OLT-specifiable Sync Pattern

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Overview of changes

1. Modify REGISTER to enable OLT to specify a 66-bit Burst Sync Pattern suited to its upstream receiver

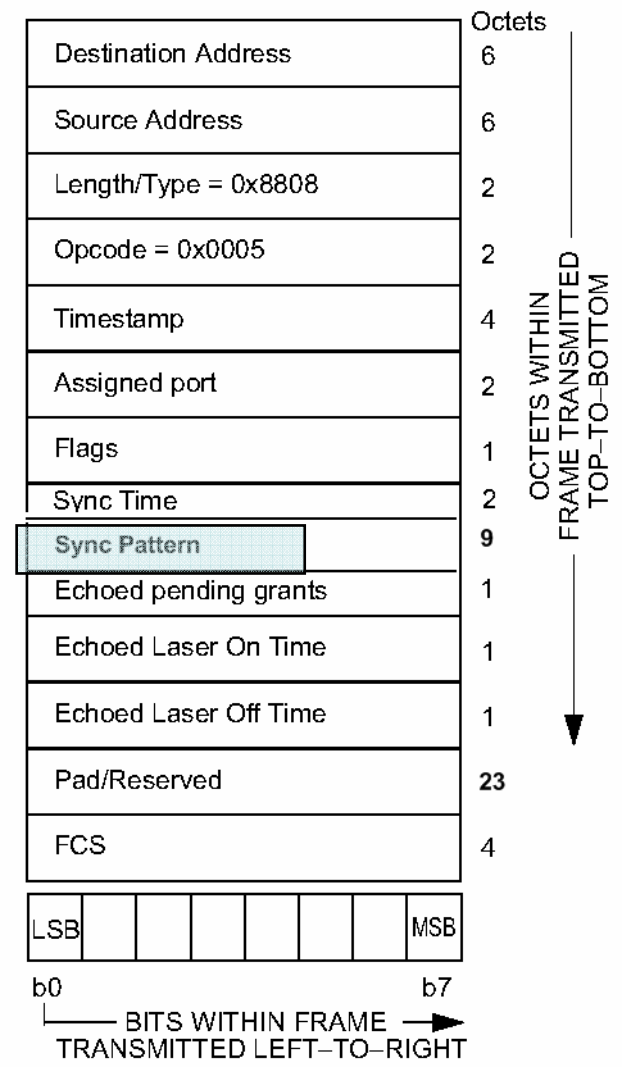
2. MPCP receives SyncPattern from REGISTER and passes it to MAC Control Client for use by lower layer

3. The constant **SP** in clause 76 will become a variable.

4. The current value of **SP** will become the default burst sync pattern that is used for the initial REGISTER_REQ

    - OLT may choose to specify the same value in the Sync Pattern field of REGISTER

New Field in REGISTER



1. Sync Pattern is written as $b_{65}…b_0$
2. The two least significant bits of the B_0 (ie. first) *Sync Pattern* octet are b_{65} and b_{64} of the sync pattern
3. Most significant bit of the B_1 *Sync Pattern* octet is b_{63} of the sync pattern
4. Most significant bit of B_0 (ie. final) *Sync Pattern* octet is b_7 of the sync pattern

