**3GPP TSG-SA WG4 Meeting #127S4-240364**

**Sophia-Antipolis, France, 29 January - 2 February 2024**

**Source: NTT**

**Title: [FS\_eiRTCW] Pseudo-CR on Conclusion of FS\_eiRTCW**

**Spec: 3GPP TR 26.930**

**Agenda item: 10.9**

**Document for: Agreement**

**1. Introduction**

The pCR proposes the updates on conclusion of the Study Item (FS\_eiRTCW).

**2. Reason for Change**

1. The clause of overall evaluation is not needed since the solution evaluations are described per solution in this TR.

2. The clause of "conclusions and recommendations" needs to be updated based on the solution evaluations in clause 6.

**3. Proposal**

It is proposed to agree on the following changes to 3GPP TR 26.930.

\* \* \* First Change \* \* \* \*

# 6 Solutions

## 6.1 General

This clause describes the solutions for key issues in clause 5. Each solution corresponds to a key issue with the same number (e.g., Solution #1 corresponds to Key Issue #1). In subsequent clauses for each solution, solution evaluations are described per solution.

\* \* \* Next Change \* \* \* \*

\* \* \* Next Change \* \* \* \*

# 7 Conclusions and Recommendations

## 7.1 General

In this clause, the solution evaluations in technical aspects for enabling collaboration scenario 4 and collaboration scenario 3 are summarized as conclusions of this Study Item (FS\_eiRTCW).

## 7.2 Stage-2 aspect

The architecture diagram that best represents the architectural solution is shown in Figure 7.2-1. This architectural diagram consists of functional entities already defined in TS 26.506 [xx]. While Network Support function (NS-AF) is snipped in the figure, this document expects RTC AF to be integrated with WebRTC Signalling Function (WSF) to interact with 5GC via N5 interface, as indicated in 3GPP TS 26.506 [xx] clause 4.2.5.

Also, as an extension of collaboration scenario 4, this document addresses the interworking between RTC network and IMS network over NNI which conforms to 3GPP TS 29.162 [xx].



Figure 7.2-1: Derivative RTC architecture diagram

In order to enable both collaboration scenario 4 and collaboration scenario 3 defined in TS 26.506 [xx], this document identifies that the following enhancements are needed:

A) New reference points

- This document identifies that the following reference points are required to be newly introduced, in addition to the existing reference point defined in 3GPP TS 26.506 [xx] clause 4.3. These reference points need to be assigned/defined considering the common architecture for 5GMS and RTC.

1) RTC-X

\* To enable the immersive RTC service in collaboration with content providers, the interface between a ASWF and a content provider network for service control is needed. Over this reference point, ASWF is expected to provide the service control APIs.

2) RTC-Y

\* To enable the collaboration scenario 4 supporting interoperability between multiple RTC networks, the NNI specification is needed.

\* RTC-Y is divided into two sub-interfaces, RTC-Ys (for C-Plane signalling) and RTC-Ym (U-Plane media/data transport).

B) Functional enhancements on the existing entities

- This document identifies that the functional enhancements on the existing entities shown in Table 7.2-2 are required against the functional definitions in 3GPP TS 26.506 [xx] clause 4.2. This table does not show all the enhancements, but major enhancements identified in this document.

- This document does not identify the new functional entity needed.

Table 7.2-2: Major expected functional enhancements

|  |  |  |  |
| --- | --- | --- | --- |
| Entity | Expected functional enhancement | Interface | Solution |
| UE | Support of WSF discovery mechanism at UE. | RTC4m | Sol#6 |
| WSF | Interaction with MF for media session control. | - | - |
| Interaction with ASWF for collaboration with web applications/services. | - | - |
| Interaction with 5GC, using network Support function (NS-AF). | N5 | Sol#1 |
| Authentication/authorization of the UE. | RTC-4s | Sol#2 |
| Support of functionalities needed for service control.   * Connection control enforcer * RTC ID resource handling enforcer | RTC-X | Sol#5 |
| Signing and verification of network-asserted UE's ID. | RTC-Ys | Sol#10 |
| MF | Support of functionalities needed for service control.   * Media data forwarding control enforcer * RTC exchange resource handling enforcer | RTC-X | Sol#5 |
| ASWF | Exposing the service control APIs. | RTC-X | Sol#5 |
| Storage of user subscription data specific to MNO's WebRTC services. | - | - |
| Providing supplementary files via best-effort transport different from the channels for real-time media. | RTC-4m | Sol#1 |
| Providing WSF discovery functionality. | RTC-4m | Sol#6 |
| IWF | C-plane signalling protocol interworking between RTC network and IMS network. | - | Sol#7 |
| Signing and verification of network-asserted UE's ID. | RTC-Ys | Sol#10 |
| TGF | U-Plane protocol interworking between RTC network and IMS network. | - | Sol#7 |

For the interworking with IMS network, the impact on the existing IMS specification needs be discussed further with relevant working groups before going to normative work.

## 7.2 Stage-3 aspect

Based on the architectural and functional enhancements as summarized in clause 7.1, the following stage-3 level solutions are studied in this document.

1) A new C-Plane signalling protocol - RESPECT (Solution #3)

2) A new service control APIs (Solution #5)

3) A new mechanism for WSF discovery (Solution #6)

4) Interworking specifications at IGF/TGF for RTC-IMS inter-connection (Solution #8)

It is confirmed that the solutions 1), 2) and 3) are technically feasible. However, recommended usage of these protocol and procedures needs be discussed further with relevant working groups (i.e., CTx) before going to normative work.

For solution 4), the impact on the existing IMS specification needs be discussed further with relevant working groups before going to normative work.

## 7.3 Recommended way forward

Before normative work, it is recommended to communicate with the relevant working groups regarding solutions that is recommended to get feedback.

\* \* \* End of Changes \* \* \* \*