MPCP State Machines

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Outline

- **General Description**
- **Main Function of State Machines**
- **The Detailed State Machine Diagrams**

General Description

•The MPCP, which is implemented in MAC control sublayer, specifies a control mechanism between an OLT and ONUs connected to a Point-to-Multi-Point (P2MP) segment to allow efficient transmission of data.

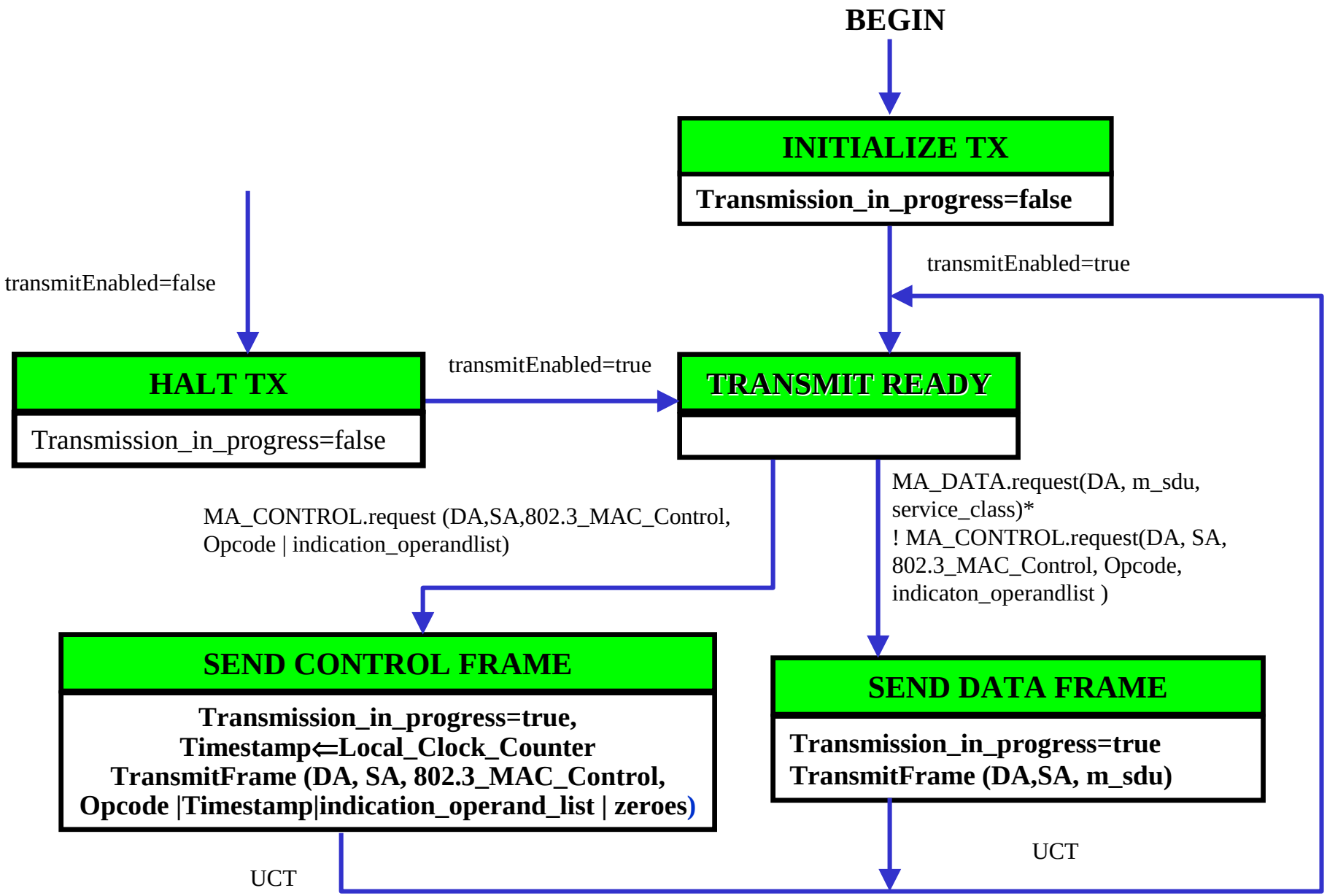
•The operation of the protocol is controlled by a number of state machines, each of which performs a distinct function.

