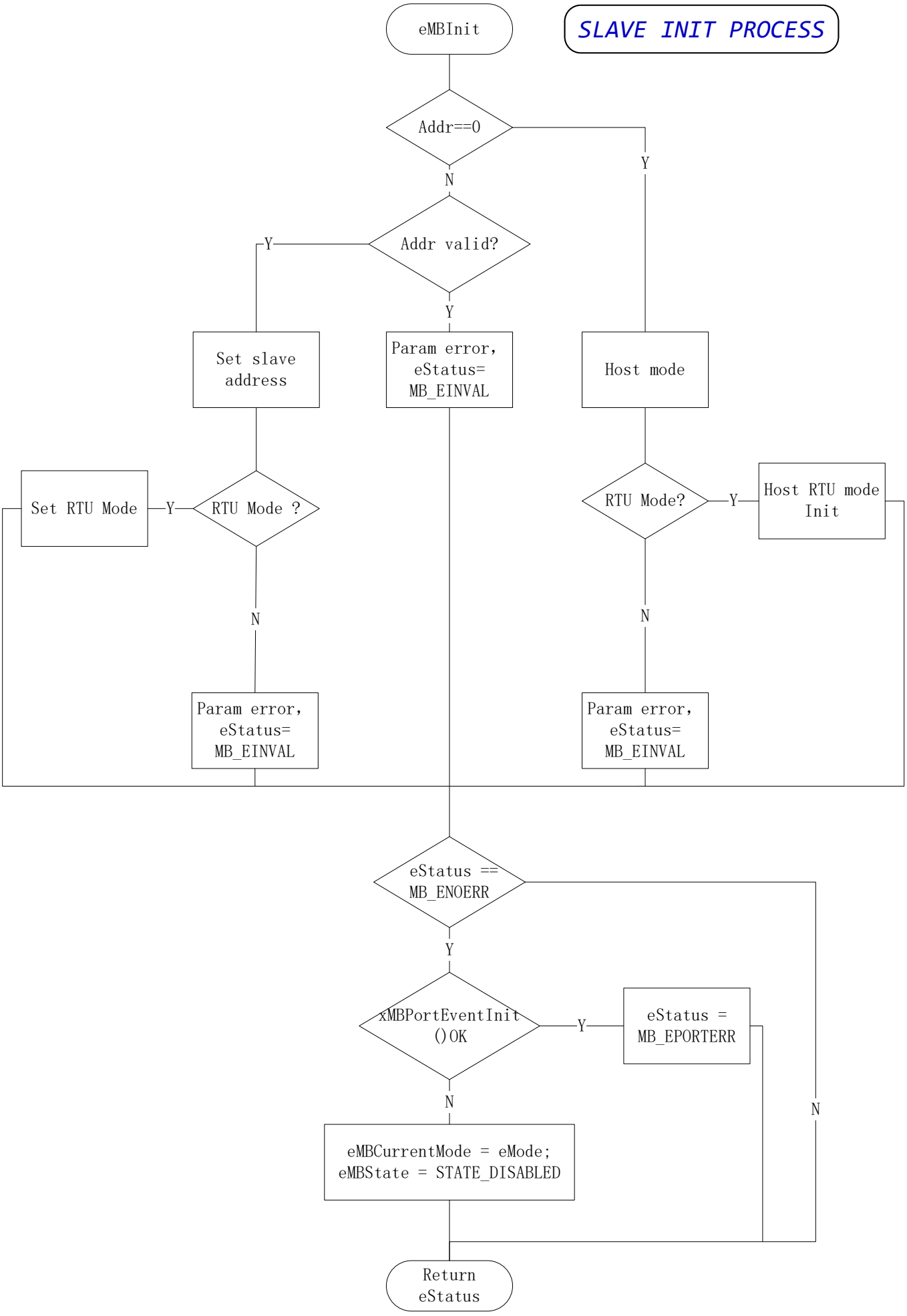
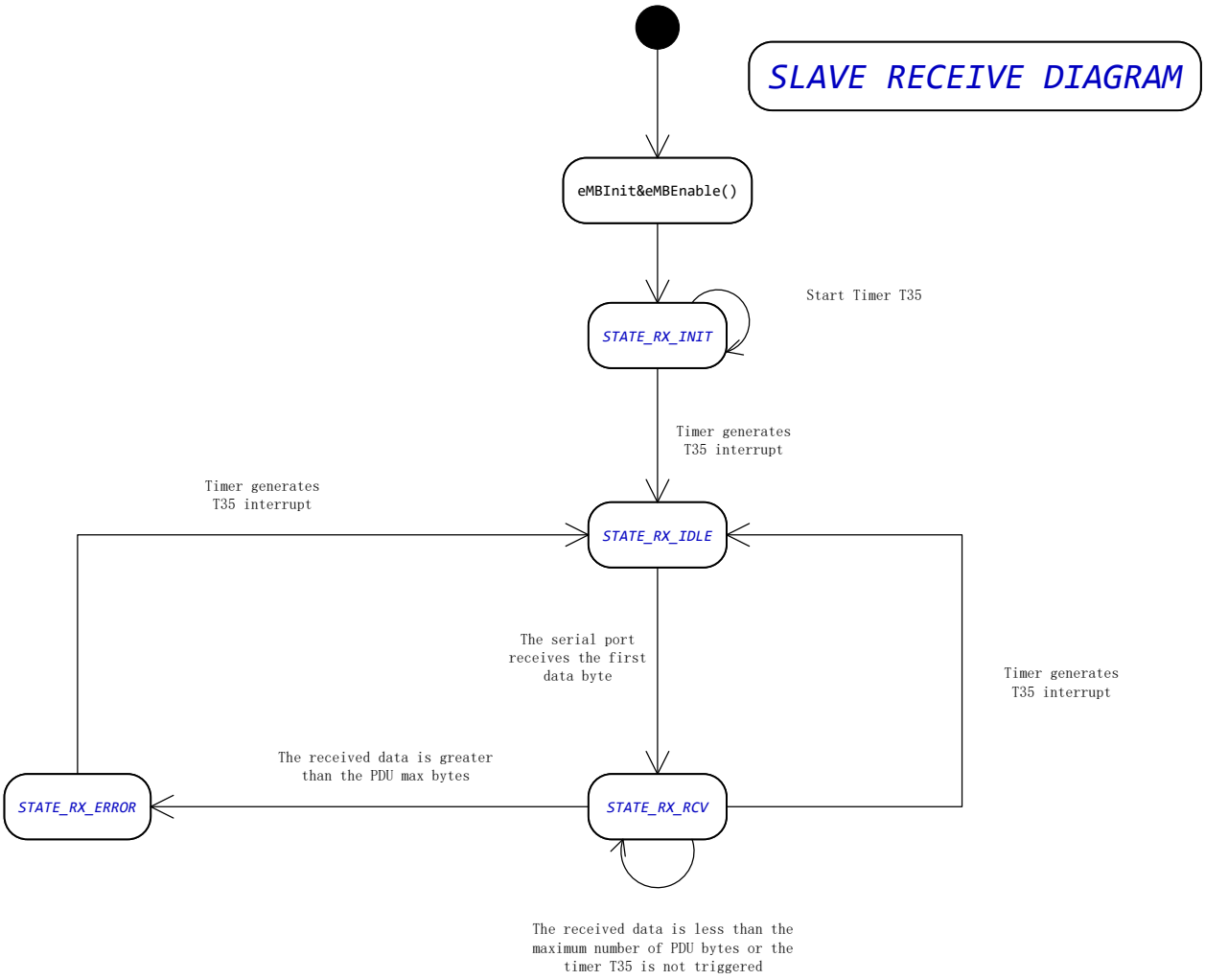
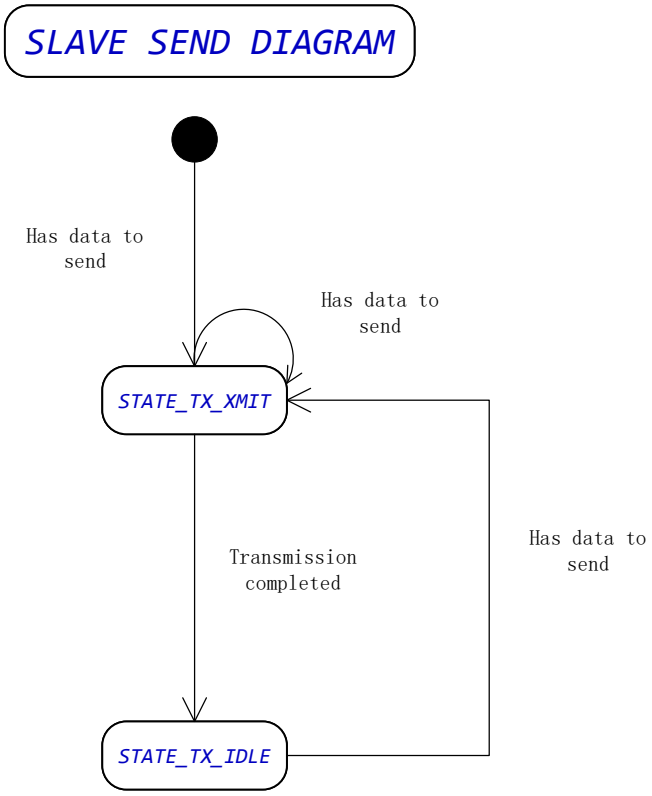
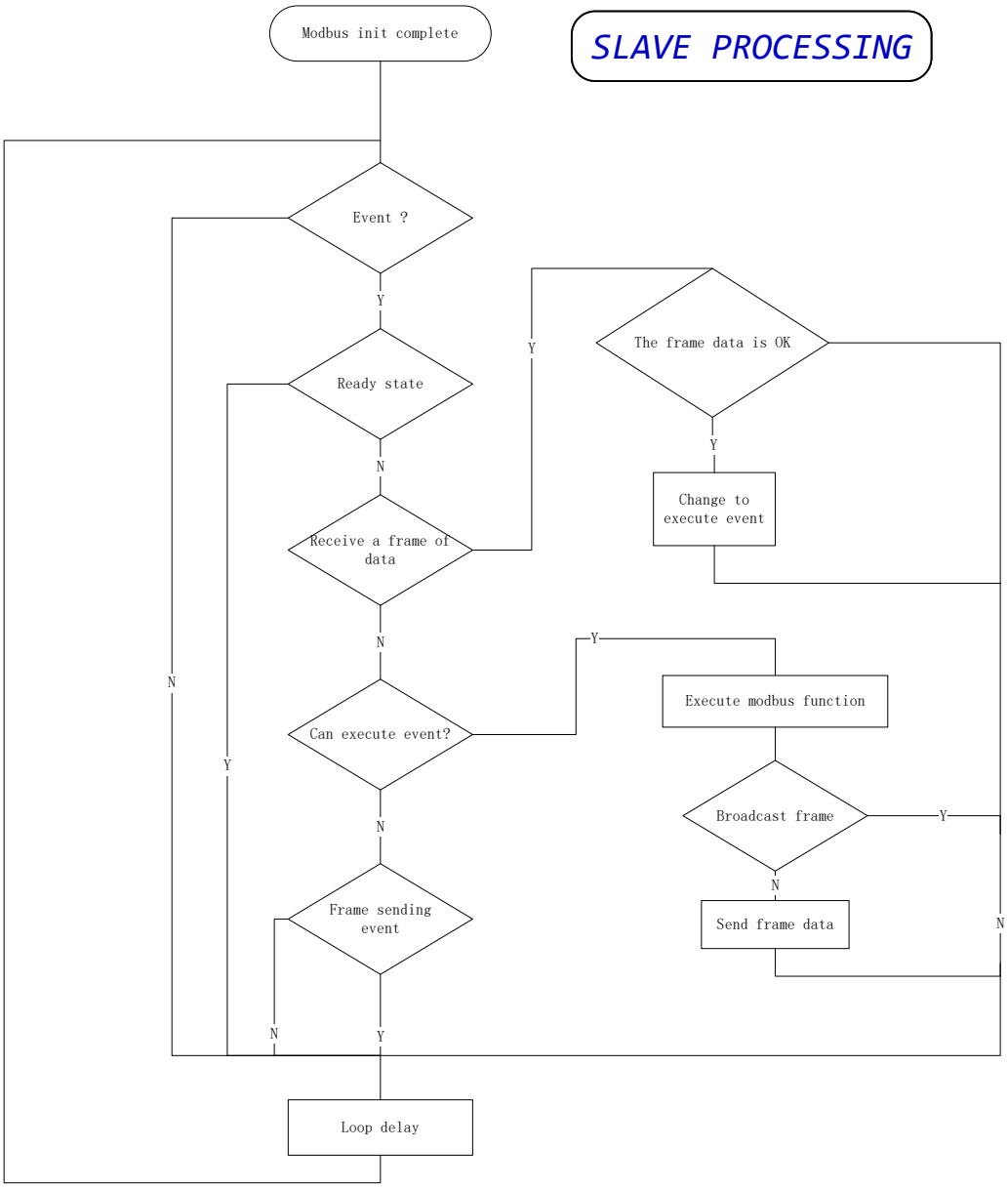
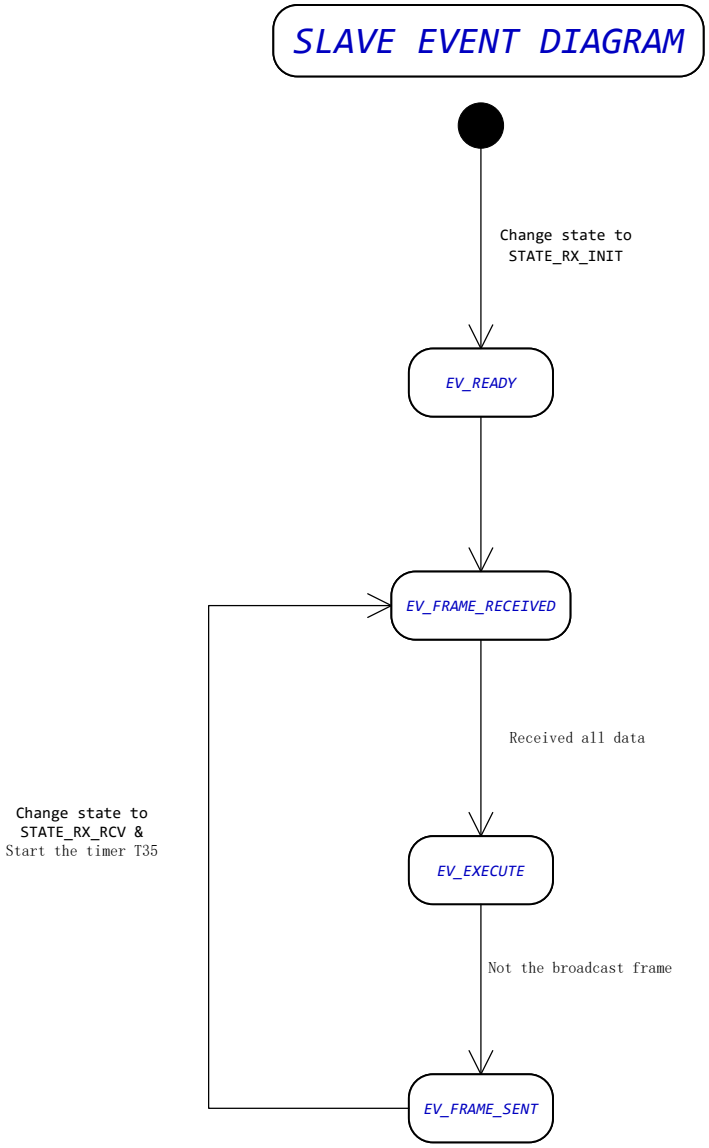

SLAVE INIT PROCESS
eMBInit
Addr==0
Y
N
Addr valid?
Y
N
Set slave address
Param error, eStatus= MB_EINVAL
Host mode
Set RTU Mode
Y
RTU Mode ?
N
Param error, eStatus= MB_EINVAL
RTU Mode?
