

# 3GPP TS 22.096 V16.0.0 (2020-07)

---

*Technical Specification*

**3rd Generation Partnership Project;  
Technical Specification Group Services and System Aspects;  
Name identification supplementary services;  
Stage 1  
(Release 16)**

---



---

**Keywords**

LTE, GSM, UMTS, CNAP, supplementary service,  
stage 1

**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.

© 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).  
All rights reserved.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners

LTE™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners

GSM® and the GSM logo are registered and owned by the GSM Association

# Contents

Foreword.....	4
1 Scope .....	5
2 References .....	5
3 Definitions and abbreviations.....	5
3.1 Definitions .....	5
3.2 Abbreviations.....	6
4 Calling Name Presentation (CNAP) .....	6
4.1 Definition.....	6
4.2 Description.....	6
4.2.1 Description .....	6
4.2.2 Applicability to telecommunication services .....	6
4.3 Normal procedures with successful outcome.....	6
4.3.1 Provision .....	6
4.3.2 Withdrawal.....	7
4.3.3 Registration .....	7
4.3.4 Erasure .....	7
4.3.5 Activation.....	7
4.3.6 Deactivation .....	7
4.3.7 Invocation.....	7
4.3.8 Normal operation with successful outcome .....	7
4.3.9 Interrogation.....	7
4.4 Exceptional procedures or unsuccessful outcome.....	8
4.5 Alternate procedures .....	8
4.6 Interactions with other supplementary services .....	8
4.6.1 Calling Line Identification Presentation (CLIP) .....	8
4.6.2 Calling Line Identification Restriction (CLIR) .....	8
4.6.3 Call Forwarding Unconditional (CFU) .....	8
4.6.4 Call Forwarding on mobile subscriber Busy (CFB) .....	8
4.6.4.1 Network Determined User Busy (NDUB).....	8
4.6.4.2 User Determined User Busy (UDUB) .....	9
4.6.5 Call Forwarding on No Reply (CFNRy) .....	9
4.6.6 Call Forwarding on mobile subscriber Not Reachable (CFNRc).....	9
4.6.7 Call Waiting (CW) .....	9
4.6.9 Explicit Call Transfer (ECT).....	9
4.6.10 Support of Private Numbering Plan (SPNP) .....	9
4.6.11 Completion of Calls to Busy Subscriber (CCBS) .....	9
4.6.12 enhanced Multi-Level Precedence and Pre-emption (eMLPP) .....	9
4.7 Service functions for roamers .....	9
4.8 Interworking considerations.....	9
<b>Annex A (informative): Change history .....</b>	<b>10</b>

---

# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

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 describes the supplementary services belonging to the group Name Identification supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004 [2].

The group of Name Identification supplementary services is divided into the following supplementary services:

CNAP                                  Calling Name Presentation (clause 4).

---

# 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 TR 21.905: "Vocabulary for 3GPP Specifications".
- [2]                                  3GPP TS 22.004: "General on Supplementary Services".
- [3]                                  3GPP TS 22.081: "Line Identification Supplementary Services - Stage 1".

---

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the following definitions apply:

### **Definition of name identity:**

The name identity is made up of the following information unit:

- The name of the mobile subscriber for the purpose of calling name presentation - up to 80 characters of information associated with a specific calling party.

The calling name identity is the name identity of the calling party.

### **Definition of Presentation Indicator:**

In addition to or instead of the name identity, the network may give a Presentation Indicator (PI) to the called mobile subscriber of the CNAP service. The following information may be given:

- Presentation Indicator (PI) showing:
  - a) presentation restricted, or
  - b) name unavailable.

The name identity of a PLMN subscriber shall always be provided by the network.

**Calling Party:** The calling party is the originating party.

**Called Party:** The called party is the terminating party. The CNAP service is provided to the called party.

**Calling Name Information:** The calling name information of the calling party includes either the calling name identity or an indication of privacy or unavailability.

## 3.2 Abbreviations

In addition to the following abbreviations used in the present document, abbreviations are listed in TS 21.905 [1].

CNAP	Calling Name Presentation
------	---------------------------

---

# 4 Calling Name Presentation (CNAP)

## 4.1 Definition

The CNAP supplementary service enables the called party to receive the calling name information of the calling party.

