**3GPP TSG-SA5 Meeting #155 *S5-243327d1***

Jeju, South Korea, 27 - 31 May 2024

**Source: China Unicom**

**Title: Add concepts and background of Indirect Network Sharing**

**Document for: Approval**

**Agenda Item: 6.19.19**

# 1 Decision/action requested

***The group is asked to discuss and approval.***

# 2 References

[1] S5-242035 Revised SID on Management of Network Sharing Phase 3.

[2] S2-2405669, CR 23.501, Indirect network sharing.

[3] 3GPP TS 22.261: "Service requirements for the 5G system".

# 3 Rationale

As agreed in S5-242035[1], WT-3 is described as "Investigate potential enhancements for Indirect Network Sharing scenarios". Since S2-2405669[2] has been approved in SA2, this contribution is to start investigating concepts and background referred to the definition in TS 22.261[3].

# 4 Detailed proposal

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| **1st Change** |

# 3 Definitions of terms, symbols and abbreviations

## 3.1 Terms

For the purposes of the present document, the terms given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

**example:** text used to clarify abstract rules by applying them literally.

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

<symbol> <Explanation>

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

GWCN Gateway Core Network

MOCN Multiple Operator Core Network

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| **2nd Change** |

# 4 Concepts and background

Network sharing is a crucial approach to decrease CAPEX of 5G constructions for operators. As stated in TS 22.261[2] the increased density of access nodes needed to meet future performance objectives pose considerable challenges in deployment and acquiring spectrum and antenna locations. RAN sharing is seen as a technical solution to these issues. Plenty of previous normative works have been completed during Rel-17 and Rel-18.

During Rel-18, SA5 has specified new scenarios for MOCN Network sharing, SBMA deployment examples for MOCN management architectures and related NRM enhancements in TS 32.130[4]. Some issues for existing MOCN, including Trace job and collection requirements for POPs, etc., are supposed to be further studied.

During Rel-19, Indirect Network Sharing has been introduced in TS 22.261[2]. Potential management enhancements are supposed to be studied.

4.1 Indirect Network Sharing

According to the definition in clause 6.21.2.2 of TS 22.261[2], Indirect Network Sharing is a type of NG-RAN Sharing in which the communication between the Shared NG-RAN and the Participating Operator’s core network is routed through the Hosting NG-RAN Operator’s core network. In RAN Sharing operations, NG-RAN resources can be used by multiple network operators. Indirect Network Sharing is one of the possible sharing methods.

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| **End of Changes** |