PCS TRANSMIT UPDATE

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OVERVIEW

- **Draft text changes laubach_3bn_03_0315.pdf**
- **Hole filling for upstream CNU PCS and CLT/CNU harmonization**
  - Data Detector Updates
    - Same data detector input process for CLT and CNU
      - Brought back certain elements from Figure 76-16
        - 2 Idle count, End of data, transmitting status
    - Slightly updated CLT output process
    - New CNU output process
      - Added accumulation of a burst time header 65-bit block that is extracted at the CLT based on notion from Figure 76-14
    - Added two pseudo-code functions that define upstream codeword filling, end of burst detection, and interaction with PMA client
    - Added all used constants, variables, and functions
    - Updated transferToPMA process to be usable by both CLT and CNU
    - Found some Clause 76 typos, will submit comment
  - Fixed some “65” vs “66” issues
  - Removed now redundant text and unneeded subclauses

CLAUSE 76 REVIEW – DATA DETECTOR INPUT

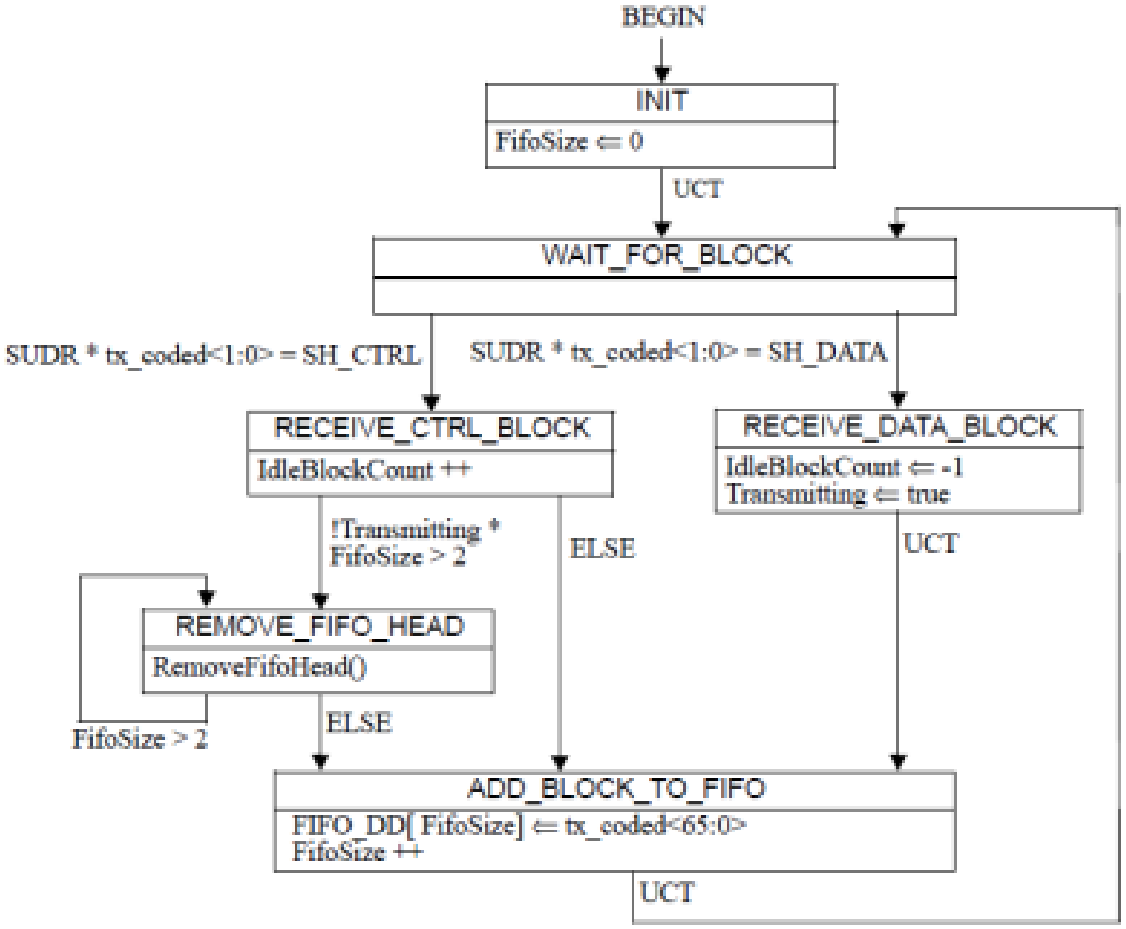


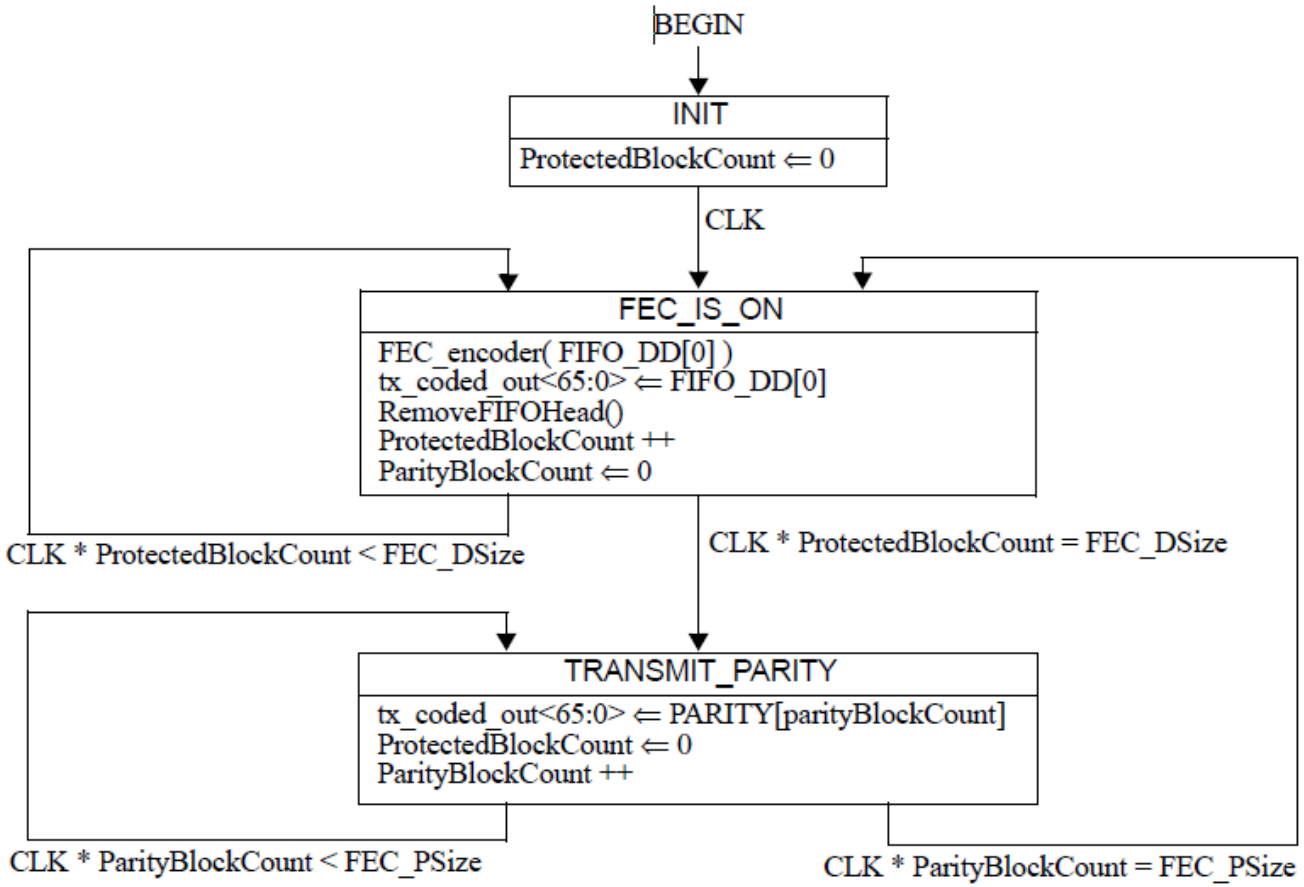
Figure 76–16—Data Detector, input process state diagram

