3GPP TSG-SA WG2#163 S2-2406835

Jeju, Korea, 27-31 May 2024 (was S2-240xxxx)

**Source: Intel (Rapporteur)**

**Title: Summary of NWM feedback on FS\_eEDGE\_5GC\_Ph3**

**Document for: Discussion**

**Agenda Item: 19.9**

**Work Item / Release: FS\_eEDGE\_5GC\_ph3 / Rel-19**

*Abstract of the contribution: this contribution provides a summary of the NWM discussion on the FS\_eEDGE\_5GC\_ph3 study.*

# 1. Discussion

Details of the NWM discussion on FS\_eEDGE\_5GC\_ph3 study conclusions were captured at:

First round: <https://nwm-trial.etsi.org/#/documents/8818>

Second round: <https://nwm-trial.etsi.org/#/documents/88>

The PDF version of the feedback forms and summary are available in the below links:

<https://www.3gpp.org/ftp/tsg_sa/WG2_Arch/TSGS2_163_Jeju_2024-05/INBOX/DRAFTS/R19%20FS_eEDGE_5GC_Ph3/R19_FS_eEDGE_5GC_Ph3_First_Round_NWM_questions-v0.0.3.pdf>

<https://www.3gpp.org/ftp/tsg_sa/WG2_Arch/TSGS2_163_Jeju_2024-05/INBOX/DRAFTS/R19%20FS_eEDGE_5GC_Ph3/SA2_R19_FS_eEDGE_5GC_Ph3_second_round_NWM_discussion-v0.0.1.pdf>

Based on the feedback, rapporteur’s proposals are provided, which are captured in the following section.

# 2. Summary and Rapporteur’s proposals

**The rapporteur’s proposals are based on first round NWM Discussion by taking second round NWM discussion into account. The second round NWM discussion feedback will be used by rapporteur to draft SoH questions and propose way forward.**

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| KI#1\_Q1: Can I-SMF based solution (i.e. #1, #5, #26) be supported? | | | |
| 1 – Qualcomm | Yes |  |  |
| 2 – Samsung | Yes |  |  |
| 3 – CATT | Yes |  |  |
| 4 – Huawei |  | No |  |
| 5 – Ericsson | Yes |  |  |
| 6 – LG Electronics | Yes |  |  |
| 7 – China Mobile | Yes |  |  |
| 8 – ZTE | Yes |  |  |
| 9 – Nokia | Yes |  |  |
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| Rapporteur Proposal | Yes: 8, No: 1.  Update solution principles to conclude I-SMF based solution. | | |

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| KI#1\_Q2: Can L-SMF based solution (i.e. #3, #4, #7) be supported? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Samsung |  | No |  |
| 3 – CATT |  | No |  |
| 4 – Huawei | Yes |  |  |
| 5 – Ericsson |  | No |  |
| 6 – LG Electronics | Yes |  |  |
| 7 – China Mobile |  |  | Neutral |
| 8 – Intel | Yes |  |  |
| 9 – ZTE | Yes |  |  |
| 10 – Nokia |  | No |  |
| Rapporteur Proposal | Yes: 4, No: 5.  SoH (Per offline discussion, at least 2 companies changed position from No/Neutral to Yes, Huawei asks for SoH and will provide a compromised way forward solution).  Supporting companies prepare solution principles for compromised way forward. | | |

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| KI#1\_Q3: Can two options of both I-SMF and L-SMF based solutions be supported? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Samsung |  |  | Neutral |
| 3 – CATT |  | No |  |
| 4 – Huawei | Yes |  |  |
| 5 – Ericsson |  | No |  |
| 6 – LG Electronics |  | No |  |
| 7 – China Mobile |  | No |  |
| 8 – Intel | Yes |  |  |
| 9 – ZTE | Yes |  |  |
| 10 – Nokia |  | No |  |
| Rapporteur Proposal | Yes: 3, No: 6.  SoH (Per offline discussion, at least 2 companies changed position from No/Neutral to Yes, Huawei asks for SoH and will provide a compromised way forward solution).  Supporting companies prepare solution principles for compromised way forward. | | |

