

# rts\_forward\_timer duration concern

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# The concern is with rts\_forward\_timer min duration

One side could go to FAIL while the other goes to PATH\_UP due to RTS asserting before recovery\_timer expires.

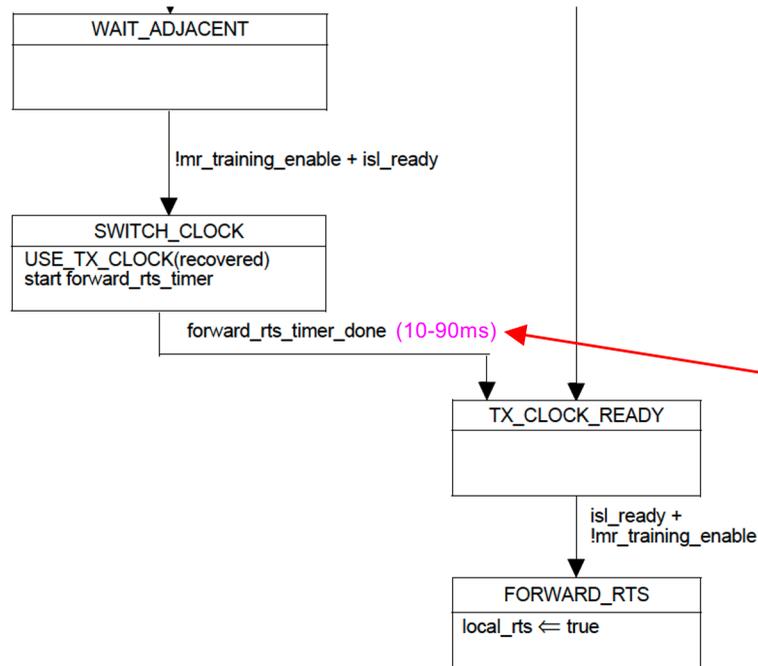


Figure 178B-9—RTS update state diagram

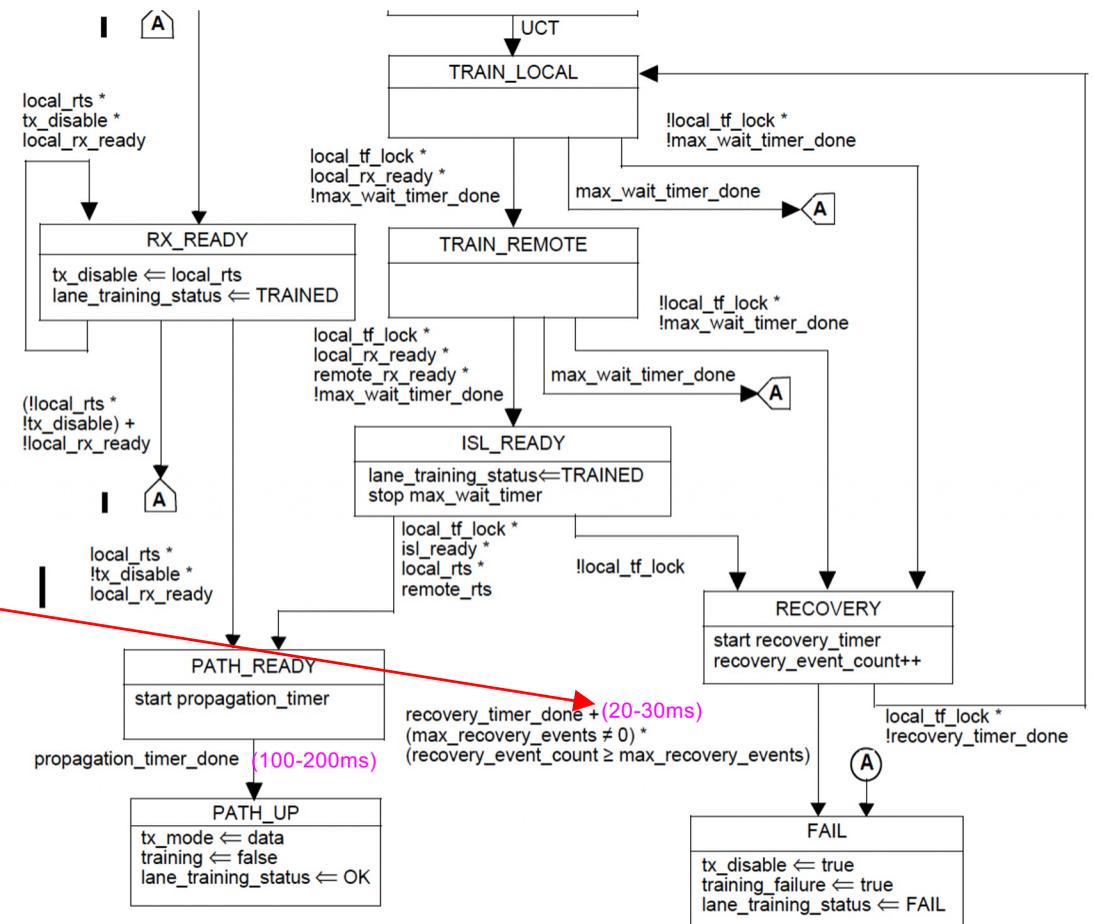


Figure 178B-10—Training control state diagram

# A scenario

Peer interfaces A and B are in ISL\_READY and TRAIN\_REMOTE states in Fig. 178B-10 and WAIT\_ADJACENT in Figure 178B-9.

