

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Obtaining Sleep Mode Information in RS with distributed scheduling	
Date Submitted	2007-3-05	
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Re:	IEEE 802.16j-06/027: "Call for Technical Proposals regarding IEEE Project P802.16j"	
Abstract	In MR networks, RS could have more flexibility for scheduling, if it can obtain MS sleep mode information.	
Purpose	Discuss and adopt proposed text.	
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Obtaining Sleep Mode Information in RS with Distributed Scheduling

This revision of contribution propose a harmonization text proposal on sleep mode.

1. Problem Statement

In MR networks, distributed scheduling RS shall allocate resources to this sleep-mode MS to properly perform the event-based actions. However, if the RS does not decode MOB_SLP-RSP messages, it may not allocate proper resources to MSs on time, thus the event-based actions may failed.

Moreover, if RS, in distributed case, can know that an MS has switched to sleep mode by decoding the MOB_SLP-RSP message, it shall avoid sending management message to this MS. Also, an RS, in distributed case, can cancel the bandwidth resources allocated to this MS during the sleep period, thus saving bandwidth.

In order to facilitate the centralized management of sleep mode in distributed MR networks, text is required to clarify how the RS and MR-BS shall synchronize the sleep-mode information between MR-BS and RS.

MR-BS can instruct the MS sleep mode by sending MOB_SLP-RSP, RNG-RSP, or DL sleep control extended subheader. If the RS could share the security key (HMAC, CMAC) with MR-BS, it can obtain the sleep mode information by decoding these received message (as shown in figure 1).

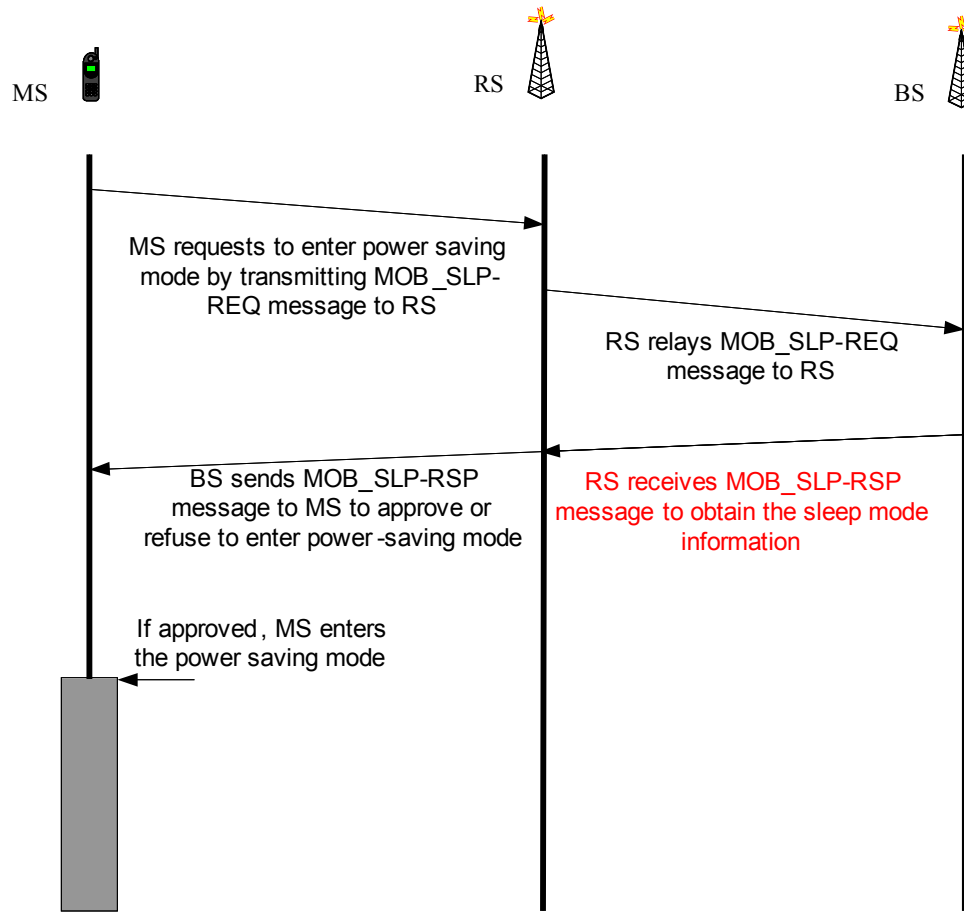


Fig. 1. RS decodes the MOB_SLP_RSP message for further scheduling

3. Specific Text Change

6.3.21 Sleep mode for mobility-support MS

[Insert a new subclause after 6.3.21.7]

6.3.21.7.x MS sleep mode support for distributed scheduling approach

In MR networks, the sleep mode shall be centrally controlled by MR-BS in the presence distributed scheduling.

In distributed case, RS may receive and decode the relevant sleep-mode messages, such as MOB_SLP-RSP, RNG-RSP, or DL sleep control extended subheader, sent by MR-BS to obtain sleep mode information, so as to be aware of MSs being in sleep state.