**3GPP SA4#114-e meeting *S4-210798***

**May 18th – 28th 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
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|  | **26.114** | **CR** |  | **rev** | **-** | **Current version:** | **17.0.0** |  |
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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:*** | S4-210798 ITT4RT: Presentation Overlay | | | | | | | | | |
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| ***Source to WG:*** | KPN N.V. | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ITT4RT | | | | |  | ***Date:*** | | | 2021-05-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 can be 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)* | |
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| ***Reason for change:*** | | How to handle presentation type content in ITT4RT is on requrement of the work item and currently not sufficiently addresed in 26.114 | | | | | | | | |
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| ***Summary of change:*** | | Proposed a new section Y.6.4.4. to add functionality and message flows to handle signalling, detection and replacement of presentation content in the 360-degree content. | | | | | | | | |
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| ***Consequences if not approved:*** | | How to handle presentation type content in ITT4RT is not poperly addressed. | | | | | | | | |
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| ***Clauses affected:*** | | Y.6.4.4. | | | | | | | | |
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|  | | **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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
| ***56*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**===== 1st CHANGE =====**

## Y.6.4.4 Presentation Replacement

To prevent degradation of presentation material (e.g., slides, screen share, video, notes) that may be captured from a display (screen or projector) with a 360-degree camera, the captured content in the 360-degree video can be replaced with the original presentation material. Such replacement implies a decoding, replacement of the presentation content at the (exact) display coordinates in the 360-degree video and finally encoding the new 360-degree video (i.e., with the same encoding parameters as the original 360-degree video). The replacement could either be performed in the client sending the 360-video or in the network (MRF/MCU).

When replacement is performed in the client sending the 360-video, the availability of the presentation content should be signalled by the source of the content to the client sending the 360-video using the SDP parameter “a=content:slides”[81]. If no overlay parameters are given by the source of the presentation content (e.g., configuration in terms of sphere-relative overlay coordinates as defined in Y.6.4.3.2), the client sending the 360-video should determine an appropriate configuration for performing the content replacement in the 360-degree video.

When replacement is to be performed in the network (MRF/MCU), the client sending the 360-degree video should include the “a=3gpp\_360video\_replacement” attribute in its SDP offer or answer to indicate that content in the 360-degree video can be replaced. If an MRF/MCU supports content replacement it should include the “a=3gpp\_360video\_replacement” attribute in its SDP answer (i.e., if accepting any 360-degree video content that where signalled with the “a=3gpp\_360video\_replacement” attribute), to indicate that the MRF/MCU can perform content replacement. If an MRF/MCU accepts the replacement then the MRF/MCU should perform content replacement once the presentation content was signalled by the source of the content. The availability of the presentation content should be signalled by the source of the content to the MRF/MCU using the SDP parameter “a=content:slides”[81]. If no overlay parameters are given by the source of the presentation content (e.g., configuration in terms of sphere-relative overlay coordinates as defined in Y.6.4.3.2), the MRF/MCU should determine an appropriate configuration for performing the content replacement in the 360-degree video.

If the client sending the 360-degree signals the “a=3gpp\_360video\_replacement” but the MRF/MCU does not supports replacement it may still accept the SDP offer but without including the “a=3gpp\_360video\_replacement” attribute in the SDP answer. In this case a different process can be followed to signal the presentation content (e.g., the presentation content can be sent as overlay as defined in Y.6.4., or might be replaced in the 360-video sending client as described above).

If the 360-degree client does not indicate that content in the 360-degree video can be replaced (e.g., there is no such content captured by the 360-degree camera), no further action needs to be taken by the MRF/MCU and a different process can be followed to signal the presentation content (e.g., the presentation content can be sent as overlay as defined in Y.6.4.).