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Title	**Clarification for Global service flow class name TLV encoding**
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Re:	Call for Maintenance Change Requests on IEEE Std 802.16
Abstract	This document suggests changes in TGe Draft Document IEEE 802.16e-2005 to clarify Global service flow class name TLV encoding
Purpose	Adopt into the current Maint TG draft
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Clarification for Global service flow class name TLV encoding

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Background

In EEE Std 802.16e-2005, Global service flow class name TLV encoding is employed as a baseline convention for communicati ng uthorizedQoSParamSet or AdmittedQoSParamSet.(refer to 6.3.14.4.1). As you know, Global service class names are used to facili tate operation across a distributed topology (i.e among the context-synchronous BSs)

Global service flow class name TLV encoding includes several mandatory QoS parameters such as Maximum Sustained Traffic Rate, Maximum Latency and Minimum Reserved Traffic Rate which are already in Global service flow class name TLV encoding. B ut, those QoS parameters is not enough to specify the characteristic of a service flow because it doesn't includes all the mandatory Qo S Parameters for UGS, rtPS, ertPS, nrtPS and BE..

Hence, there should be included at least all the mandatory QoS parameters in Global service flow class name information TLV e ncoding to specify explicitly the characteristic of a service flow .

The following table shows the mandatory QoS parameters required to specify explicitly the characteristic of a service flow, as des cribed in IEEE Std 802.16-2004 and IEEE Std 802.16e-2005. (Red-colored parameters should be included in Global service flow cla ss name TLV encoding)

FIELD NAME	UGS	rtPS	ertPS	nrtPS	BE
Maximum Sustained Traffic Rate	-	O	O	O	O
Maximum Latency	O	O	O	-	-
Tolerated Jitter	O	-	O	-	-
Uplink Grant Scheduling Type	O	O	O	O	O
Request/Transmission Policy	O	O	O	O	O
Minimum Reserved Traffic Rate	O	O	O	O	-
Traffic Priority	-	O	O	O	O
Unsolicited Grant Interval	O	-	O	-	-
Unsolicited Polling Interval	-	O	-	-	-

Proposed Changes

[*Modify Table 124a on Page 211, Line 3 as follows*]

Table 124a.Global service flow class name information field parameters

Position	Name	Size (bits)	Value
I	Uplink/Downlink indicator	1	0 or 1: 0=uplink; 1=downlink
S	Maximum sustained traffic rate	6	Extensible look-up Table (value 0b111111 indicates TLV to follow)
T	Traffic indication preference	1	0 or 1: 0=No traffic indication; 1=Traffic indication
B	Maximum traffic burst	6	Extensible look-up Table (value 0b111111 indicates TLV to follow)
R	Minimum reserved traffic rate	6	Extensible look-up Table (value 0b111111 indicates TLV to follow)
L	Maximum Latency	6	Extensible look-up Table (value 0b111111 indicates TLV to follow)
S	Fixed-length versus variable-length SDU indicator	1	0 or 1: 0=variable length; 1=fixed length
P	Paging preference	1	0 or 1: 0 = No paging generation 1 = Paging generation
S	Uplink Grant Scheduling Type	3	(Refer to 11.13.11) 1 = Undefined, 2= BE, 3 = nrtPS, 4 = rtPS, 5 = ertPS, 6 = UGS
L	Tolerated Jitter	6	Extensible look-up Table (value 0b111111 indicates TLV to follow) This is available only for Uplink Grant Scheduling Type = ertPS, or UGS.
S	Request/Transmission Policy	8	(Refer to 11.13.12)
S	Traffic Priority	3	(Refer to 11.13.5) This is used only for Uplink Grant Scheduling Type = rtPS, ertPS, nrtPS, or BE
S	Unsolicited Grant Interval	6	Extensible look-up Table (value 0b111111 indicates TLV to follow) This is available only for Uplink Grant Scheduling Type = ertPS, or UGS.
S	Unsolicited Polling Interval	6	Extensible look-up Table (value 0b111111 indicates TLV to follow) This is available only for Uplink Grant Scheduling Type = rtPS
R	Reserved	4	Shall be set to 0b0000