## 4.2 Description

### 4.2.1 Description

This supplementary service provides for the ability to indicate the name information of the calling party to the called party at call set-up time for all incoming calls.

The calling party takes no action to activate, initiate, or in any manner provide Calling Name Identification Presentation. However, the delivery of the calling name to the called party may be affected by other services subscribed to by the calling party. For example, if the calling party has subscribed to Calling Line Identification Restriction (CLIR), then the calling line identity as well as the calling name identity shall not be presented to the called party.

### 4.2.2 Applicability to telecommunication services

The applicability of this supplementary service is defined in TS 22.004 [2].

CNAP is applicable to all telecommunication services except Short Message service. (for further study)

## 4.3 Normal procedures with successful outcome

### 4.3.1 Provision

This supplementary service is provisioned for all Basic Services subscribed to and to which it is applicable, i.e. not provisioned for any subset of these Basic Services.

This service shall be provided after pre-arrangement with the service provider. It may be provided on a subscription basis or be generally available.

The override category controlling the name information is separate from the override category for the line identity information. It is left to the CNAP service provider to ensure that no discrepancy between these two override categories occurs. The handling of override category within a PLMN or between PLMNs shall follow the rules applying to the override category of the line identification services TS 22.081 [3].

### 4.3.2 Withdrawal

The CNAP supplementary service shall be withdrawn at the customer's request or for administrative reasons.

### 4.3.3 Registration

Not applicable.

### 4.3.4 Erasure

Not applicable.

### 4.3.5 Activation

The CNAP supplementary service is activated as a result of provision.

### 4.3.6 Deactivation

The CNAP supplementary service is deactivated as a result of withdrawal.

### 4.3.7 Invocation

The network shall automatically invoke the CNAP supplementary service in the call set-up phase to the terminating CNAP subscriber.

CNAP is invoked when the Calling Name Information associated with an incoming call is available and can be presented to the called party which has subscribed to CNAP.

### 4.3.8 Normal operation with successful outcome

A user who has subscribed to the CNAP supplementary service and receives a call shall also receive the calling name information of the calling party, if available.

The calling party takes no action to activate, initiate, or in any manner provide the calling name identity.

When the CNAP service is subscribed and activated, the destination network provides the called subscriber with calling name information at call set-up on all incoming calls or during an active call for that particular call.

In addition to, or instead of, the calling name identity, the subscriber may be given a presentation indicator with the relevant information.

### 4.3.9 Interrogation

#### Status check

The mobile subscriber can, by the appropriate control procedure, request from the network the status of this supplementary service. Upon receiving an interrogation request, the network shall send the status of this supplementary service to the subscriber.

The information sent to the subscriber shall indicate whether the service is provided to her.

The information sent in response to the interrogation of this supplementary service shall not imply the status of any other supplementary service.

## 4.4 Exceptional procedures or unsuccessful outcome

If the name identity for a specific caller is not available, then the CNAP subscriber shall be sent an indication that the name is unavailable.

If the network has been unable to determine the appropriate name information within a predefined time, then the CNAP subscriber shall be sent an indication that the name is unavailable. The predefined time is a network dependent value such that the called user may receive the name in a timely manner prior to answer.

If the calling name information is not available due to a system problem, such as signalling inter-working, then a standard error treatment shall be provided, which may be a visual display to the subscriber indicating the name is unavailable.

## 4.5 Alternate procedures

The decision of whether the user-defined name stored in the handset should take precedence over the calling name identity provided by the network is a handset implementation issue.

## 4.6 Interactions with other supplementary services

Only those supplementary services for which CNAP has any interactions are detailed in this clause. For all other supplementary services not mentioned in this clause no interactions were identified.

### 4.6.1 Calling Line Identification Presentation (CLIP)

No interaction.

### 4.6.2 Calling Line Identification Restriction (CLIR)

The CLIR supplementary service shall take precedence over the CNAP supplementary service, unless the called user has an override category. In this latter case, it is assumed that the override category for name information has been set so that the name information is presented to the called user.

The Calling Line Identification Restriction (CLIR) information shall be used to restrict the delivery of the calling name to the called subscriber. That is, if the calling party has activated CLIR then instead of the calling name, a privacy indication shall be provided to the called subscriber, which may be a visual display indicating “private” (or Restricted) name. This method of restricting calling name shall not restrict the use or implementation of other calling name restriction methods when the calling party is a fixed subscriber. These methods used by fixed subscribers are outside the scope of this specification.

