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Wireless LANs

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| 30.5.6.4.3 Space Time Block Coding (STBC) |
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| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Artyom Lomayev | Intel | Turgeneva 30, Nizhny Novgorod 603024, Russia | +7 (831) 2969444 | artyom.lomayev@intel.com |
| Alexander Maltsev | Intel  |  |  | alexander.maltsev@intel.com |
| Miki Genossar | Intel |  |  | miki.genossar@intel.com |
| Claudio da Silva | Intel |  |  | claudio.da.silva@intel.com |
| Carlos Cordeiro | Intel  |  |  | carlos.cordeiro@intel.com |

Abstract

This document proposes specification text for subclause 30.5.6.4.3 of the spec describing space-time block coding definition, [1], [2].

**30.5.6.4.3 Space-time block coding**

This subclause defines a Space-Time Block Coding (STBC) for EDMG SC PHY. The STBC transmission is defined over a 2.16 GHz channel. It performs single spatial stream to two space-time streams mapping and includes the following steps:

1. The input encoded bits of a single spatial stream is broken into groups of *NCBPB* bits - , where *q* denotes group number. The STBC applies encoding procedure defined in 30.5.6.3.3. The padding procedure requires that the total number of groups of *NCBPB* bits shall be an even number.
2. Each group of bits , *k* = 0, 1, …, *NSPB* – 1 is converted to the constellation point , following the rules defined in 20.6.3.2.4.
3. STBC operates with symbol blocks , *q* = 0, 1, …, *NBLKS*-1 and with blocks with inverted symbols order  of a single spatial stream and assigns these blocks to two space-time streams.
4. The modulated data symbols for the first space-time stream are defined as follows:

 

1. The modulated data symbols for the second space-time stream are defined as follows:



1. STBC uses the same symbol blocking structure defined for SU PPDU and MU PPDU in 30.5.6.2.3 and 30.5.6.2.4 accordingly.

**References:**

1. Draft P802.11ay\_D0.3