<table>
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<tr>
<th>Project</th>
<th>IEEE 802.16 Broadband Wireless Access Working Group</th>
<th><a href="http://ieee802.org/16">http://ieee802.org/16</a></th>
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<tr>
<td>Title</td>
<td>ASN.1 coding for FTN messages in IEEE 802.16.1a</td>
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<td>Date Submitted</td>
<td>2012-11-13</td>
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<tr>
<td>Source(s)</td>
<td>Eunkyung Kim, Jaesun Cha, Anseok Lee, Wooram Shin, Kwangjae Lim ETRI</td>
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<td></td>
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</tbody>
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Re: In response to Sponsor Ballot Recirculation #1 on P802.16.1a

Abstract ASN.1 coding for BS-controlled FTN messages in GRIDMAN Draft Standard

Purpose To discuss and adopt the proposed text in the draft amendment document on GRIDMAN

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http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and
ASN.1 coding for FTN messages in IEEE 802.16.1a

Eunkyung Kim, Jaesun Cha, Anseok Lee, Wooram Shin, Kwangjae Lim
ETRI

1. Introduction
This document provides ASN.1 encoding for BS-controlled FTN messages in P802.16.1a, including:
- AAI-FN-CONFIG-CMD
- AAI-FN-RNG-ACK
- AAI-FN-RNG-FLU
- AAI-MSPG-GRP
- AAI-MSPG-PG

2. References

3. Proposed Text on the IEEE 802.16.1a Amendment Draft Standard
[-------------------------------------Start of Text Proposal---------------------------------------------------]

[Remedy1: Add the following text in line#4, page 238, P802.16.1a/D6:]
-- HR Power Control configuration
  aaiHrPcc   AAI-HR-PCC.

[Remedy2: Add the following text in line#46, page 238, P802.16.1a/D6:]
-- BS controlled HR-MS forwarding to network
  aaiPnPcnfgCmd   AAI-PN-CONFIG-CMD.
  aaiPnPngAck   AAI-PN-RNG-ACK.
  aaiPnPngFlu   AAI-PN-RNG-FLU.
[Remedy 3: Add the following text in line#46, page 282, P802.16.1a/D6:]

-- BS controlled HR-MS forwarding to network

-- AAI-FN-CONFIG-CMD, AAI-MSPG-GRP, AAI-MSPG-PG,

[Remedy 4: Add the following text in line#30, page 296, P802.16.1a/D6:]

-- BS-Controled FTN Messages

-- AAI-FN-CONFIG-CMD Message

FdmUlPuseZone ::= SEQUENCE {

  subframeOffsetRch INTEGER (0..3),
  startRpCodInfoRch INTEGER (0..15),
  numRpCodesForCoverageExtRng INTEGER (0..3)
}

NoFdmUlPuscZone ::= SEQUENCE {

  subframeOffsetRch INTEGER (0..3),
  startRpCodInfoRch INTEGER (0..15),
  txTimeOffsetSRch INTEGER (0..7)
}

PostAccessParamPreAssign ::= SEQUENCE {

  postIdCell INTEGER (0..1023),
  numberOfSuperframeNCI INTEGER (0..1023),
  startRpCodInfoSRch INTEGER (0..15),
  numberOfRNGOpportunity INTEGER (0..3),
  subframeOffsetRch INTEGER (0..3)
}

-- BS controlled HR-MS forwarding to network

AAI-FN-CONFIG-CMD ::= SEQUENCE {

  superframeNumActionLSB4 INTEGER (0..15),
  idCell INTEGER (0..1023),
  numberOfPreambleOnlySuperframe INTEGER (0..1023),
  numberOfSuperframesWithNCI INTEGER (0..3),
  subframeIndexNCI INTEGER (0..7),
  lruStartingIndexNCI INTEGER (0..63),
  frameContainingRngOpportunity ENUMERATED {

    second, fourth

  },
  numberOfRngOpportunity INTEGER (0..3),
  supportFdmUlPuscZone CHOICE {

    supportFdmUlPuscZone FdmUlPuseZone,
    noSupportFdmUlPuscZone NoFdmUlPuscZone

  },
  hrMsPreambleTimingAdvance INTEGER (0..2047),
  hrMsEirp INTEGER (0..31)
}
hrMstoHrMsFbRrcIndex INTEGER (0..2047) OPTIONAL,
hrMstoHrMsRepRrcIndex INTEGER (0..2047) OPTIONAL,
threshold2PhaseDiscovery INTEGER (0..7) OPTIONAL,
postAccessParmPreAssign PostAccessParamPreAssign OPTIONAL.

---

-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
-- AAI-FN-RNG-ACK Message
-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
RNGStatusSuccessContinue ::= SEQUENCE {
  adjustParamIndication BIT STRING {
    offsetAdjustInd (0),
    powerLevelAdjustInd (1),
    freqOffsetAdjustInd (2)
  },
  timingOffsetAdjust INTEGER (0..32767) OPTIONAL,
  powerLevelAdjust INTEGER (0..15) OPTIONAL,
  freqOffsetAdjust INTEGER (0..511) OPTIONAL
}

AAI-FN-RNG-ACK ::= SEQUENCE {
  rcvCodes SEQUENCE (SIZE(0..15)) OF SEQUENCE {
    rngPreambleCodeIndex INTEGER (0..3),
    rngStatus ENUMERATED {
      success,
      continue,
      abort,
      secondPhase
    },
    rngStatusSuccessContinue RNGStatusSuccessContinue OPTIONAL
  },
  ...
}

-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
-- AAI-FN-RNG-FLU Message
-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
AAI-FN-RNG-FLU ::= SEQUENCE {
  numRngCodes SEQUENCE (SIZE(0..15)) OF SEQUENCE {
    rngCodeIndex INTEGER (0..3),
    frameIndex INTEGER (0..15),
    subframeOffsetOfRcvRngPreamble INTEGER (0..3)
  },
  ...
}

-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
-- AAI-MSPG-GRP Message
-- ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++--
AAI-MSPG-GRP ::= SEQUENCE {
  purpose BOOLEAN, -- 0: remove, 1: add
  pagerGroupID INTEGER (0..255)
}

-- +---------------------------------------------
-- AAI-MSPG-PG Message
-- +---------------------------------------------
AAI-MSPG-PG ::= SEQUENCE {
  MsPgSupportFdmUlPusc ::= SEQUENCE {
    subframeOffsetRch INTEGER (0..3),
    ...
startRpCodInfoRch INTEGER (0..15),
numRpCodAlloc INTEGER (0..63)
}

MsPgSupportAAI ::= SEQUENCE {
  pid INTEGER (0..4095),
  startRpCodInfoRch INTEGER (0..15),
  numRpCodAlloc INTEGER (0..63)
}

AAI-MSPG-PG ::= SEQUENCE {
  pagerGroupID INTEGER (0..255),
  msPgP股指FdmUlPusc SEQUENCE (SIZE (0..63)) OF MsPgSupportFdmUlPusc OPTIONAL,
  msPgP股指AAI SEQUENCE (SIZE (0..63)) OF MsPgSupportAAI OPTIONAL
}