

Network Topology Advertisement for IEEE 802.16j

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Purpose:

. Propose network topology advertisement for IEEE802.16j

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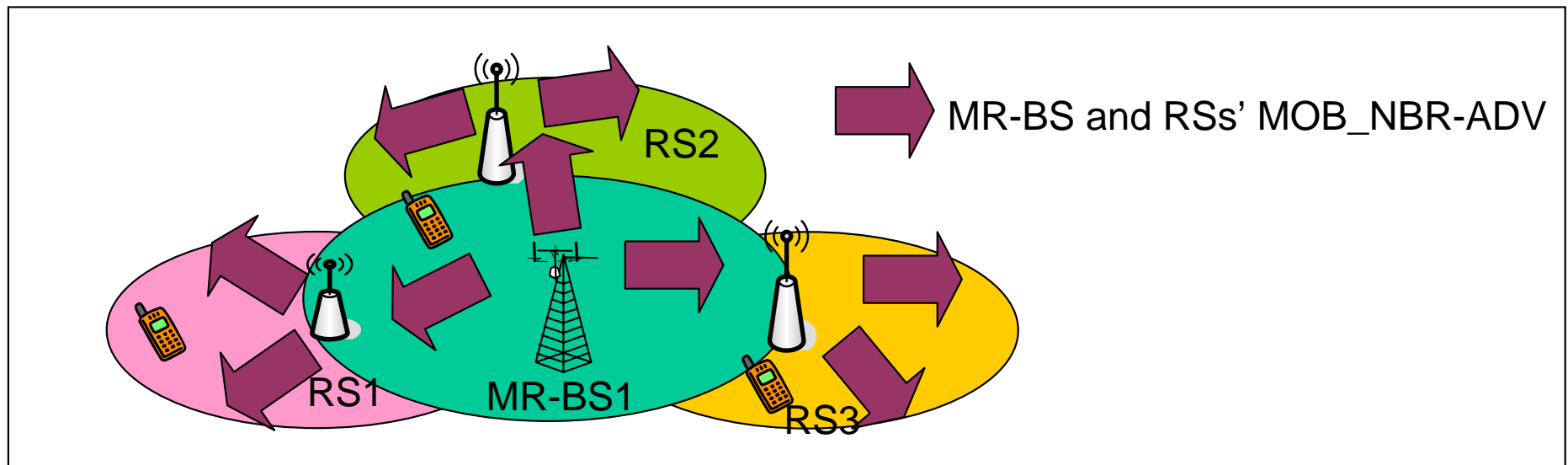
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General Description

- This contribution proposes an efficient network advertisement for 16j that can be used to facilitate the handover procedures.
- In 16e, the neighbor base stations are advertised by the serving base station through the message MOB_NBR_ADV.
- In an MR network, the advertisement needs to include RSs that acts like BS to MSs.
- How to perform this functionality efficiently is an important issue if the number of RSs is not too small.

The Existing 16e's Network Topology Advertisement

- One MOB_NBR-ADV with all information of neighbor stations is broadcast by the MR-BS.
 - RS receives this message and forward it to all its subordinate RSs and MS.
 - MSs get the overall network topology information no matter where it is located.
 - It is not efficient.



The Propose Method

- Instead of the MR-BS broadcasts all the information, the MR-BS and RS broadcast its own MOB_NBR-ADV in our proposal. Therefore, it is more efficient.
 - If the topology has changed, the MR-BS transmits a newly designed message MOB_RS_NBR-REQ to an RS to notify the change of its neighbors and the RS responds with the message MOB_RS_NBR-RES .
 - RS will update its neighborhood information accordingly and broadcast a new MOB_NBR-ADV.
 - MSs only get the relevant neighborhood information based on their location

