Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Comment on Unsolicited RNG-RSP in transparent RS System**
Date Submitted	**2007-07-18**
Source(s)	Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee, Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee, Institute for Information Industry 8F, No. 218, Sec. 2, Dunhua S. Rd., Taipei City 106, Taiwan	Voice: +886-2-27399616 Fax: +886-2-23782328 loa@iii.org.tw
Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"
Abstract	This contribution proposes the modified figures of MS unsolicited RNG-RSP in non-transparent RS system under centralized scheduling scheme based on comment #1141 of 80216j-07_014r4.cmt.
Purpose	Text proposal for 802.16j Baseline Document.
Notice	*This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups*. It represents only the views of the participants listed in the "Source(s)" field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who 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	The contributor is familiar with the IEEE-SA Patent Policy and Procedures: <http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and <http://standards.ieee.org/guides/opman/sect6.html#6.3>. Further information is located at <http://standards.ieee.org/board/pat/pat-material.html> and <http://standards.ieee.org/board/pat>.

Comment on Unsolicited RNG-RSP in transparent RS System

Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee,
Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee
Institute for Information Industry (III)

Introduction

In order to reduce the overhead on the relay link, this contribution provides a new scheme for MS unsolicited RNG-RSP in transparent RS system. In this scheme, the RS sends unsolicited RNG-RSP to the MS locally instead of sending RNG-REQ to MR-BS. In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r4 are listed below.

Text Proposal

6.3.10.3.4.3 Unsolicited RNG-RSP in transparent RS systems

[Change the following text in line 56 of page 97 as indicated]

When the offsets of frequency, power, and timing for any other data transmission from the MS are beyond the tolerance defined in this specification, RSs shall either transmit a RNG-REQ message with the RS basic CID containing the MS basic CID to the serving MR-BS through the relay path, or locally send an unsolicited RNG-RSP to MS in optional transparent zone. In order to send RNG-RSP to MS in optional transparent zone, RS shall send a RS BR header to MR-BS.

After RS receives a bandwidth request CDMA ranging code, it should transmit an RNG-REQ MR-Code-REP message with the RS basic CID containing the CDMA BR ranging code to the serving MR-BS through the relay path with adjustment information of frequency, power, and timing corrections. When RS receives multiple codes in the ranging subchannel of a frame, the RNG-REQ MR-Code-REP message sent by the RS to serving MR-BS may contain information of multiple received codes.

When the MR-BS receives a bandwidth request CDMA ranging code, it shall wait for RNG-REQ MR-Code-REP with the same ranging code from its subordinate RSs for T48 timer.

The message sequence charts (Table xxx201d and Table yyy201e) and flow charts (Figure 108f, Figure 108g, Figure xxx108h and Figure yyy108i) define the unsolicited RNG-RSP process that shall be followed by compliant RSs and MR-BSs.

[Change the title of the following Table in page 99 as indicated]

Table 201d—Unsolicited RNG-RSP triggered by upstream traffic in non-transparent ~~RS system~~ mode

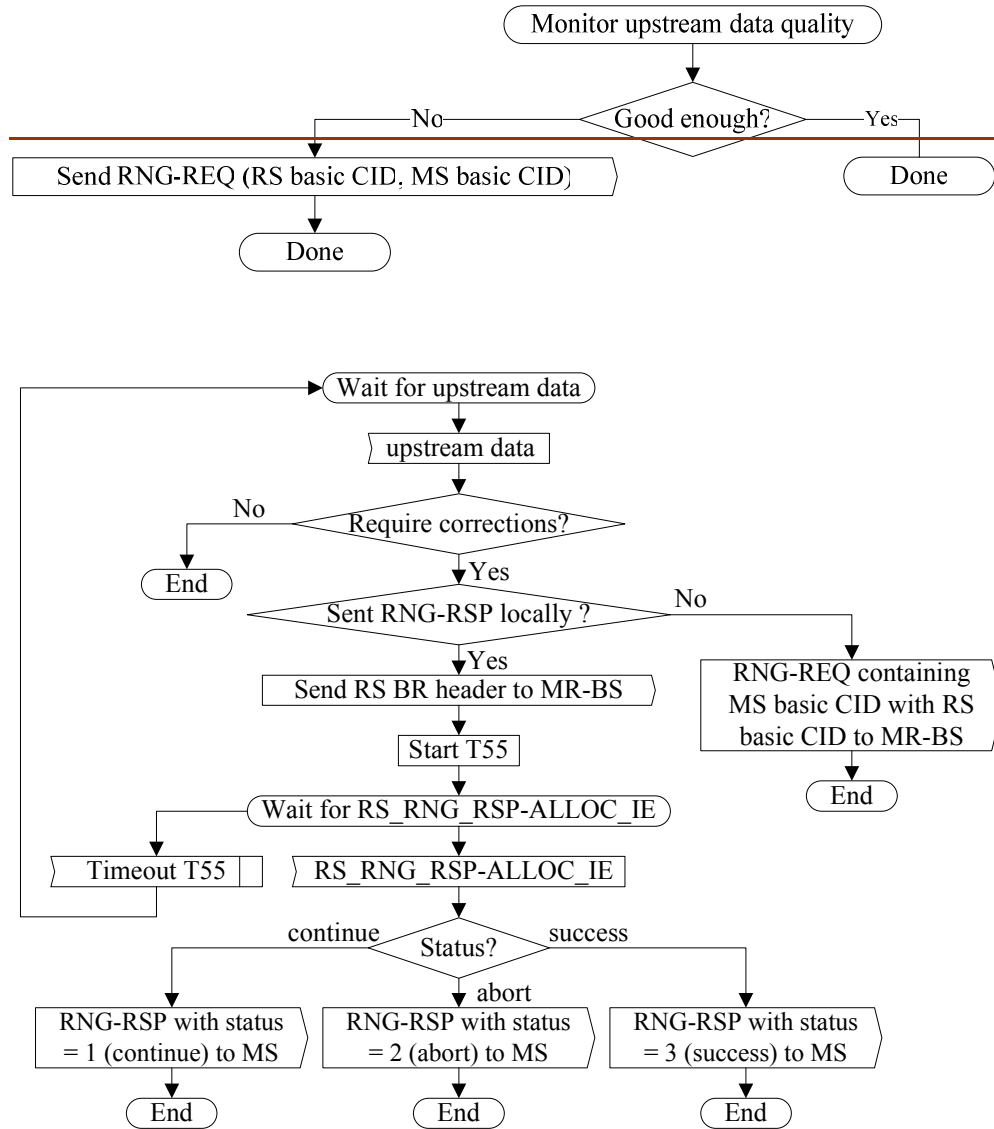*[Replace the following Figure 108f in page 99 as indicated]*

