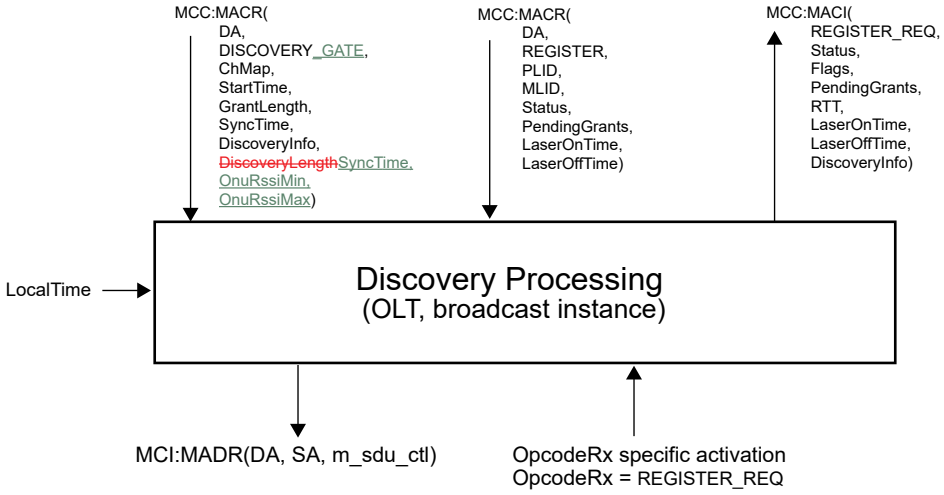
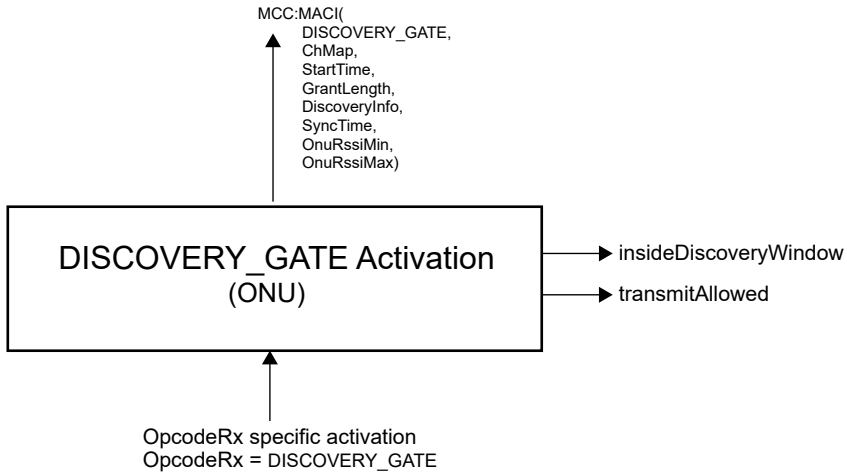
144.3.3 Discovery processing



Instances of Service Interface:
MCI = interface to MAC Control multiplexer
MCC = interface to MAC Control client

Figure 144–3—Discovery Processing service interfaces (OLT, broadcast instance)



Instances of Service Interface:
MCI = interface to MAC Control multiplexer
MCC = interface to MAC Control client

Figure 144–6—DISCOVERY_GATE Activation service interfaces (ONU)

144.3.3.5 Messages

MCC:MACR(DA, DISCOVERY_GATE, ChMap, StartTime, GrantLength, SyncTime, DiscoveryInfo, ~~DiscoveryLength~~OnuRssiMin, OnuRssiMax)

The service primitive is used by the MAC Control client at the OLT to initiate the Discovery Process. This primitive accepts the following parameters:

DA: Multicast or unicast MAC address.

DISCOVERY_GATE: Opcode for DISCOVERY_GATE MPCPDU as defined in Table 31A–1.

ChMap: A bitmap representing the wavelength channel(s) on which to transmit on during the assigned transmission slot. See Table 144–1 for details.

StartTime: Start time of the discovery window.

