

Unsolicited RNG-RSP with Non-transparent RS

IEEE 802.16 Presentation Submission Template (Rev. 8.3)

Document Number:

IEEE S802.16j-07/062

Date Submitted: 2007-01-16

Source:

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

Fax: 886-2-2378-2328

E-mail: loa@iii.org.tw

Hang Zhang, Peiyong 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

Voice: +1 613 7631315

E-mail: WenTong@nortel.com, pyzhu@nortel.com

Yu Ge, Peng-Yong Kong, Chen-Khong Tham
21 Heng Mui Keng Terrace, Singapore 119613

E-mail: geyu@i2r.a-star.edu.sg

[add co-authors here]

Venue:

IEEE 802.16 Session #47, London, UK

Base Document:

IEEE C802.16j-07/062 http://dot16.org/CSUpload//upload/Relay_db/C80216j-07_062.pdf

Purpose:

Propose the text regarding Unsolicited RNG-RSP with Non-transparent RS.

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.

IEEE 802.16 Patent Policy:

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 with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <<mailto:chair@wirelessman.org>> as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site <<http://ieee802.org/16/ipr/patents/notices>>.

Background

- The BS may send an unsolicited RNG-RSP as a response to
 - a CDMA-based bandwidth-request or
 - any other data transmissionfrom the SS

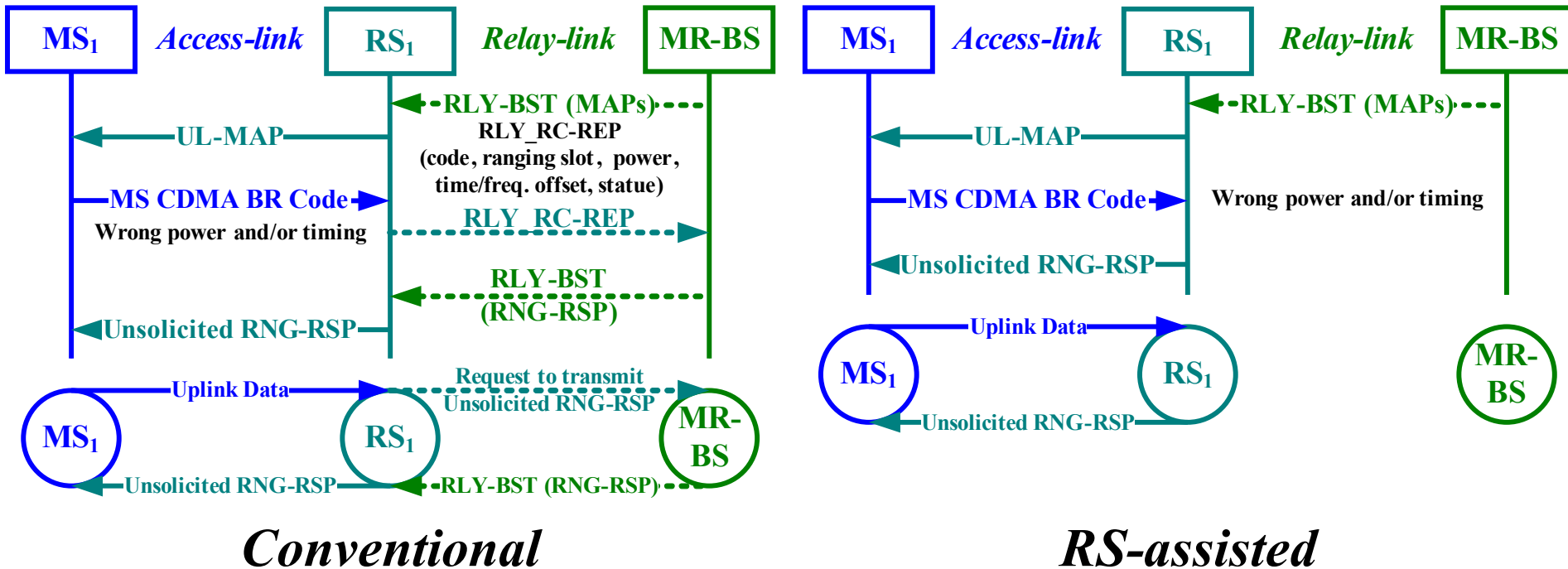
Requirements on Unsolicited RNG-RSP with Non-transparent RS

- The RS shall support unsolicited RNG-RSP procedure without any modification on MS
- The unsolicited RNG-RSP procedure should be initiated by RS and centrally controlled by the MR-BS but allow RS-assisted scenarios under current security model defined in IEEE 802.16-2004/16e-2005

