

3GPP TSG RAN Rel-18 workshop

RWS-210166

Electric meeting, June 28 – July 2, 2021

Further enhancements for IAB in Rel-18

Source: vivo

Document for: Discussion and Decision

Agenda item: 4.1

Background

- In Rel-16, basic functionalities for IAB were defined, including
 - ◆ IAB specific SSB, PRACH, synchronization, backhaul link resource allocation;
 - ◆ Routing, flow control;
 - ◆ Network structure.
- In ongoing Rel-17 IAB, the following are being discussed/specified
 - ◆ Duplexing enhancements, including
 - ✓ Simultaneous DU/MT TX, simultaneous DU/MT RX;
 - ✓ simultaneous UL (i.e. DU RX & MT TX) and simultaneous DL (i.e. DU TX & MT RX);
 - ✓ Intra/inter-donor NR-DC.
 - ◆ Enhancements: multiple hop latency, fairness, flow control
 - ◆ Topology adaptations, including
 - ✓ intra/inter-CU migration (partial/full migration, CHO and DAPS);
 - ✓ intra/inter-donor-DU local rerouting;
 - ✓ Backhaul link RLF handling.

Potential further enhancements in Rel-18

High priority:

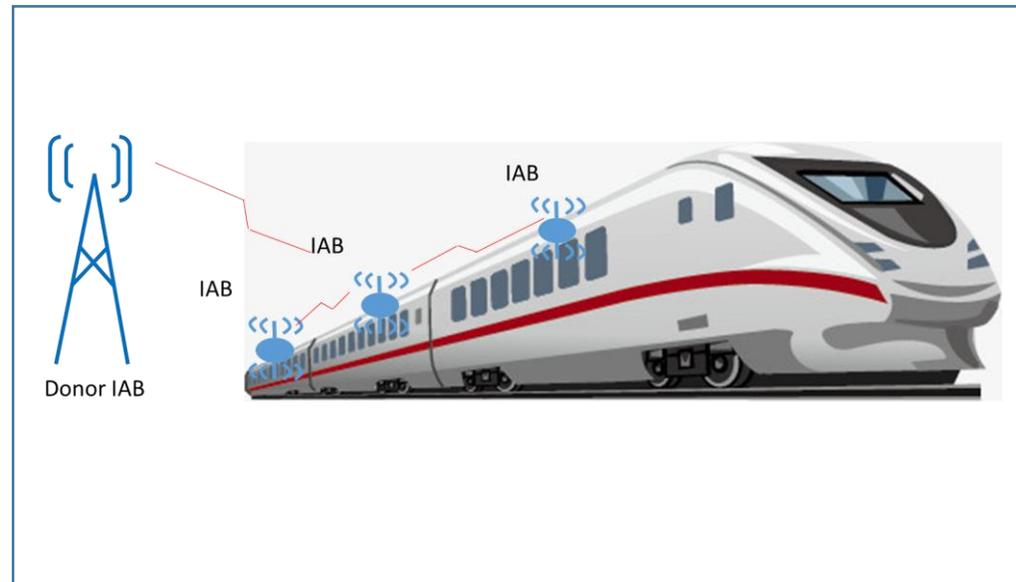
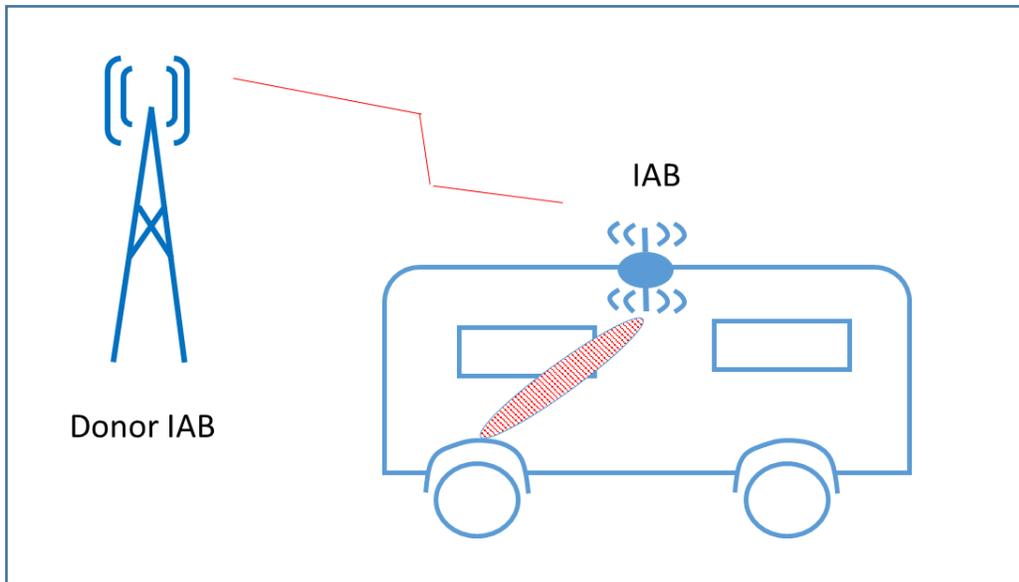
- Mobile IAB ([RAN2](#), RAN3)
- Smart repeater ([RAN1](#), RAN2)

