Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**IPv6 Flow Label Classifier**
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Re:	Call for contribution IEEE 802.16d-03/02
Abstract	Addition of IPv6 Flow Label Classifier in Classifier Rules
Purpose	Proposal for inclusion in the 802.16d amendment document
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IPv6 Flow Label Classifier

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1. References

[1] IEEE Std. 802.16-2001

[2] RFC 2460, IPv6 Specification

2. Problem statement and Discussion

The packet classification rules in section 11.4.9.3.6.2 of [1] contain the IP Type of Service /DSCP byte as a classifier for IP packets. This byte is the ToS byte in IPv4 and the Traffic Class field in IPv6 [2].

But the second QoS related IPv6 header field “Flow Label” (20 bit) has not been included in the classification rules. RFC2460 [2] characterizes this field as follows: “Flow Labeling Capability: A new capability is added to enable the labeling of packets belonging to particular traffic "flows" for which the sender requests special handling, such as non-default quality of service or "real-time" service.”

This field is ideal to indicate certain QoS requirements of higher layers to the IP specific packet convergence sublayer. Therefore the IPv6 header field “Flow Label” should be included into the packet classification rules of the IEEE Std. 802.16-2001 standard.

3. Proposal

Add a section 11.4.9.3.6.20 in [1]:

11.4.9.3.6.20 IPv6 Flow Label

The value of this field specifies a list of matching values for the IPv6 Flow label field. As the flow label field has a length of 20 bits, the first 4 bits of the most significant byte shall be disregarded.

Name	Type	Length	Value
IPv6 Flow Label	[24/25].100.9.14	n*3	Flow Label 1, ... , Flow Label i, ... , Flow Label n