

3GPP TS 23.509 V8.0.0 (2008-09)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Technical Specification Group
Services and System Aspects;
Telecommunications and Internet converged Services and
Protocols for Advanced Networking (TISPAN);
NGN Architecture to support emergency communication
from citizen to authority
[Endorsed document 3GPP TS 23.167, Release 7]
(Release 8)**



The present document has been developed within the 3rd Generation Partnership Project (3GPP™) and may be further elaborated for the purposes of 3GPP.

The present document has not been subject to any approval process by the 3GPP Organizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPP only. The Organizational Partners accept no liability for any use of this Specification. Specifications and reports for implementation of the 3GPP™ system should be obtained via the 3GPP Organizational Partners' Publications Offices.

Keywords

UMTS, IMS, architecture, emergency

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

<http://www.3gpp.org>

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2008, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

Contents

Foreword	4
1 Scope	5
2 References.....	5
3 Definitions and abbreviations	5
4 Endorsement notice	5
Annex ZA (normative): Call back of Emergency Session.....	7
Annex ZB (informative): Examples of Network Connection Model for Emergency services.....	8
ZB.1 Non roaming.....	8
ZB.2 Roaming at IMS level.....	9
ZB.3 Roaming at the Access Network level.....	9
Annex ZZ (informative): Change history.....	10

Foreword

This Technical Specification (TS) was produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN) and originally published as ETSI TS 182 009 [3]. It was transferred to the 3rd Generation Partnership Project (3GPP) in December 2007.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document provides the ETSI endorsement of the 3GPP TS 23.167 [1].

The present document defines the architectural description for emergency services in the IP Multimedia Core Network Subsystem (IMS), including the elements necessary to support IP Multimedia (IM) emergency services

The present document covers also the Access Network aspects that are crucial for the provisioning of IMS emergency services.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 23.167 (Release 7): "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; IP Multimedia Subsystem (IMS) emergency sessions (Release 7)".
- [2] ETSI TS 102 424: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Requirements of the NGN network to support Emergency Communication from Citizen to Authority".
- [3] ETSI TS 182 009 v1.1.1: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Architecture to support emergency communication from citizen to authority [Endorsed document 3GPP TS 23.167, Release 7]".

3 Definitions and abbreviations

For the purposes of the present document, the terms, definitions and abbreviations given in 3GPP TS 23.167 [1] apply.

4 Endorsement notice

The elements of 3GPP TS 23.167 [1] apply, with the following modifications:

Replace references as shown below.

Reference in 3GPP TS 23.167 [1]	Modified reference
3GPP TS 22.101	ETSI TS 102 424 [2]

Clause 3.1 Definitions

Add the following at the end of the definition of IP-Connectivity Access Network:

In the context of the present document and an NGN, this can be read as a combination of the Network. (NASS), (RACS) and the transfer functions as described in ES 282 001.

Clause 4.1 Architectural Principles

After item 7, add the following:

NOTE: For NGN fixed access, the additional emergency registration is for further study.

Clause 6.1 UE

Add the following as the first paragraph of the section:

The steps described below applies to UEs that are able to detect that a user is requesting an emergency session: In case the UE is not able to detect that the user is requesting an emergency session, the session establishment will from the UEs perspective proceed as the establishment of an ordinary multimedia session.

Clause 6.2.1 Proxy-CSCF

Delete the third bullet item "Reject/allow unmarked emergency requests".

Clause 7.1.1 UE Detectable Emergency Session

After NOTE 2 that follows item 5 add the following:

NOTE 2a: For NGN fixed access, the mechanisms and procedures for discovery of a local P-CSCF that is suitable for use in emergency sessions, are for further study. Therefore, the ordinary procedures for P-CSCF discovery may be used.

Clause 7.1.2 Non UE Detectable Emergency Session

After the third bullet item starting "Alternatively, the P-CSCF" add the following:

NOTE: For NGN fixed access, the third alternative is always to be used.

New Annex ZA (normative): Call back of Emergency Session

At the end of the document add the following new annex:

Annex ZA (normative): Call back of Emergency Session

NOTE: The PSAP can return a call to the UE, via the S-CSCF in the home network, using existing basic call procedures. Procedures for a real Emergency call back is a GAP for this release. Alternative methods and procedures for establishing an emergency call back session, e.g. via the E-CSCF in the local network, is for further study

New Annex ZB (informative): Examples of Network Connection Model for Emergency services

At the end of the document add the following new annex:

Annex ZB (informative): Examples of Network Connection Model for Emergency services

This annex provides typical examples of network connection model to support emergency services. The annex clarifies the NGN Release 1 ability to support emergency services depending on the network connection model. It also clarifies which network is responsible for the connection to PSAP.

Three connecting cases using the TISPAN NGN are described as follows.

ZB.1 Non roaming

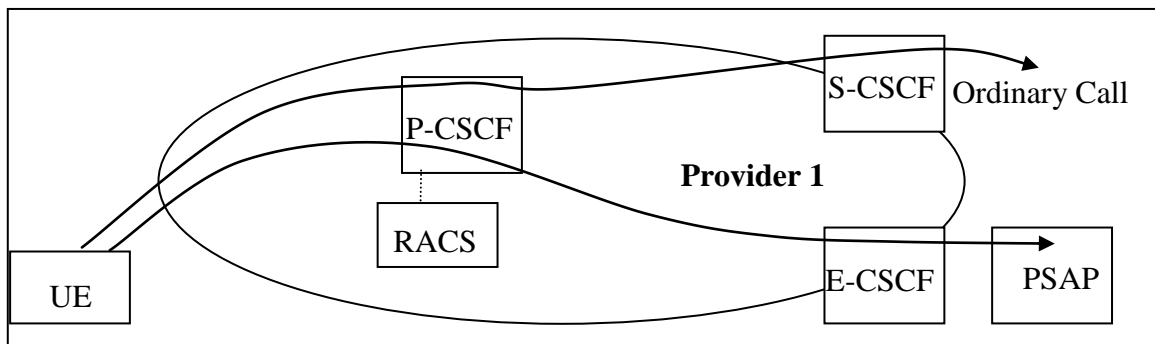


Figure ZB.1

The Figure ZB.1 shows the case where the Provider 1 network handles both ordinary calls and emergency calls to be connected to PSAP.

