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TECHNICAL SPECIFICATION

**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Unstructured Supplementary Service Data (USSD)  
using IP Multimedia (IM) Core Network (CN) subsystem IMS;  
Stage 3  
(3GPP TS 24.390 version 14.0.0 Release 14)**



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# Foreword

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# 1 Scope

The present document describes the procedures for using Unstructured Supplementary Service Data (USSD) operations for mobile initiated MMI mode over IP Multimedia Core Network Subsystem (IMS) and for network initiated MMI mode over IP Multimedia Core Network Subsystem (IMS). MMI mode is for the transparent transport of MMI strings entered by the user to the Application Servers (AS) and for the transparent transport of text strings back to the User Equipment (UE) to be displayed for user information. Support of either mode of USSD service is optional and only applicable for an operator's Public Land Mobile Network (PLMN).

The current version of the document describes procedures for USSD operation over IMS where the USSD application in the network resides on an AS. Signalling from the AS to other core network functional entities is left out of scope.

The present document is applicable to UE and AS which are intended to support USSD operations over IMS in mobile initiated MMI mode and network initiated MMI mode.

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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.
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- 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] IETF RFC 6086 (January 2011): "Session Initiation Protocol (SIP) INFO Method and Package Framework".
- [3] 3GPP TS 24.090: " Unstructured Supplementary Service Data (USSD); Stage 3".
- [4] 3GPP2 X.S0065-0 v1.0 (April 2012): "Unstructured Supplementary Service Data (USSD) Support".
- [5] 3GPP TS 24.080: "Mobile radio interface layer 3 supplementary services specification; Formats and coding".
- [6] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [7] IETF RFC 4967 (July 2007): "Dial String Parameter for the Session Initiation Protocol Uniform Resource Identifier".
- [8] 3GPP TS 24.238: "Session Initiation Protocol (SIP) based user configuration; Stage 3".
- [9] IETF RFC 4288 (December 2005): "Media Type Specifications and Registration Procedures".
- [10] IETF RFC 3023: "XML Media Types".
- [11] IETF RFC 3261: "SIP: Session Initiation Protocol".
- [12] IETF RFC 5646 (September 2009): "Tags for Identifying Languages".
- [13] 3GPP TS 24.391: "Unstructured Supplementary Service Data (USSD) using IP Multimedia (IM) Core Network (CN) subsystem (IMS) Management Object (MO)".
- [14] 3GPP TS 23.221: "Architectural requirements".