Support of MS-to-MS Communications Through RS

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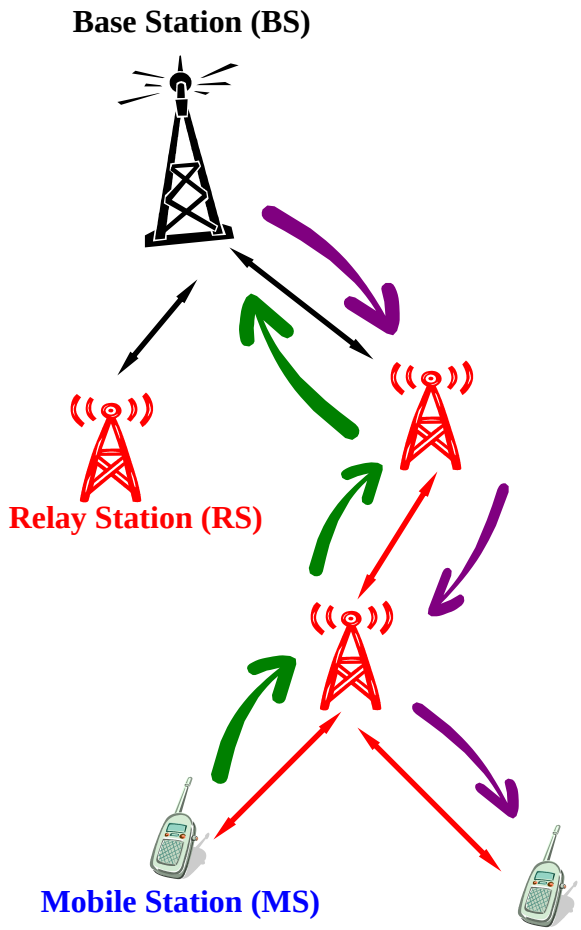
Base Document:

None.

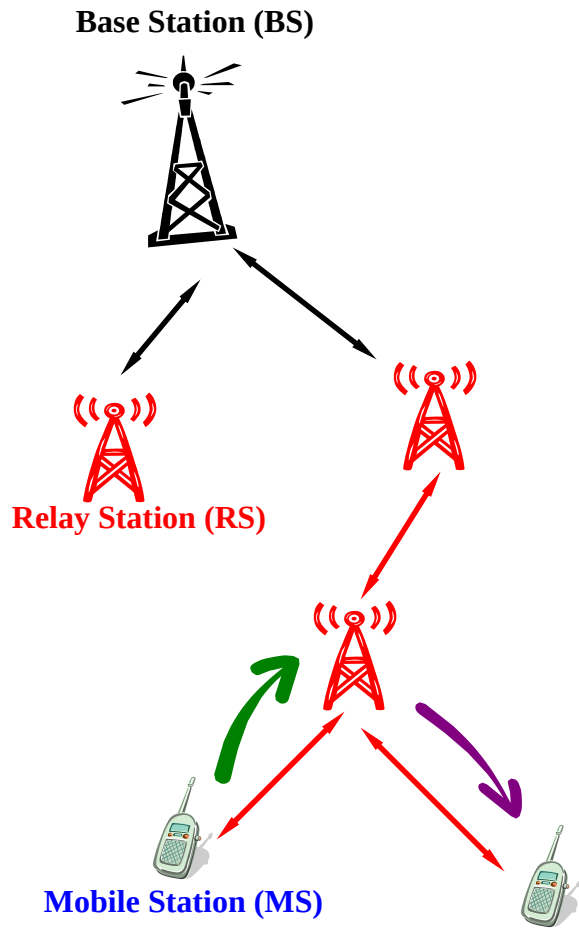
Purpose:

Propose not to prohibit MS-RS-MS but make judgment based on submitted technical solutions if efficient MS-RS-MS communications can be supported.

Without MS-RS-MS



With MS-RS-MS



- Propose not to prohibit in IEEE 802.16j MS-RS-MS communications.

With and without MS-RS-MS Communications

- With MS-RS-MS, data traffic can be delivered faster and consumes less radio resources.
- Without MS-RS-MS, communications in the downstream nodes are highly dependent on the channel condition of upstream nodes. For example, when a RS that is closer to the BS breaks down, all the nodes that are further away from the BS cannot communicate despite their good channel conditions. This is similar to the problem of *single-point-failure* and thus, is less opportunistic by nature.
- MS-RS-MS is useful to both military and civilian scenarios.

Does MS-RS-MS violate 16j PAR?

- From the PAR, “This document specifies OFDMA physical layer and medium access control layer enhancements to IEEE Std 802.16 for licensed bands to enable the operation of relay stations. Subscriber station specifications are not changed.”

- Interpretation: So long there is a practical solution to enable MS-RS-MS without change to SS specification, then there is not PAR violation.

Concern about differentiation from 802.16-2004 Mesh

- 802.16-2004 Mesh is clearly different from 802.16j with or without MS-RS-MS.
- The fundamental difference is that 802.16-2004 is a multihop solution not compatible to 802.16e but 802.16j will be a multihop solution that is compatible to 802.16e.

- Propose not to prohibit MS-RS-MS but make judgment based on submitted technical solutions if efficient MS-RS-MS communications can be supported.