•Since OLT and ONU have different requirements for each function, MPCP state machines further consists of the transmit, receive, and auto-discovery state machines in ONU and OLT respectively.

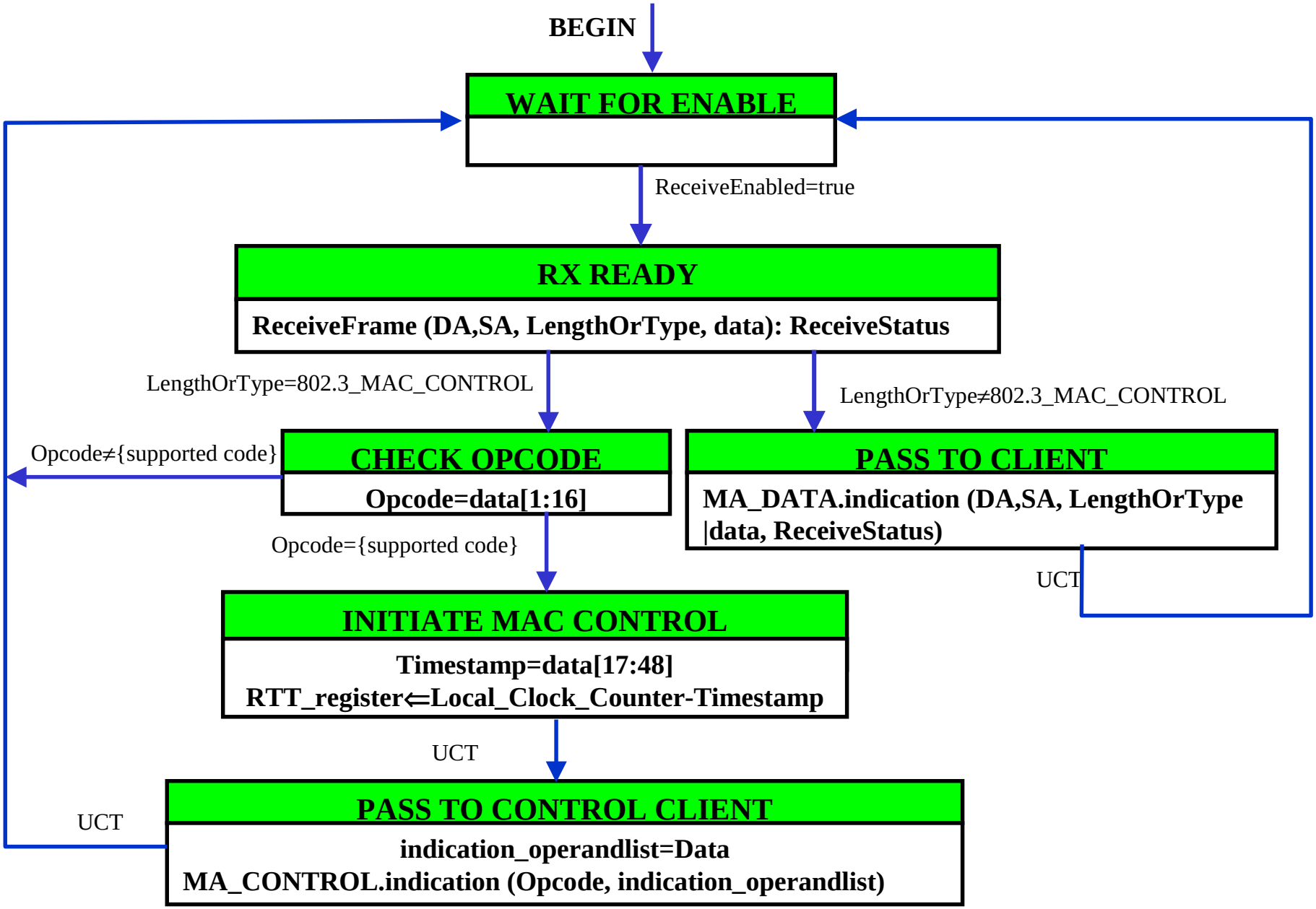
Function of State Machines

- Transmit State Machine
  - It handles the transmission of control or data packet from the layer above MAC sublayer.
- Receive State Machine
  - The opcode-independent MAC control sublayer Receive State Machine accepts and parses valid frames received from the MAC sublayer.
- Auto-discovery State Machine
  - It is responsible for harmonizing new ONUs into EPON system.