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| KI#2\_Q1: Should N6 delay per pair of L-PSA UPF and EAS? | | | |
| 1 – Qualcomm | Yes |  |  |
| 2 – Huawei | Yes |  |  |
| 3 – Samsung | Yes |  |  |
| 4 – CATT | Yes |  |  |
| 5 – Ericsson | Yes |  | The end point an be EAS or IPv4 range/Ipv6 prefix |
| 6 – LG Electronics | Yes |  |  |
| 7 – China Mobile |  |  | Question should be clarified to node level |
| 8 – Intel | Yes |  |  |
| 9 – ZTE | Yes |  |  |
| 10 – Nokia |  | No | The end point can be EAS or Ingress point. |
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| Rapporteur Proposal | Yes: 9, No: 1.  Update the solution principles to conclude this aspect: N6 delay for the pair of L-PSA UPF and EAS/designated IP (range) should be supported. | | |

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| KI#2\_Q2: Should N6 delay per Traffic Flow level? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Huawei |  |  | Needs further clarification |
| 3 – Samsung |  |  | Needs further clarification |
| 4 – CATT |  | No |  |
| 5 – Ericsson |  | No |  |
| 6 – LG Electronics |  | No |  |
| 7 – China Mobile | Yes |  |  |
| 8 – ZTE |  | No |  |
| 9 – Nokia |  | No |  |
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| Rapporteur Proposal | Yes: 1, No: 6.  Don’t support this aspect in Rel-19 | | |

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| KI#2\_Q3: Should SMF collect N6 delay measurement from L-PSA UPF? | | | |
| 1 – vivo | Yes |  |  |
| 2 – Qualcomm | Yes |  |  |
| 3 – Huawei | Yes |  |  |
| 4 – Samsung | Yes |  |  |
| 5 – CATT | Yes |  |  |
| 6 – Ericsson |  |  | Prefer AF to provide N6 delay |
| 7 – LG Electronics | Yes |  | AF can also provide N6 delay |
| 8 – China Mobile | Yes |  |  |
| 9 – Intel | Yes |  |  |
| 10 – ZTE |  |  | Prefer AF to provide N6 delay |
| 11- Nokia |  | No |  |
| 12 – China Telecom | Yes |  |  |
| Rapporteur Proposal | Yes: 9, No: 1.  Update the solution principles for KI#2 to conclude this aspect | | |

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| KI#2\_Q4: Should SMF collect N6 delay measurement from AF? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Huawei |  | No |  |
| 3 – CATT | Yes |  |  |
| 4 – Ericsson | Yes |  |  |
| 5 – LG Electronics | Yes |  |  |
| 6 – China Mobile |  | No |  |
| 7 – Intel |  | No |  |
| 8 – ZTE | Yes |  |  |
| 9 - Nokia |  | No |  |
| 10 – China Telecom | Yes |  |  |
| Rapporteur Proposal | Yes: 5, No: 5.  Don’t support this aspect in Rel-19. | | |

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| KI#2\_Q5: Should EAS load be aware and used by SMF/EASDF for the purpose of (re)selecting EAS or L-PSA UPF? | | | |
| 1 – vivo | Yes |  |  |
| 2 – Qualcomm |  | No |  |
| 3 – Huawei | Yes |  |  |
| 4 – Samsung |  | No |  |
| 5 – CATT | Yes |  |  |
| 6 – Ericsson |  | No |  |
| 7 – LG Electronics | Yes |  | Prefer to be aware by EASDF |
| 8 – China Mobile | Yes |  |  |
| 9 – Intel |  |  | Neutral |
| 10 – Nokia |  | No |  |
| 11 – China Telecom | Yes |  |  |
| Rapporteur Proposal | Yes: 6, No: 4.  SoH.  Supporting companies prepare solution principles for compromised way forward. | | |

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| KI#2\_Q6: Should NWDAF be involved to determine the N6 delay in the (re)selection procedure of L-PSA UPF? | | | |
| 1 – vivo | Yes |  |  |
| 2 – Qualcomm |  | No |  |
| 3 – Huawei |  | No |  |
| 4 – Samsung | Yes |  |  |
| 5 – CATT | Yes |  |  |
| 6 – China Mobile | Yes |  |  |
| 7 - Ericsson |  | No |  |
| 8 – LG Electronics |  | No |  |
| 9 – China Mobile |  | No |  |
| 10 – Intel |  | No |  |
| 11 - ZTE |  | No |  |
| 12 - Nokia |  | No |  |
| Rapporteur Proposal | Yes: 4, No: 8.  Don’t support this aspect in Rel-19 | | |

