**SA WG2 Meeting #156E (e-meeting) S2-230xxxx**

**April 17 – 21, 2023 *revision of S2-230xxxx***

**Source: Nokia, Nokia Shanghai-Bell**

**Title: TMGI allocation for Resource sharing across broadcast MBS Sessions during network sharing based on configuration**

**Document for: Approval**

**Agenda Item: 9.10.2**

**Work Item / Release: 5MBS\_Ph2 / Rel-18**

*Abstract:.* *This contribution discusses how to handle TMGI allocation for Resource sharing across broadcast MBS Sessions during network sharing based on configuration. A related CR is in S2-230xxxx*

# 1. Introduction

TS 23.247 contains the following ENs:

Editor's note: For the association of MBS session identifiers (i.e. TMGIs) configured in NG-RAN, it is FFS whether AFs can provide additional information (e.g. TMGI index) to request the allocation of a TMGI from a range of TMGIs for shared MBS services in an MB-SMF.

Editor's note: Updates to TMGI allocation for resource sharing across multiple broadcast MBS Sessions during network sharing based on configured TMGI mapping in NG-RAN (see clause 6.17) are FFS.

# 2. Discussion

As part of the key issue 2 conclusions that NG RAN nodes can identify MBS session subject to resource sharing based on a configured mapping between TMGIs. It is thus necessary that TMGIs that are mapped to each other in RAN nodes are allocated for related MBS sessions.

One possibility would be that arbitrary TMGIs are allocated to AFs, and the content provider then informs the operators about the allocated TMGIs in order to allow them to configure a mapping in shared RAN nodes. This is a cumbersome procedure that would need to be performed separately for each MBS service subject to RAN sharing

It has already been agreed that RAN nodes may be configured with ranges of TMGIs (one for each PLMN participating in RAN sharing) that are mapped to each other to avoid such a per-MBS-service configuration. However, such ranges cannot be used unless AFs obtain appropriate TMGIs (that are mapped to each other in RAN nodes) from those ranges.

It is thus suggested to extend TMGI allocation procedures with a TMGI offset value that can be provided by the AF to request a particular TMGI from a range of TMGIs for shared services reserved in the MB-SMF.

**Proposal: Extend the TMGI allocation and MBS session creation procedure with a TMGI offset value that can be provided by the AF to request a particular TMGI from a range of TMGIs for shared services reserved in the MB-SMF.**