Low priority:

- Mesh-like IAB([RAN2](#), RAN3)
- IAB over unlicensed spectrum ([RAN1](#), RAN2)

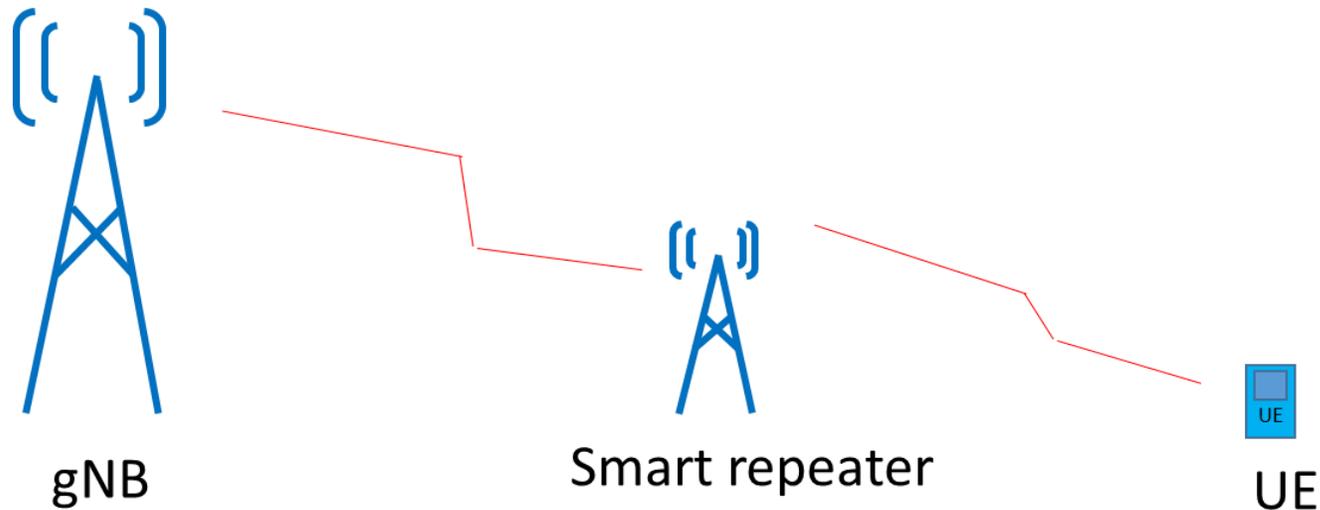
Mobile IAB (RAN2, RAN3, high priority)

- Main application scenarios: IAB node mounted in high speed train and bus.
- Objectives: study/define the solutions for
 - ◆ measurements and RRC-INACTIVE/IDLE UE mobility;
 - ◆ migration of both IAB nodes and the served UEs, for both fixed and non-fixed tracks;
 - ◆ service interruption reduction etc.



Smart repeater (**RAN1**, RAN2, high priority)

- Application scenarios: low cost single-hop relaying.
- Objectives: study to define a non-regenerative relay node somewhere between Rel-16/17 IAB node and the repeater (referred to as smart repeater), including
 - Smart repeater structure and functionalities;
 - Mechanism for gNB to control the UL/DL TX/RX of the smart repeater.



THANK YOU.

谢谢。