3GPP TSG-RAN WG3 #123bis R3-242159

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Agenda Item: 12.2

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Title: TP for TR 38.799 on WAB general requirements and architecture

Document for: Agreement

# Introduction

This document provides a TP for WAB general requirements and architecture.

# Discussion

**Proposal 1: RAN3 to agree the TP for TR 38.799 WAB general requirements and architecture in ANNEX.**

# ANNEX (WAB TP for TR 38.799)

**Start of Change**

# X Wireless Access and Backhaul (WAB)

## X.1 General

The study is based on the following requirements:

* The WAB-node includes a gNB component (WAB-gNB) and an MT component (WAB-MT).
* The WAB-gNB is based on the gNB functionality specified in TS 38.300 [x] and TS 38.401 [y].
* The CU-DU split of the WAB-gNB is not considered in this study.
* The WAB-MT supports at least a subset of UE functionalities.
* The NR Uu is used for the radio link between WAB-gNB and the served UEs.
* The NR Uu radio link between the WAB-gNB and the served UE does not use NTN.
* The study focuses on NR-Uu backhaul.
* In-band scenario for access and backhaul is not precluded to be studied.
* The study precludes the scenario where the access and the backhaul are in-band meanwhile the backhaul uses NTN.
* The study focuses on the use of WAB-MT´s PDU session via NR Uu as backhaul of WAB-gNB. Other options for the backhaul (including non-3GPP radio technology) are not precluded but are not a part of the study.
* A WAB-gNB cannot serve WAB-MTs.
* The study includes a scenario where the WAB-gNB and the WAB-MT connect to the same PLMN or to different PLMNs.
* The WAB-MT may connect to a public PLMN or an SNPN.
* The WAB-gNB may connect to a public PLMN or an SNPN.
* Legacy UEs can connect to the WAB-gNB, and there are no WAB-specific enhancements to these UEs.

## X.2 WAB Architecture

Figure X.Y-1 shows an example of WAB architecture for 5GS when the WAB-gNB traffic is transported via PDU session backhaul.



Figure X.Y-1: The WAB architecture for 5GS when the WAB-gNB traffic is transported via PDU session backhaul

Figure X.Y-2 shows an example of WAB architecture for 5GS when the WAB-gNB traffic is transported via non-3GPP backhaul:



Figure X.Y-2: The WAB architecture for 5GS when the WAB-gNB traffic is transported via non-3GPP backhaul

Figure X.Y-3 shows protocol stack examples of Control plane and User plane transport for a UE connected to the network via a WAB-node.



Figure X.Y-3: Protocol stack examples of Control plane and User plane transport for UEs connected via WAB-node

**End of Change**