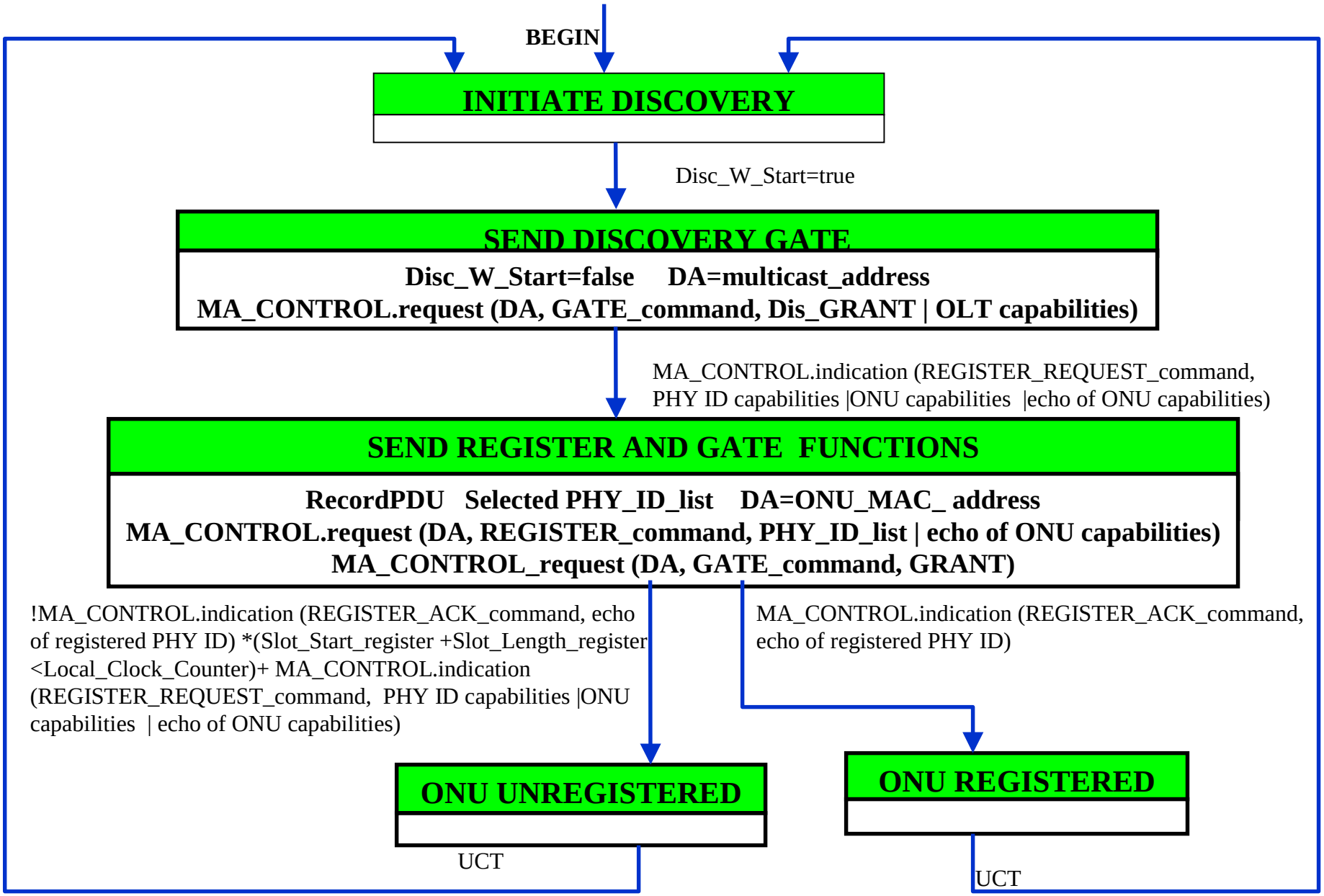
Transmit state machine @OLT



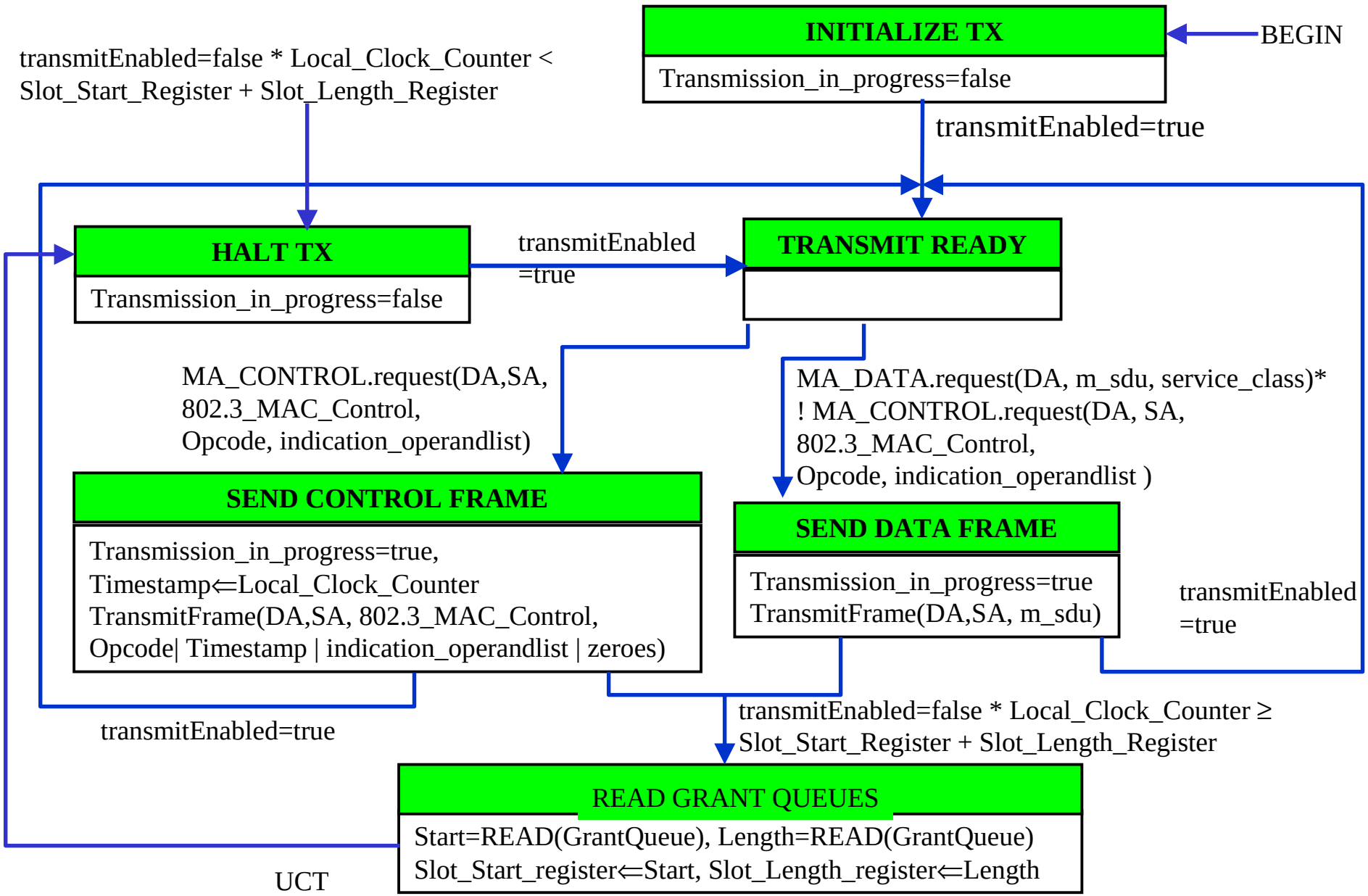