CLAUSE 76 REVIEW – INPUT/OUTPUT COORDINATION

Certain Variables in Clause 76:

- DelayBound
  TYPE: 16 bit unsigned
  This value represents the delay sufficient to initiate the laser and to stabilize the receiver at the OLT (i.e., the maximum FIFO size expressed in 66 bit blocks). The value includes LaserOnTime (77.3.3.2), $T_{receiver\_settling}$, T_{CDR}, Burst Delimiter, and the two 66 bit blocks containing Idles, that precede the first packet in the burst. This variable is used only by the ONU.
- IdleBlockCount
  TYPE: 32 bit unsigned
  The number of consecutive non-data 66-bit blocks ending with the most recently received block. The non-data 65-bit blocks are represented by sync header 10 (binary).
- Transmitting
  TYPE: Boolean
  Boolean variable indicating whether the device is transmitting or not. At the ONU, the default value of Transmitting is false. At the OLT, this variable is always set to true.

CLAUSE 76 REVIEW – OLT D.D. OUTPUT

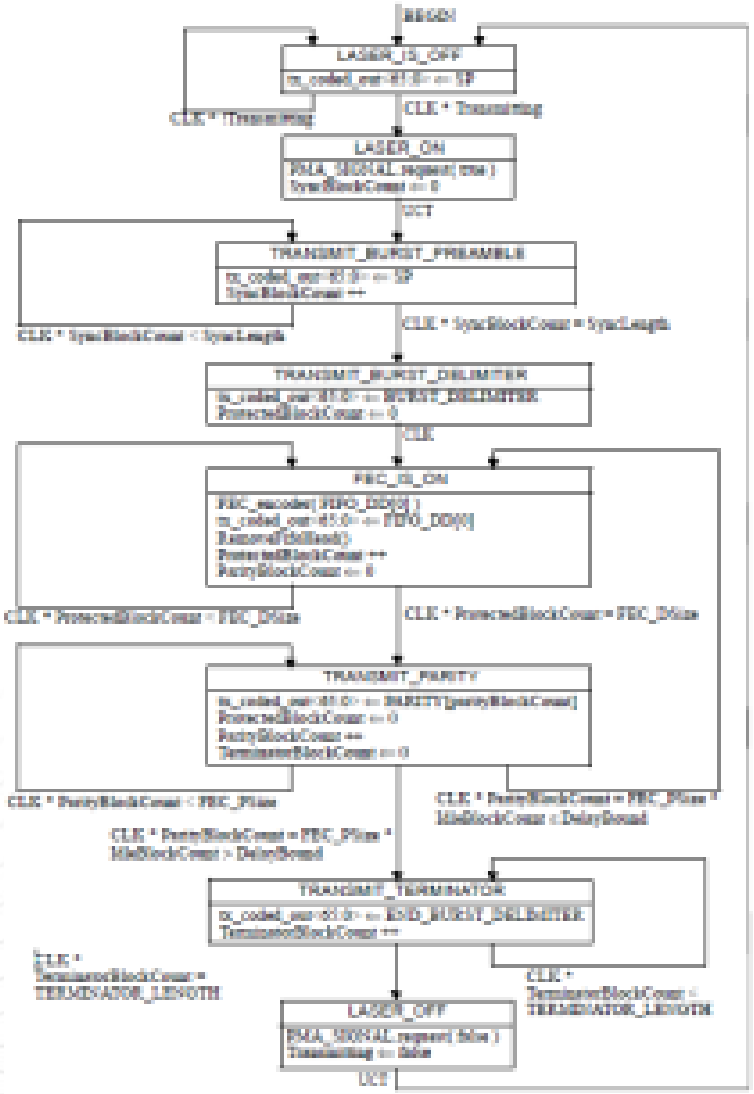


(a) OLT state diagram

CLAUSE 76 REVIEW – ONU D.D. OUTPUT

Yes, figure is large, see

PDF page at end of this presentation.



