

# ETSI TS 121 202 V9.0.0 (2010-04)

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*Technical Specification*

**Digital cellular telecommunications system (Phase 2+);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
Technical Specifications and Technical Reports relating to  
the Common IP Multimedia Subsystem (IMS)  
(3GPP TS 21.202 version 9.0.0 Release 9)**

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Reference

RTS/TSGS-0021202v900

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Keywords

GSM, LTE, UMTS

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## 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>.

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# 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.

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# 1 Scope

The present document identifies the 3GPP Technical Specifications and Technical Reports specifically relating to the IP Multimedia Subsystem (IMS), and which are common to all systems based on IMS.

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# 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 TR 21.900: "Technical specification group working methods"

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# 3 Definitions, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] apply.

## 3.2 Symbols

(None)

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

|        |  |
|--------|--|
| NGN    | Next Generation Network  |
| R1     | Release 1  |
| R2     | Release 2  |
| TISPAN | Telecommunications and Internet converged Services and Protocols for Advanced Networks |

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# 4 General

The numbering scheme for specifications is described in 3GPP TR 21.900 [2].

## 5 Specifications and Reports

NOTE 1: The "for publication?" column of the table below indicates whether or not the documents are intended for adoption by the partner Standards Development Organizations as their own publications. Those marked "no" are internal working documents of the 3GPP TSGs.

NOTE 2: "Type" indicates Technical Specification (TS) or Technical Report (TR).

The table below contains all Common IMS specs pertaining to Release 9.

| Type | Number | Title  | Group | For publication? |
|------|--------|--|-------|------------------|
| TS   | 21.111 | USIM and IC card requirements  | C6    | Yes              |
| TR   | 21.905 | Vocabulary for 3GPP Specifications   | S1    | Yes              |
| TS   | 22.030 | Man-Machine Interface (MMI) of the User Equipment (UE)   | S1    | Yes              |
| TS   | 22.041 | Operator Determined Call Barring (ODB)   | S1    | Yes              |
| TS   | 22.071 | Location Services (LCS); Service description; Stage 1  | S1    | Yes              |
| TS   | 22.101 | Service aspects; Service principles  | S1    | Yes              |
| TS   | 22.105 | Services and service capabilities  | S1    | Yes              |
| TS   | 22.115 | Service aspects; Charging and billing  | S1    | Yes              |
| TS   | 22.127 | Service requirement for the Open Services Access (OSA); Stage 1  | S1    | Yes              |
| TS   | 22.140 | Multimedia Messaging Service (MMS); Stage 1  | S1    | Yes              |
| TS   | 22.141 | Presence service; Stage 1  | S1    | Yes              |
| TS   | 22.153 | Multimedia priority service  | S1    | Yes              |
| TS   | 22.173 | IP Multimedia Core Network Subsystem (IMS) Multimedia Telephony Service and supplementary services; Stage 1  | S1    | Yes              |
| TS   | 22.174 | Push service; Stage 1  | S1    | Yes              |
| TS   | 22.182 | Customized Alerting Tone (CAT) requirements; Stage 1   | S1    | Yes              |
| TS   | 22.183 | Customized Ringing Signal (CRS) requirements; Stage 1  | S1    | Yes              |
| TS   | 22.228 | Service requirements for the Internet Protocol (IP) multimedia core network subsystem (IMS); Stage 1   | S1    | Yes              |
| TS   | 22.250 | IP Multimedia Subsystem (IMS) Group Management; Stage 1  | S1    | Yes              |
| TS   | 22.279 | Combined Circuit Switched (CS) and IP Multimedia Subsystem (IMS) sessions; Stage 1   | S1    | Yes              |
| TS   | 22.340 | IP Multimedia Subsystem (IMS) messaging; Stage 1   | S1    | Yes              |
| TR   | 22.979 | Feasibility study on combined Circuit Switched (CS) calls and IP Multimedia Subsystem (IMS) sessions   | S1    | Yes              |
| TS   | 23.141 | Presence service; Architecture and functional description; Stage 2   | S2    | Yes              |
| TS   | 23.167 | IP Multimedia Subsystem (IMS) emergency sessions   | S2    | Yes              |
| TS   | 23.204 | Support of Short Message Service (SMS) over generic 3GPP Internet Protocol (IP) access; Stage 2  | S2    | Yes              |
| TS   | 23.218 | IP Multimedia (IM) session handling; IM call model; Stage 2  | C1    | Yes              |
| TS   | 23.228 | IP Multimedia Subsystem (IMS); Stage 2   | S2    | Yes              |
| TS   | 24.141 | Presence service using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3   | C1    | Yes              |
| TS   | 24.147 | Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3   | C1    | Yes              |
| TS   | 24.173 | IMS Multimedia telephony service and supplementary services; Stage 3   | C1    | Yes              |
| TS   | 24.182 | IP Multimedia Subsystem (IMS) Customized Alerting Tones (CAT); Protocol specification  | C1    | Yes              |
| TS   | 24.229 | Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 | C1    | Yes              |
| TS   | 24.238 | Session Initiation Protocol (SIP) based user configuration; Stage 3  | C1    | Yes              |
| TS   | 24.239 | Flexible Alerting (FA) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification  | C1    | Yes              |

