BEGIN

WAIT FOR GRANT

!empty(grantList)

WAIT FOR START TIME

currentGrant = remove_head(grantList)

localTime = currentGrant.start

LASER ON

laserControl = true
stopTime = currentGrant.start + currentGrant.length - laser_off_time
[start sync_timer, syncTime]

sync_timer_done

START TX

transmitAllowed = true

localTime = stopTime

STOP TX

!empty(grantList)   empty(grantList)

CHECK NEXT GRANT

nextGrant = peek_head(grantList)
nextStopTime = nextGrant.start + nextGrant.length - laser_off_time

nextStopTime <= stopTime   nextGrant.start <= stopTime *   else
                                 nextStopTime > stopTime

HIDDEN GRANT   **B2B GRANT**   **LASER OFF**

remove_head(grantList)   remove_head(grantList)   laserControl = false
                            stopTime = nextStopTime   transmitAllowed = false
                                                        MA_CONTROL.indication(currentGrant, status = done)

UCT   UCT   UCT

ONU Gate Activation State Diagram

Example of hidden grant:
GRANT **k** is hidden inside GRANT **j**

GRANT **j**

GRANT **k**

Example of back-to-back grants:

GRANT **j**

GRANT **k**