Monitor upstream data quality

No ← Good enough? → Yes

Send RNG-REQ (RS basic CID, MS basic CID)

Done

Done

Wait for upstream data

upstream data

Require corrections? — No

End

Yes

Sent RNG-RSP locally ? — No

Yes

Send RS BR header to MR-BS

RNG-REQ containing MS basic CID with RS basic CID to MR-BS

Start T55

End

Wait for RS_RNG_RSP-ALLOC_IE

Timeout T55 | RS_RNG_RSP-ALLOC_IE

continue ← Status? → success

abort

RNG-RSP with status = 1 (continue) to MS

RNG-RSP with status = 2 (abort) to MS

RNG-RSP with status = 3 (success) to MS

End | End | End

Figure 108f—Unsolicited RNG-RSP ~~in Transparent RS system –~~ triggered by upstream traffic at Transparent Access RS

3

[Replace the following Figure 108g in page 99 as indicated]
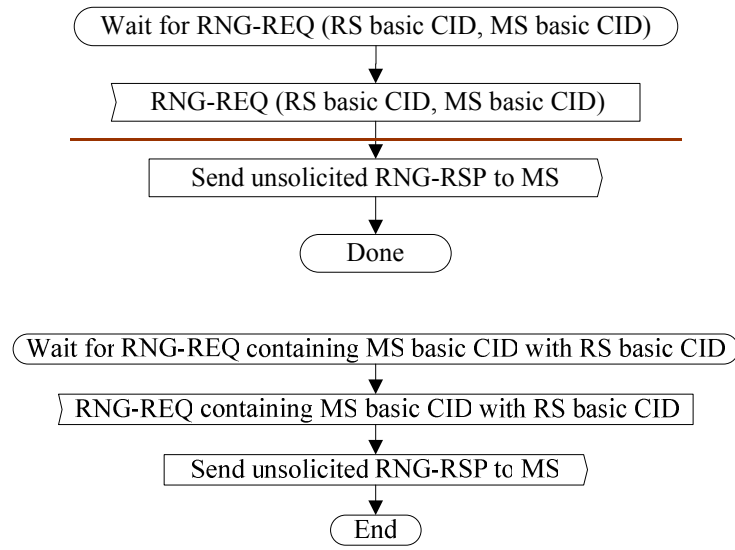

Figure 108g—~~Unsolicited RNG-RSP in Transparent RS system~~ Handle RNG-REQ in transparent mode at MR-BS

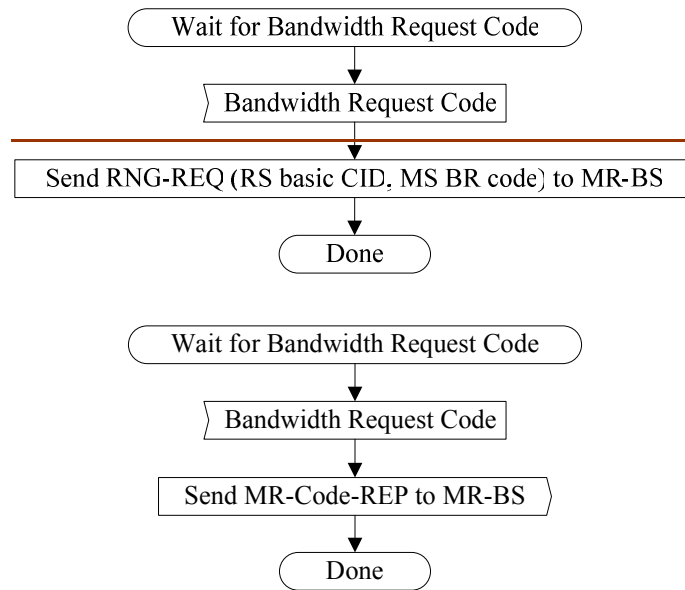*[Replace the following Figure 108h in page 99 as indicated]*

