**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 5.31.4.1 in TS 23.501:

“*The following rules apply for the use of the Control Plane Only Indicator during PDU Session Establishment:*

*- If N3 data transfer was not successfully negotiated, all PDU Sessions shall include Control Plane Only Indicator.*

*- If N3 data transfer was successfully negotiated then:*

*- For a new PDU Session for a DNN/S-NSSAI for which the subscription data for SMF Selection includes an Invoke NEF indication (i.e. for a PDU Session which will be anchored in NEF), the AMF shall always include the Control Plane Only Indicator.*

*- For a new PDU Session for a DNN/S-NSSAI for which the subscription data for SMF Selection does not include an Invoke NEF indication (i.e. for a PDU Session which will be anchored in UPF) and that supports interworking with EPS based on the subscription data defined in TS 23.502 [3]:*

*- for the first PDU Session the AMF determines based on local policy whether to include the Control Plane Only Indicator or not;*

*- if the AMF previously included a Control Plane Only Indicator for PDU Sessions that support interworking with EPS based on the subscription data defined in TS 23.502 [3] and that are anchored in UPF, the AMF shall include it also for the new PDU Session;*

*- if the AMF previously did not include a Control Plane Only Indicator for any of the PDU Sessions that support interworking with EPS based on the subscription data defined in TS 23.502 [3] and that are anchored in UPF, the AMF shall not include it for the new PDU Session.*

*- For a new PDU Session for a DNN/S-NSSAI for which the subscription data for SMF Selection does not include an Invoke NEF indication (i.e. for a PDU Session which will be anchored in UPF) and that does not support interworking with EPS based on the subscription data defined in TS 23.502 [3], AMF determines individually per PDU Session whether to include the Control Plane Only Indicator or not.”.*

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 the target MME will take care of this if it happens?

**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