3GPP TSG RAN Meeting #68
Malmö, Sweden, June 15 - 18, 2015
Agenda: 13.1.3

RP-150716

Motivation for a New WI: Network Assistance for Network Synchronization

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Huawei Proprietary

Background

- LTE FDD network will be able to perform better with time synchronization between eNBs for the features, e.g, eICIC, eMBMS, NAICS, eCOMP, and etc.

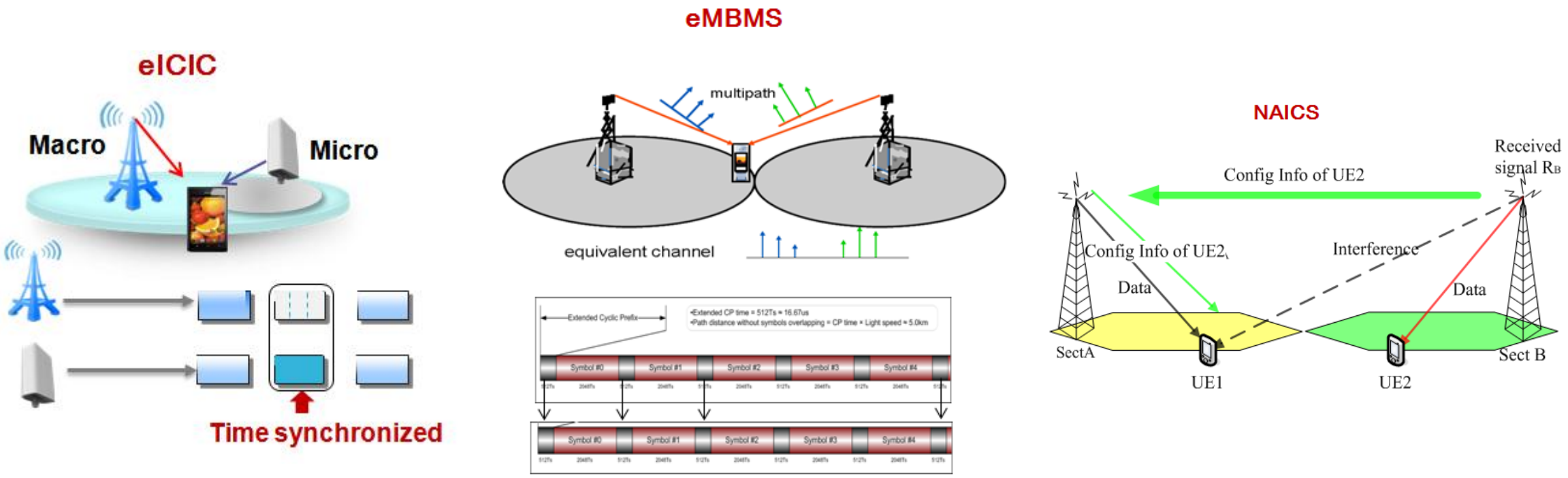

Figure 1. Example features

Existing mechanisms for LTE sync

- **GPS**
  - Pros: high accuracy
  - Cons: installation is needed for each site; cost is high.
  - What about indoor?

- **IEEE1588v2**
  - Pros: high accuracy
  - Cons: Both hardware and software updates are needed.
  - What about some backhaul types?

- **RIBS**
  - Pros: the solution of network listening only has radio network impacts
  - Cons: limitation to small cells cases; an additional receiver is needed.
  - What about the hidden cells?

Objectives for Network Assistance

- The objective of this work item is to provide a way of Radio Network Assistance to help synchronize LTE FDD networks.

- The detailed descriptions are followed:
  - Introduce a UE assisted Radio Network synchronization scheme without standards impacts on UE.
  - Enhance X2 and possibly S1 signaling to convey additional synchronization information between two eNBs, e.g., during handover.

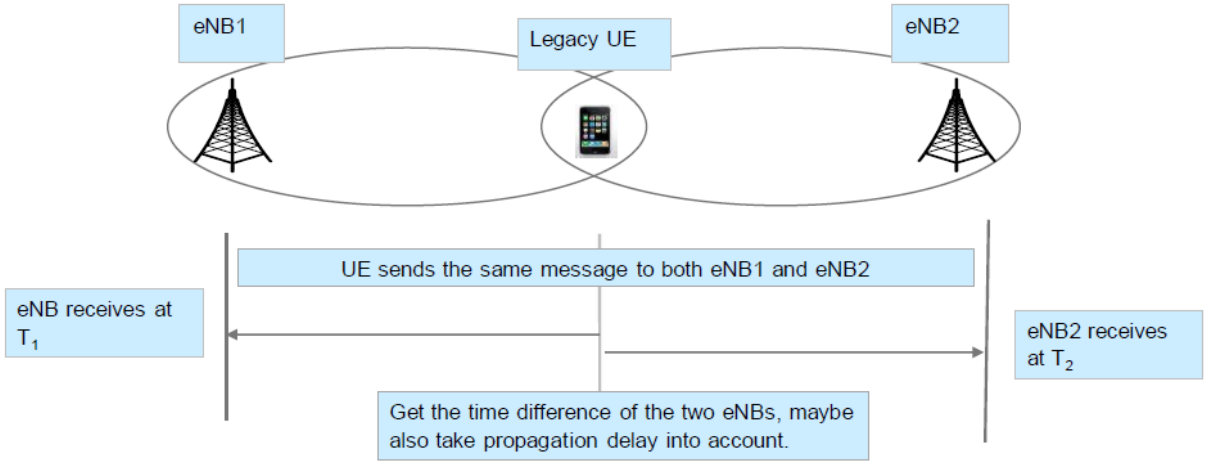

Figure 2. Principle of Radio Network Assisted Synchronization

Thank you !