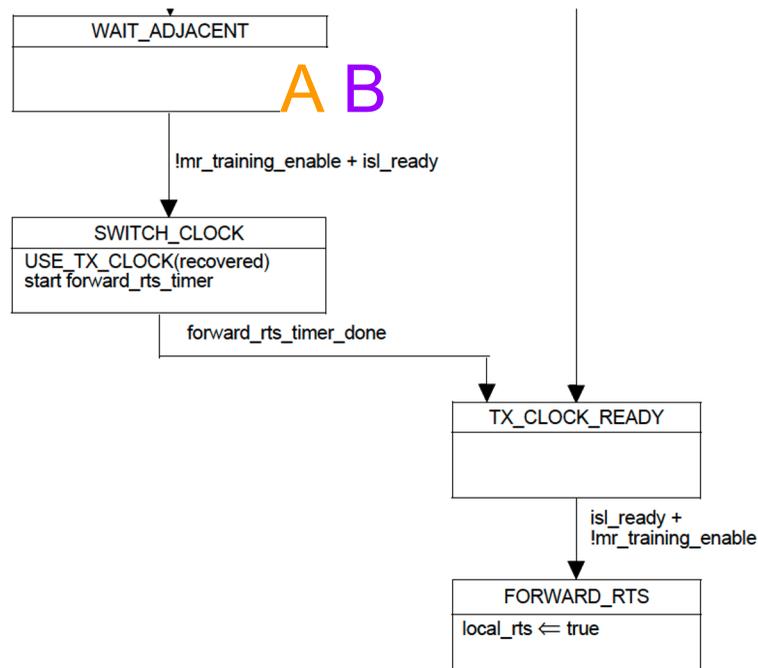


Figure 178B-9—RTS update state diagram

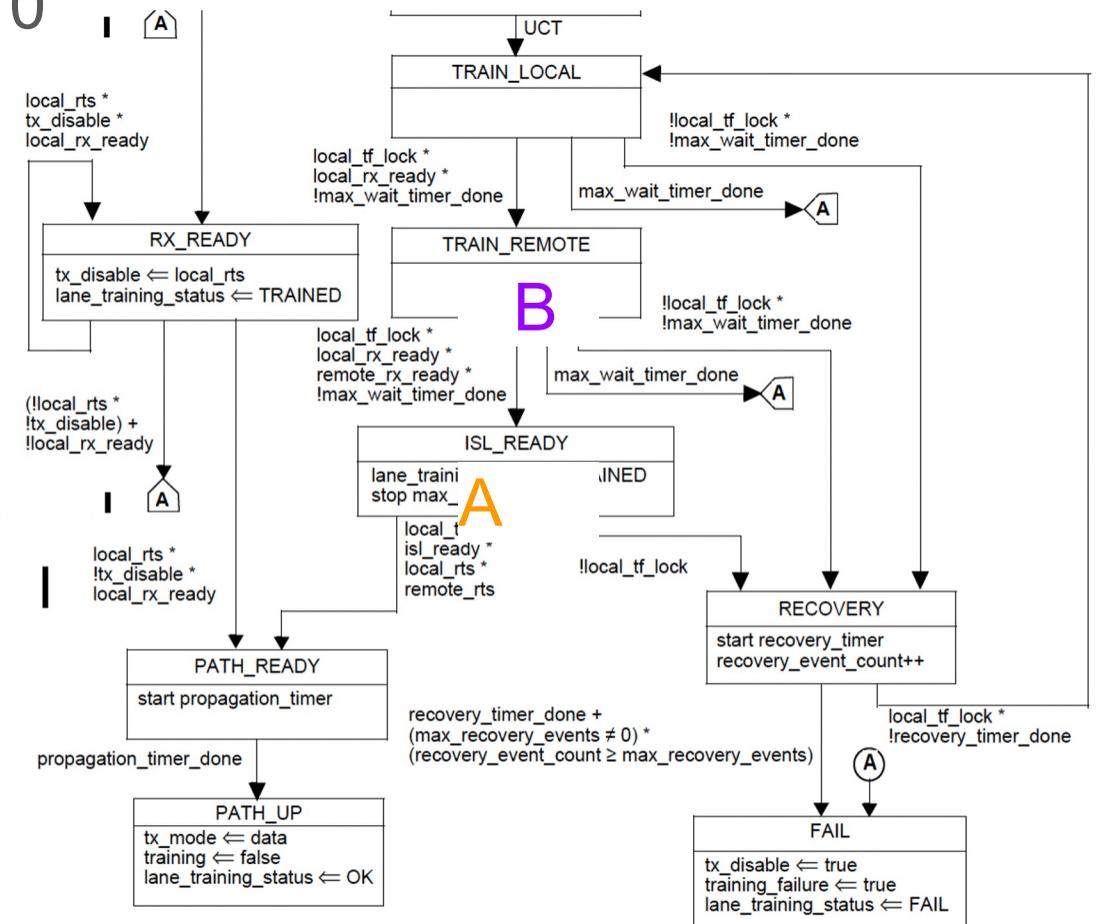


Figure 178B-10—Training control state diagram

# A scenario

Interface B transitions to ISL\_READY.

