

A Recommendation on PMP Mode Compatible Frame Structure

IEEE 802.16 Presentation Submission Template (Rev. 8.3)

Document Number:

IEEE C802.16mmr-05/005

Date Submitted: 2005-09-09

Source:

Fang-Ching Ren, Chang-Lung Hsiao,
Yu-Ching Hsu, and Wern-Ho Sheen ,
CCL/ITRI
Bldg. 11, 195 Sec. 4, Chung Hsing Rd. Chutung,
HsinChu, Taiwan 310, R.O.C.

Voice: 886-3-5914786

Fax: 886-3-5829733

E-mail: frank_ren@itri.org.tw

Venue:

IEEE 802.16 Session #39, Taipei, Taiwan

Base Document:

None.

Purpose:

This is a response to IEEE 802.16mmr-05/001 (call for contributions: IEEE 802.16's Study Group on Mobile Multi-hop Relay) to present a compatible frame structure.

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.

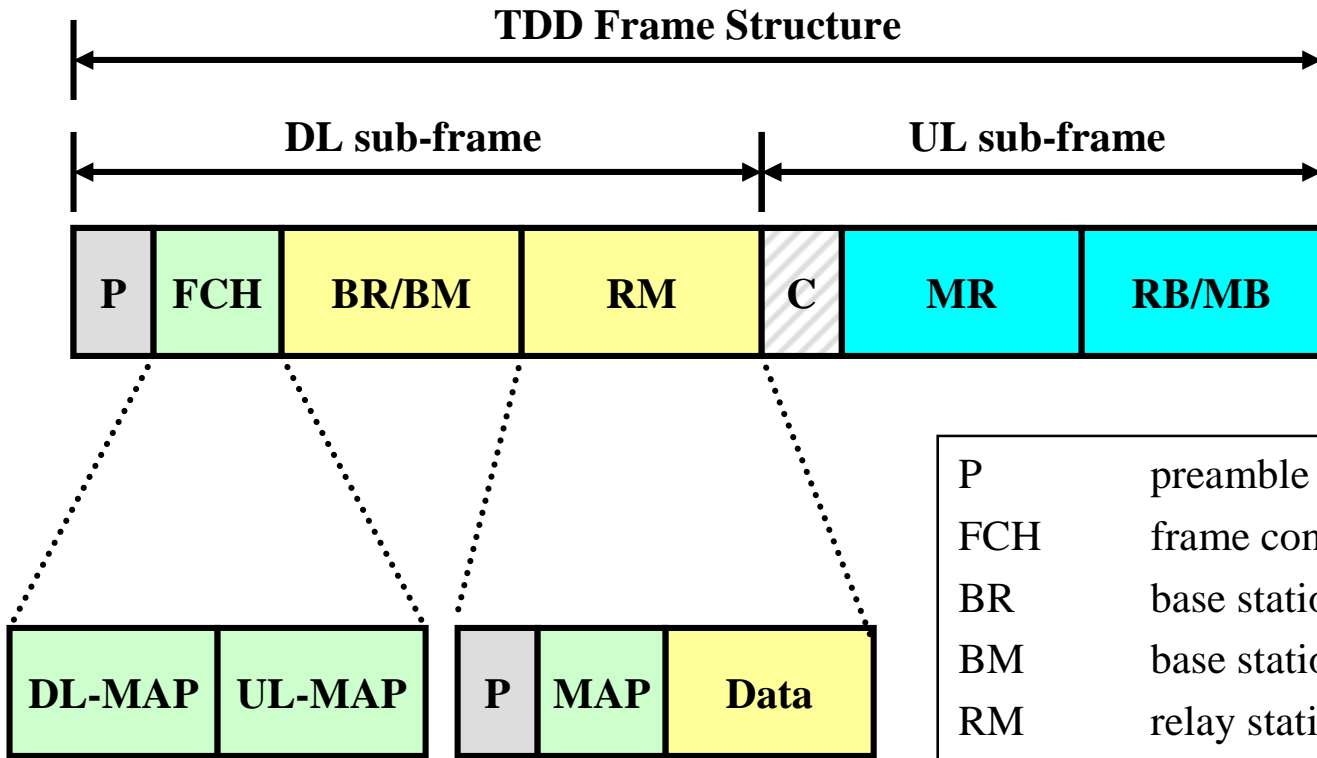
IEEE 802.16 Patent Policy:

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>>.

