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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Terminating Identification Presentation (TIP)
and Terminating Identification Restriction (TIR)
using IP Multimedia (IM) Core Network (CN) subsystem;
Protocol specification
(3GPP TS 24.608 version 16.0.0 Release 16)**



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Foreword

This Technical Specification (TS) was been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN) and originally published as ETSI TS 183 008 [18]. It was transferred to the 3rd Generation Partnership Project (3GPP) in January 2008.

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1 Scope

The present document specifies the stage three protocol description of the Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) services, based on stage one and two of the ISDN COLP [3] and COLR [4] supplementary services. It provides the protocol details in the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP) and the Session Description Protocol (SDP).

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 23.002: "Network architecture".
- [2] 3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP".
- [3] ETSI EN 300 094 V2.1.1: "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Service description".
- [4] ETSI ETS 300 095 (January 1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Service description".
- [5] IETF RFC 3323: "A Privacy Mechanism for the Session Initiation Protocol (SIP)".
- [6] IETF RFC 3325: "Private Extensions to the Session Initiation Protocol (SIP) for Network Asserted Identity within Trusted Networks".
- [7] IETF RFC 2396: "Uniform Resource Identifiers (URI): Generic Syntax".
- [8] IETF RFC 3966: "The tel URI for Telephone Numbers".
- [9] IETF RFC 3261: "SIP: Session Initiation Protocol".
- [10] Void.
- [11] IETF RFC 2806: "URLs for Telephone Calls".
- [12] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
- [13] ITU-T Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [14] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [15] 3GPP TS 24.623: "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services".
- [16] Void
- [17] IETF RFC 4916: "Connected Identity in the Session Initiation Protocol (SIP)".
- [18] ETSI TS 183 008 V1.6.0: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR); Protocol specification".

- [19] 3GPP TS 24.238: "Session Initiation Protocol (SIP) based user configuration; stage 3".
- [20] IETF RFC 4825: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".

3 Definitions and abbreviations

3.1 Definitions

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

Call Session Control Function (CSCF): See 3GPP TS 23.002 [1].

dialog: See IETF RFC 3261 [9].

header: See IETF RFC 3261 [9].

header field: See IETF RFC 3261 [9].

identity information: all the information (IETF RFC 2806 [11] / IETF RFC 2396 [7] / ITU-T Recommendation E.164 [12]) identifying a user, including trusted (network generated) and/or untrusted (user generated) addresses

NOTE: Identity information takes the form of either a SIP URI (see IETF RFC 3261 [9]) or a "tel" URI (see IETF RFC 3966 [8]).

incoming initial request: all requests intended to initiate either a dialog or a standalone transaction received from the served user

Interconnection Border Control Function (IBCF): See 3GPP TS 24.229 [2].

method: See IETF RFC 3261 [9].

outgoing initial request: all requests intended to initiate either a dialog or a standalone transaction terminated by the served user

provisional response: See IETF RFC 3261 [9].

public user identity: See 3GPP TS 23.228 [14], subclause 4.3.3.2 and 3GPP TS 24.229 [2].

request: See IETF RFC 3261 [9].

response: See IETF RFC 3261 [9].

session: See IETF RFC 3261 [9].

(SIP) transaction: See IETF RFC 3261 [9].

supplementary service: See ITU-T Recommendation I.210 [13], clause 2.4.

tag: See IETF RFC 3261 [9].

trusted identity information: network generated user public identity information

3.2 Abbreviations

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

AS	Application Server
CDIV	Communication DIVersion
CN	Core Network
CONF	CONference

CS	Circuit Switched
CSCF	Call Session Control Function
HOLD	communication HOLD
IBCF	Interconnection Border Control Function
IFC	Initial Filter Criteria
IMS	IP Multimedia Subsystem
IP	Internet Protocol
ISDN	Integrated Service Data Network
MCID	Malicious Communication IDentification
MiD	Multi-iDentity
MuD	Multi-Device
OIP	Originating Identification Presentation
OIR	Originating Identification Restriction
PSTN	Public Switch Telephone Network
S-CSCF	Serving-Call Session Control Function
SIP	Session Initiation Protocol
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
UE	User Equipment
XML	Extensible Markup Language

4 Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR)

4.1 Introduction

The Terminating Identification Presentation (TIP) service provides the originating party with the possibility of receiving identity information in order to identify the terminating party.