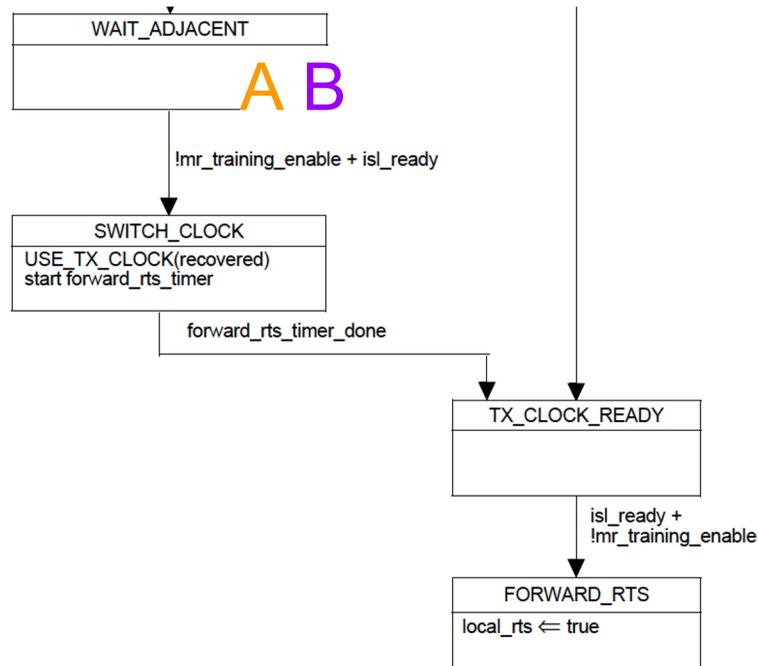


Figure 178B-9—RTS update state diagram

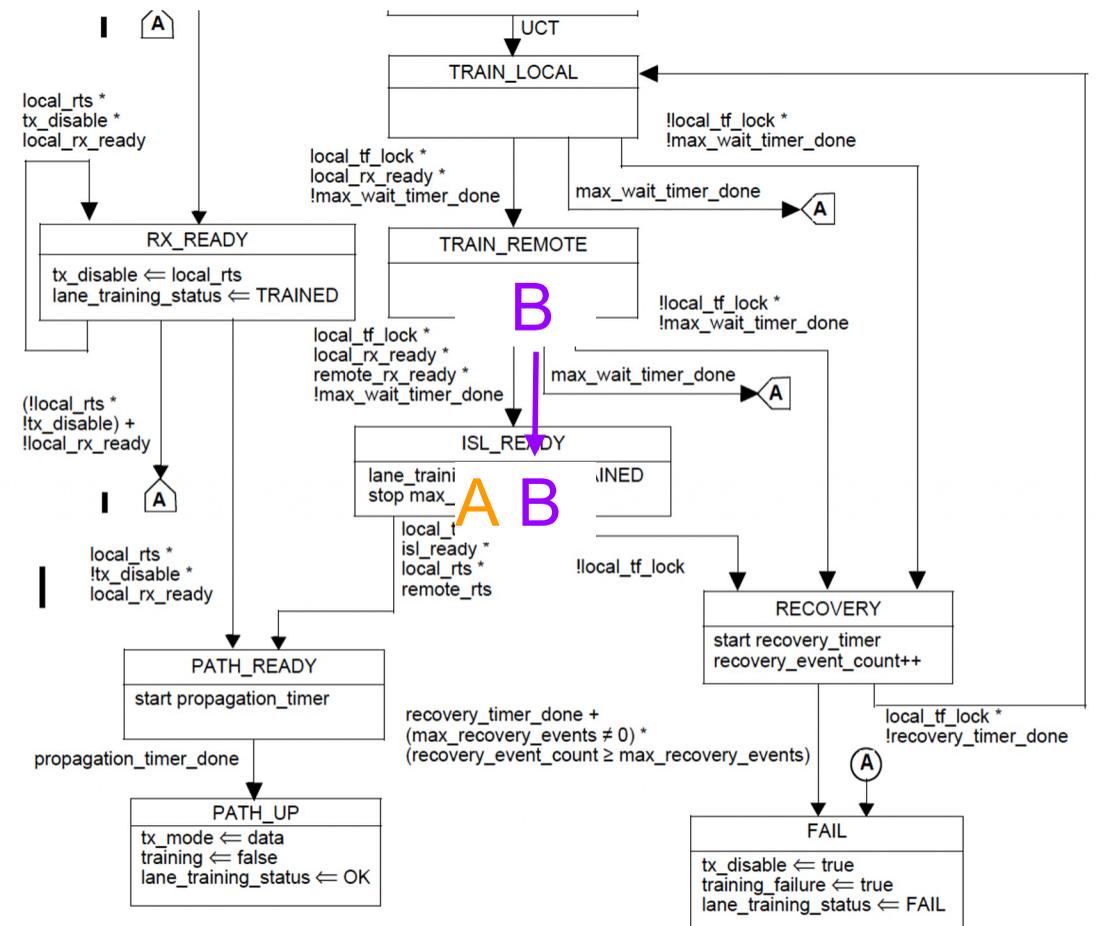


Figure 178B-10—Training control state diagram

# A scenario

isl\_ready goes true once both interfaces are in ISL\_READY state. Both interfaces transition to SWITCH\_CLOCK state where the transmit clock reference is updated to a forwarded clock source