Purpose

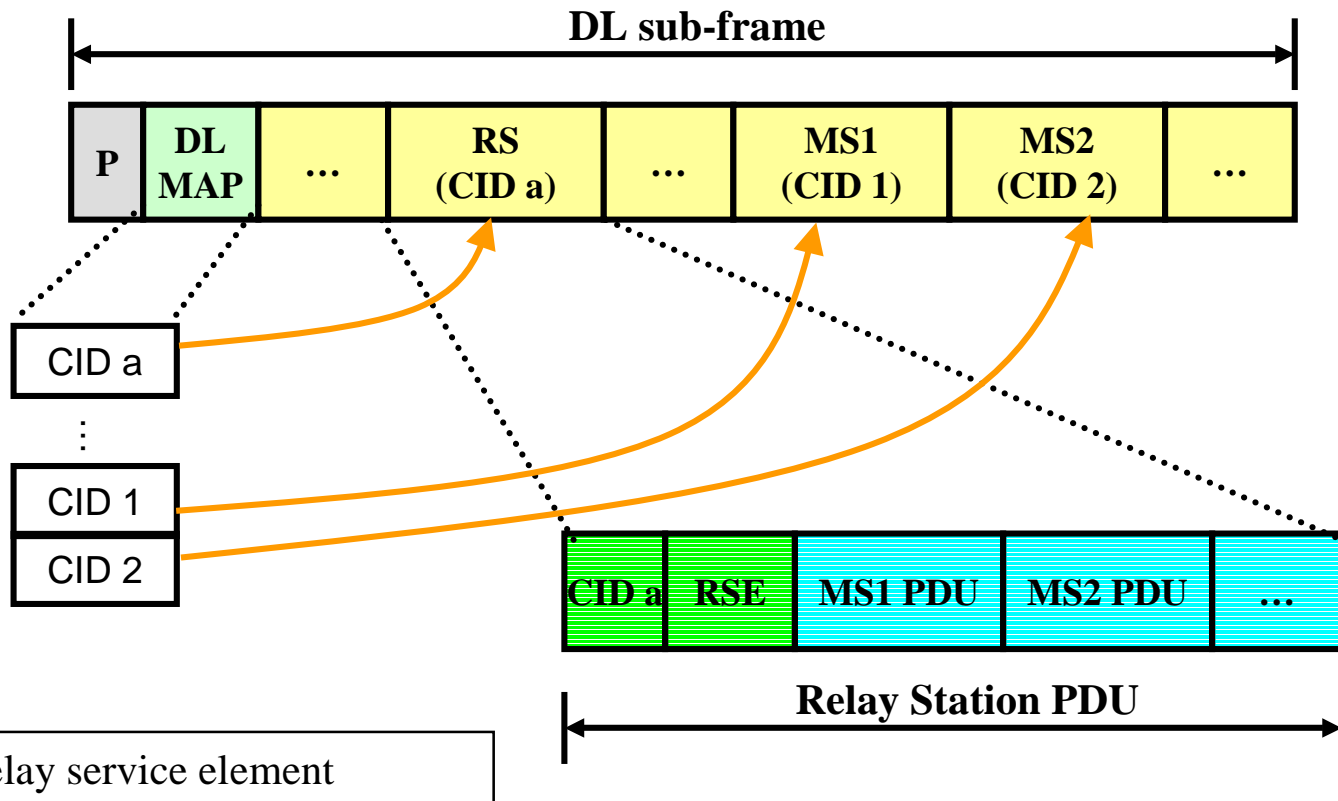
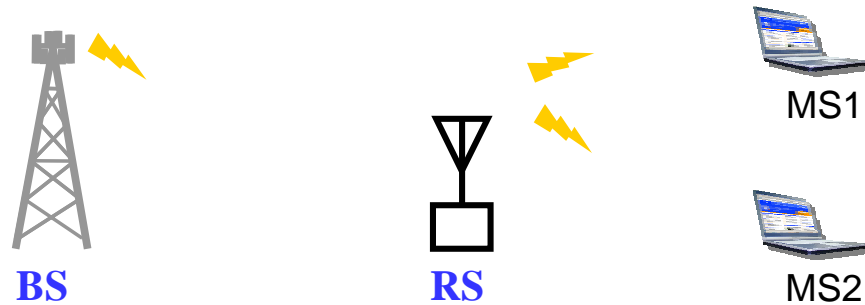
- ❑ **The recommendation TDD frame structure is compatible to the access without relaying.**
- ❑ **Relay service is operated on same frequency.**
- ❑ **From BS viewpoint, an RS performs the same as an SS. The transmission/reception time burst is controlled by BS.**
- ❑ **From MS viewpoint, an RS only performs coverage extension and no extra overhead for MS.**

