Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Addition of Classifier Action Rule**
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Re:	IEEE P802.16i/D2
Abstract	This contribution proposes the addition of the Classifier Action Rule classification parameter.
Purpose	Adopt proposed fix.
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Addition of Classifier Action Rule

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Problem

IEEE 802.16e-2005 amendment adds the following classification parameters:

11.13.19.3.4.16 Large Context ID for ROHC- or ECRTP-compressed packet or ROHC feedback packet

11.13.19.3.4.17 Classifier Action Rule

11.13.19.3.4.18 Short-format Context ID for ROHC- or ECRTP-compressed packet or ROHC feedback packet

There are currently no objects defined for these new classification parameters in IEEE P802.16i/D2.

Note that Corrigendum2 removes subclause 11.13.19.3.4.16 and 11.13.19.3.4.18. It doesn't seem very useful to add objects for these parameters.

Remedy

In IEEE P802.16i/D2 in 13.2.2, modify the text as follows:

```
WmanIf2ClassifierBitMap ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "A bit of of this object is set to 1 if the parameter
             indicated by the comment was present in the classifier
             encoding, and 0 otherwise.
             Note: that BITS are encoded most significant bit first,
             so that if e.g. bits 6 and 7 are set, this object is
             encoded as the octet string '030000'H."
        REFERENCE
            "Subclause 11.13.19.3.4 in IEEE Std 802.16~~-2004~~e2005"
        SYNTAX      BITS {priority(0),
                          ipTos(1),
                          ipProtocol(2),
                          ipMaskedSrcAddr(3),
                          ipMaskedDestAddr(4),
                          srcPort(5),
                          destPort(6),
                          destMacAddr(7),
                          srcMacAddr(8),
                          ethernetProtocol(9),
                          userPriority(10),
                          vlanId(11),
                          ipv6FlowLabel(12),
                          actionRule(13)}
```

```
WmanIf2ActionRule ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
            "The value of this field specifies an action associated with
            the classifier rule"
        REFERENCE
            "Subclause 11.13.19.3.4.17 in IEEE Std 802.16e2005"
        SYNTAX      BITS {discardPacket(0)}
```

…

```
WmanIf2BsClassifierRuleEntry::= SEQUENCE {
        wmanIf2BsClassifierRuleIndex             Unsigned32,
        wmanIf2BsClassifierRulePriority          INTEGER,
        wmanIf2BsClassifierRuleIpTosLow          INTEGER,
        wmanIf2BsClassifierRuleIpTosHigh         INTEGER,
        wmanIf2BsClassifierRuleIpTosMask         INTEGER,
        wmanIf2BsClassifierRuleIpProtocol        Integer32,
        wmanIf2BsClassifierRuleIpSourceAddr      InetAddress,
        wmanIf2BsClassifierRuleIpSourceMask      InetAddress,
        wmanIf2BsClassifierRuleIpDestAddr        InetAddress,
        wmanIf2BsClassifierRuleIpDestMask        InetAddress,
        wmanIf2BsClassifierRuleSourcePortStart   Integer32,
        wmanIf2BsClassifierRuleSourcePortEnd     Integer32,
        wmanIf2BsClassifierRuleDestPortStart     Integer32,
        wmanIf2BsClassifierRuleDestPortEnd       Integer32,
        wmanIf2BsClassifierRuleDestMacAddr       MacAddress,
        wmanIf2BsClassifierRuleDestMacMask       MacAddress,
        wmanIf2BsClassifierRuleSourceMacAddr     MacAddress,
        wmanIf2BsClassifierRuleSourceMacMask     MacAddress,
        wmanIf2BsClassifierRuleEnetProtocolType  INTEGER,
        wmanIf2BsClassifierRuleEnetProtocol      Integer32,
        wmanIf2BsClassifierRuleUserPriLow        Integer32,
        wmanIf2BsClassifierRuleUserPriHigh       Integer32,
        wmanIf2BsClassifierRuleVlanId            Integer32,
        wmanIf2BsClassifierRulePhsSize           Integer32,
        wmanIf2BsClassifierRulePhsMask           OCTET STRING,
        wmanIf2BsClassifierRulePhsVerify         WmanIf2PhsRuleVerify,
        wmanIf2BsClassifierRuleIpv6FlowLabel     WmanIf2Ipv6FlowLabel,
        wmanIf2BsClassifierRuleActionRule        WmanIf2ActionRule,
        wmanIf2BsClassifierRuleBitMap            WmanIf2ClassifierBitMap,
        wmanIf2BsClassifierRuleRowStatus         RowStatus}
```