| Type | Number | Title  | Group | For publication? |
|------|--------|--|-------|------------------|
| TS   | 24.247 | Messaging service using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3  | C1    | Yes              |
| TS   | 24.341 | Support of SMS over IP networks; Stage 3   | C1    | Yes              |
| TS   | 24.604 | Communication Diversion (CDIV) using IP Multimedia (IM)Core Network (CN) subsystem; Protocol specification   | C1    | Yes              |
| TS   | 24.605 | Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification   | C1    | Yes              |
| TS   | 24.606 | Message Waiting Indication (MWI)using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification   | C1    | Yes              |
| TS   | 24.607 | Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification            | C1    | Yes              |
| TS   | 24.608 | Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR)using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification             | C1    | Yes              |
| TS   | 24.610 | Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification   | C1    | Yes              |
| TS   | 24.611 | Anonymous Communication Rejection (ACR) and Communication Barring (CB)using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification                                     | C1    | Yes              |
| TS   | 24.615 | Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol Specification  | C1    | Yes              |
| TS   | 24.616 | Malicious Communication Identification (MCID)using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification  | C1    | Yes              |
| TS   | 24.628 | Common Basic Communication procedures using IP Multimedia (IM)Core Network (CN) subsystem; Protocol specification  | C1    | Yes              |
| TS   | 24.629 | Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification   | C1    | Yes              |
| TS   | 24.642 | Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM)Core Network (CN) subsystem; Protocol Specification | C1    | Yes              |
| TS   | 24.647 | Advice Of Charge (AOC) using IP Multimedia (IM)Core Network (CN) subsystem; Protocol Specification   | C1    | Yes              |
| TS   | 24.654 | Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem, Protocol Specification   | C1    | Yes              |
| TR   | 24.930 | Signalling flows for the session setup in the IP Multimedia core network Subsystem (IMS) based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3    | C1    | Yes              |
| TS   | 29.162 | Interworking between the IM CN subsystem and IP networks   | C3    | Yes              |
| TS   | 29.163 | Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks   | C3    | Yes              |
| TS   | 29.165 | Inter-IMS Network to Network Interface (NNI)   | C3    | Yes              |
| TS   | 29.212 | Policy and charging control over Gx reference point  | C3    | Yes              |
| TS   | 29.213 | Policy and charging control signalling flows and Quality of Service (QoS) parameter mapping  | C3    | Yes              |
| TS   | 29.214 | Policy and charging control over Rx reference point  | C3    | Yes              |
| TS   | 29.215 | Policy and Charging Control (PCC) over S9 reference point  | C3    | Yes              |
| TS   | 29.228 | IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents   | C4    | Yes              |
| TS   | 29.229 | Cx and Dx interfaces based on the Diameter protocol; Protocol details  | C4    | Yes              |
| TS   | 29.292 | Interworking between the IP Multimedia (IM) Core Network (CN) subsystem (IMS) and MSC Server for IMS Centralized Services (ICS)  | C3    | Yes              |
| TS   | 29.311 | Service Level Interworking for Messaging Services  | C3    | Yes              |
| TS   | 29.328 | IP Multimedia Subsystem (IMS) Sh interface; Signalling flows and message contents  | C4    | Yes              |
| TS   | 29.329 | Sh interface based on the Diameter protocol; Protocol details  | C4    | Yes              |
| TS   | 29.658 | TISPAN; SIP Transfer of IP Multimedia Service Tariff Information; Protocol   | C3    | Yes              |



