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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
IP Multimedia (IM) Subsystem Cx and Dx Interfaces;
Signalling flows and message contents
(3GPP TS 29.228 version 14.4.0 Release 14)**

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Contents

Foreword

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1 Scope

This 3GPP Technical Specification (TS) specifies:

1. The interactions between the HSS (Home Subscriber Server) and the CSCF (Call Session Control Functions), referred to as the Cx interface.
2. The interactions between the CSCF and the SLF (Server Locator Function), referred to as the Dx interface.
3. The interactions between the SIP Core and the SIP database, referred to as the Cx interface, for the Mission Critical Services, where this interface is named as AAA-1, as described in 3GPP TS 23.280 [30].

NOTE: In the 3GPP TS 23.280 [30] the term SIP database is used for the HSS and the term SIP Core is used for the P-CSCF, the I-CSCF and the S-CSCF when compared to this specification.

The IP Multimedia (IM) Subsystem stage 2 is specified in 3GPP TS 23.228 [1] and the signalling flows for the IP multimedia call control based on SIP and SDP are specified in 3GPP TS 24.228 [2].

This document addresses the signalling flows for Cx and Dx interfaces.

This document also addresses how the functionality of Px interface is accomplished.

The Presence Service Stage 2 description (architecture and functional solution) is specified in 3GPP TS 23.141 [10].

2 References

[1] 3GPP TS 23.228: "IP Multimedia (IM) Subsystem – Stage 2".

[2] 3GPP TS 24.228: "Signalling flows for the IP multimedia call control based on SIP and SDP".

[3] 3GPP TS 33.203: "Access security for IP-based services".

[4] 3GPP TS 23.002: "Network architecture".

[5] 3GPP TS 29.229: "Cx Interface based on Diameter – Protocol details".

[6] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IP Multimedia (IM) call model".

[7] IETF RFC 2045 "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[8] 3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP" – stage 3.

[9] Void.

[10] 3GPP TS 23.141: "Presence Service; Architecture and Functional Description".

[11] IETF RFC 3261 "SIP: Session Initiation Protocol".

[12] IETF RFC 4566 "SDP: Session Description Protocol".

[13] IEEE 1003.1-2004, Part 1: Base Definitions.

[14] IETF RFC 2486 "The Network Access Identifier".

[15] IETF RFC 3966 "The tel URI for Telephone Numbers".

[16] IETF RFC 2617 "HTTP Authentication: Basic and Digest Access Authentication".

[17] 3GPP TS 23.003: "Numbering, addressing and identification".

[18] 3GPP TS 23.008: "Organization of subscriber data".

[19] 3GPP TS 23.380: "IMS Restoration Procedures".