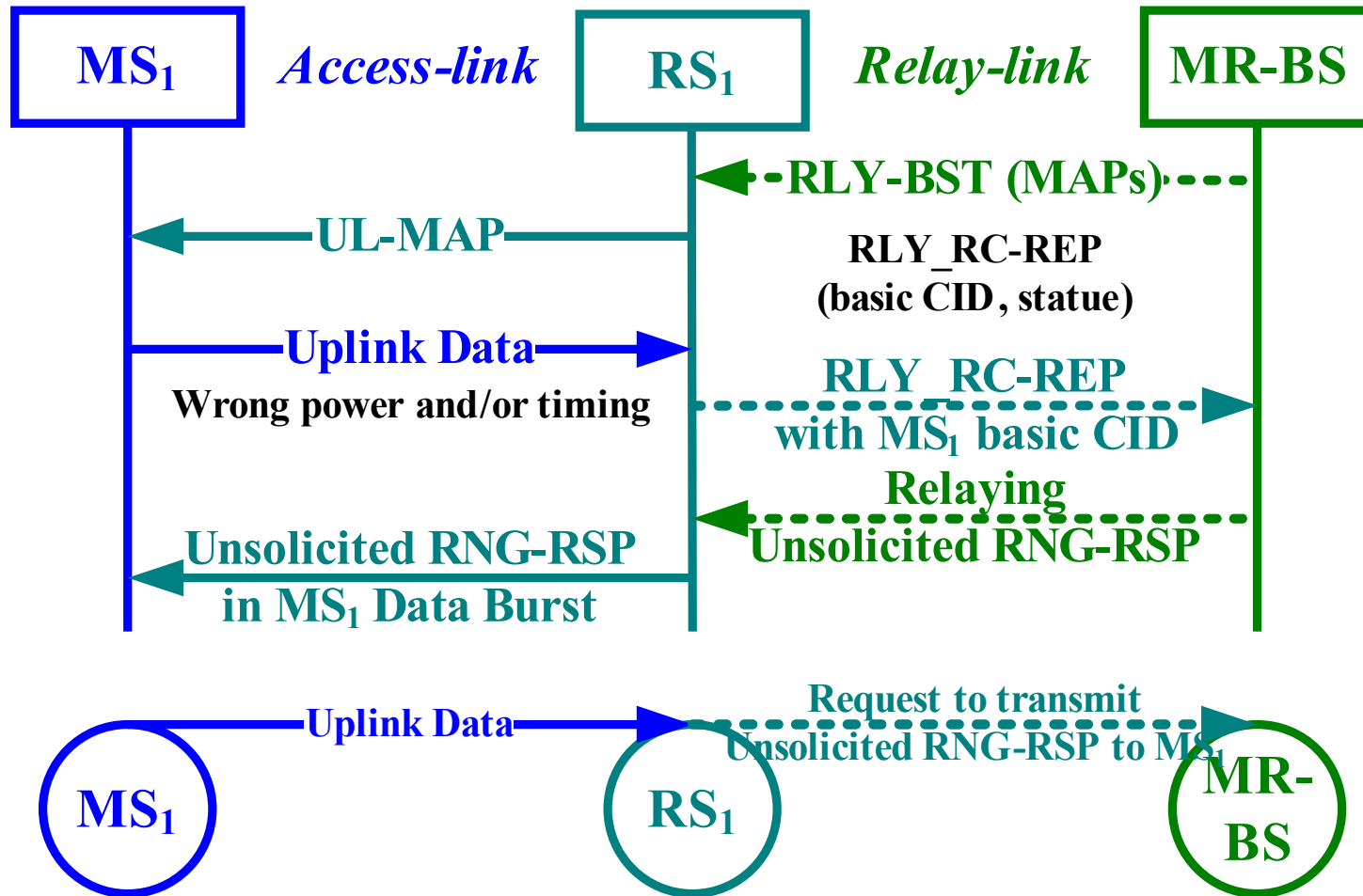
Scenarios of Unsolicited RNG-RSP

- Two scenarios for sending unsolicited RNG-RSP as a response to CDMA-based BR code are proposed based on RS capability and MR-BS policy
 - Conventional: *RS transports CDMA code with associated measurement/adjustment results to MR-BS; MR-BS generates response message*
 - RS-assisted: *RS generates response message to the received CDMA code directly*
- For UL traffic, unsolicited RNG-RSP is required for adjusting the power and timing of the UL traffic

Examples of Unsolicited RNG-RSP Triggered by CDMA-based bandwidth-request



Example of Unsolicited RNG-RSP Triggered by UL Data transmission



Summary

- Propose procedure to perform unsolicited RNG-RSP with non-transparent RS under centralized scheduling scheme
- Define relaying messages in the relay path for completing Unsolicited RNG-RSP procedure