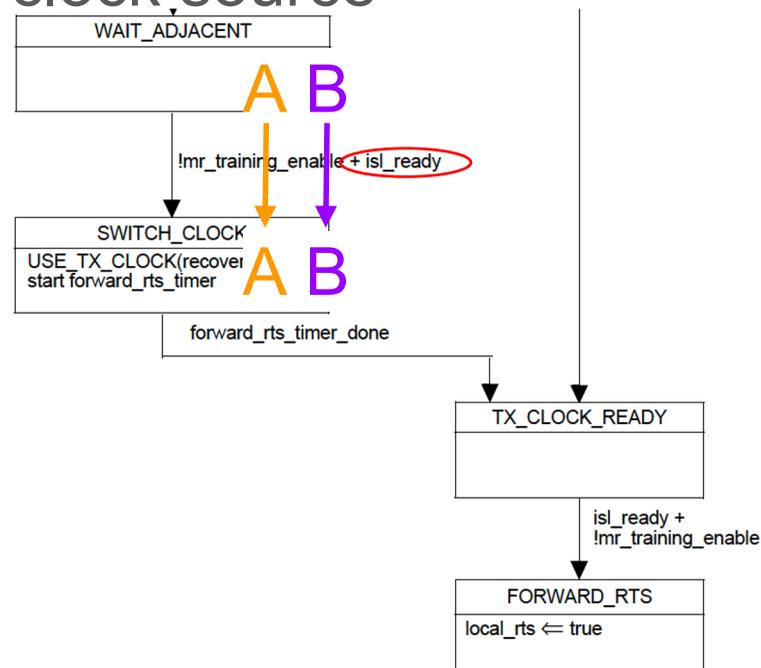


Figure 178B-9—RTS update state diagram

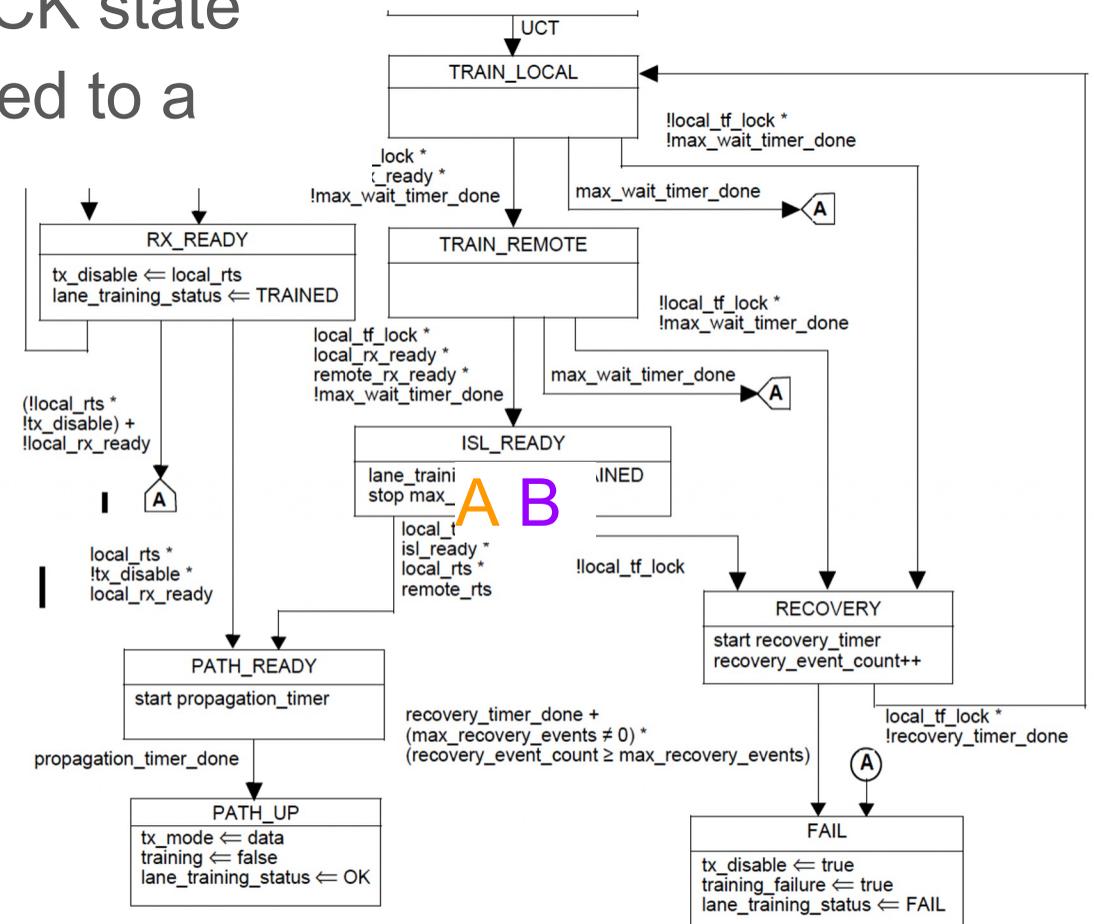


Figure 178B-10—Training control state diagram



# A scenario

Interface A regains local\_tf\_lock

Interface B does not regain local\_tf\_lock

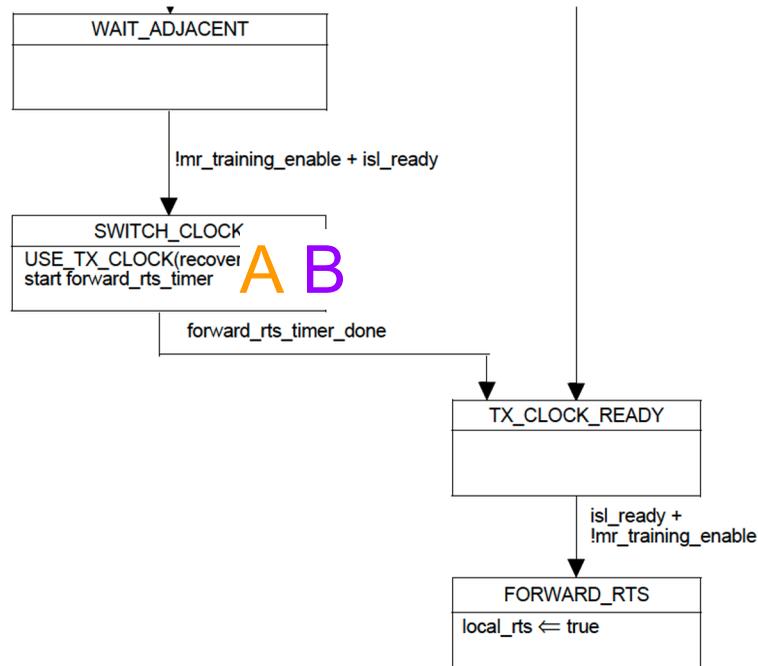


Figure 178B-9—RTS update state diagram

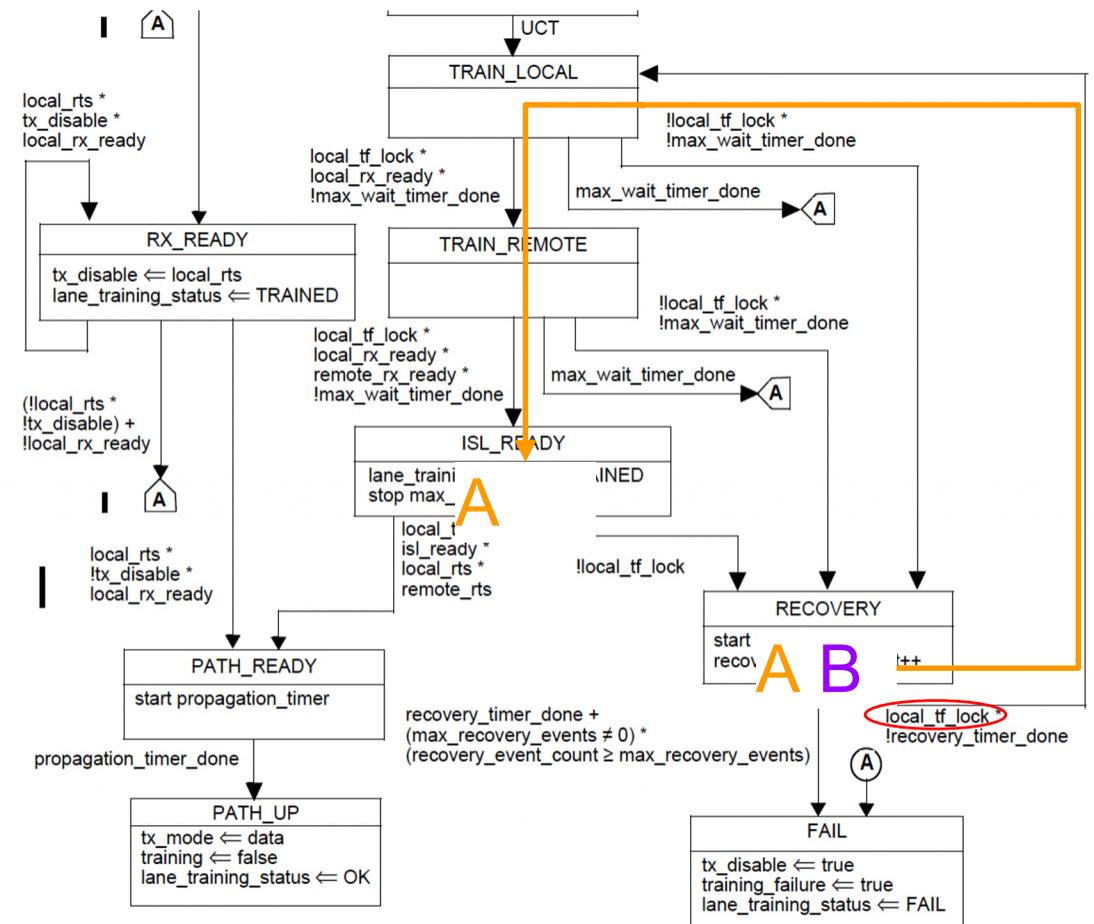


Figure 178B-10—Training control state diagram



# A scenario

local\_rts and remote\_rts are both TRUE.  
Interface A moves to PATH\_READY

Interface B is still in RECOVERY.