(b) ONU state diagram

Figure 76–17—Data Detector, output process state diagram

CLAUSE 76 – UPSTREAM BURST STRUCTURE

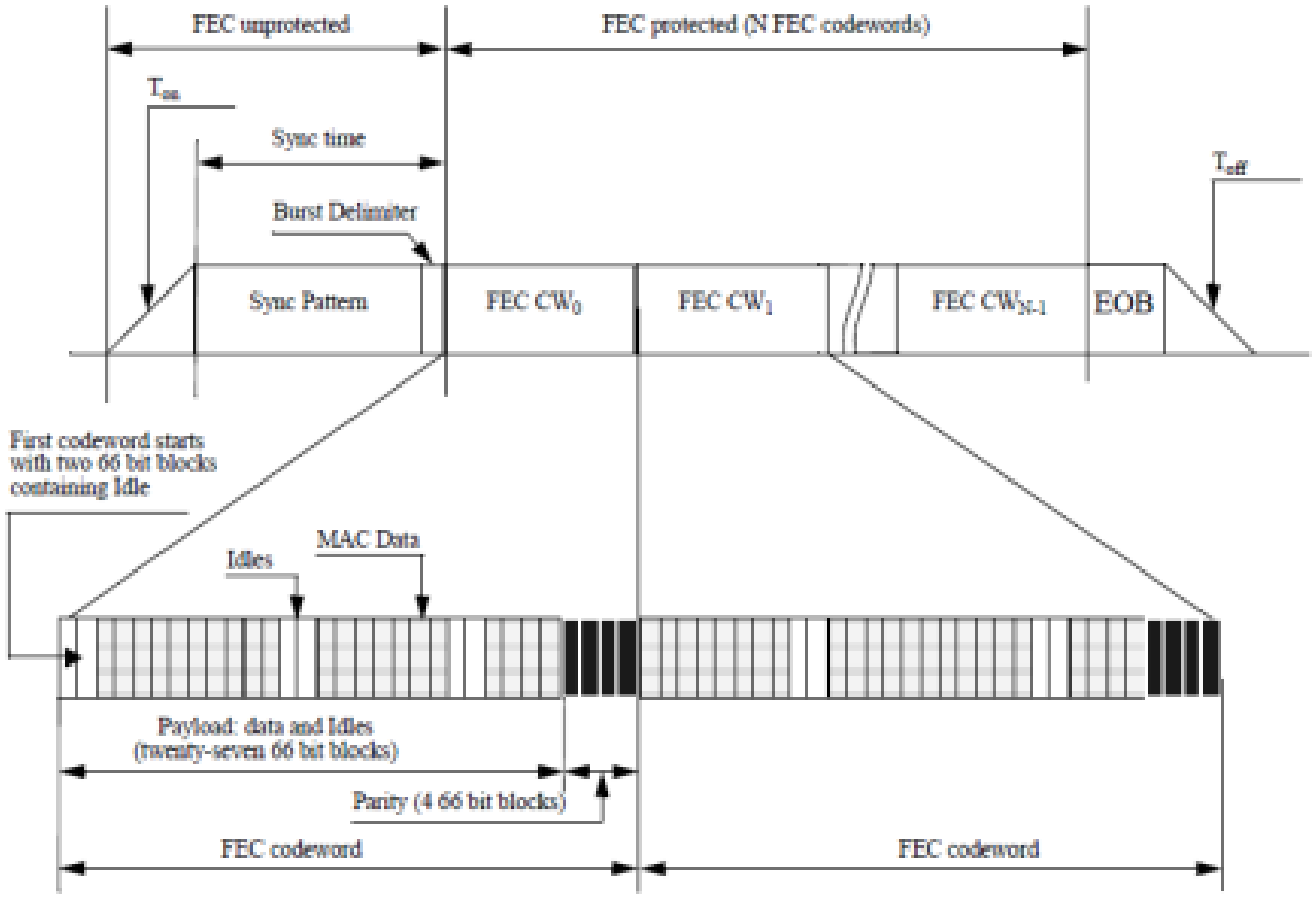


Figure 76–14—Details of burst composition

PROPOSED MOTION

Move to:

Adopt laubach_3bn_03_0315.pdf changes for PCS transmit.

Thank you