Receive State Machine @ OLT



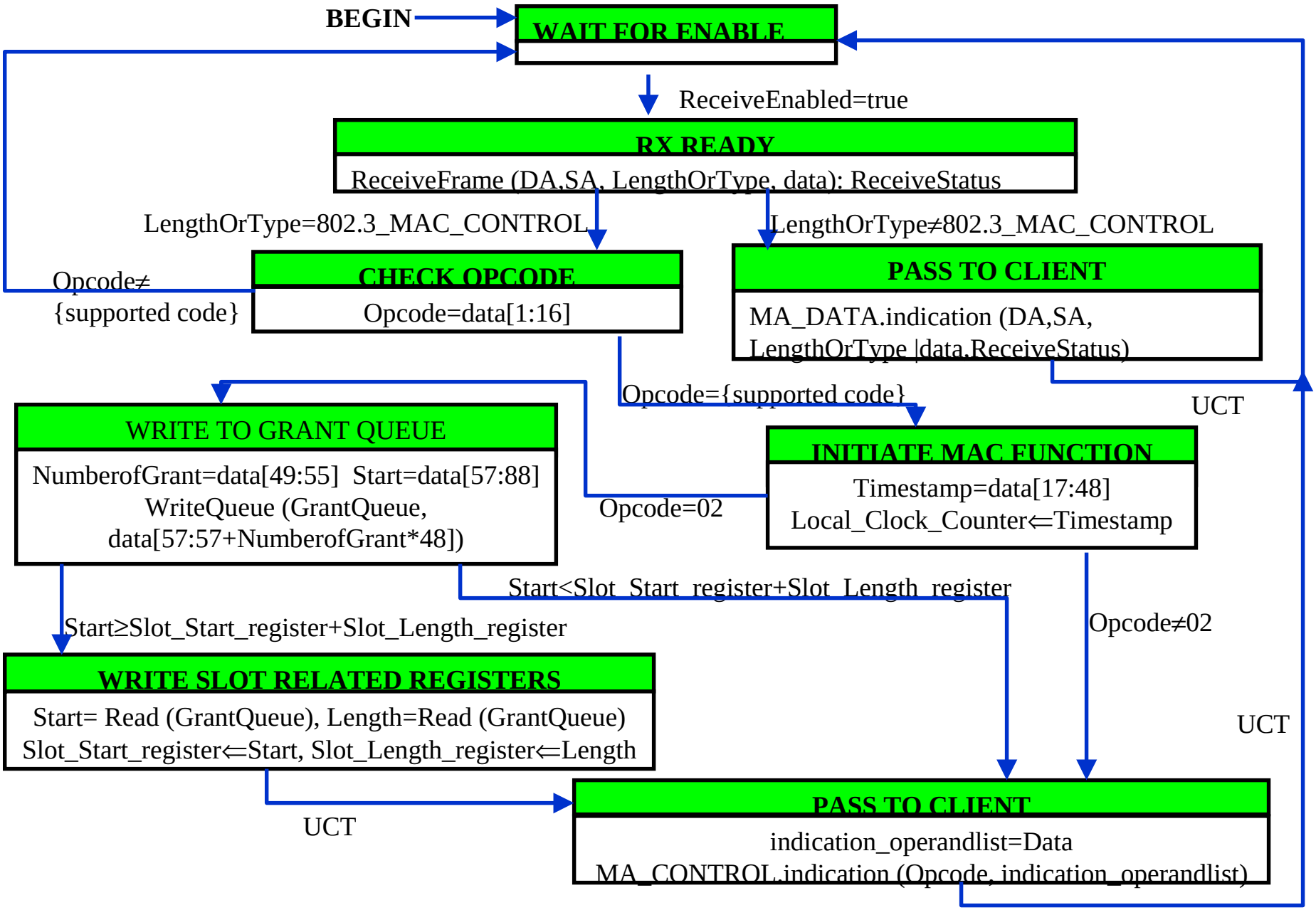
Auto-Discovery State Machine @ OLT



Transmit State Machine @ONU



Receive State Machine @ONU



Auto Discovery State Machine @ONU