# ETSI TS 123 509 V8.0.0 (2008-10)

*Technical Specification*

**Digital cellular telecommunications system (Phase 2+);**
**Universal Mobile Telecommunications System (UMTS);**
**TISPAN;**
**NGN Architecture to support emergency communication from citizen to authority**
**[Endorsed document 3GPP TS 23.167, Release 7]**
**(3GPP TS 23.509 version 8.0.0 Release 8)**

Reference
RTS/TSGS-0223509v800

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# Intellectual Property Rights



# Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

# Contents

# 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

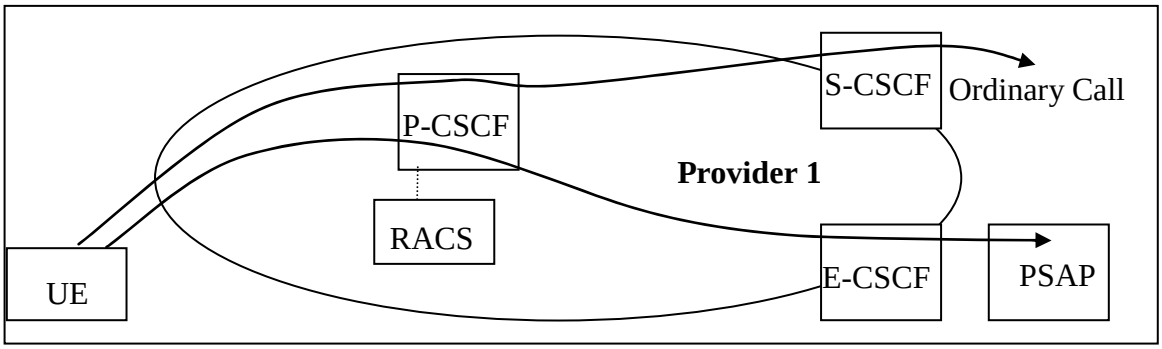


**Figure ZB.1**

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 Release1 Emergency services.

# ZB.2 Roaming at IMS level

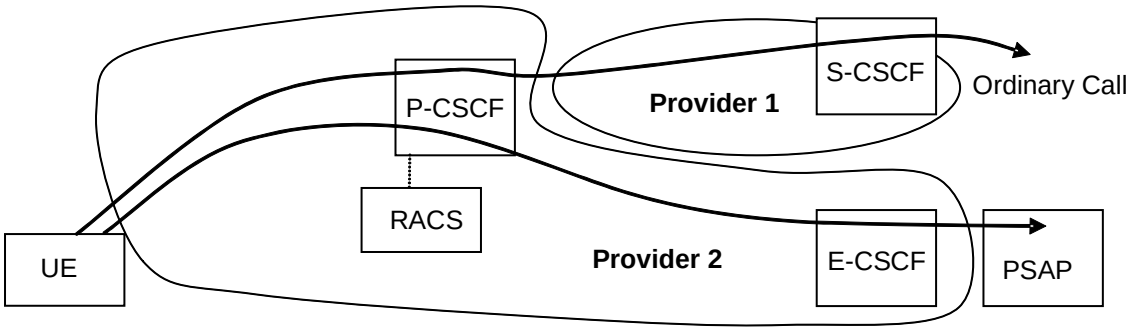


**Figure ZB.2**

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

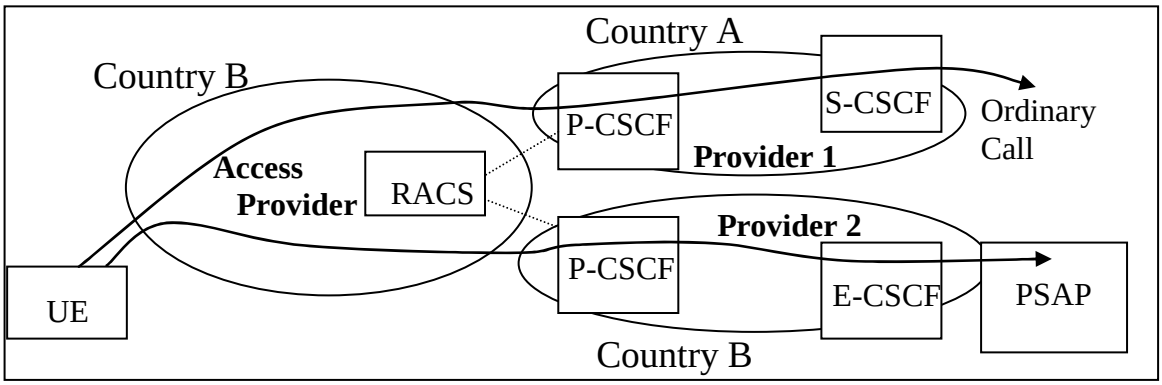


**Figure ZB.3**

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 |

# History

| Document history | | |
|---|---|---|
| V8.0.0 | October 2008 | Publication |
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