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| KI#2\_Q7: Should NWDAF be involved to determine EAS load in the (re)selection procedure of EAS? | | | |
| 1 – vivo | Yes |  |  |
| 2 – Qualcomm |  | No |  |
| 3 – Huawei |  | No |  |
| 4 – Samsung |  | No |  |
| 5 – CATT | Yes |  |  |
| 6 – Motorola Mobile | Yes |  |  |
| 7 - Ericsson |  | No |  |
| 8 – LG Electronics |  | No |  |
| 9 – China Mobile |  | No |  |
| 10 - Intel |  | No |  |
| 11 – ZTE |  | No |  |
| 12 - Nokia |  | No |  |
| Rapporteur Proposal | Yes: 3, No: 9.  Don’t support this aspect in Rel-19 | | |

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| KI#3\_Q1: Should CAT-A solution: UL and DL traffic forwarding via UL CL over the existing PDU Session be supported? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Huawei | Yes |  |  |
| 3 – Samsung | Yes |  |  |
| 4 – CATT | Yes |  |  |
| 5 – Ericsson |  | No |  |
| 6 – LG Electronics |  |  | Neutral |
| 7 – China Mobile | Yes |  |  |
| 8 – Intel | Yes |  |  |
| 9 - ZTE | Yes |  |  |
| 10 - Nokia |  | No |  |
| 11 – China Telecom | Yes |  |  |
| Rapporteur Proposal | Yes: 7, No: 3.  SoH to select one option to move forward.  Supporting companies prepare solution principles for compromised way forward. | | |

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| KI#3\_Q2: Should CAT-B solution (Sol#21): UL and DL traffic forwarding via direct tunnel between L-PSA UPF and C-PSA UPF independent of PDU Session be supported? | | | |
| 1 – Huawei |  | No |  |
| 2 – Samsung |  |  | Neutral |
| 3 – CATT |  | No |  |
| 4 – Ericsson | Yes |  |  |
| 5 – LG Electronics |  |  | Neutral |
| 6 – China Mobile |  | No |  |
| 7 – ZTE |  | No |  |
| 8 - Nokia | Yes |  |  |
| 9 – China Telecom |  | No |  |
| Rapporteur Proposal | Yes: 2, No: 5.  Don’t support this aspect in Rel-19 | | |

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| KI#3\_Q3: Should both CAT-A solution and CAT-B solution be supported? | | | |
| 1 – Qualcomm |  | No |  |
| 2 – Huawei | Yes |  |  |
| 3 – Samsung | Yes |  |  |
| 4 – CATT |  | No |  |
| 5 – Ericsson |  | No |  |
| 6 – LG Electronics |  |  | Neutral |
| 7 – China Mobile |  | No |  |
| 8 - Intel | Yes |  |  |
| 9 - ZTE |  | No |  |
| 10 - Nokia |  | No |  |
| Rapporteur Proposal | Yes: 3, No: 6.  Don’t support two CATs in Rel-19. | | |

# 3. Open points for further discussions

Some of the following points requires further discussion to conclude if any enhancement is required for the normative phase:

* For KI#1:
  + Per NWM discussion, I-SMF based solution (i.e. #1, #5, #26) has been selected as way forward (8 Yes, 1 No) for KI#1. While some companies think I-SMF based solution can’t satisfy the requirement in field, they want to pursue the L-SMF based solution.
  + **SA2 needs to decide whether L-SMF based solution (i.e. #3, #4, #7) can also be supported as an option to solve KI#1**.
* For KI#2:
  + **SA2 needs to decide whether EAS load should be aware and used by SMF/EASDF for the purpose of (re)selecting EAS or L-PSA UPF.**
* For KI#3:
  + Per NWM discussion, CAT-A solution looks more promising to move forward. Per offline discussion, supporting companies for CAT-A solution agreed to select one option between solution#17 and #18 to move forward.
  + **SA2 needs to decide which option to be selected between solution#17 and #18.**

The corresponding SoH questions are provided in the slides.