**i3GPP TSG-SA WG6 Meeting #61 S6-242510**

**Jeju, Korea (Republic Of), 20th May 2024 - 24th May 2024 (revision of S6-242025)**

**Source: FirstNet, AT&T, Erilliverkot, Sync Techno Inc., TCCA, Nkom, A.S.T.R.I.D. SA/NV, BDBOS, UK Home Office, Motorola Solutions, Netherlands Police, Ericsson**

**Title: New WID on MC services support on IOP mode of operation for 5G**

**Document for: Approval**

**Agenda Item: 10**

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: MC services support on IOPS mode of operation for 5G

Acronym: 5GIOPS

Unique identifier:

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
| X | 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 |
| 840038 | MC services support on IOPS mode of operation | LTE support for IOPS in Rel-17 |

**Dependency on non-3GPP (draft) specification: none**

# 3 Justification

In Release 17, SA6 completed work on IOPS over LTE in TS 23.180. With the continued deployment of 5G, and with mission critical services over 5G, we now need to expand IOPS to include support over 5G systems.

As presented in the initial work item (840038), both 3GPP TS 22.179 and 3GPP TS 22.280 specify requirements on availability of the mission critical (MC) services. This includes several resilient related requirements on different access options. 3GPP SA1 has completed work in TS 22.346 on the requirements for IOPS over LTE. 3GPP SA1 has also indicated in section 8.2 of 3GPP TS 22.261 that the 5G system shall be able to provide temporary service for authorized users without access to their home network (e.g. IOPS, mission critical services). For this work, 3GPP SA6 should focus on matching the existing 4G IOPS capabilities and reuse the 3GPP SA1 requirements referenced here.

3GPP SA6 has completed a detailed study in 3GPP TR23.778 which has several good use cases and ideas that can be adapted to the 5G system, and the work in TS 23.401 Annex K that provides an informative view of IOPS architecture over LTE.

For the case of a backhaul failure, MC services shall be supported based on the availability of an Isolated 5G operations for Public Safety (5GIOPS) system. During the 5GIOPS mode of operation, the 5GIOPS system shall provide local connectivity to public safety users under the coverage of the radio base station(s) forming the IOPS system.

3GPP SA2 has defined the informative annex K in 3GPP TS 23.401 for isolated E-UTRAN operations for public safety, it is strictly an informative annex, and relies on the existing E-UTRAN architecture.

# 4 Objective

The SA6 objectives is to enhance the application layer IOPS functionality specified in 3GPP TS 23.180 to make it general irrespective of the network layer under consideration, i.e., LTE, 5G, NTN, private networks, etc. The IOPS functionality can be enhanced by: :

* 1. Updating the functional model of the MC service architecture for the IOPS mode of operation,
  2. Addressing MC system data synchronization aspects for the IOPS mode of operation,
  3. Identifying IOPS specific procedures applicable to MCPTT, and MCData operation.

NOTE1: MCPTT and MCData operations will be restricted to what is currently supported in TS23.180, not additional features are to be considered.

NOTE2: Definition of the security architecture and security procedures in support of IOPS operation (e.g. Identity Management, Key Management, user authentication and authorization, etc.) is the responsibility of SA3.

# 5 Expected Output and Time scale

***{If this WID covers both stage 2 and stage 3, clearly indicate the different completion dates.}***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS23.180 | Update the TS to support IOPS over 5G | TSG#106 |  |

# 6 Work item Rapporteur(s)

FirstNet, Mark Lipford

# 7 Work item leadership

SA6

# 8 Aspects that involve other WGs

SA3: Security

For a Stage 2 WID requiring Stage 3 to be done by another group: on a best-effort basis, indicate which potential WG is expected to specify the Stage 3: **n/a**

# 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 |
| FirstNet |
| AT&T |
| Erilliverkot |
| SyncTechno Inc. |
| TCCA (MRP) |
| Nkom |
| A.S.T.R.I.D. SA/NV |
| BDBOS |
| UK Home Office |
| Motorola Solutions |
| Netherlands Police |
| Ericsson |