[*Modify the title of Table 124c on Page 213, Line 22 as follows*]

Table 124c—Maximum latency and Tolerated Jitter values

[*Insert the following text after the paragraph of 'Paging Preference' on Page 213 , Line 40*]

Uplink Grant Scheduling Type

This parameter specifies which Uplink grant scheduling service type is associated with uplink service flow (Refer to 11.13.11). This parameter is available in case of UL service flow with Uplink/Downlink indicator = 0 (i.e. uplink). Otherwise, it shall be set to '000' as no commitment.

Tolerated Jitter

The value of this parameter specifies the maximum delay variation (jitter) for the connection. This parameter is available in case of a DL or UL service flow which are associated with Uplink Grant Scheduling Type = UGS or ertPS. Otherwise, it shall be set to '000000' as no commitment. If defined, this parameter represents a service commitment and shall be guaranteed. A value of zero for Maximum latency shall be interpreted as no commitment.(Refer to Table 124c and the section 11.13.13)

Request/Transmission Policy

The value of this parameter specifies a certain attributes for the associated service flow. Each bit specifies each other action (Refer to 11.13.12).

Traffic Priority

The value of this parameter specifies the priority of associated service flow. (Refer to 11.13.5). This parameter is available in case of a DL or UL service flow which are associated with any other Uplink Grant Scheduling Types except UGS.

Unsolicited Grant Interval

This parameter defines the nominal interval between successive data grant opportunities for a DL and UL service flow.which are associated with Uplink Grant Scheduling Type = UGS or ertPS.(Refer to the Table 124d and the section 11.13.20). If this parameter is set to zero, then there is no explicitly mandated unsolicited grant interval. The maximum unsolicited grant interval field specifies only a bound, not a guarantee that the rate is available. The algorithm for policing this parameter is left to vendor differentiation and is outside the scope of the standard.

Unsolicited Polling Intervals

This parameter defines the maximal nominal interval between successive polling grants opportunities for a DL and UL service flow.which are associated with Uplink Grant Scheduling Type = rtPS.(Refer to the Table 124d and the section 11.13.21). If this parameter is set to zero, then there is no explicitly mandated unsolicited grant interval. The maximum unsolicited grant interval field specifies only a bound, not a guarantee that the rate is available. The algorithm for policing this parameter is left to vendor differentiation and is outside the scope of the standard.

Table 124d - Unsolicited Grant Intervals and Unsolicited Polling Intervals

6-bit Code (Binary)	Intervals (Frames)	6-bit Code (Binary)	Intervals (Frames)	6-bit Code (Binary)	Intervals (Frames)	6-bit Code (Binary)	Intervals (Frames)
000000	*reserved*	010000	16	100000	48	110000	160
000001	1	010001	18	100001	52	110001	170
000010	2	010010	20	100010	56	110010	180
000011	3	010011	22	100011	60	110011	190
000100	4	010100	24	100100	64	110100	200
000101	5	010101	26	100101	68	110101	*reserved*
000110	6	010110	28	100110	72	110110	
000111	7	010111	30	100111	76	110111	
001000	8	011000	32	101000	80	111000	
001001	9	011001	34	101001	90	111001	
001010	10	011010	36	101010	100	111010	
001011	11	011011	38	101011	110	111011	
001100	12	011100	40	101100	120	111100	
001101	13	011101	42	101101	130	111101	
001110	14	011110	44	101110	140	111110	
001111	15	011111	46	101111	150	111111	TLV follows

[*Modify Global Service Class Name TLV encoding on Page746, Line 24 as follows*]

11.13.24 Global Service Class Name

The value of this field refers to a predefined BS service configuration to be used for this service flow. The Global Service Class Name itself contains coded references to extensible tables defining QoS Parameters.

Type	Length	Value	Scope
[145/146].35	~~6~~ 8	Variable: combination of ASCII characters and hex values	DSx-REQ DSx-RSP DSx-ACK