Figure 108h Unsolicited RNG-RSP triggered by CDMA BR ranging code ~~in Transparent RS system~~ at Transparent Access RS

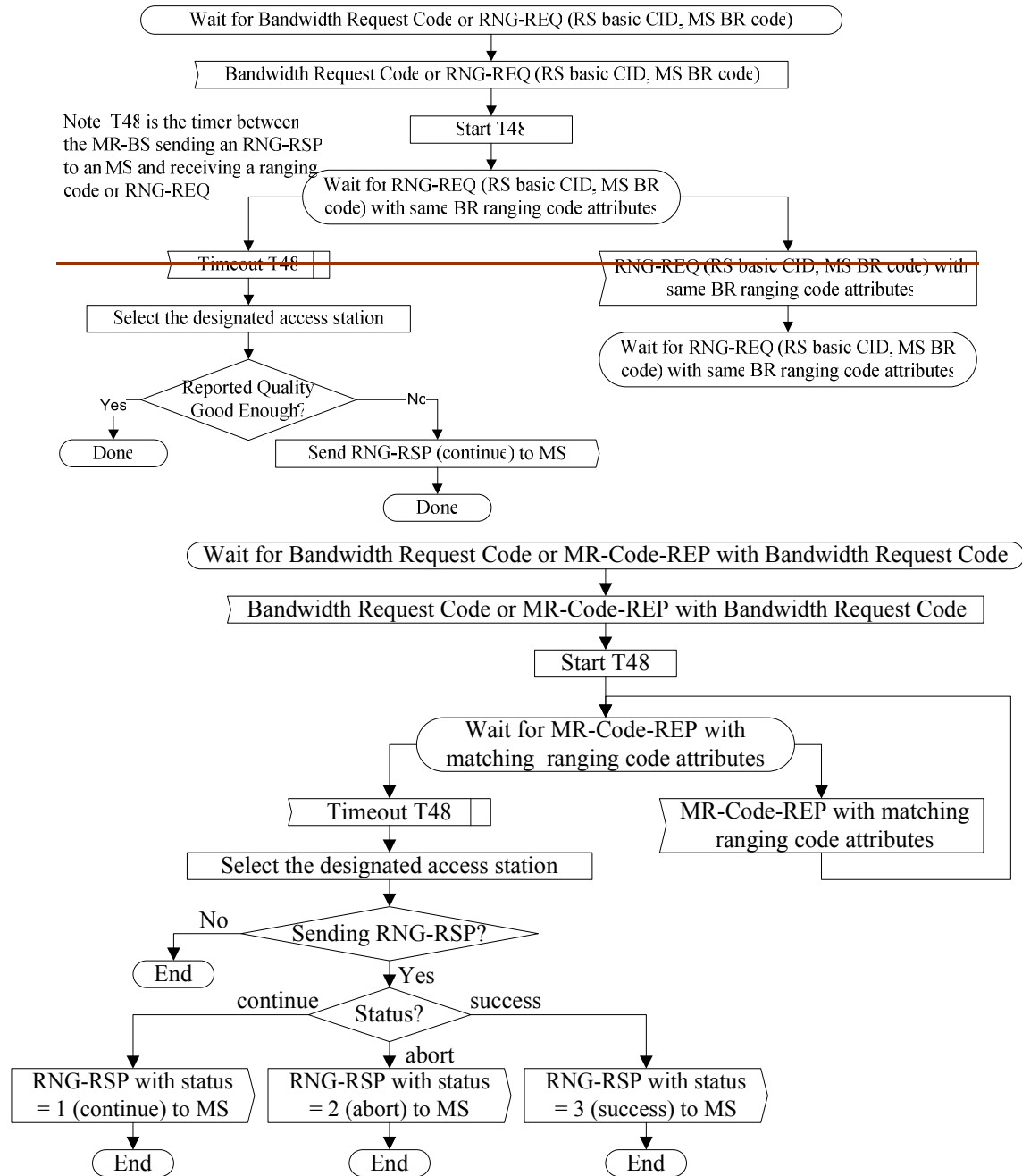*[Replace the following Figure 108i in page 99 as indicated]*

Figure 108i Unsolicited RNG-RSP triggered by CDMA BR ranging code in Transparent ~~RS system~~ mode at MR-BS

10.1 Global values

[Insert the following rows into Table 583 in page 169:]

Table 583—Parameters and constants

System	Name	Time reference	Minimum value	Default value	Maximum value
RS	T55	The timer between RS sending an RS_BR header to MR-BS and receiving the allocate bandwidth for adjusting UL timing offset, power level offset and frequency offset triggered by upstream traffic	tbd	tbd	tbd