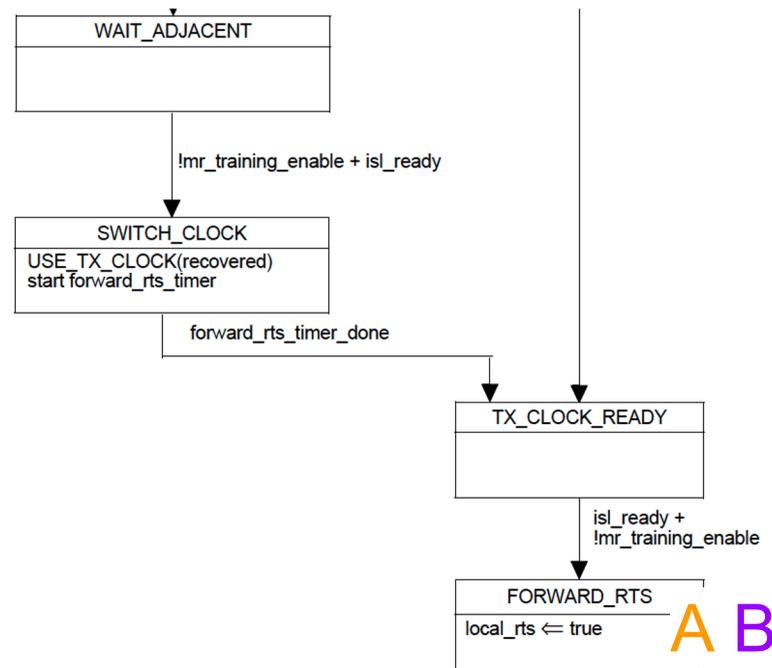


Figure 178B-9—RTS update state diagram

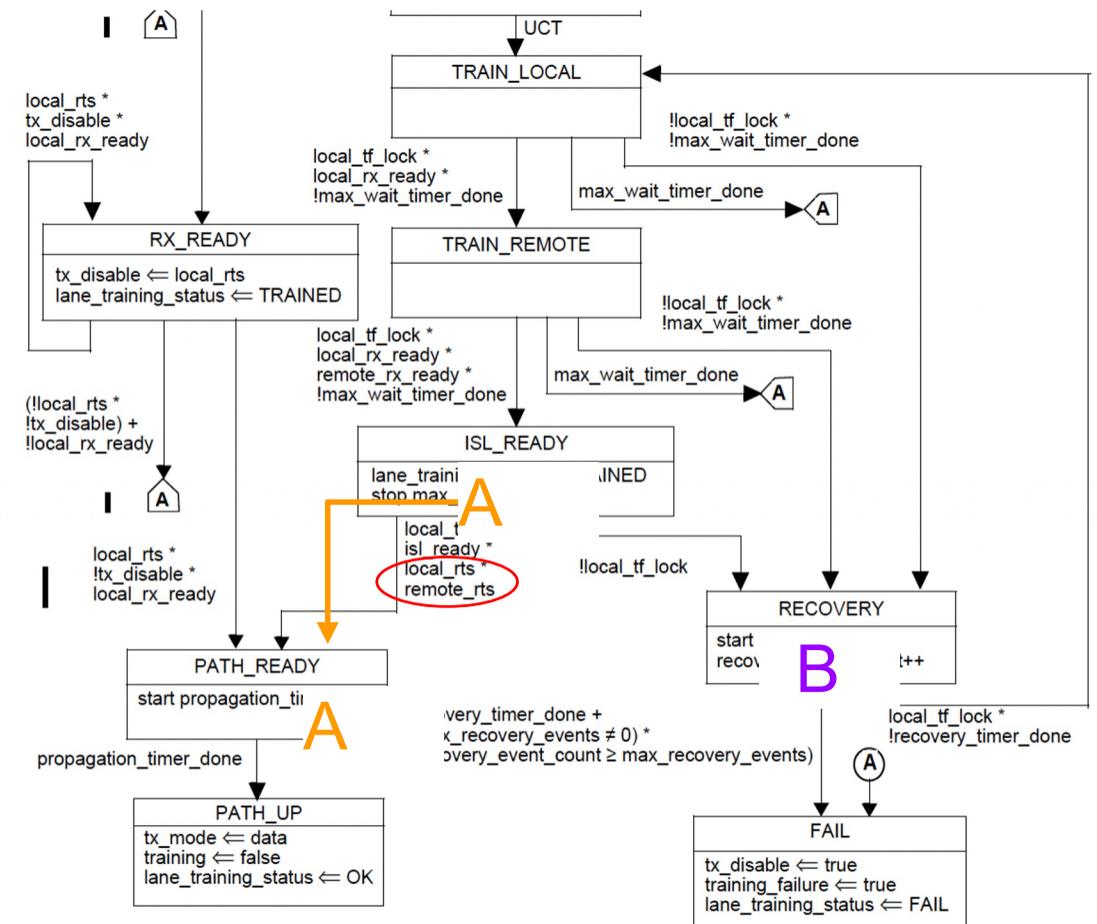


Figure 178B-10—Training control state diagram

# A scenario

Interface B moves to FAIL as its recovery\_timer expires without regaining local\_tf\_lock

