Pseudocode for ReceiveService.c

This service acts upon the XBEE packets received. They are of tree types: Ack packet from own XBEE in response to packet sent by it, status packet set by WHA:LE or Pair ack sent by WHA:LE

Data private to the module:
MyPriority
CurrentState
static ES_Event_t DeferralQueue[3 + 1];
static uint8_t MSBLEN;
static uint8_t LSBLEN;
static uint16_t BytesLeft;
static uint8_t ChkSum;
static uint8_t FrameDataReceived[20];
static int Index;

Received_Packet[20];// visible in all the services

Constants:
Motor_Time // for truning off the vibe motor
Ack_Header
Directed_Header//which is the status header

Function : InitReceiveService()
Set MyPriority = Priority
CurrentState as IdleReceiving
Post ES_Init to itself

bool PostReceiveService(ES_Event_t ThisEvent)
return PostToService

ES_Event_t RunReceiveService(ES_Event_t ThisEvent)
Initiate ReturnEvent to ES_NO_EVENT
If the event is ES_TIMEOUT and param is Motor_Timer
    Turn off all the motors
Endif

If the event is ES_PacketReady
    If it is Pair Ack
        Post ES_AckReceived to TransmitService
        Initialize Pair_Timer
    Endif

    If it is a Directed Header (status packet)
        Parse it to check the following:
        If the WHA:LE is “It”

```
                    Light up It status LED
                Endif

                If bumper is hit
                    Turn on vibe motor corresponding to that bumper
                    Initialize the motor timer
                Endif
        Else if this is Ack Header in response to message sent from own XBEE
                Do nothing
        Endif
Endif
```

Function : bool Check4Receiving(void)

This is an event checker to detect the receiving of the packet

```
If packet is received
        Clear receive_flag//
        Make a copy of the data  from received packet
        If checksum is Ok
                Post ES_PacketReady to ReceiveService
        Return true
        Endif
Else
        Return false
Endif
Return false
```