| Type | Number | Title  | Group | For publication? |
|------|--------|--|-------|------------------|
|      |        | specification  |       |                  |
| TS   | 31.101 | UICC-terminal interface; Physical and logical characteristics  | C6    | Yes              |
| TS   | 31.103 | Characteristics of the IP Multimedia Services Identity Module (ISIM) application                               | C6    | Yes              |
| TS   | 31.115 | Secured packet structure for (Universal) Subscriber Identity Module (U)SIM Toolkit applications                | C6    | Yes              |
| TS   | 31.116 | Remote APDU Structure for (Universal) Subscriber Identity Module (U)SIM Toolkit applications                   | C6    | Yes              |
| TS   | 31.133 | IP Multimedia Services Identity Module (ISIM) Application Programming Interface (API); ISIM API for Java Card™ | C6    | Yes              |
| TS   | 32.240 | Telecommunication management; Charging management; Charging architecture and principles                        | S5    | Yes              |
| TS   | 32.260 | Telecommunication management; Charging management; IP Multimedia Subsystem (IMS) charging                      | S5    | Yes              |
| TS   | 32.299 | Telecommunication management; Charging management; Diameter charging applications                              | S5    | Yes              |
| TR   | 32.824 | Telecommunication management; Service Oriented Architecture (SOA) Integration Reference Point (IRP) study      | S5    | No               |
| TS   | 33.141 | Presence service; Security   | S3    | Yes              |
| TS   | 33.203 | 3G security; Access security for IP-based services   | S3    | Yes              |
| TS   | 33.210 | 3G security; Network Domain Security (NDS); IP network layer security  | S3    | Yes              |

Tables are based on query " 2003-09-03\_CmnIMS\_specs\_list\_rel-x\_\_21-202" in the [3GPP Specifications Status database](#).

Annex A (informative):  
(void)

## Annex M (informative): IMS related Specifications and Reports in 3GPP2

The table below shows the 3GPP2 publications relating to core functions of the IP Multimedia Subsystem (IMS) used by the 3GPP2. Also shown in the table is the mapping between the replaced 3GPP2 MMD specifications and the corresponding 3GPP IMS specifications which replace them and the final revision of the document that was published by 3GPP2.

| 3GPP2 Document Number and Revision | 3GPP2 Document Title   | 3GPP Rel-8 TS/TR   | 3GPP WG |
|------------------------------------|--|--------------------|---------|
| X.S0013-000-B v1.0                 | Overview   | TS 23.002          | S2      |
| X.S0013-002-B v1.0                 | IP Multimedia Subsystem – Stage 2  | TS 23.228          | S2      |
|                                    |  | TS 23.002          | S2      |
| X.S0013-003-B v1.0                 | IP Multimedia Session Handling; IP Multimedia Call Model – Stage 2                   | TS 23.218          | C1      |
| X.S0013-004-B v1.0                 | IP Multimedia Call Control Protocol Based on SIP and SDP - Stage 3                   | TS 24.229          | C1      |
| X.S0013-005-B v1.0                 | IP Multimedia Subsystem Cx Interface Signaling flows and Message Contents            | TS 29.228          | C4      |
| X.S0013-006-B v1.0                 | Cx Interface Based on the Diameter Protocol; Protocol Details                        | TS 29.229          | C4      |
| X.S0013-007-A v1.0                 | IP Multimedia Subsystem - Charging Architecture                                      | TS 32.240          | S5      |
|                                    |  | TS 32.260          | S5      |
| X.S0013-008-A v1.0                 | IP Multimedia Subsystem - Offline Accounting Information Flows and Protocol          | TS 32.260          | S5      |
|                                    |  | TS 32.299          | S5      |
| X.S0013-009-0 v1.0                 | IMS/MMD Call Flow Examples   | TR 24.930          | C1      |
| X.S0013-010-B v1.0                 | IP Multimedia Subsystem Sh interface; Signaling flows and message contents – Stage 2 | TS 29.328          | C4      |
| X.S0013-011-B v1.0                 | Sh Interface based on Diameter Protocols Protocol Details – Stage 3                  | TS 29.329          | C4      |
| X.S0013-012-0 v1.0                 | Service Based Bearer Control – Stage 2   | TS 23.203          | S2      |
| X.S0013-013-0 v1.0                 | Service Based Bearer Control – Tx Interface Stage 3                                  | TS 29.213          | C3      |
|                                    |  | TS 29.214          | C3      |
| X.S0013-014-0 v1.0                 | Service Based Bearer Control – Ty Interface Stage 3                                  | TS 29.212          | C3      |
|                                    |  | TS 29.215          | C3      |
| X.S0013-016-0 v1.0                 | Messaging Service Using the IP Multimedia Subsystem                                  | TS 24.247          | C1      |
| X.S0027-000-A v1.0                 | Presence Overview  | No 3GPP equivalent |         |
| X.S0027-001-0 v1.0                 | Presence Service: Architecture and Functional Description                            | TS 23.141          | S2      |
| X.S0027-002-0 v1.0                 | Presence Security  | TS 33.141          | S3      |
| X.S0027-003-0 v1.0                 | Presence Stage 3   | TS 24.141          | C1      |
| X.S0027-004-0 v1.0                 | Network Presence   | No 3GPP equivalent |         |
| X.S0029-0 v1.0                     | Conferencing Using the IP Multimedia (IM) Core Network (CN) Subsystem                | TS 24.147          | C1      |
| X.S0049-0 v1.0                     | All-IP Network Emergency Call Support  | TS 23.167          | S2      |
|                                    |  | TS 24.229          | C1      |
| X.S0055-0 v1.0                     | MMD Supplementary Services   | TS 24.173          | C1      |
|                                    |  | TS 24.182          | C1      |
|                                    |  | TS 24.238          | C1      |