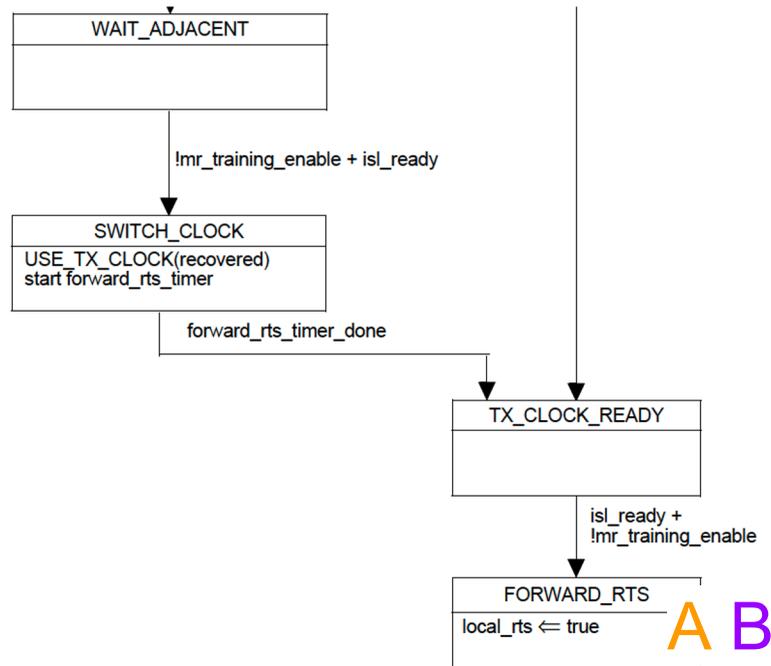


Figure 178B-9—RTS update state diagram

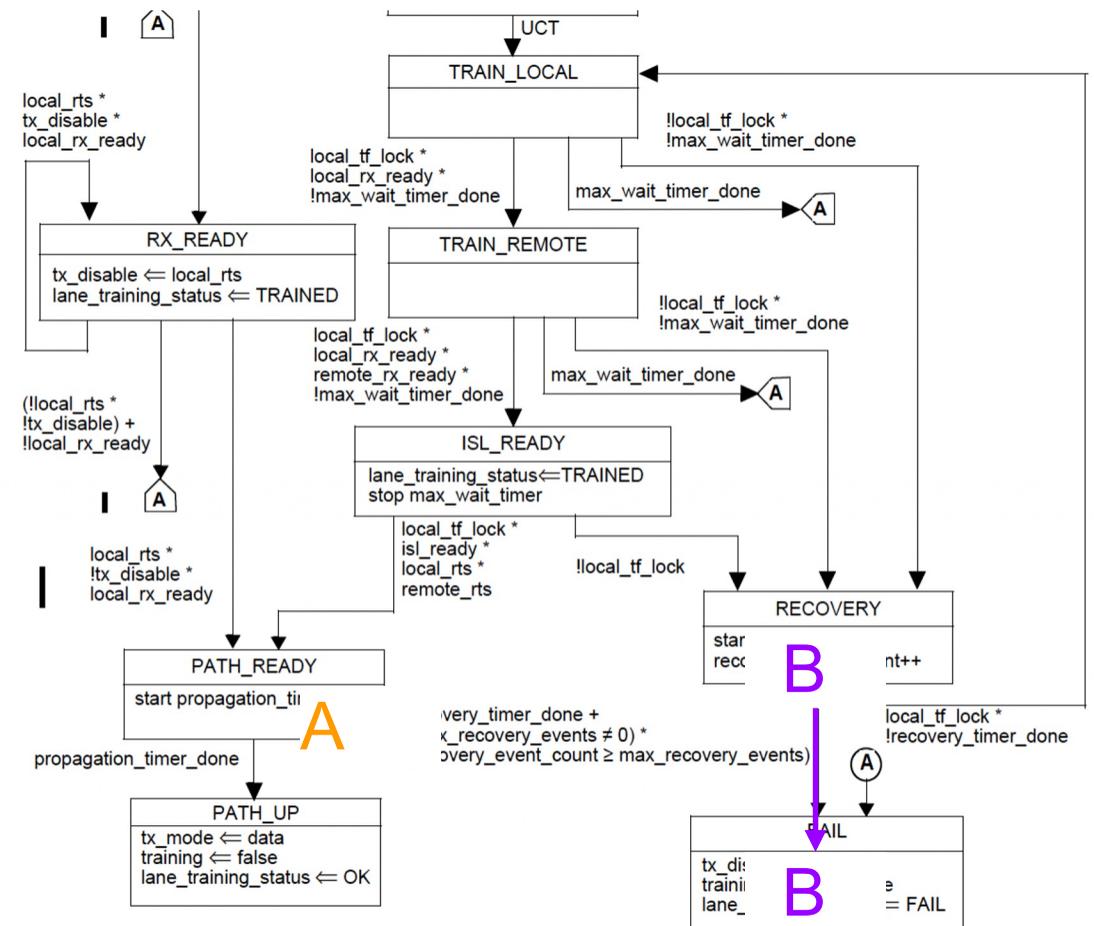


Figure 178B-10—Training control state diagram

# A scenario

Interface A moves to PATH\_UP after propagation\_timer expires.

The peer interfaces did not end up in the same place!  
(both should be in FAIL or PATH\_UP)

