Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
Title	Unsolicited RNG-RSP in Non-transparent RS System under Distributed Scheduling
Date Submitted	2006-03-13
Source(s)	Kanchei (Ken) Loa, Yi-Hsueh Tsai, Chih-Chiang Hsieh, Yung-Ting Lee, Hua-Chiang Yin, Shiann-Tsong Sheu, Frank C.D. Tsai, Youn-Tai Lee, Heng-Iang Hsu Institute for Information Industry 8F., No. 218, Sec. 2, Dunhua S. Rd., Taipei City, Taiwan. Voice: +886-2-2739-9616 loa@iii.org.tw
	Hang Zhang, Peiying Zhu, Mo-Han Fong, Wen Tong, David Steer, Gamini Senarath, Derek Yu, Mark Naden, G.Q. Wang Nortel 3500 Carling Avenue Ottawa, Ontario K2H 8E9 Yuefeng Zhou, Masato Okuda Fujitsu [add co-authors here]	Voice: +1 613 7631315 WenTong@nortel.com pyzhu@nortel.com yuefeng.zhou@uk.fujitsu.com okuda@jp.fujitsu.com
Re:	IEEE 802.16j-07/007r2: "Call for Technical Comments and Contributions regarding IEEE Project 802.16j"
Abstract	This contribution proposes procedures for unsolicited RNG-RSP in non-transparent RS system under Distributed Scheduling
Purpose	Text proposal for 802.16j Baseline Document
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance

Unsolicited RNG-RSP in Non-transparent RS System under Distributed Scheduling

Introduction

This contribution describes MS unsolicited RNG-RSP in non-transparent RS system under distributed scheduling scheme. In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r2 are listed below.

Text Proposal

6.3.10 Ranging

6.3.10.3 OFDMA based ranging

6.3.10.3.4 Relaying support for OFDMA based ranging

[Insert the following sebclause]

6.3.10.3.4.4 Unsolicited RNG-RSP in non-transparent RS systems

6.3.10.3.4.4.1 Non-transparent RS with Centralized Scheduling

[This subclause is just a place holder. The contents are in a different contribution.]

6.3.10.3.4.4.2 Non-transparent RS with Distributed Scheduling

When the offsets of frequency, power, and timing for any other data transmission from the MS are beyond the tolerance defined in this specification or the MS have to attached to another access station, the RS shall follow the precedure defined in 6.3.10.3.4.4.1 to send an unsolicited RNG-RSP to the MS.

The RS should send an unsolicited RNG-RSP as a response to a CDMA-based bandwidth-request from MS, which results in continue status.

When RS receives the BR CDMA ranging code resulting in continue status, RS shall locally send RNG-RSP to MS on the access link.

The message sequence charts (Table 364, Table yyy) and flow charts (Figure zzz) define the unsolicited RNG-RSP process that shall be followed by compliant RSs and MR-BSs.

Table yyy: Unsolicited RNG-RSP triggered by BR ranging code in non-transparent RS system under distributed scheduling

MR-BS	RS	MS

[Time to send the BR ranging opportunity in RS access link]

send map containing Periodic Ranging IE with broadcast CID

UL-MAP →

CDMA Ranging Code ←

[Receive Ranging Code]

Transmit randomly selected BR Ranging code in a randomly selected Ranging Slot from available Ranging Region

send RNG-RSP containing adjustment information, status, ranging code attributes with initial ranging CID. Status = Continue

RNG-RSP →

Receive RNG-RSP message with Ranging Code and Ranging Slot matching sent values. Adjust Time & Power parameters

Wait for Bandwidth Request Code

Bandwidth Request Code

Good enough?

Yes —

Yes

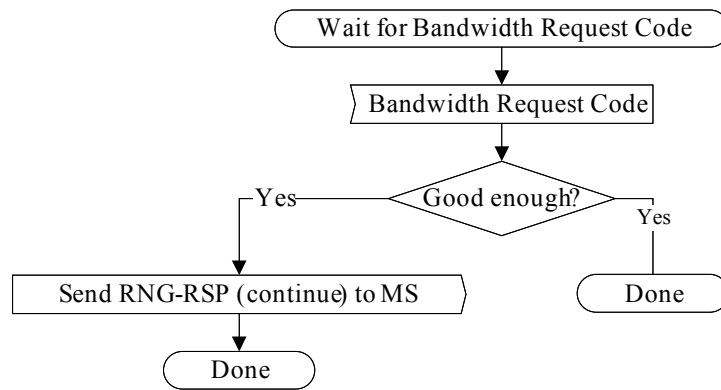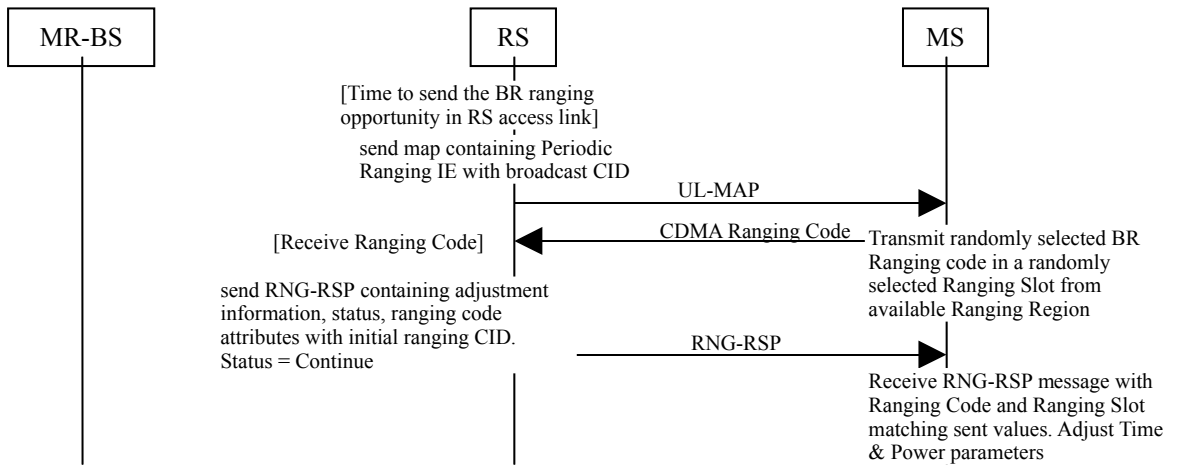**Send RNG-RSP (continue) to MS**

Done

Done

Figure zzz Unsolicited RNG-RSP triggered by BR ranging code in non-transparent RS system – Access non-transparent RS