**3GPP TSG-SA WG1 Meeting #106 S1-241359**

**Jeju, Korea, 27– 31 May 2024** *(revision of S1-241262, S1-241145)*

**Source: Nokia, Nokia Shanghai Bell, Telefonica, China Mobile, Huawei, Qualcomm, Samsung, Ericsson, Vodafone, Telecom Italia, LG Uplus, Orange, Rakuten Mobile, Erillisverkot**

**Title: New SID: Study on user interaction in the IMS**

**Document for: Approval**

**Agenda Item: 4**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

*Title:* Study on user interaction in the IMS

Acronym: FS\_IMSUserInteract

Unique identifier:

Potential target Release: Rel-20

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | x |  | x |  |
| No |  |  | x |  |  |
| Don't know | x |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

This work item is a …

|  |  |
| --- | --- |
| X | Study |
|  | Normative – Stage 1 |
|  | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
|  |  | N/A |  |

## 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| N/A |  |  |

# 3 Justification

Network operators offering IP Multimedia Subsystem (IMS) services have interest in enhancing their IMS services by offering innovative engagement from their users as a potential way to optimize their network, provide better services, reduce churn or enable new revenue opportunities. User interaction related to already existing IMS services can be enabled eg by providing opportunities to take actions such as providing feedback or accessing additional services. For example, the collected user feedback can be used to improve their network operations as well as the overall user experience and satisfaction about IMS services.

In the context of current IMS services, including data channel-based services, various scenarios could be addressed, as an opportunity for the network operator to enhance the current experience and possibly to take follow-up actions based on a received user feedback, for example:

* Operator’s voice service quality reporting, e.g., to help the network to improve its QoE and customer satisfaction
* Robocall/spam callers or messengers reporting to the network, e.g., to help marking/blocking spam numbers
* Rating of IMS Data Channel applications in the DC app catalogue
* Reacting to CAT/CRS audio/video, for example like/dislike/subscribe
* Navigating in automated support calls
* Offering AI-based assistance during conference calls

Contextual information may be provided together with such interactive feedback opportunities to assist and/or influence user behaviour (eg current number of “likes” or already reported spams, current rating of DC application etc).

Such functionalities may further be exposed by the operator towards authorized third parties (e.g. upon user consent), as a business opportunity for the operator to enable scenarios involving such parties for some IMS services based on operator’s policy (e.g., CAT/CRS audio/video content providers).

In general, these scenarios require proper addressing of user privacy aspects, which could be subject to regulatory requirements, such as:

1) enabling the user to opt-in/opt-out of receiving feedback opportunities from the operator or from 3rd parties,

2) protecting user privacy for data shared by the user in responses to the operator and 3rd parties.

Thus, instead of addressing such scenarios individually which may lead to partial considerations, it is proposed to comprehensively study the potential use cases related more generally to direct user interaction related to IMS services with network operators. The study will identify proper service requirements that are common to such scenarios and use cases, whilst analysing existing available features which could already address them as well as avoiding negative impacts on critical IMS based services and on user privacy.

# 4 Objective

This study is aiming at identifying use cases, providing gap analysis and defining potential requirements to enable direct user interaction for IMS-based services, further allowing operators to control the interaction opportunities, access to actual user feedback and react accordingly.

The objectives include:

* + Identify possible use cases and service requirements to enable (under regulatory, network operator and/or user control) user interactions related to IMS services (e.g. user feedback reporting), including:
    - Enabling direct user interaction related to IMS services with the network operator (e.g., call quality feedback, spam reporting)
    - Enabling a network operator to authorize 3rd parties to:
      * propose user interaction opportunities related to IMS services,
      * retrieve the related user-provided information (e.g., collected feedback, input to services, etc).
    - Enabling user interaction opportunities in scenarios involving IMS users of different network operators and in roaming scenarios.
    - Support the enabled user interaction opportunities under study to be restricted by a network operator (e.g., to specific predefined and/or pre-formatted actions, to network-initiated user interaction opportunities only).
  + Provide a gap analysis between the identified potential new requirements and existing functionalities of IMS and 5GS, including the user consent framework.
  + Consider security (e.g. protection against user feedback’s DDoS attacks) and privacy aspects (e.g. user consent, user feedback data exposure) as an integral part of the study, in particular to comply with regulations (e.g. EU GDPR) and so that any new proposed requirement do not adversely impact existing critical IMS based services (e.g. voice, emergency calls, etc.).
  + Other aspects including charging.

Note 1: MMI requirements are out of scope of this study.

Note 2: Direct user interaction related to non-IMS services (e.g. web/HTTP/streaming based applications etc) are out of scope of this study.

Note 3: Whether and how to use IMS signalling in order to propose and/or collect user feedback is Stage 2.

Note 4: General user consent requirements and mechanisms for 3GPP services have been specified in TS 33.501, whether and how to adopt these user consent mechanisms to meet the identified requirements will be investigated in stage 2.

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
| TR | 22.8xx | Study on user interaction in the IMS | SA#106 (Dec. 2024) | SA#107 (Mar. 2025) | TBD |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
|  |  |  |  |

# 6 Work item Rapporteur(s)

TBD

# 7 Work item leadership

SA1

# 8 Aspects that involve other WGs

Specifications regarding IMS (including security & privacy).

# 9 Supporting Individual Members

{At least 4 supporting Individual Members are needed. There is an expectation that these companies will provide resources to progress the work. Note that having 4 supporting companies is a necessary but not sufficient condition: the usual TSG approval process by consensus is needed for the WID approval}

|  |
| --- |
| Supporting IM name |
| Nokia |
| Nokia Shanghai Bell |
| Telefonica |
| China Mobile |
| Huawei |
| Qualcomm |
| Samsung |
| Ericsson |
| Vodafone |
| Telecom Italia |
| LG Uplus |
| Orange |
| Rakuten Mobile |
| Erillisverkot |