The network shall deliver the Terminating Identity to the originating party on communication acceptance regardless of the terminal capability to handle the information.

The Terminating Identification Restriction (TIR) is a service offered to the connected party which enables the connected party to prevent presentation of the terminating identity information to originating party.

4.2 Description

4.2.1 General description

The Terminating Identification Presentation (TIP) service provides the originating party with the possibility of receiving trusted information in order to identify the terminating party.

The Terminating Identification Restriction (TIR) is a service offered to the terminating party which enables the terminating party to prevent presentation of the terminating identity information to originating party.

4.3 Operational requirements

4.3.1 Provision/withdrawal

4.3.1.1 TIP provision/withdrawal

The TIP service may be provided after prior arrangement with the service provider or be generally available.

The TIP service shall be withdrawn at the subscriber's request or for administrative reasons.

As a general operator policy a special arrangement may exist on a per subscriber basis or on a general behaviour basis whereby the terminating user's identity information intended to be transparently transported by the network is not screened by the network.

4.3.1.2 TIR provision/withdrawal

The TIR service, temporary mode, may be provided on a subscription basis or may be generally available.

The TIR service, permanent mode, shall be provided on a subscription basis.

As a network option, the TIR service can be offered with several subscription options. A network providing the TIR service shall support temporary mode at a minimum. Subscription options are summarized in table 1.

Table 1: TIR subscription options

Subscription option values	Values
Mode	- permanent mode (active for all requests) - temporary mode (specified by the user per request)
Temporary mode default	- presentation restricted - presentation not restricted

4.3.2 Requirements on the originating network side

For originating users that subscribe to the TIP service, if network provided identity information about the terminator is available, and if presentation is allowed, the network shall include that information in the responses sent to the user.

If the presentation of the network asserted identity is restricted due to the TIR service, then the originating user shall receive an indication that the network provided identity was not sent because of restriction.

If the network asserted identity information is not available at the originating network (for reasons such as interworking), then the network shall indicate to the originating user that the network asserted identity information was not included for reasons other than restriction.

As a national option, the originating AS can override the presentation restriction indication and the terminating identity is then presented to the originating subscriber for specific originating access's categories (e.g. police).

NOTE 1: The priv-value "id" in the Privacy header field is not expected be removed when removing any P-Asserted-Identity header field as described in 3GPP TS 24.229 [2].

NOTE 2: Annex B provides an example of an initial filter criterion that can be applied for the TIP/TIR service.

NOTE 3: It is assumed that the IBCF is responsible for stripping the P-Asserted-Identity from the SIP header when interworking with untrusted networks.

4.3.3 Requirements on the terminating network side

As part of the basic communication control procedures specified in 3GPP TS 24.229 [2], the following requirements apply at the terminating network side in support of the TIP service and the TIR service. Unless noted otherwise, these requirements are meant to apply to responses where the presence of the P-Asserted-Identity and Privacy header fields are allowed. These procedures apply regardless of whether the originating or terminating parties subscribe to the TIP service or the TIR service.

The terminating network shall include network asserted identity information in responses where allowed by 3GPP TS 24.229 [2]. For TIR subscribers:

- The terminating user may include an indication that it wishes to have the presentation of its identity information restricted, in any response where allowed by 3GPP TS 24.229 [2].
- If the terminating user has subscribed to the TIR service in the permanent or temporary mode, then the network shall invoke the TIR service for every incoming request.

NOTE 1: The above requirement needs appropriate configuration of the initial filter criteria.

If the TIR service is not invoked, the network-provided identity shall be considered to be presentation allowed.