|                |  |                    |    |
|----------------|--|--------------------|----|
|                |  | TS 24.239          | C1 |
|                |  | TS 24.604          | C1 |
|                |  | TS 24.605          | C1 |
|                |  | TS 24.606          | C1 |
|                |  | TS 24.607          | C1 |
|                |  | TS 24.608          | C1 |
|                |  | TS 24.610          | C1 |
|                |  | TS 24.611          | C1 |
|                |  | TS 24.615          | C1 |
|                |  | TS 24.628          | C1 |
|                |  | TS 24.629          | C1 |
| S.S0086-B v2.0 | IMS Security Framework   | TS 33.203          | S3 |
|                |  | TS 33.210          | S3 |
| S.R0058        | IP Multimedia Domain – System Requirements                     | TS 22.228          | S1 |
| S.R0062        | Presence for Wireless Systems – Stage 1 Requirements           | TS 22.141          | S1 |
| S.R0125        | VoIP Supplementary Services Feature Description                | TS 22.173          | S1 |
| X.R0052-0      | All-IP System – MMD Roaming Technical Report                   | No 3GPP equivalent |    |
| X.S0042        | Voice Call Continuity between IMS and Circuit Switched Systems | TS 23.206          | S2 |
|                |  | TS 24.206          | C1 |
| C.S0069        | ISIM Application on UICC for cdma2000 Spread Spectrun Systems  | TS 31.103          | C6 |

## Annex C (informative): Change history

| Change history |       |           |    |     |  |       |       |
|----------------|-------|-----------|----|-----|--|-------|-------|
| Date           | TSG # | TSG Doc.  | CR | Rev | Subject/Comment  | Old   | New   |
| 2008-05        |       |           |    |     | First draft based on SA1 request to SP-38, refined at SP-39. Spec list based on Specification Manager's whim.  |       | 0.0.0 |
| 2008-12        |       |           |    |     | Update based on continuing evolution of Release 8 specs  | 0.0.0 | 0.1.0 |
| 2008-12        | SP-42 | SP-080724 |    |     | Incorporation of comments from TSG CT: removal of §5.1 (substituted by two examples in annex A); indication in list of specs of those which do not progress beyond NGN R2 applicability. | 0.1.0 | 0.2.0 |
| 2009-01        |       |           |    |     | Update to specs list table resulting from further feedback; Correction to URL of TISPAN spec mapping following revamp of 3GPP web site   | 0.2.0 | 0.3.0 |
| 2009-03        | CP-43 | CP-090103 |    |     | Presentation for information   | 0.3.0 | 1.0.0 |
| 2009-03        | SP-43 | SP-090035 |    |     | Presentation to TSG for approval   | 1.0.0 | 1.1.0 |
| 2009-03        | SP-43 |           |    |     | Approved   | 1.1.0 | 8.0.0 |
| 2009-05        | SP-44 | SP-090463 | 2  | 2   | Annex mapping 3GPP2 specs to 3GPP common IMS specs   | 8.0.0 | 8.1.0 |
|                |       | SP-090464 | 3  |     | Revise scope   |       |       |
| 2009-06        | SP-46 | SP-090695 | 4  | 1   | Correction to list of specifications   | 8.1.0 | 8.2.0 |
| 2010-03        | SP-47 | SP-100012 | 5  |     | Update list of specs   | 8.2.0 | 8.3.0 |
|                |       |           | 6  |     | Update list of specs   | 8.3.0 | 9.0.0 |
|                |       |           | 7  |     | Removal of information only relevant for earlier Release   |       |       |

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## History

| <b>Document history</b> |            |             |
|-------------------------|------------|-------------|
| V9.0.0                  | April 2010 | Publication |
|                         |            |             |
|                         |            |             |
|                         |            |             |
|                         |            |             |