Y
Host RTU mode Init
N
Param error, eStatus= MB_EINVAL
eStatus == MB_ENOERR
Y
N
xMBPortEventInit ()OK
Y
eStatus = MB_EPORTERR
N
eMBCurrentMode = eMode;
eMBState = STATE_DISABLED
Return eStatus


SLAVE RECEIVE DIAGRAM
eMBInit&eMBEnable()
Start Timer T35
STATE_RX_INIT
Timer generates
T35 interrupt
Timer generates
T35 interrupt
STATE_RX_IDLE
The serial port
receives the first
data byte
Timer generates
T35 interrupt
The received data is greater
than the PDU max bytes
STATE_RX_ERROR
STATE_RX_RCV
The received data is less than the
maximum number of PDU bytes or the
timer T35 is not triggered


SLAVE SEND DIAGRAM
Has data to send
Has data to send
STATE_TX_XMIT
Transmission completed
Has data to send
STATE_TX_IDLE


SLAVE PROCESSING
Modbus init complete
Event ?
Y
Ready state
N
Receive a frame of data
N
Can execute event?
N
Frame sending event
N
Y
Loop delay
Y
The frame data is OK
Y
Change to execute event
Y
Execute modbus function
Broadcast frame
Y
N
Send frame data
N
Y
N
Y


SLAVE EVENT DIAGRAM
Change state to
STATE_RX_INIT
EV_READY
EV_FRAME_RECEIVED
Received all data
Change state to
STATE_RX_RCV &
Start the timer T35
EV_EXECUTE
Not the broadcast frame
EV_FRAME_SENT