MS Initial Ranging with Non-transparent RS

Voice: 886-2-2739-9616

E-mail: loa@iii.org.tw

Voice: +1 613 7631315

886-2-2378-2328

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

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

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Kanchei (Ken) Loa, Yung-Ting Lee, Yi-Hsueh Tsai, Heng-Iang Hsu, Chih-Chiang Hsieh, Shiann-Tsong Sheu,

Frank C.D. Tsai, Youn-Tai Lee, Hua-Chiang Yin

Institute for Information Industry

8F., No. 218, Sec. 2, Dunhua S. Rd., Taipei City, Taiwan.

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

Yu Ge, Peng-Yong Kong, Chen-Khong Tham

21 Heng Mui Keng Terrace, Singapore 119613

[add co-authors here]

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Purpose:

Propose the text regarding MS Initial Ranging with Non-transparent RS.

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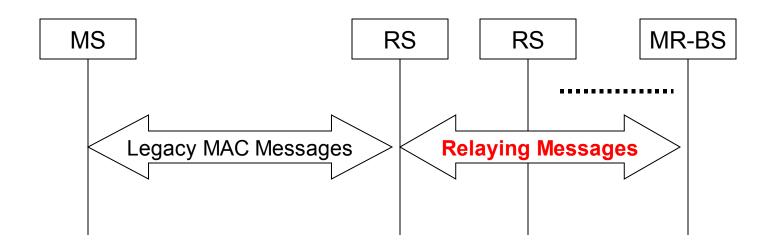
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Requirements on MS Initial Ranging with Non-transparent RS

- The MS initial ranging procedure with non-transparent RS should be designed for centralized scheduling scheme but allows RS-assisted scenarios under current security model defined in IEEE 802.16-2004/16e-2005
- There is no modification to legacy MS initial ranging procedure

Proposed Remedy

 Relaying messages are defined to transport the information in the relay path required for completing the MS initial ranging procedures



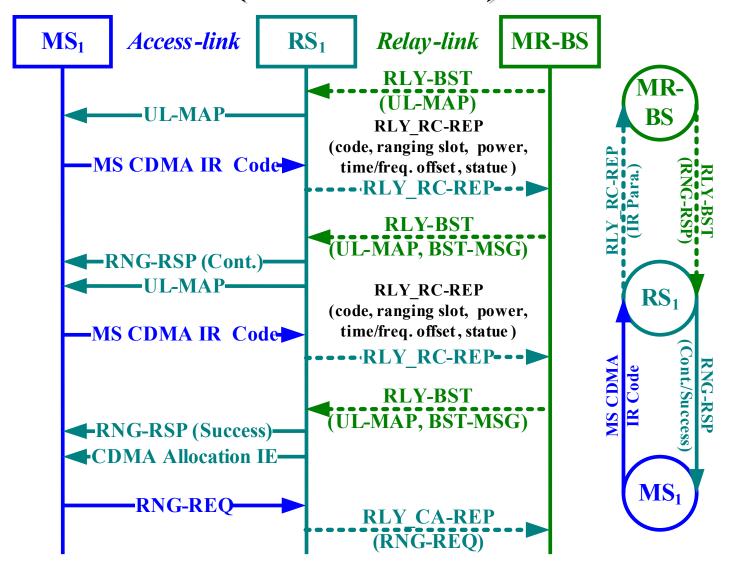
Proposed Relaying Messages

Message name	Message description	Connection
RLY-BST	MR-BS configure associated RS for RS broadcasting	TBD
RLY_RC-REP	RS transports MS CDMA initial ranging code, and associated measurements and adjustments to MR-BS	Basic
RLY-CA_REP	RS transports MS RNG-REQ and associated adjustments to MR-BS	Basic

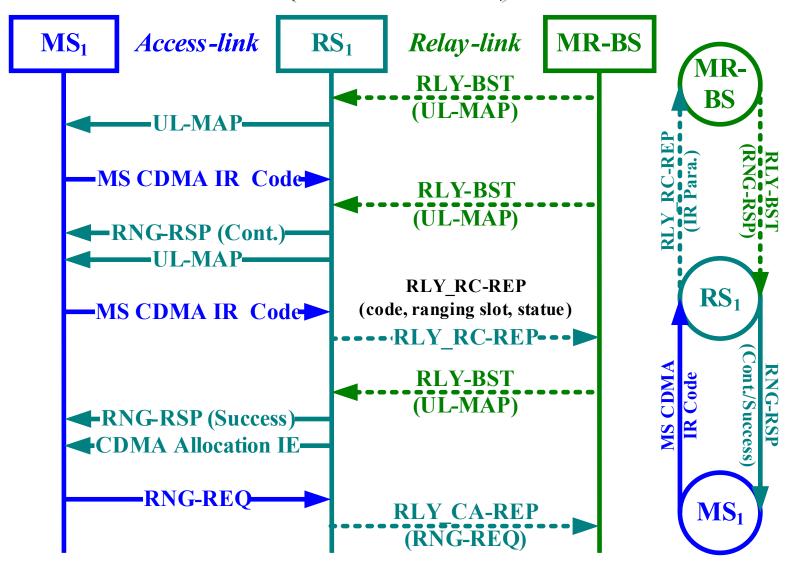
Scenarios of MS Initial Ranging with Non-transparent RS

- Two scenarios for MS Initial Ranging are proposed based on RS capability and MR-BS policy
 - Conventional: RS transports CDMA code and RNG-REQ with associated measurement/adjustment results to MR-BS; MR-BS generates response message
 - RS-assisted: RS transports RNG-REQ with associated adjustments to MR-BS; RS generates response message to CDMA code

Example of MS Initial Ranging (Conventional)



Example of MS Initial Ranging (RS-assisted)



Summary

- Propose the procedures of MS initial ranging with non-transparent RS under centralized scheduling scheme
- Define relaying messages in the relay path for completing MS initial ranging procedure with non-transparent RS