Annex 31A

(normative)

MAC Control opcode assignments

Insert new Tables 31A-10 through Table 31A-15 as shown below:

Table 31A–10—GATE MAC Control indications

GATE (opcode 0x0012)		
indication_operand_list element	**Value**	**Interpretation**
ChMap	8 bits	This entry represents the upstream channel(s) granted to the ONU. Table 144–1 shows the mapping between individual bits and upstream channels.
StartTime	32 bits	This entry represents the start time of the transmission window (burst), expressed in the units of EQ. The start time is compared to the local clock, to correlate the start of the grant.
EnvAlloc	40 bits [7]	Represents the *Envelope Allocation #n* field, see 144.3.7.1 for more details.

Table 31A–11—REPORT MAC Control indications

REPORT (opcode 0x0013)		
indication_operand_list element	**Value**	**Interpretation**
RTT	32 bits	Indicates the calculated round trip time for the station, as calculated following the REGISTER_REQ MPCPDU reception.
LLID	16 bits [7]	Each entry represents the logical link that is reporting the queue occupancy.
QueueLength	24 bits [7]	Each entry represents the occupancy of the queue assigned to LLID #n, at time Report Time. The value of the queue occupancy is expressed in the units of 1 EQ.
NumNonEmptyQ	8 bits	The number of LLIDs in the ONU with non-empty queues.

Table 31A–12—REGISTER_REQ MAC Control indications

REGISTER_REQ (opcode 0x0014)		
indication_operand_list element	**Value**	**Interpretation**
Status	incoming	Indicates that a station is requesting recognition.
	retry	Indicates that the station should reattempt registration.

Table 31A–12—REGISTER_REQ MAC Control indications

REGISTER_REQ (opcode 0x0014)		
indication_operand_list element	**Value**	**Interpretation**
Flags	Register	Indicates that the station is requesting to register.
	Deregister	Indicates that the station is requesting to deregister.
PendingGrants	8 bits	Indicates the maximum number of future grants the ONU is capable of buffering.
RTT	32 bits	Indicates the calculated round trip time for the station, as calculated following the REGISTER_REQ MPCPDU reception.
LaserOnTime	8 bits	Indicates the Laser On Time characteristic for the given ONU transmitter, expressed in the units of 1 TQ.
LaserOffTime	8 bits	Indicates the Laser Off Time characteristic for the given ONU transmitter, expressed in the units of 1 TQ.
DiscoveryInfo	16 bits	See Table 144-3 for the internal structure of the Discovery Information Field.

Table 31A–13—REGISTER MAC Control indications

REGISTER (opcode 0x0015)		
indication_operand_list element	**Value**	**Interpretation**
SA	48 bits	MAC address of OLT to which registration is being performed.
PLID	16 bits	Reflects the Physical LLID (see 143.2.1.1) of the port assigned following registration.
MLID	16 bits	Reflects the Management LLID (see 143.2.1.2) of the port assigned following registration.
Status	Reregister	The ONU is explicitly asked to re-register.
	Deregister	This is a request to deallocate the port and free the LLID. Subsequently, the MAC is deallocated.
	Ack	The requested registration is successful.
	Nack	The requested registration attempt is denied by the MAC Control Client.

Table 31A–14—REGISTER_ACK MAC Control indications

REGISTER_ACK (opcode 0x0016)		
indication_operand_list element	**Value**	**Interpretation**
SA	48 bits	MAC address of ONU to which registration is being performed.
PLID	16 bits	Reflects the Physical LLID (see 143.2.1.1) of the port assigned following registration.
MLID	16 bits	Reflects the Management LLID (see 143.2.1.2) of the port assigned following registration.
Status	Nack	The requested registration attempt is denied by the MAC Control Client.
	Ack	The registration process is successfully acknowledged.
RTT	32 bits	Indicates the calculated round trip time for the station, as calculated following the REGISTER_ACK MPCPDU reception.

Table 31A–15—DISCOVERY_GATE MAC Control indications

DISCOVERY_GATE (opcode 0x0017)		
indication_operand_list element	**Value**	**Interpretation**
ChMap	8 bits	A bitmap representing the wavelength channel(s) on which to transmit on during the assigned transmission slot. See Table 144–1 for details.
StartTime	32 bits	This entry represents the start time of the transmission window (burst), expressed in the units of EQ. The start time is compared to the local clock, to correlate the start of the grant.
GrantLength	22 bits	Represents the length of the discovery grant, expressed in the units of 1 EQ.
DiscoveryInfo	16 bits	See Table 144-6 for the internal structure of the Discovery Information Field.
SyncTime	16 bits	Represents the required synchronization time of the OLT receiver. The value is counted in 1 EQ increments. The advertised value includes synchronization requirement on all receiver elements including PMD, PMA, and PCS.
OnuRssiMin	16 bits	Represents the minimum RSSI threshold value for ONUs, with the LSB equal to 0.1 uW, covering the range of 0 to 6.5535 mW (~ -40 to +8.2 dBm).
OnuRssiMax	16 bits	Represents the maximum RSSI threshold value for ONUs, with the LSB equal to 0.1 uW, covering the range of 0 to 6.5535 mW (~ -40 to +8.2 dBm).