

144.3.5.3 Variables

ChState

Note to Editor: Copy definition from 144.3.6.3. In 144.3.6.3, reference 144.3.5.3 (this location)

Onu10GCapable

Type: Boolean

Description: This variable is set to true if the ONU is capable at transmitting at line rate of 10.3125 Gb/s. Otherwise, it is set to false.

Onu25GCapable

Type: Boolean

Description: Description: This variable is set to true if the ONU is capable at transmitting at line rate of 25.78125 Gb/s. Otherwise, it is set to false.

OnuCoexType

Type: 2-bit integer

Description: This variable represents the coexistence types supported by the ONU transceiver (see 141.2.3). Bit 0 represents G-type coexistence and bit 1 represents X-type coexistence. Therefore, this variable can take the following values:

0x1: The ONU transceiver supports G-type coexistence

0x2: The ONU transceiver supports X-type coexistence

0x3: The ONU transceiver supports both G-type and X-type coexistence

OnuRssiLocal

Type: 16-bit unsigned integer

Description: This variable holds the RSSI value measured by the ONU receiver. Only the ONUs whose *OnuRssiLocal* value is within the RSSI limits advertised in the DISCOVERY MPCPDU are allowed to register in the given discovery window. Refer to definitions of *OnuRssiMin* and *OnuRssiMax* in 144.3.4.6.

Unit: 0.1 μ W

RegAllowed

Type: Boolean

Description: This variable is set to true if upon the verification of the various fields of the DISCOVERY MPCPDU, the ONU has determined that it is allowed to transmit a REGISTER_REQ in the current discovery window. The *RegAllowed* is an alias for the following code:

RegAllowed =

```
// 1) Upstream channel is available
((MsgDiscovery.ChannelMap AND ChState) != 0) AND
```

```
// 2) RSSI is within the allowed limits
OnuRssiLocal >= MsgDiscovery.OnuRssiMin AND
OnuRssiLocal <= MsgDiscovery.OnuRssiMax AND
```

```
// 3) OLT and ONU support the same coexistence mode (G or X)
((MsgDiscovery.DiscoveryInfo[15:14] AND OnuCoexType) != 0) AND
```

```
// 4) 25G discovery is open and ONU is 25G-capable,  
//    OR (10G discovery is open and ONU is 10G-capable  
//    AND the OLT and/or the ONU are not 25G-capable)  
//    (see Discovery in dual-rate systems, 144.3.7)  
((MsgDiscovery.DiscoveryInfo[6] == 1 AND Onu25GCapable) OR  
(MsgDiscovery.DiscoveryInfo[5] == 1 AND Onu10GCapable) AND  
(MsgDiscovery.DiscoveryInfo[2] == 0 OR !Onu25GCapable));
```

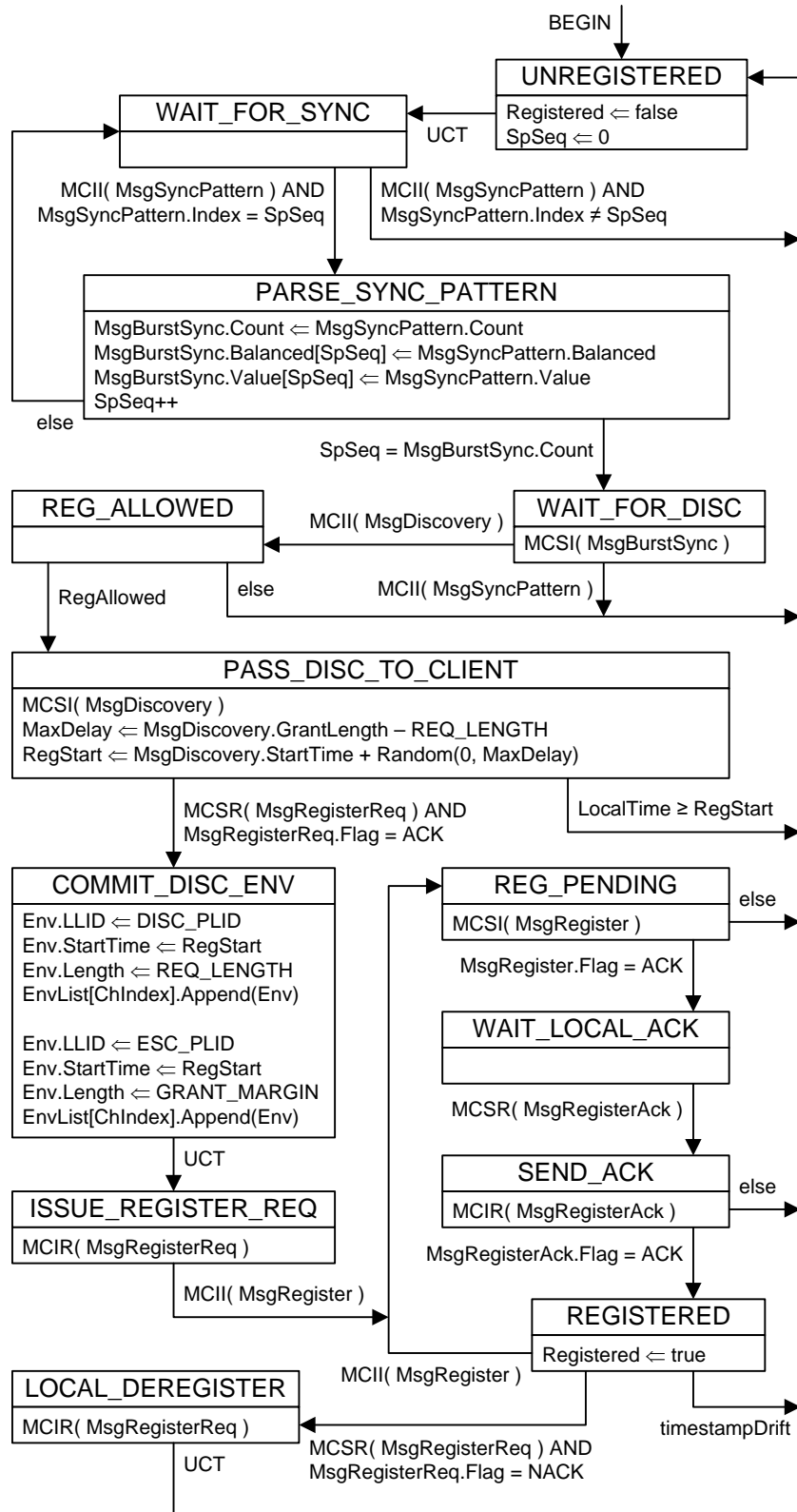


Figure 144-20 – ONU Registration state diagram