NOTE 2: Annex B provides an example of an initial filter criterion that that can be applied for the TIP/TIR service.

NOTE 3: It is assumed that the IBCF is responsible for stripping the P-Asserted-Identity from the SIP header when interworking with untrusted networks.

4.4 Syntax requirements

The syntax for the relevant header fields in the SIP requests and SIP responses shall be as follows:

- The syntax of the P-Asserted-Identity header field shall conform to the requirements in 3GPP TS 24.229 [2] (IETF RFC 3325 [6] and IETF RFC 3966 [8]).
- The syntax of the Privacy header field shall conform to the requirements in 3GPP TS 24.229 [2] (IETF RFC 3323 [5] and IETF RFC 3325 [6]).
- The Syntax of the option tag "from-change" shall conform to the requirements in IETF RFC 4916 [17]

4.5 Signalling procedures

4.5.0 General

Configuration of supplementary services by the user should:

- take place over the Ut interface using XCAP as enabling protocol as described in 3GPP TS 24.623 [15]; or
- use SIP based user configuration as described in 3GPP TS 24.238 [19].

NOTE: Other possibilities for user configuration, such as web-based provisioning or pre-provisioning by the operator are outside the scope of the present document, but are not precluded

The enhancements to the XML schema for use over the Ut interface are described in subclause 4.9.

4.5.1 Activation/deactivation

The TIP service is activated at provisioning and deactivated at withdrawal.

The TIR service is activated at provisioning and deactivated at withdrawal.

4.5.1A Registration/erasure

The TIP service requires no registration. Erasure is not applicable.

The TIR service requires no registration. Erasure is not applicable.

4.5.1B Interrogation

For interrogation of TIP and TIR, the mechanisms specified in subclause 4.5.0 should be used.

4.5.2 Invocation and operation

4.5.2.1 Actions at the originating UE

A UE that supports the TIP service signalling procedures shall support the receipt, in SIP responses to SIP requests initiating a dialog or for standalone transactions, one or more P-Asserted-Identity headers, each one containing a network-provided identity information of the terminating user.

If no P-Asserted-Identity header fields are present, but a Privacy header field set to "id" was present, then the network-provided identity information was withheld due to presentation restriction.

If neither P-Asserted-Identity header fields nor a Privacy header fields set to "id" are present, then the network-provided identity information was not available (due, for example, to interworking with other networks).

Once a 2xx response is received, the P-Asserted-Identity header field of the first 2xx response is used, e.g. when presenting the identity to the user.

NOTE 1: Any P-Asserted-Identity received in a provisional response is outside the scope of this service.

If the originating user is subscribed to the TIP services and wants to receive changes of the terminating identity in the dialog the UE shall add the option tag "from-change" to the Supported header field in the initial request.

NOTE 2: This option tag is used to indicate that a UA supports changes to URIs in From and To header fields during a dialog. Not setting this indication shows that the UE is not supporting this procedure.

4.5.2.2 Void

4.5.2.3 Void

4.5.2.4 Actions at the AS serving the originating UE

If the originating user is subscribed to the TIP service the AS shall pass the option tag "from-change" in the Supported header field in the initial request if received from the originating user.

If the originating user is not subscribed to the TIP service the AS shall remove the option tag "from-change".

NOTE 1: If the terminating user requests privacy the S-CSCF or PCSCF removes the P-Asserted-Identity header field as part of the basic communication procedures defined in 3GPP TS 24.229 [2].

If an originating user does not subscribe to the TIP service, any P-Asserted-Identity header fields or Privacy header fields included in the SIP response shall be removed. As a network option, if the originating user has an override category, the AS shall send the P-Asserted-Identity headers and remove the Privacy header fields.

When the Privacy header field is set to "id", with the exception of the cases listed above, the AS should not remove this Privacy header entry.

NOTE 2: The priv-value "id" in the Privacy header will be used by the originating UE to distinguish the request of TIR by the terminating user.

