-number format shall be used. In these cases the <context> as described in RFC3966 [2] shall include a <descriptor> containing the <global-number-digits> “+44”.

History

Document history		
1.1.1	October 2008	Initial publication