**3GPP TSG-CT WG1 Meeting #141eC1-232702**

**Online 17– 21 April 2023**

Title: LS on applicability of IWK to mixture of control plane only PDU session and non-control plane only

Response to:

Release: Rel-18

Work Item: 5GProtoc18

Source: CT1

To: SA2

Cc:

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

Attachments:

**1. Overall Description:**

CT1 would like to seek guidance in relation to the following from subclause in TS 23.501:

If the UE and the network support both the control plane CIoT 5GS optimization and N3 data transfer, then when receiving the UE's request for a PDU session establishment, the AMF decides whether the PDU session should be NEF PDU session or N6 PDU session as specified in 3GPP TS 23.501 [8] and then:

a) if NEF PDU session is to be established for unstructured data type, the AMF includes control plane only indication for the requested PDU session to the SMF;

b) if N6 PDU session is to be established and the DNN or S-NSSAI of the newly requested N6 PDU session supports interworking with EPS as specified in 3GPP TS 23.502 [9]:

1) if there are existing N6 PDU sessions supporting interworking with EPS for this UE that were established with the control plane only indication, the AMF includes the control plane only indication for the newly requested N6 PDU session to the SMF; or

2) if there are existing N6 PDU sessions supporting interworking with EPS for this UE that were established without the control plane only indication, the AMF does not include the control plane only indication for the newly requested N6 PDU session to the SMF;

3) if there is no existing N6 PDU session supporting interworking with EPS for this UE, the AMF determines whether to include the control plane only indication for the newly requested N6 PDU session to the SMF based on local policies, the UE's preferred CIoT network behaviour and the supported CIoT network behaviour; and

c) if N6 PDU session is to be established and the DNN or S-NSSAI of the N6 PDU session does not support interworking with EPS as specified in 3GPP TS 23.502 [9], the AMF determines whether to include the control plane only indication for the newly requested N6 PDU session to the SMF based on local policies, the UE's preferred CIoT network behaviour and the supported CIoT network behaviour

And the following from subclause 4.3.2.2.1 in TS 23.502:

“If the AMF determines that the RAT type is NB-IoT and the number of PDU Sessions with user plane resources activated for the UE has reached the maximum number of supported user plane resources (0, 1 or 2) based on whether the UE supports UP data transfer and the UE's 5GMM Core Network Capability as described in Clause 5.31.19 of TS 23.501 [2], the AMF may either reject the PDU Session Establishment Request or continue with the PDU Session establishment and include the Control Plane CIoT 5GS Optimisation indication or Control Plane Only indicator to the SMF”

Scenario for UE in NB-Iot:

1. UE has established the maximum allowed 2 PDU sessions and network did not indicate control-plane only and provided mapped EPS bearers for N26 interworking support
2. UE is attempting to establish an additional PDU session which the 5G core can decide to use control plane only following option specified in TS 23.502.

Q1) Can the additional established PDU session in step 2 be subject to inter-working with EPS given the limitation specified in above text from TS 23.501?

Q2) if the answer to Q1 is YES, then Does the UE need to do anything during TAU procedure for idle or connected mode interworking to EPS? or target MME will take care of this if it ever happened?

**2. Actions:**

**To SA2: CT1 kindly requests SA2 to answer the questions above.**

**3. Date of Next CT1 Meetings:**

CT1#142 22nd – 26th May 2023 Bratislava

CT1#143 21st – 25th August 2023 Goteborg

CT1#144 9th – 13th October 2023 China (TBC)

CT1#145 13th – 17th November 2023 Chicago