4.5.2.5 Void

4.5.2.6 Void

4.5.2.7 Void

4.5.2.8 Void

4.5.2.9 Actions at the AS serving the terminating UE

For a terminating user who subscribes to the TIR service in "permanent mode", if a SIP response to a SIP request includes a Privacy header field that is set to "none", the AS shall remove the "none" value from the Privacy header field. The AS shall insert a Privacy header field set to "id" if not already present.

For a terminating user who subscribes to the TIR service in "permanent mode", if an INVITE request with a Supported header field including an option tag "from-change" is received, the AS shall remove the option tag "from-change".

For a terminating user who subscribes to the TIR service in "temporary mode" with default set to "restricted", if a SIP response to a SIP request does not include a Privacy header field, the AS shall insert a Privacy header field set to "id".

For a terminating user who subscribes to the TIR service in "temporary mode" with default set to "not restricted" normal procedures apply.

As a terminating network option, if the "no screening" special arrangement does not exist with the terminating user and an UPDATE request is received from the terminating user, then the AS may attempt to match the information in the From header with the set of registered public user identities for the served user. If no match is found, the AS may change the value of the From header in the UPDATE request to the public user identity of the served user.

4.5.2.10 Void

4.5.2.11 Void

4.5.2.12 Actions at the terminating UE

A terminating UE receiving an initial request including a Supported header field with the option tag "from-change" and supporting the "from-to" change shall send within a provisional or final response the Supported header with the option tag "from-change".

A terminating UE receiving an initial request including a Supported header field with the option tag "from-change" may send a UPDATE request with a updated from and to header according the rules of IETF RFC 4916 [17].

The destination UE, if the terminating user wishes to override the default setting of "presentation not restricted" of the TIR service in temporary mode, shall include a Privacy header with privacy type of "id" in any non-100 responses it sends upon receipt of a SIP request.

The destination UE, if the terminating user wishes to override the default setting of "presentation restricted" of the TIR service in temporary mode, shall include a Privacy header with privacy type of "none" in any non-100 responses it sends upon receipt of a SIP request.

NOTE: It is assumed that TIR subscribers support IETF RFC 3325 [6].

4.6 Interaction with other services

4.6.1 Communication session Hold (HOLD)

No impact, i.e. neither service shall affect the operation of the other service.

4.6.2 Terminating Identification Presentation (TIP)

The TIR service shall normally take precedence over the TIP service. The TIP service can take precedence over the TIR service when the originating user has an override category. This is a national matter, the operation of which is outside the scope of the present document.

4.6.3 Terminating Identification Restriction (TIR)

The TIR service shall normally take precedence over the TIP service. The TIP service can take precedence over the TIR service when the originating user has an override category. This is a national matter, the operation of which is outside the scope of the present document.

4.6.4 Originating Identification Presentation (OIP)

No impact, i.e. neither service shall affect the operation of the other service.

4.6.5 Originating Identification Restriction (OIR)

No impact, i.e. neither service shall affect the operation of the other service.

4.6.6 Conference (CONF)

Conference controller: no impact, i.e. neither service shall affect the operation of the other service.

Participants in a conference shall not receive the TIP service information of participants being added to the conference.

4.6.7 Communication DIVersion services (CDIV)

In case of the TIP service if the served (forwarding/deflecting) user selects the option that the originating user is not notified of communication diversion, then the originating user shall receive no diversion notification. In addition, the originating user shall not receive the terminating user's identity information when the communication is answered, unless the originating user has override capability.

In case of the TIP service if the served (forwarding/deflecting) user selects the option that the originating user is notified, but without the diverted-to address, then the originating user shall not receive the terminating user's identity information when the communication is answered, unless the originating user has override capability.

If a diverted-to user subscribes to the TIR service "permanent mode", then the diverted-to user's URI shall not be provided with the notification that the communication has been diverted.

If a diverted-to user subscribes to the TIR service "temporary mode", then the diverted-to user's URI shall not be provided until negotiation with the user has taken place and a positive indication from the user has been received.