…

```
wmanIf2BsClassifierRuleIpv6FlowLabel OBJECT-TYPE
        SYNTAX      WmanIf2Ipv6FlowLabel
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "The value of this field specifies the matching values for
             the IPv6 Flow label field."
        ::= { wmanIf2BsClassifierRuleEntry 28 }
wmanIf2BsClassifierRuleActionRule OBJECT-TYPE
```

```
        SYNTAX      WmanIf2ActionRule
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "The value of this field specifies an action associated with
            the classifier rule.
            If this classification action rule exists, its action shall
            be applied on the packets that match this classifier rule."
        ::= { wmanIf2BsClassifierRuleEntry 29 }


wmanIf2BsClassifierRuleBitMap OBJECT-TYPE
        SYNTAX      WmanIf2ClassifierBitMap
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "This object indicates which parameter encodings were
             actually present in the entry. A bit set to '1' indicates
             the corresponding classifier encoding is present, and '0'
             means otherwise"
        ::= { wmanIf2BsClassifierRuleEntry 2930 }

wmanIf2BsClassifierRuleRowStatus OBJECT-TYPE
        SYNTAX      RowStatus
        MAX-ACCESS  read-create
        STATUS      current
        DESCRIPTION
            "This object is used to create a new row or modify or
             delete an existing row in this table.

             If the implementator of this MIB has choosen not
             to implement 'dynamic assignment' of profiles, this
             object is not useful and should return noSuchName
             upon SNMP request."
        ::= { wmanIf2BsClassifierRuleEntry 3031 }


...


WmanIf2CmnClassifierRuleEntry::= SEQUENCE {
        wmanIf2CmnClassifierRuleIndex           Unsigned32,
        wmanIf2CmnClassifierRulePriority        INTEGER,
        wmanIf2CmnClassifierRuleIpTosLow        INTEGER,
        wmanIf2CmnClassifierRuleIpTosHigh       INTEGER,
        wmanIf2CmnClassifierRuleIpTosMask       INTEGER,
        wmanIf2CmnClassifierRuleIpProtocol      Integer32,
        wmanIf2CmnClassifierRuleIpSourceAddr    InetAddress,
        wmanIf2CmnClassifierRuleIpSourceMask    InetAddress,
        wmanIf2CmnClassifierRuleIpDestAddr      InetAddress,
        wmanIf2CmnClassifierRuleIpDestMask      InetAddress,
        wmanIf2CmnClassifierRuleSourcePortStart Integer32,
        wmanIf2CmnClassifierRuleSourcePortEnd   Integer32,
        wmanIf2CmnClassifierRuleDestPortStart   Integer32,
        wmanIf2CmnClassifierRuleDestPortEnd     Integer32,
        wmanIf2CmnClassifierRuleDestMacAddr     MacAddress,
```

```
        wmanIf2CmnClassifierRuleDestMacMask     MacAddress,
        wmanIf2CmnClassifierRuleSourceMacAddr   MacAddress,
        wmanIf2CmnClassifierRuleSourceMacMask   MacAddress,
        wmanIf2CmnClassifierRuleEnetProtocolTyp INTEGER,
        wmanIf2CmnClassifierRuleEnetProtocol    Integer32,
        wmanIf2CmnClassifierRuleUserPriLow      Integer32,
        wmanIf2CmnClassifierRuleUserPriHigh     Integer32,
        wmanIf2CmnClassifierRuleVlanId          Integer32,
        wmanIf2CmnClassifierRulePkts            Counter64,
        wmanIf2CmnClassifierRuleIpv6FlowLabel   WmanIf2Ipv6FlowLabel,
        wmanIf2CmnClassifierRuleActionRule      WmanIf2ActionRule,
        wmanIf2CmnClassifierRuleBitMap          WmanIf2ClassifierBitMap}

...


wmanIf2CmnClassifierRuleIpv6FlowLabel OBJECT-TYPE
        SYNTAX      WmanIf2Ipv6FlowLabel
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The value of this field specifies the matching values for
             the IPv6 Flow label field."
        ::= { wmanIf2CmnClassifierRuleEntry 26 }

wmanIf2CmnClassifierRuleActionRule OBJECT-TYPE
        SYNTAX      WmanIf2ActionRule
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "The value of this field specifies an action associated with
            the classifier rule.
            If this classification action rule exists, its action shall
            be applied on the packets that match this classifier rule."
        ::= { wmanIf2CmnClassifierRuleEntry 27 }

wmanIf2CmnClassifierRuleBitMap OBJECT-TYPE
        SYNTAX      WmanIf2ClassifierBitMap
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
            "This object indicates which parameter encodings were
             actually present in the entry. A bit set to '1' indicates
             the corresponding classifier encoding is present, and '0'
             means otherwise"
        ::= { wmanIf2CmnClassifierRuleEntry 278 }


...


wmanIf2MibCommonGroup     OBJECT-GROUP
        OBJECTS {-- Classification
                 wmanIf2CmnClassifierRulePriority,