Proposed Frame Structure

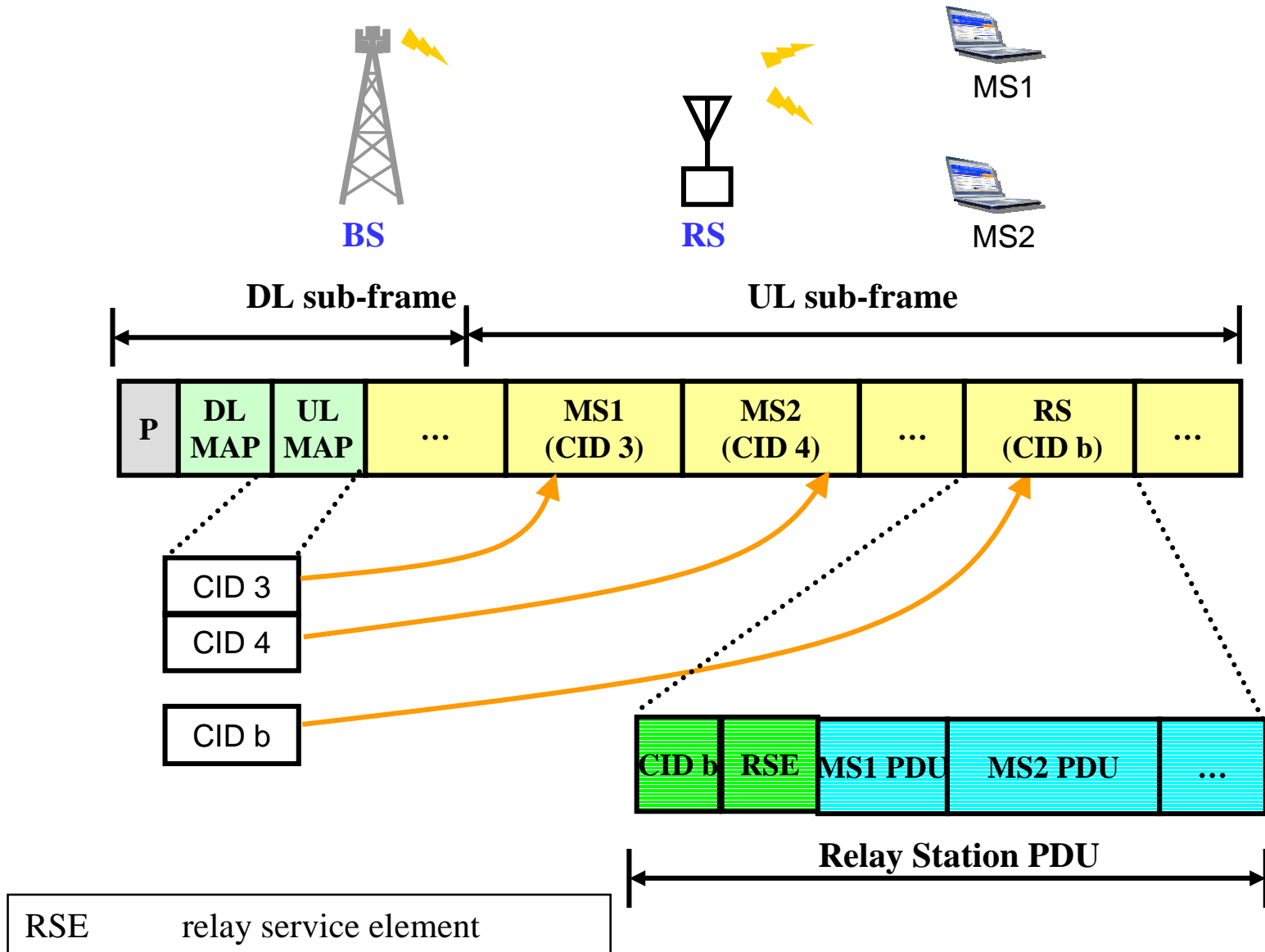


P	preamble
FCH	frame control header
BR	base station to relay station
BM	base station to mobile station
RM	relay station to mobile station
C	contention area
MR	mobile station to relay station
RB	relay station to base station
SB	mobile station to base station

Example of DL Relaying



Example of UL Relaying



Relay Service Element (RSE)

□ RSE consists of

- ❖ downlink relaying service CIDs through the specified RS
- ❖ Uplink relaying service CIDs through the specified RS