IEEE P802.11
Wireless LANs

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| 30.6.7.4.3 DCM SQPSK Modulation |
| Date: 2017-11-06 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Sunwoong Yun | LG Electronics | Seocho LG R&D Lab, Korea |  | sunwoong.yun@lge.com |
| Artyom Lomayev | Intel | Turgeneva 30, Nizhny Novgorod 603024, Russia | +7 (831) 2969444 | artyom.lomayev@intel.com |
| SungJin Park | LG Electronics |  |  | allen.park@lge.com |
| Saehee Bang | LG Electronics |  |  | saehee.bang@lge.com |
| Jinmin Kim | LG Electronics |  |  | jinmin1230.kim@lge.com |
| Jinsoo Choi | LG Electronics |  |  | js.choi@lge.com |
| Sanggook Kim | LG Electronics | San Diego/California/US |  | sanggook.kim@lge.com |

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Abstract

This document proposes specification text for subclause 30.6.7.4.3 (MIMO SQPSK Modulation) to clarify the definition of MIMO SQPSK modulation technique in case of channel aggregation [1].

*Editor: modify the 30.6.7.4.3 in D0.5 as below, [2]*

**30.6.7.4.3 DCM SQPSK modulation**

A DCM SQPSK modulation is applied if the number of spatial streams is equal to *NSS* = 2 and DCM SQPSK Applied bit in EDMG-Header-A is set to 1.

The input encoded bits of *iSS*-th spatial stream are broken into the groups of *NCBPS* bits, , where *q* denotes the group number. Each pair of bits , *k* = 0, 1, …, *NSD*/2 – 1, is converted into the complex point .

For 2.16 GHz, 4.32 GHz, 6.48 GHz, and 8.64 GHz bandwidth configuration, the modulation is performed as follows:





where index *P*(*k*) is defined as *P*(*k*) = *k* + *NSD*/2. The *q*-th modulated data block of *iSS*-th spatial stream is mapped to *NSD* data subcarriers of *q*-th OFDM symbol of *iSS*-th spatial stream.

For 2.16+2.16 GHz and 4.32+4.32 GHz bandwidth configuration, the modulation is performed as follows:





where index *P*(*k*) is defined as *P*(*k*) = *k* + *NSD*/2. The *q*-th modulated data block of *iSS*-th spatial stream is mapped to *NSD* data subcarriers of *q*-th OFDM symbol of *iSS*-th spatial stream.

**References:**

1. Draft P802.11ay\_D0.5
2. 11-17-1170-02-00ay 30 6 7 4 Modulation mapping