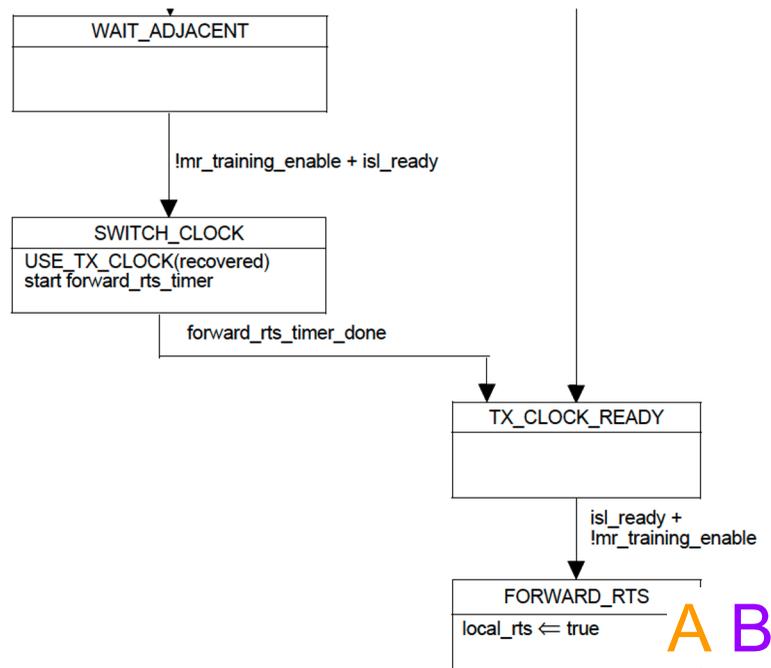


Figure 178B-9—RTS update state diagram

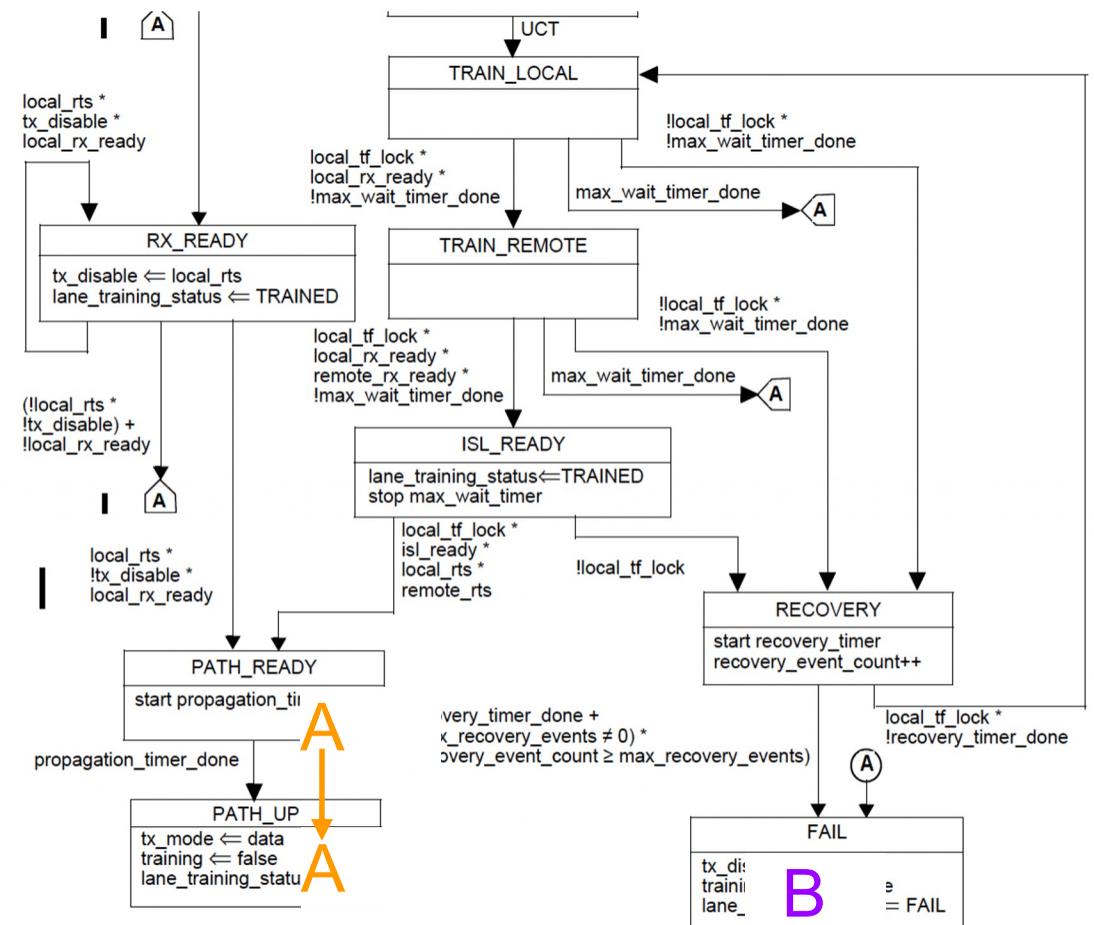


Figure 178B-10—Training control state diagram

# Solution

Change the minimum duration for forward\_rts\_timer to be 40ms

Which is larger than the maximum duration of the recovery\_timer.  
If one sides enters FAIL, other follows due to squelch.