GrantLength: Length of the grant given for discovery.

SyncTime: The time interval required to stabilize the receiver at the OLT.

DiscoveryInfo: This parameter represents the Discovery Information field in DISCOVERY_GATE MPCPDU as specified in 144.3.7.6, defining the speed(s) the OLT is capable of receiving and speed(s) at which the discovery window is opened for.

~~DiscoveryLength: Length of the discovery window process.~~OnuRssiMin: 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: 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).

MCC:MACI(DISCOVERY_GATE, ChMap, StartTime, GrantLength, DiscoveryInfo, SyncTime, OnuRssiMin, OnuRssiMax)

The service primitive is used by the Discovery Initiation process at the ONU to notify the client and Layer Management about the arrival of a DISCOVER GATE MPCPDU. This primitive accepts the following parameters:

DISCOVERY_GATE: Opcode for DISCOVERY_GATE MPCPDU as defined in Table 31A–1.

ChMap: A bitmap representing the wavelength channel(s) on which to transmit on during the assigned transmission slot. See Table 144–1 for details.

StartTime: Start time of the discovery window.

GrantLength: Length of the grant given for discovery.

DiscoveryInfo: This parameter represents the Discovery Information field in DISCOVERY_GATE MPCPDU as specified in 144.3.7.6, defining the speed(s) the OLT is capable of receiving and speed(s) at which the discovery window is opened for.

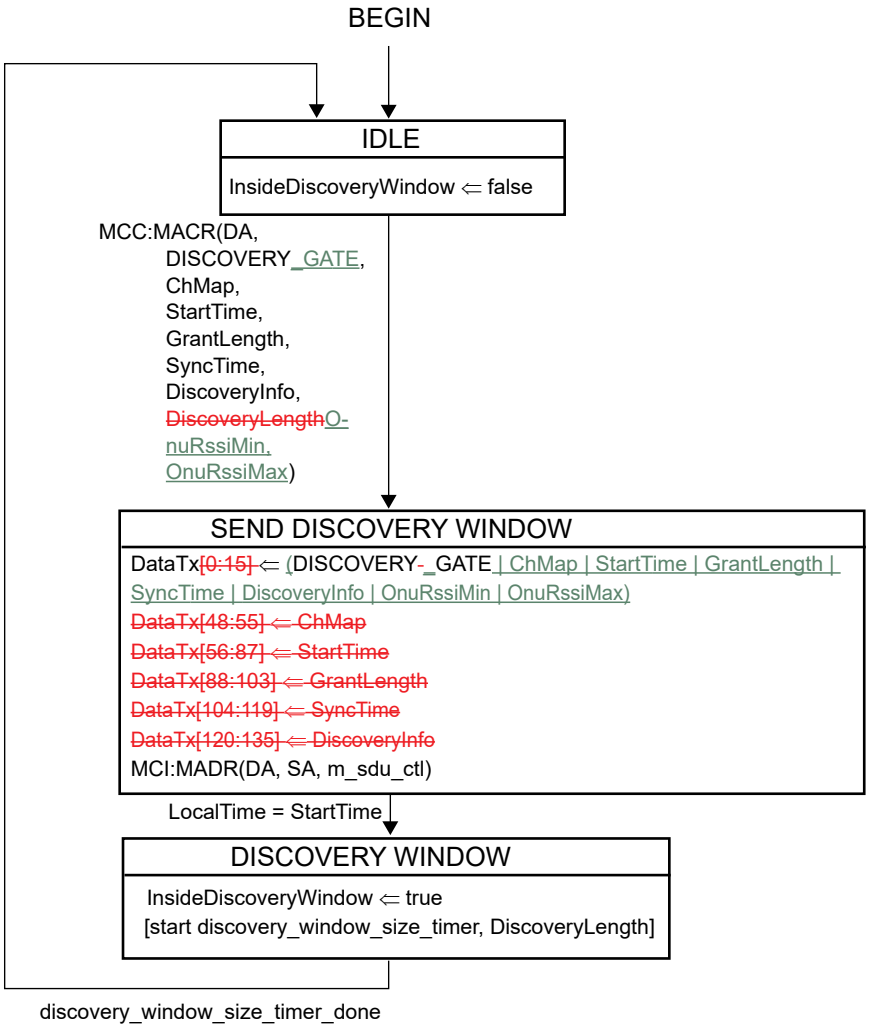
SyncTime: The time interval required to stabilize the receiver at the OLT.