In each of the above situations, a originating user that subscribes to the TIP service and who has override capability will not receive the diverted-to user's number as part of the diverting notification information, but can use the override capability in order to receive the terminating identity information when the communication is answered.

4.6.8 Malicious Communication IDentification (MCID)

No impact, i.e. neither service shall affect the operation of the other service.

4.6.9 Enhanced Calling Name (eCNAM)

No impact. Neither service shall affect the operation of the other service.

4.6.10 Multi-Device (MuD)

No impact. Neither service shall affect the operation of the other service.

4.6.11 Multi-Identity (MiD)

No impact on the TIR service. The TIR service handles the Privacy header field following the procedures in this specification.

No impact on the TIP service.

4.7 Interactions with other networks

4.7.1 Void

4.7.2 Void

4.7.3 Void

4.8 Parameter values (timers)

Void

4.9 Service configuration

4.9.0 General

Terminating Identity documents are sub-trees of the *simservs* XML document specified in 3GPP TS 24.623 [15]. As such, Terminating Identity documents use the XCAP application usage in 3GPP TS 24.623 [15].

Data semantics: The semantics of the Terminating Identity XML configuration document is specified in subclause 4.9.1.

XML schema: Implementations in compliance with the present document shall implement the XML schema that minimally includes the XML Schema defined in subclause 4.9.2 and the *simservs* XML schema specified in subclause 6.3 of 3GPP TS 24.623 [15].

An instance of an Terminating Identity document is shown:

```
<?xml version="1.0" encoding="UTF-8"?>
<simservs xmlns="http://uri.etsi.org/ngn/params/xml/simservs/xcap"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" >

  <terminating-identity-presentation active="true"/>

  <terminating-identity-presentation-restriction active="true">
    <default-behaviour>presentation-restricted</default-behaviour>
  </terminating-identity-presentation-restriction>

</simservs>
```

4.9.1 Data semantics

The TIP service can be activated/deactivated using the active attribute of the `<terminating-identity-presentation>` service element.

The TIR service can be activated/deactivated using the active attribute of the `<terminating-identity-presentation-restriction>` service element. Activating the TIR service this way activates the temporary mode TIR service. When deactivated and not overruled by operator settings, basic communication procedures apply.

The behaviour of the temporary mode TIR is configured with the optional `<default-behaviour>` element. There are two values that this element can take:

- **Presentation-restricted:** configures the service to behave as specified in subclause 4.5.2.9 for the case TIR service in "temporary mode" with default "restricted".
- **Presentation-not-restricted:** configures the service to behave as specified in subclause 4.5.2.9 for the case TIR service in "temporary mode" with default "not restricted".

Authorization for manipulation of the active attribute of the <terminating-identity-presentation> service element and of the <terminating-identity-presentation-restriction> service element is subject to local policy. Unauthorized manipulation attempts are rejected with an HTTP 409 (Conflict) response as defined in IETF RFC 4825 [20].

