**3GPP TSG-WG SA2 Meeting #156e *S2-230xxxx***

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

**Source: Huawei, HiSilicon**

**Title: N3GPP device behind 5G-RG definitions**

**Document for: Discussion**

**Agenda Item: [Agenda Item]**

**Work Item / Release: 5WWC-Ph2 / Rel-18**

*Abstract: A summary of what this is about. Don’t start it with “This contribution…”*

# 1. Discussion

We have currently some definition for N3GPP devices in TS 23.501 and in 5WWC TR and in TS 23.501 related to PIN. The plethora of definitions needs to be consistent. The table 1 shows the existing definitions.

The key point is whether to refer to deice capability supported or to the capability been used. For example a 3GPP UE may have N3GPP access, e.g. WLAN and BT, but it may not support Untrusted and Trusted capability or it may support but not use it since for example the user disabled it. An other example is the support of Voice over Wifi, the UE may or not support, and in case that it is supported the user may enable or disable it. All this discussion is not a novelty , for example see the definition for N5CW in TS 23.501.

The considerations related to the definitions are:

* N3GPP device definition in 5WWC TR must be make generic or changed to be specific only to 5WWC. If make generic the term needs to cover other scenarios.
* N3GPP device term is used extensively, but never defined formally

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|  |  |  | note |
| 3GPP UE |  |  |  |
| N5CW (5G UE) | 23.501  | **Non-5G-Capable over WLAN device ,** A Non-5G-Capable over WLAN device (N5CW) is not capable to operate as a 5G UE that supports 5GC NAS signalling over a WLAN access network, however, it may be capable to operate as a 5G UE over NG-RAN. | not in definition section, but in the clause |
| Non-3GPP device | 5WWC\_PH2 TR | A device that use Non-3GPP access technology to connect to the RG and does not support NAS over non 3GPP access. |  |
| NAUN3 **Non Authenticable Non-3GPP (NAUN3) devices** | 5WWC\_PH2 TR | A Non-3GPP device that the 5GC cannot authenticate**.**  |  |
| AUN3 **Authenticable Non-3GPP (AUN3) devices** | 5WWC\_PH2 TR | A Non-3GPP device that the 5GC can authenticate**.** |  |

Based on above consideration is proposed to introduce the following definitions

1. **Non-5G-Capable over Non-3GPP access device (N5CN3) :** A Non-5G-Capable over Non-3GPP access (e.g. WLAN, BT,..) device is not capable to operate as a 5G UE that supports 5GC NAS signalling over a Non-3GPP access network, however, it may be capable to operate as a 5G UE over NG-RAN, if supports 3GPP Access.
2. **Non-Authenticable Non-3GPP device (NAUN3) :A** Non-Authenticable Non-3GPP device is a Non-5G-Capable over Non-3GPP access which supports only Non-3GPP access (e.g. WLAN, BT,..) and that the 5GC is not able to authenticate
3. **Authenticable Non-3GPP device (AUN3) :A** Authenticable Non-3GPP device is a Non-5G-Capable over Non-3GPP access which supports only Non-3GPP access (e.g. WLAN, BT,..) and that the 5GC is able to authenticate

Note: the N5CW device is a subset of N5CN3 devices

# 3. Conclusion and proposal(s)

It is proposed to add the above definition in TS 23.501(?) or only is TS 23.316(?)