**3GPP TSG-CT WG1 Meeting #125-eC1-20XXXX**

**Electronic meeting, 20-28 August 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.173** | **CR** | **0144** | **rev** | **1** | **Current version:** | **16.2.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | IMS registration when interworking without N26 is supported |
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| ***Source to WG:*** | Lenovo, Motorola Mobility |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2020-08-13 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)* |
|  |  |
| ***Reason for change:*** | TS 29.514 and TS 29.513 provide features to subscribe to the access network information and the EPS fallback to inform the UE about the information such as location. If the IMS network supports those features, the SIP signaling will not be lost at the time establishing MMTEL session when interworking is supported without N26 interface.Therefore there is no need for the UE and the network to use TCP transport when establishing an MMTEL session. |
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| ***Summary of change:*** | Added text that P-CSCF can signal the UE about its capability for the EPS fallback. |
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| ***Consequences if not approved:*** | The UE establishes unnecessaryTCP transport for the duration of the MMTEL session. |
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| ***Clauses affected:*** | 2, M.2.X (new), M.3.1.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 24.229 CR 6436 |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

----------------------------------------- NEXT CHANGE -----------------------------------------

# 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 TS 22.173: "IP Multimedia Core Network Subsystem (IMS) Multimedia Telephony Service and supplementary services; Stage 1".

[3] 3GPP TS 24.604: "Communication Diversion (CDIV); Protocol specification using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification ".

[4] 3GPP TS 24.605: "Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[5] 3GPP TS 24.606: "Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[6] 3GPP TS 24.607: "Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[7] 3GPP TS 24.608: "Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[8] 3GPP TS 24.610: "Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[9] 3GPP TS 24.611: "Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[10] 3GPP TS 24.629: "Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[11] 3GPP TS 24.623: "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Simulation Services".

[12] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction".

[13] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[14] 3GPP TS 24.247: "Messaging using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3".

[15] Void

[16] IETF RFC 3841 (August 2004): "Caller Preferences for the Session Initiation Protocol (SIP)".

[17] 3GPP TS 24.647: "Advice Of Charge (AOC) using IP Multimedia (IM)Core Network (CN) subsystem; Protocol Specification".

[18] 3GPP TS 24.654: "Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem, Protocol Specification".

[19] 3GPP TS 24.239: "IP Multimedia Subsystem (IMS) Flexible alerting supplementary service".

[20] 3GPP TS 24.238: "Session Initiation Protocol (SIP) based user configuration; stage 3".

[21] 3GPP2 C.S0055-A: "Packet Switched Video Telephony Services".

[22] ETSI TS 181 005: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Service and Capability Requirements".

[23] 3GPP TS 24.615: "Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem, Protocol Specification".

[24] 3GPP TS 24.642: "Completion of Communications to Busy Subscriber (CCBS) Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification".

[25] 3GPP TS 24.182: "IP Multimedia Subsystem (IMS) Customized Alerting Tones (CAT); Protocol specification".

[26] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification".

[27] 3GPP TS 24.183: "IP Multimedia Subsystem (IMS) Customized Ringing Signal (CRS); Protocol specification".

[28] IETF RFC 3362 (August 2002): "Real-time Facsimile (T.38) - image/t38 MIME Sub-type Registration".

[29] 3GPP TS 24.259: "Personal Network Management (PNM); Stage 3".

[30] 3GPP TS 24.390: "Unstructured Supplementary Service Data (USSD) using IP Multimedia (IM) Core Network (CN) subsystem IMS; Stage 3".

[31] IETF RFC 6809 (November 2012): "Mechanism to Indicate Support of Features and Capabilities in the Session Initiation Protocol (SIP)".

[32] 3GPP TS 24.167: "3GPP IMS Management Object (MO); Stage 3".

[33] 3GPP TS 23.221: "Architectural requirements".

[34] Void.

[35] 3GPP TS 24.628: "Common Basic Communication procedures using IP Multimedia (IM) Core Network (CN) subsystem; Protocol Specification".

[36] 3GPP TS 24.275: "Management Object (MO) for basic communication part of IMS multimedia telephony (MMTEL) communication service".

[37] 3GPP TS 22.011: "Service accessibility".

[38] 3GPP TS 31.102: "Characteristics of the Universal Subscriber Identity Module (USIM) application".

[39] 3GPP TS 24.196: "Technical Specification Group Core Network and Terminals; Enhanced Calling Name".

[40] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".

[41] 3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".

[42] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[43] 3GPP TS 24.174: "Support of Multi-Device and Multi-Identity in IMS; Stage 3".

[XX] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".

[YY] 3GPP TS 29.513: "5G System; Policy and Charging Control signalling flows and QoS parameter mapping; Stage 3".

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## M.2.X Procedures at the IM CN subsystem

Upon receipt of a SIP REGISTER request if the Contact header field contains a MMTEL ICSI and a transport=tcp URI and if the P-CSCF supports subscription on the access network information as specified in 3GPP TS 29.514 [XX] in case of EPS fallback as specified in 3GPP TS 29.513 [YY], the P-CSCF includes the feature capability indicator "+g.3gpp.eps-fallback" as defined in 3GPP TS 24.229 [13] in the Feature-Caps header field of the SIP 200 OK response to indicate P-CSCF capability for EPS fallback.

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### M.3.1.2 Establishing an MMTEL session

If the UE is establishing an MMTEL session offering audio and if the IP-CAN of 5GS indicated that interworking without N26 is supported as specified in 3GPP TS 24.501 [42] and if the UE has not received any indication that the IM CN subsystem supports EPS fallback, the UE should transmit the SIP INVITE request using TCP as transport protocol.

NOTE: The use of TCP is to ensure the reception of transmitted SIP messages in case fallback to EPS for voice is used and the IP-CAN of 5GS supports interworking without N26.

----------------------------------------- End of CHANGE -----------------------------------------