4.9.2 XML schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:ss="http://uri.etsi.org/ngn/params/xml/simservs/xcap"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://uri.etsi.org/ngn/params/xml/simservs/xcap" elementFormDefault="qualified"
attributeFormDefault="unqualified">
  <xs:element name="terminating-identity-presentation-restriction"
substitutionGroup="ss:absService">
    <xs:annotation>
      <xs:documentation>Terminating Identity presentation Restriction
      </xs:documentation>
    </xs:annotation>
    <xs:complexType>
      <xs:complexContent>
        <xs:extension base="ss:simservType">
          <xs:sequence>
            <xs:element name="default-behaviour" default="presentation-restricted"
minOccurs="0">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="presentation-restricted"/>
                  <xs:enumeration value="presentation-not-restricted"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
  <xs:element name="terminating-identity-presentation" type="ss:simservType"
substitutionGroup="ss:absService">
    <xs:annotation>
      <xs:documentation>Terminating Identity Presentation
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:schema>
```

Annex A (informative): Signalling flows

No signalling flows are provided.

Annex B (informative): Example of filter criteria

This annex provides an example of a filter criterion that triggers SIP requests that are subject to initial filter criteria evaluation.

B.1 Originating IFC for TIP service

All outgoing initial SIP requests are forwarded to an Application Server (AS) providing the TIR simulation service under the following conditions:

- The originating user does not subscribe to the TIP service and the AS removes the P-Asserted-Identity header fields and the Privacy header field.

NOTE: Responses follow the same route as requests, so the responses will also be routed via the AS.

B.2 Terminating IFC for TIR service

The terminating user has subscribed the TIR service, in either permanent or temporary mode.

NOTE: Responses follow the same route as requests, so the responses will also be routed via the AS.

Annex C (informative):
Void

Annex D (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New	
2007-08					Publication as ETSI TS 108 008		2.4.1	
2008-01					Publication as ETSI TS 108 008		2.7.0	
2008-01					Conversion to 3GPP TS 24.508		2.7.1	
2008-01					Technically identical copy as 3GPP TS 24.608 as basis for further development.		2.7.2	
2008-02					Implemented C1-080100		2.8.0	
2008-04					The following CR's were incorporated and the editor adopted their content / structure to the structure of the TS C1-081005 C1-081088 C1-081176 C1-081242 C1-081413	2.8.0	2.9.0	
2008-05					The following CR's were incorporated and the editor adopted their content / structure to the structure of the TS C1-081554 C1-081555 C1-081830 C1-081903 C1-081912	2.9.0	2.10.0	
2008-05					Editorial changes done by MCC	2.10.0	2.10.1	
2008-06	CT#40	CP-080329			CP-080329 was approved by CT#40 and version 8.0.0 is created by MCC	2.10.1	8.0.0	
2008-06					Version 8.0.1 created to include attachments (.xml and .xsd files)	8.0.0	8.0.1	
2008-09	CT#41	CP-080539	0001	1	Allow SIP based user configuration mechanism for configuring supplementary services	8.0.1	8.1.0	
2008-12	CT#42	CP-080864	0002	2	Interaction between SIP and Ut based service configuration	8.1.0	8.2.0	
2008-12	CT#42				Editorial clean up	8.1.0	8.2.0	
2009-12	CT#46	CP-090909	0007		Correction of reference to simservs TS	8.2.0	8.3.0	
2009-12	CT#46	CP-090923	0005	1	Restriction of P-Asserted-Identity	8.3.0	9.0.0	
2009-12	CT#46	CP-090923	0006		Ut applicability for TIP	8.3.0	9.0.0	
2010-06	CT#48	CP-100343	0011	1	Remove EN pertaining to Privacy Header field handling	9.0.0	9.1.0	
2010-06	CT#48	CP-100358	0012	1	Error in XCAP for TIP/TIR	9.0.0	9.1.0	
2010-12	CT#50	CP-100864	0013		Remove AS addition of from-change	9.1.0	10.0.0	
2011-12	CT#54	CP-110881	0016	1	Clarification of "from-change" usage in TIP/TIR	10.0.0	11.0.0	
2012-03	CT#55	CP-120124	0017		Correcting a reference	11.0.0	11.1.0	
2012-03	CT#55	CP-120124	0018		TIR AS procedures	11.0.0	11.1.0	
2012-09	CT#57	CP-120677	0023	2	Reference corrections	11.1.0	11.2.0	
2013-06	CT#60	CP-130224	0027	1	From-change for TIP, not TIR	11.2.0	11.3.0	
2014-09	CT#65				Upgrade to Rel-12	11.3.0	12.0.0	
2015-12	CT#70				Upgrade to Rel-13	12.0.0	13.0.0	

Change history								
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version	
2017-03	CT-75					Upgrade to Rel-14	14.0.0	
2017-12	CT-78	CP-173071	0029	2	B	Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem	15.0.0	
2019-12	CT-86	CP-193111	0030		B	Adding interactions with "Multi-Device" and "Multi-Identity" services	16.0.0	

History

Document history		
V16.0.0	November 2020	Publication