Action Item for 144.3.6 Granting Process intro

Add the following text to 144.3.6 Granting Process.

As noted in 144.1.1.1 upstream transmissions in a PON network are arbitrated by the OLT. The OLT sends an ONU a grant (see 1.4.278) to allow an upstream transmission by that ONU to begin at a specific time and have a specific duration. A grant is defined by the envelope allocations in one or more GATE messages (see 144.3.4.1). Multiple envelope allocations apply to a single grant if they have the same start time and apply to the same ONU. How the OLT MPMC Client determines the start time and duration of grants is out of scope for this standard but may be based on REPORT messages (see 144.3.4.2) received from an ONU.

The upstream granting process begins when the OLT MPMC Client defines a transmission opportunity for an ONU and compiles a GATE message using the *MsgGate* (see 144.3.4.1) which is sent to the MPMC layer via the MSCR. This generates a GATE message using the process defined in the GATE Generation state diagram (see 144.3.6.7) which is transmitted to the subtended ONUs.

Upon receiving the GATE message, the ONU processes the message as defined in the GATE reception state diagram (see 144.3.6.8) and passes the included information to the MPMC Client via the MSCI using the *MsgGate* message. The ONUs MPMC Client determines when its next transmission opportunity is and generates an appropriate envelope descriptor, which may be grouped with other envelope descriptors, and is sent to the ONUs MPMC in a *MsgEnvGroup* message (see 144.3.6.3) over the MSCR interface. The *MsgEnvGroup* message is processed using the ONU Envelope Commitment state diagram (see 144.3.6.10). This will result in an envelope being added to the *EnvList[]* (see 144.3.6.3).

The *EnvList[]* is processed by the ONU Envelope Commitment state diagram (see 144.3.6.11) which results in an MCRS_CTRL[ch].request begin generated in the Envelope Activation state diagram (see 144.3.6.11) for the indicated channel or channels at the start of the next burst.

Grants are not explicitly used by the OLT in the DS direction. In the OLT transmission is continuous, however, the OLT does use the envelope descriptor, OLT Envelope Commitment (see 144.3.6.9) and Envelope Activation in a manner similar to complementary state diagrams for the ONU. In the case of the OLT the transition from Inter-Envelope Idle to data transmission begins with the issuing of an envelope descriptor by the OLT MPMC Client. The envelope descriptor is processed by the OLT Envelope Commitment state diagram and Envelope Activation state diagram as described for the ONU.