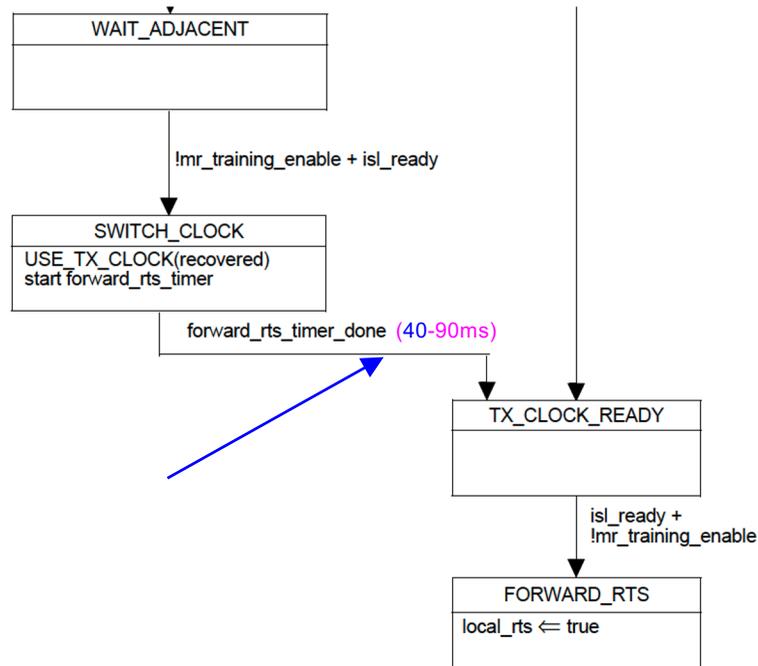


Figure 178B-9—RTS update state diagram

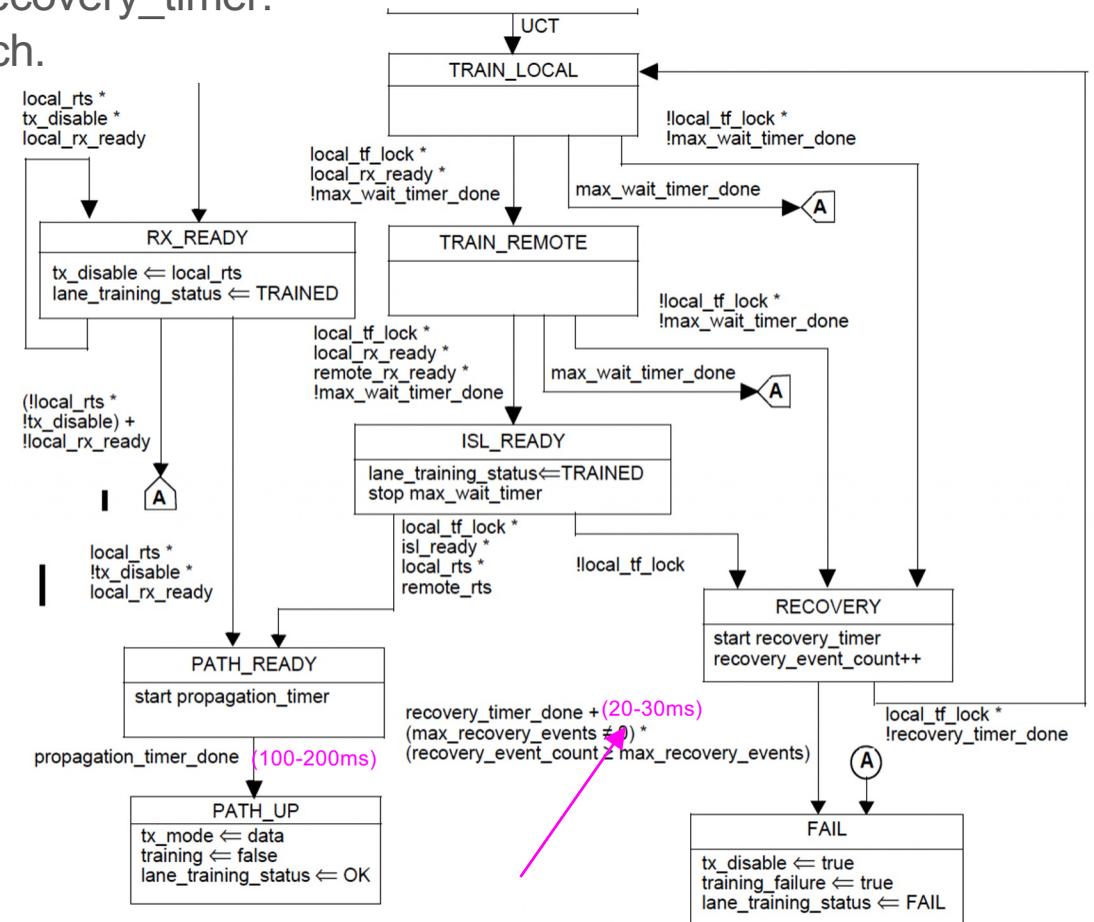


Figure 178B-10—Training control state diagram

Thank you