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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
IP multimedia call control protocol based on
Session Initiation Protocol (SIP) and
Session Description Protocol (SDP);
Stage 3
(3GPP TS 24.229 version 12.13.0 Release 12)**

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# Foreword

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Version x.y.z

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# 1 Scope

The present document defines a call control protocol for use in the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP), and the associated Session Description Protocol (SDP).

The present document is applicable to:

- the interface between the User Equipment (UE) and the Call Session Control Function (CSCF);
- the interface between the CSCF and any other CSCF;
- the interface between the CSCF and an Application Server (AS);
- the interface between the CSCF and an ISC gateway function;
- the interface between the ISC gateway function and an Application Server (AS);
- the interface between the CSCF and the Media Gateway Control Function (MGCF);
- the interface between the S-CSCF and the Multimedia Resource Function Controller (MRFC);
- the interface between the Application Server (AS) and the Multimedia Resource Function Controller (MRFC);
- the interface between the S-CSCF and the Media Resource Broker (MRB);
- the interface between the AS and the MRB;
- the interface between the MRB and the MRFC;
- the interface between the CSCF and the Breakout Gateway Control Function (BGCF);
- the interface between the BGCF and the MGCF;
- the interface between the CSCF and an IBCF;
- the interface between the IBCF and AS, MRFC or MRB;
- the interface between the E-CSCF and the Location Retrieval Function (LRF);
- the interface between the BGCF and any other BGCF;
- the interface between the CSCF and an external Multimedia IP network;
- the interface between the E-CSCF and the EATF;
- the interface between the P-CSCF and the ATCF;
- the interface between the ATCF and the I-CSCF;
- the interface between the ATCF and the IBCF; and
- the interface between the transit function and the AS.

Where possible the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SDP. Where this is not possible, extensions to SIP and SDP are defined within the present document. The document has therefore been structured in order to allow both forms of specification.

As the IM CN subsystem is designed to interwork with different IP-Connectivity Access Networks (IP-CANs), the IP-CAN independent aspects of the IM CN subsystem are described in the main body and annex A of this specification. Aspects for connecting a UE to the IM CN subsystem through specific types of IP-CANs are documented separately in the annexes or in separate documents.

The document also specificies HTTP for use by an AS and by an MRB in support of the provision of media resources.