### 4.6.3 Call Forwarding Unconditional (CFU)

For an incoming call to a subscriber with both CNAP and Call Forwarding Unconditional activated, the calling party name information shall not be displayed at the forwarding subscribers terminal.

When a call has been forwarded and the forwarded-to user has been provided with the CNAP supplementary service, the forwarded-to user shall receive the name of the original calling party, if the calling party has not subscribed to or invoked the CLIR supplementary service.

### 4.6.4 Call Forwarding on mobile subscriber Busy (CFB)

#### 4.6.4.1 Network Determined User Busy (NDUB)

Same as the interaction with call forwarding unconditional.

#### 4.6.4.2 User Determined User Busy (UDUB)

Same as interaction with call forwarding no reply.

### 4.6.5 Call Forwarding on No Reply (CFNRy)

For an incoming call to a subscriber with both CNAP and Call Forwarding on No Reply activated, the calling party name information shall be displayed by the predefined time while the call is alerting.



#### 4.6.6 Call Forwarding on mobile subscriber Not Reachable (CFNRc)

Same as the interaction with call forwarding unconditional.

#### 4.6.7 Call Waiting (CW)

If the served mobile subscriber is provisioned with the CNAP service, the calling party name information shall be displayed to the subscriber at the notification of an incoming (waiting) call as for a normal incoming call.

#### 4.6.9 Explicit Call Transfer (ECT)

For Further Study.

#### 4.6.10 Support of Private Numbering Plan (SPNP)

The public number corresponding to the used PNP number is used to obtain the calling name information for delivery to the called party's terminal.

#### 4.6.11 Completion of Calls to Busy Subscriber (CCBS)

No interaction.

#### 4.6.12 enhanced Multi-Level Precedence and Pre-emption (eMLPP)

No interaction.

### 4.7 Service functions for roamers

CNAP should be available to a roaming subscriber. However, the serving system may elect to not offer the CNAP service to any subscriber.

### 4.8 Interworking considerations

According to national network specific rules, the CNAP supplementary services need not be applicable, if at least one of the two parties is not an ISDN or PLMN subscriber.

## Annex A (informative): Change history

Change history											
TSG SA#	SA Doc.	SA1 Doc	Spec	CR	Rev	Rel	Cat	Subject/Comment	Old	New	WI
Jun 1999			GSM 02.96					Transferred to 3GPP SA1	7.0.0		
SA#04			22.096					Transferred to 3GPP SA1		3.0.0	
SP-05	SP-99479	S1-99639	22.096	001		R99	D	Editorial changes for alignment	3.0.0	3.0.1	Editorial changes
SP-11	SP-010065	S1-010258	22.096			Rel-4		Transferred to 3GPP Release 4	3.0.1	4.0.0	
SP-16	SP-020267	S1-021043	22.096			Rel-5		Updated from Rel-4 to Rel5	4.0.0	5.0.0	
SP-26	SP-040744	S1-040997	22.096			Rel-6		Updated from Rel-5 to Rel-6	5.0.0	6.0.0	
SP-36			22.096			Rel-7		Updated from Rel-6 to Rel-7	6.0.0	7.0.0	
SP-42	-	-				Rel-8		Updated from Rel-7 to Rel-8	7.0.0	8.0.0	
SP-46	-	-	-	-	-	-	-	Updated to Rel-9 by MCC	8.0.0	9.0.0	
2011-03	-	-	-	-	-	-	-	Update to Rel-10 version (MCC)	9.0.0	10.0.0	
2012-09	-	-	-	-	-	-	-	Updated to Rel-11 by MCC	10.0.0	11.0.0	
2014-10	-	-	-	-	-	-	-	Update to Rel-12 version (MCC)	11.0.0	12.0.0	
2015-12	-	-	-	-	-	-	-	Updated to Rel-13 by MCC	12.0.0	13.0.0	
2017-03	-	-	-	-	-	-	-	Updated to Rel-14 by MCC	13.0.0	14.0.0	
2018-06	-	-	-	-	-	-	-	Updated to Rel-15 by MCC	14.0.0	15.0.0	
SA#88e	-	-	-	-	-	-	-	Updated to Rel-16 by MCC	15.0.0	16.0.0	