Proposed Text of UL Subchannelization Section for the IEEE 802.16m Amendment

E-mail:

Voice:

+82-31-279-7869

jeongho.jh.park@samsung.com

IEEE 802.16 Presentation Submission Template (Rev. 9)

Document Number: IEEE S802.16m-08/1457

Date Submitted:

2008-11-03

Source:

Jeongho Park, Junsung Lim, Hokyu Choi, Heewon Kang

Samsung Electronics

416 Maetan-dong, Yeongtong-gu

Suwon-si, Gyeonggi-do, Korea

*<http://standards.ieee.org/faqs/affiliationFAQ.html>

Re:

"16m amendment text":

IEEE 80216m-08_042 "Call for Contributions on Project 802.16m Draft Amendment Content" in response to the following section: "11.6 Uplink Physical Structure (data plane only)"

Base Contribution:

None

Purpose:

To be discussed and adopted by TGm for use in stage 3 document development

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:

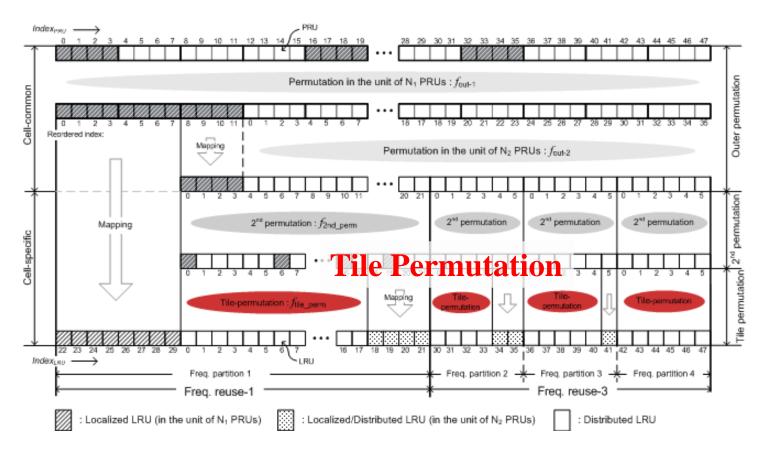
The contributor is familiar with the IEEE-SA Patent Policy and Procedures:

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 <<u>http://standards.ieee.org/board/pat/pat-material.html</u>> and <<u>http://standards.ieee.org/board/pat</u>>.

Uplink Subchannelization

- Identical to DL's
- Only Except 'Tile Permutation' for distributed LRU
 - Function for tile permutation is same to 2nd permutation



Pilot Pattern for 16m PUSC

- Major Issue is Pilot OH for 2 Stream Case
 - Trade off btw Pilot OH and Link Performance

* Efficiency : MPR * (1-PER)*(1-OH)

| Case | Pattern | Overhead | Link Perf. | Efficiency* |
|------|---------|----------|------------|-------------|
| 1 | 1 2 | 16.7% | low | High |
| 2 | 2 1 2 1 | 25% | mid | Mid |
| 3 | 1 | 33.3% | high | low |

• Reference: Contribution C80216m-08_1458.ppt

Guard Carrier Utilization

- Difference of Available Subcarrier btw 16m & 16e
 - 24 subcarriers (864 840) for 10MHz BW
 - 16m system can benefit from using the subcarriers

