3GPP TSG RAN Rel-18 workshop
Electronic Meeting, June 28 - July 2, 2021

RWS-210358

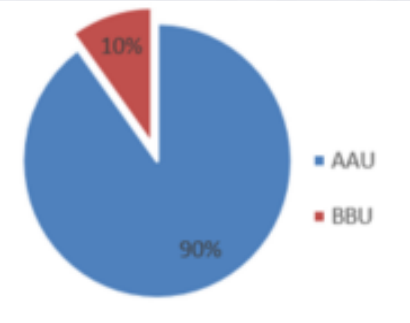
Network energy saving

Agenda Item: 4.3
Source: CMCC

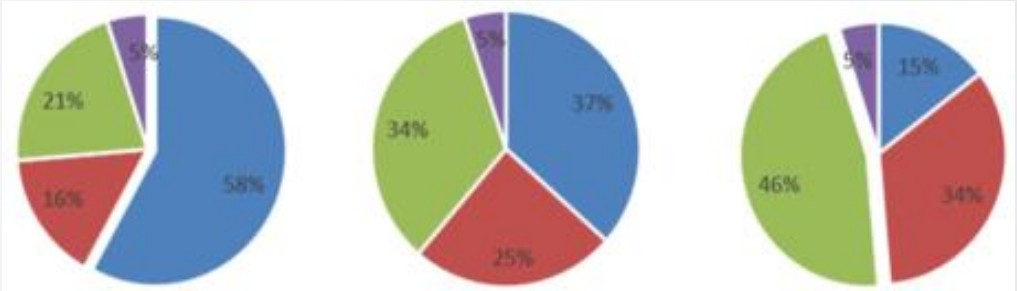
Motivation

- Network energy cost is the primary focus of operators for a sustainable 5G deployment.
- Power consumption of a 5G base station will be 3~4 times higher than LTE, due to 8 times TX/RX channels, 10 times bandwidth and larger transmission powers.
- Standardization efforts have been given to UE power savings in Rel-15/16/17, network power consumption has not been the focus.
- More efficient energy saving mechanism is needed to timely respond to the real-time traffic/UE distribution.

Power consumption Percentage of BS component



Power consumption Percentage of AAU components in difference load status



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Enhancement of energy saving should be considered in Rel-18

Potential objectives

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- General requirement: solutions for network energy saving should allow early implementation, i.e., not largely rely on terminal assistance.
- Definition of different energy saving modes and network signalling support to enable energy saving.
- Multi-RAT/Multi-carrier synergy energy saving mechanisms
- Traffic/UE behavior/user experience aware energy saving mechanisms

Proposals

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- Proposal 1: Network energy saving should be considered in Rel-18
- Proposal 2: It is to decide whether to handle it in dedicated WI or as integral part of other WIs for each features.

中国移动
China Mobile

THANK YOU !