Provider 1 takes the responsibility on the connection to PSAP.

This is one of the network connection model case provided by TISPAN NGN Release 1 Emergency services.

ZB.2 Roaming at IMS level

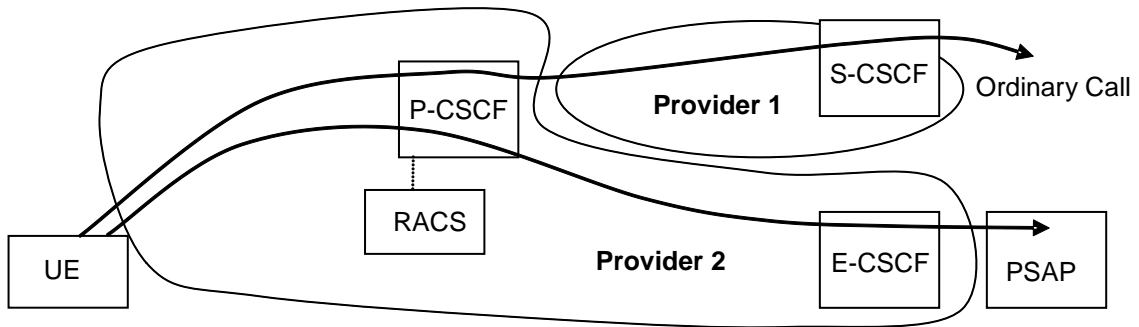


Figure ZB.2

Figure ZB.2 shows the case where Provider 1 network handles ordinary calls and the other Provider 2 network handles emergency calls to be connected to PSAP.

The P-CSCF is located in Provider 2. Thus this is a case of IMS level roaming.

Provider 2 Network takes the responsibility on the connection to PSAP.

This is one of the network connection model case provided by TISPAN NGN Release1 Emergency services.

ZB.3 Roaming at the Access Network level

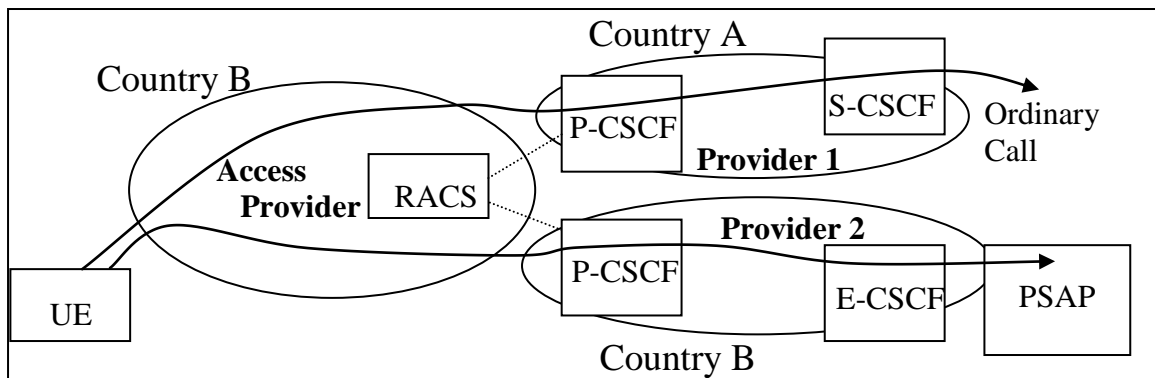


Figure ZB.3

Figure ZB.3 shows the case where Provider 1 network handles ordinary calls using their own P-CSCF, and the other Provider 2 network handles emergency calls to be connected to PSAP using their own P-CSCF.

P-CSCFs are located in both Provider 1 and 2 respectively. This is a case of Access Network level roaming.

Access Provider and Provider 2 jointly takes the responsibility on the connection to PSAP.

In this case, it is necessary to clarify the mechanism on how UE selects the P-CSCF providing emergency services. As the current architecture of UE and the access network does not provide or handle any information on which P-CSCF has the ability to connect to PSAP for the serving user, enhancements in the UE and the access network is needed to support this case.

Therefore, this network connection model case is out of scope of the TISPAN NGN Release1 Emergency services.

Annex ZZ (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Cat	Subject/Comment	Old	New
2006-10						Publication as ETSI TS 182 009		1.1.1
2007-12	SP-38	SP-070939				Conversion to 3GPP format, no technical change	1.1.1	1.1.2
2007-12	SP-38					Approved and frozen	1.1.2	7.0.0
2008-06	SP-40	SP-080367	0001	-	F	Correction due to changes in 23.167	7.0.0	7.1.0
2008-09	SP-41	SP-080573	0002	1	F	Removal of emergency public user identity	7.1.0	7.2.0
2008-09	SP-41	SP-080538	-	-	-	Upgrade to Rel-8 version	7.2.0	8.0.0