OnuRssiMin: 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: 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).

144.3.3.6 State Diagrams

The ONU shall implement the DISCOVERY_GATE MPCPDU activation state diagram as shown in Figure 144–11.



Instances of Service Interface:
MCI = interface to MAC Control multiplexer
MCC = interface to MAC Control client

Figure 144–7—Discovery Processing OLT Window Setup state diagram

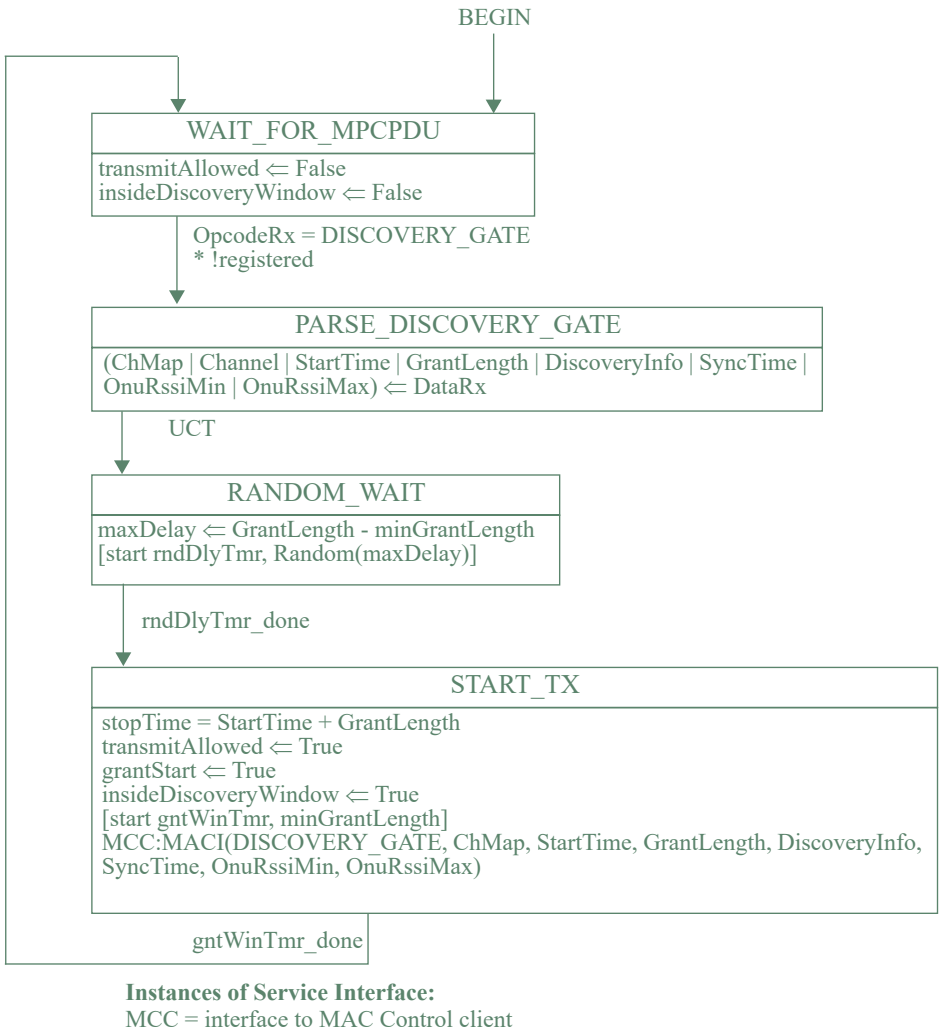


Figure 144–11—DISCOVERY_GATE Activation ONU state diagram