**3GPP TSG-CT WG1 Meeting #130-eC1-213408**

**Electronic meeting, 20-28 May 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.183** | **CR** | **0077** | **rev** | **1** | **Current version:** | **16.6.0** |  |
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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:***  | CRS Corrections on the support of DTMF |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | TEI17 |  | ***Date:*** | 2021-05-13 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | In 4.5.5.2.4, it’s not clear where the UE shall indicate support of DTMF, and the requirement of AS should not exist in this clause.In 4.5.5.3.5, the two points conflict with each other:1. If the terminating UE has indicate A and B, the AS shall choose one, if the AS want B, the AS shall indicate it support B

From the description, it’s obvious that the chosen and indication by AS is later than the indication by the UE.1. The AS shall indicate it support B in the initial INVITE request.

From this description, it’s obvious that the indication by AS is earlier than any indication by the terminating UE.To solve this conflict , it’s reasonable that the AS does chosen and indication after the UE does the indication.And clause 4.5.5.2.4.1 is missing. |
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| ***Summary of change:*** | Main changes are:For UE side, in 4.5.5.2.4, clarify that UE indicate its DTMF capability in the first 180/183 response.For AS side, in 4.5.5.3.5 and 4.5.5.4.3, change the "initial INVITE request" to the "subsequent PRACK or UPDATE request".An editorial change is:Use clause 4.5.5.2.4.1 to replace clause 4.5.5.2.4.2, and void the clause 4.5.5.2.4.2. |
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| ***Consequences if not approved:*** | Conflict exists. Editorial problem exists. |
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| ***Clauses affected:*** | 4.5.5.2.4, 4.5.5.2.4.1 (new), 4.5.5.2.4.2 (void), 4.5.5.3.5, 4.5.5.4.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\*\*\* Next change \*\*\*\*\*

##### 4.5.5.2.4 UE support of DTMF

###### 4.5.5.2.4.1 General

In addition to indicating support of the telephone-event media subtype in the SDP answer, as defined in 3GPP TS 24.229 [3], the UE shall indicate support of the SIP INFO mechanism for DTMF transport, as defined in 3GPP TS 24.229 [3], by including a Recv-Info header field with a "infoDtmf" value, as defined in IETF RFC 6086 [7]. The AS indicates to the UE which DTMF transport mechanism to use for CRS control.

\*\*\*\*\* Next change \*\*\*\*\*

##### 4.5.5.3.5 AS support of DTMF

“”The AS shall based on operator policy choose which DTMF transport mechanism to use for CRS control between the UE and the AS.

If the AS wants to use the SIP INFO mechanism for DTMF transport, as defined in 3GPP TS 24.229 [3], the AS shall indicate support of the mechanism in the initial SIP INVITE request sent towards the terminating UE by including a Recv-Info header field with a "infoDtmf" value, as defined in IETF RFC 6086 [7].

If the AS wants to use the "telephone-event" media subtype for DTMF transport, the AS shall include the "telephone-event" in the SDP offer for CRS media, sent to the UE.

NOTE: The usage of the "telephone-event" media subtype for CRS control requires that intermediates allow the telephone-event packages to traverse from the UE to the AS during the early dialog.

For the remainder of this subclause, when the term "receipt of DTMF digit" is used, it means either the detection of a DTMF digit by the MRF, which is then passed to the AS over the Cr interface, or the receipt of an INFO request containing the appropriate INFO package, as negotiated above.

\*\*\*\*\* Next change \*\*\*\*\*

##### 4.5.5.4.3 AS support of DTMF

The AS shall based on operator policy choose which DTMF transport mechanism to use for CRS control between the UE and the AS.

If the AS wants to use the SIP INFO mechanism for DTMF transport, as defined in 3GPP TS 24.229 [3], the AS shall indicate support of the mechanism in the initial SIP INVITE request sent towards the terminating UE by including a Recv-Info header field with a "infoDtmf" value, as defined in IETF RFC 6086 [7].

If the AS wants to use the "telephone-event" media subtype for DTMF transport, the AS shall include the "telephone-event" in the SDP offer for CRS media, sent to the UE.

NOTE: The usage of the "telephone-event" media subtype for CRS control requires that intermediates allow the telephone-event packages to traverse from the UE to the AS during the early dialog.

For the remainder of this subclause, when the term "receipt of DTMF digit" is used, it means either the detection of a DTMF digit by the MRF, which is then passed to the AS over the Cr interface, or the receipt of an INFO request containing the appropriate INFO package, as negotiated above.