                 wmanIf2CmnClassifierRuleIpTosLow,
```

```
                wmanIf2CmnClassifierRuleIpTosHigh,
                wmanIf2CmnClassifierRuleIpTosMask,
                wmanIf2CmnClassifierRuleIpProtocol,
                wmanIf2CmnClassifierRuleIpSourceAddr,
                wmanIf2CmnClassifierRuleIpSourceMask,
                wmanIf2CmnClassifierRuleIpDestAddr,
                wmanIf2CmnClassifierRuleIpDestMask,
                wmanIf2CmnClassifierRuleSourcePortStart,
                wmanIf2CmnClassifierRuleSourcePortEnd,
                wmanIf2CmnClassifierRuleDestPortStart,
                wmanIf2CmnClassifierRuleDestPortEnd,
                wmanIf2CmnClassifierRuleDestMacAddr,
                wmanIf2CmnClassifierRuleDestMacMask,
                wmanIf2CmnClassifierRuleSourceMacAddr,
                wmanIf2CmnClassifierRuleSourceMacMask,
                wmanIf2CmnClassifierRuleEnetProtocolTyp,
                wmanIf2CmnClassifierRuleEnetProtocol,
                wmanIf2CmnClassifierRuleUserPriLow,
                wmanIf2CmnClassifierRuleUserPriHigh,
                wmanIf2CmnClassifierRuleVlanId,
                wmanIf2CmnClassifierRulePkts,
                wmanIf2CmnClassifierRuleIpv6FlowLabel,
                wmanIf2CmnClassifierRuleActionRule,
                wmanIf2CmnClassifierRuleBitMap,

                -- Configuration parameters
                wmanIf2CmnCpsTargetSaid,
                wmanIf2CmnInvitedRangRetries,
                wmanIf2CmnDSxReqRetries,
                wmanIf2CmnDSxRespRetries,
                wmanIf2CmnT7Timeout,
                wmanIf2CmnT8Timeout,
                wmanIf2CmnT10Timeout,
                wmanIf2CmnT22Timeout}
        STATUS       current
        DESCRIPTION
            "This group contains objects for both BS and SS,
             and are independent of PHY."
        ::= { wmanIf2MibGroups 1 }


...


wmanIf2MibBsGroup     OBJECT-GROUP
        OBJECTS {-- Service classes
                wmanIf2BsSfDirection,
                wmanIf2BsServiceClassIndex,
                wmanIf2BsSfState,
                wmanIf2BsSfProvisionedTime,
                wmanIf2BsProvisionedSfRowStatus,
                wmanIf2BsSsProvisionedForSfRowStatus,
                wmanIf2BsSfCsSpecification,
                wmanIf2BsQosServiceClassName,
                wmanIf2BsQoSTrafficPriority,
                wmanIf2BsQoSMaxSustainedRate,
```

```
                wmanIf2BsQoSMaxTrafficBurst,
                wmanIf2BsQoSMinReservedRate,
                wmanIf2BsQoSToleratedJitter,
                wmanIf2BsQoSMaxLatency,
                wmanIf2BsQoSFixedVsVariableSduInd,
                wmanIf2BsQoSSduSize,
                wmanIf2BsQosScSchedulingType,
                wmanIf2BsQosScArqEnable,
                wmanIf2BsQosScArqWindowSize,
                wmanIf2BsQosScArqBlockLifetime,
                wmanIf2BsQosScArqSyncLossTimeout,
                wmanIf2BsQosScArqDeliverInOrder,
                wmanIf2BsQosScArqRxPurgeTimeout,
                wmanIf2BsQosScArqBlockSize,
                wmanIf2BsQosSCMinRsvdTolerableRate,
                wmanIf2BsQoSReqTxPolicy,
                wmanIf2BsQoSServiceClassRowStatus,

                -- Classification
                wmanIf2BsClassifierRulePriority,
                wmanIf2BsClassifierRuleIpTosLow,
                wmanIf2BsClassifierRuleIpTosHigh,
                wmanIf2BsClassifierRuleIpTosMask,
                wmanIf2BsClassifierRuleIpProtocol,
                wmanIf2BsClassifierRuleIpSourceAddr,
                wmanIf2BsClassifierRuleIpSourceMask,
                wmanIf2BsClassifierRuleIpDestAddr,
                wmanIf2BsClassifierRuleIpDestMask,
                wmanIf2BsClassifierRuleSourcePortStart,
                wmanIf2BsClassifierRuleSourcePortEnd,
                wmanIf2BsClassifierRuleDestPortStart,
                wmanIf2BsClassifierRuleDestPortEnd,
                wmanIf2BsClassifierRuleDestMacAddr,
                wmanIf2BsClassifierRuleDestMacMask,
                wmanIf2BsClassifierRuleSourceMacAddr,
                wmanIf2BsClassifierRuleSourceMacMask,
                wmanIf2BsClassifierRuleEnetProtocolType,
                wmanIf2BsClassifierRuleEnetProtocol,
                wmanIf2BsClassifierRuleUserPriLow,
                wmanIf2BsClassifierRuleUserPriHigh,
                wmanIf2BsClassifierRuleVlanId,
                wmanIf2BsClassifierRulePhsSize,
                wmanIf2BsClassifierRulePhsMask,
                wmanIf2BsClassifierRulePhsVerify,
                wmanIf2BsClassifierRuleIpv6FlowLabel,
                wmanIf2BsClassifierRuleActionRule,
                wmanIf2BsClassifierRuleBitMap,
                wmanIf2BsClassifierRuleRowStatus,
…
```