New variable in 77.3.3.2

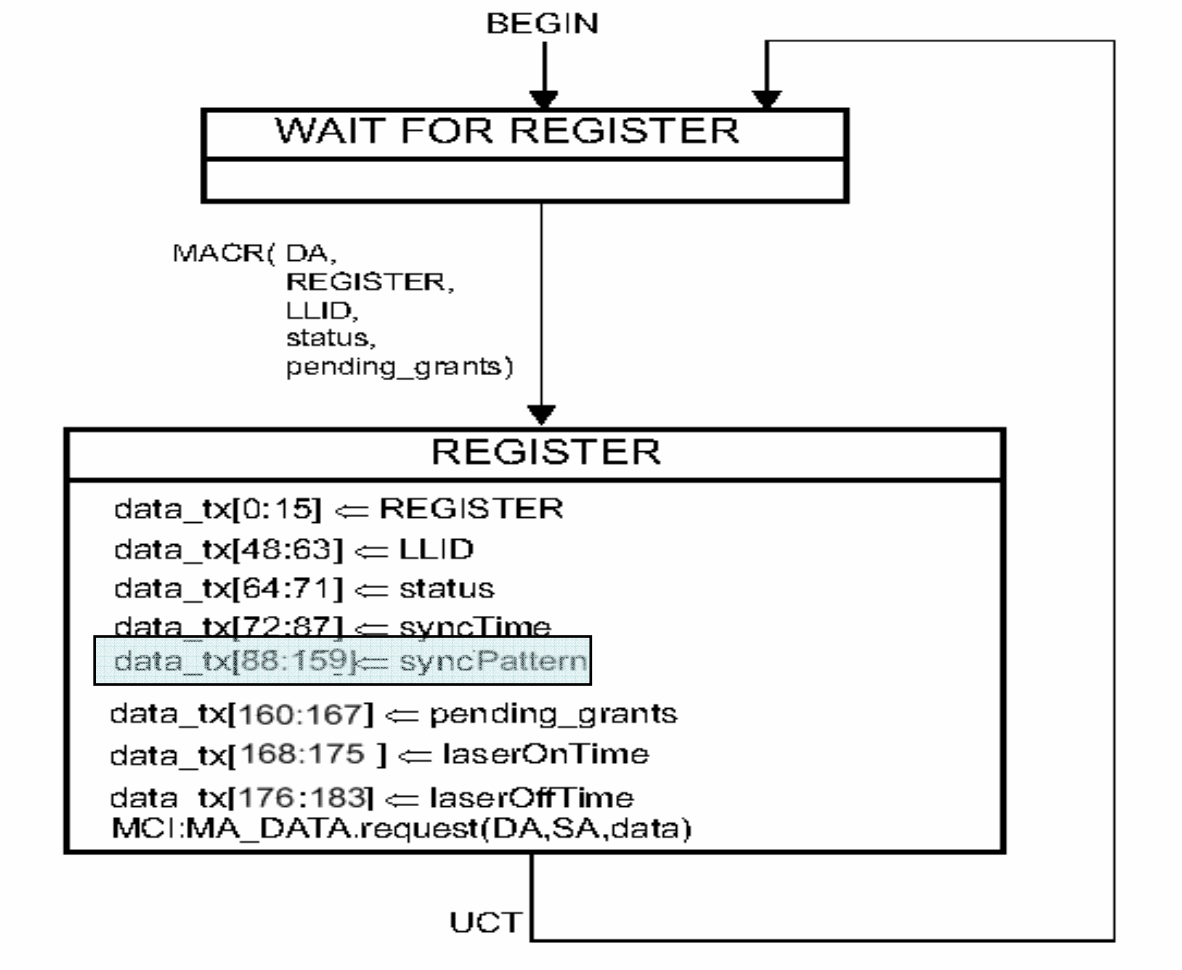
syncPattern

TYPE: 66 bit unsigned

This variable holds the burst synchronization pattern that the ONU is instructed to use at the beginning of the transmission burst.

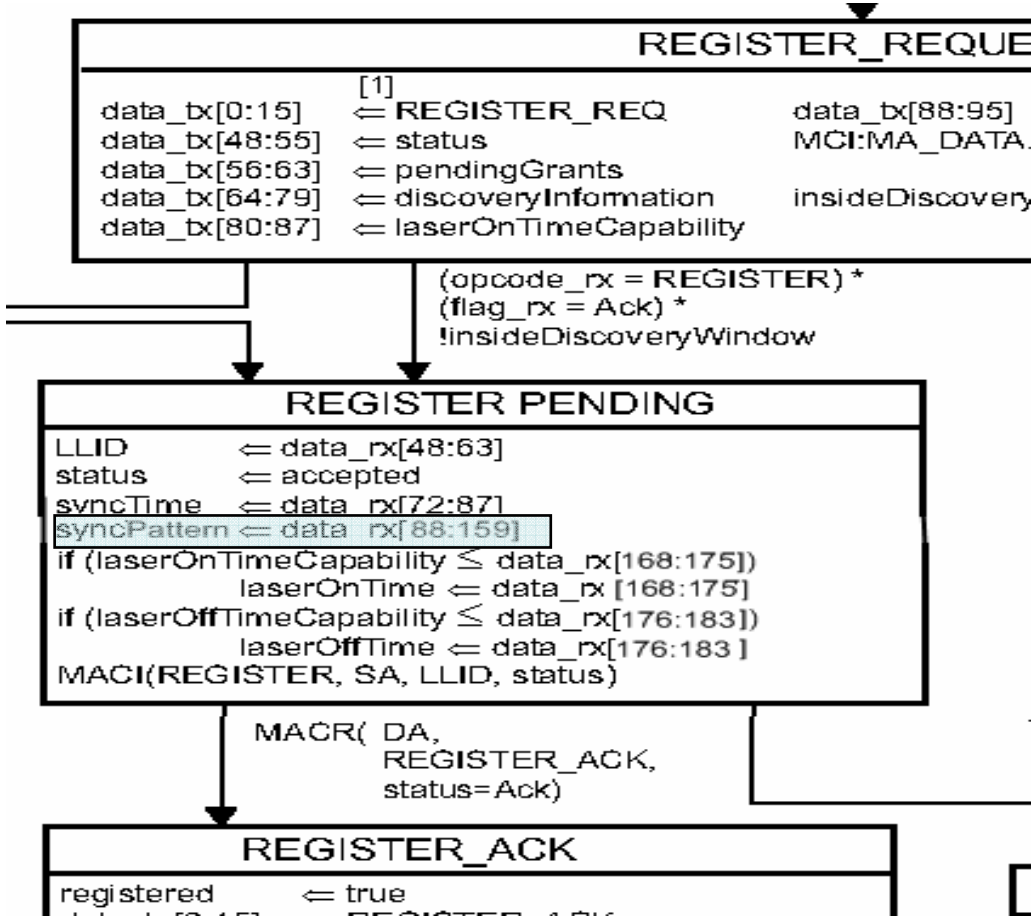
The OLT conveys a particular value for the burst synchronization pattern to an ONU in the REGISTER message. During the burst synchronization period an asymmetric 10/1 Gb/s ONU transmits only IDLE patterns, and a symmetric 10 Gb/s ONU sends the repeating synchronization pattern for a period of time indicated in the syncTime parameter, followed by a burst delimiter and idle blocks as defined in Subclause @@76.2.2.5.2@@.

OLT REGISTER State diagram (Fig 77-20)



- syncPattern handling is based on handling for syncTime

ONU REGISTER State diagram (Fig 77-22)



- syncPattern handling is based on handling for syncTime

New variable in 76.2.2.5.2

SP

Type: 66-bit unsigned

A 66-bit value used as the burst mode synchronization pattern. The initial value of this variable is set specified below. After receipt of the REGISTER message by the ONU, the variable will contain the 66-bit value derived from the *Sync Pattern* parameter passed from the OLT. See Subclause 77.3.3.2 for details.

Initial Value: 0x 4 BF 40 18 E5 C5 49 BB 59

(transmission bit sequence 10 1111 1101 0000 0010 0001 1000 1010 0111 1010 0011 1001 0010 1101 1101 1001 1010)