Comments 12 and 13

Technical	76	17.5.3.3	8	The offset-FromMaster variable has the purpose to indicate if the MasterTime received via a SyncMessage (with compensated P-Delay) is within the threshold from the ClockSlave time, i.e. that the latter is a good estimate of the MasterTime. But when the calculation of this offset is traced to the 802.1AS-2020 document, it seems to be related only to the ClockMasterFreqOffset (in 10.2.10.2.1). Hence, only the rate accuracy and not the accuracy of the actual time is checked. This should be changed.	Add the text: "The offsetFromMaster is calculated as a difference between the MasterTime supplied via SyncMessages (with compensated Pdelay) and the best estimate of the MasterTime by the ClockSlave. Hence it reflect the difference in time (counter value) between two clocks and not the difference in their frequencies (rates)." Add the figure from "60802-Obradovic-Controller-for-ClockSlaves-0622.pdf" on page 5 showing the closed-loop of the ClockSlave used to track the ClockMaster time.	Yes	12. Double check this, because some figures were changed.
Technical	74	17.5.1.1	49	It is not stated what happens if one PTP-Instance in a line is in the state NOT_SYNCED and it this persists for some time. It this the case, the attached application will be affected but possibly also the PTP-Instances after the current PTP Instance. One possibility is that the SyncMessages are not forwarded (for example in the case where the ClockSlave is directly used for the residence time compensation).	Add text:" The PTP-Instance of the network element "N" being in NOT_SYNCED state can have consequences for the following network elements and their PTP-Instances. For example, if the ClockSlave in element "N" is used to update the SyncMessage content (i.e. its MasterTime information), then forwarding this message from the element "N" which is not synchronized to the next element "N+1" will not be desired. The consequences of the element "N" not be in SYNCED state on other elements shall be described in an appropriate state machine."	Yes	13. Make a short presentation by 21.10. Check if this is within the PAR. Check with Günter

Comment 12

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Offset-from-Master definition

- → 17.5.3.3 isSynced(): This function returns a boolean value that is TRUE when the PTP Instance is determined to be synchronized to the master port that is the immediate upstream port of the slave port of this PTP Instance, or the PTP Instance is a Grandmaster PTP Instance. If the PTP Instance is not synchronized, isSynced() returns FALSE. The PTP Instance is determined to be synchronized to the master port that is the immediate upstream port of the slave port of this PTP Instance when the following conditions hold:

     a) …

     b) offsetFromMaster (see 17.5.1.2 and 14.3.3) does not exceed the configurable threshold offsetFromMasterThreshold (see 17.5.1.3);

- → 17.5.1.2 offsetFromMaster: The value of the managed object currentDS.offsetFromMaster (see 14.3.3)

- → 14.3.3 offsetFromMaster: The value is an implementation-specific or TSN profile-specific representation of the current value of the time difference between a slave and the Grandmaster Clock, as computed by the slave, and as specified in 10.2.10. The value is computed by an algorithm that is implementation-specific or TSN profile-specific. The inputs to this algorithm are the successive values of clockSourcePhaseOffset (see 10.2.4.7) of the ClockMasterSyncOffset state machine (see 10.2.10 and Figure 10-6). The data type shall be TimeInterval. The default value is implementation specific.

- → 10.2.10 ClockMasterSyncOffset state machine (shown in Figure 10-6—ClockMasterSyncOffset state machine)

- COMMENT: the above state machine calculates both clockSourcePhaseOffset (the conditions not completely clear) and clockSourceFreqOffset. Why is this state machine then called "ClockMasterSyncOffset state machine"? This is confusing. The conditions (in the if statement) are not easy to understand.
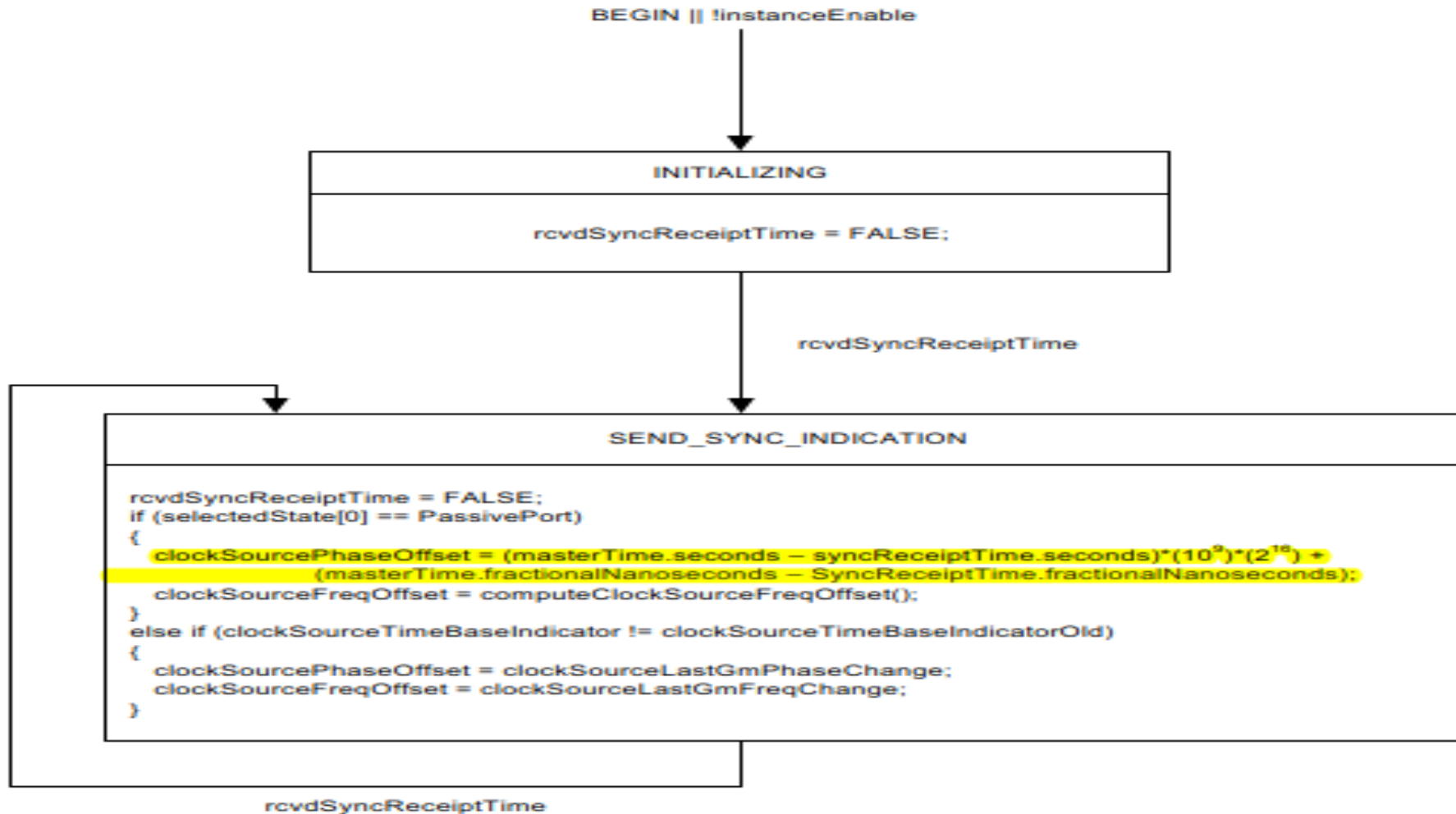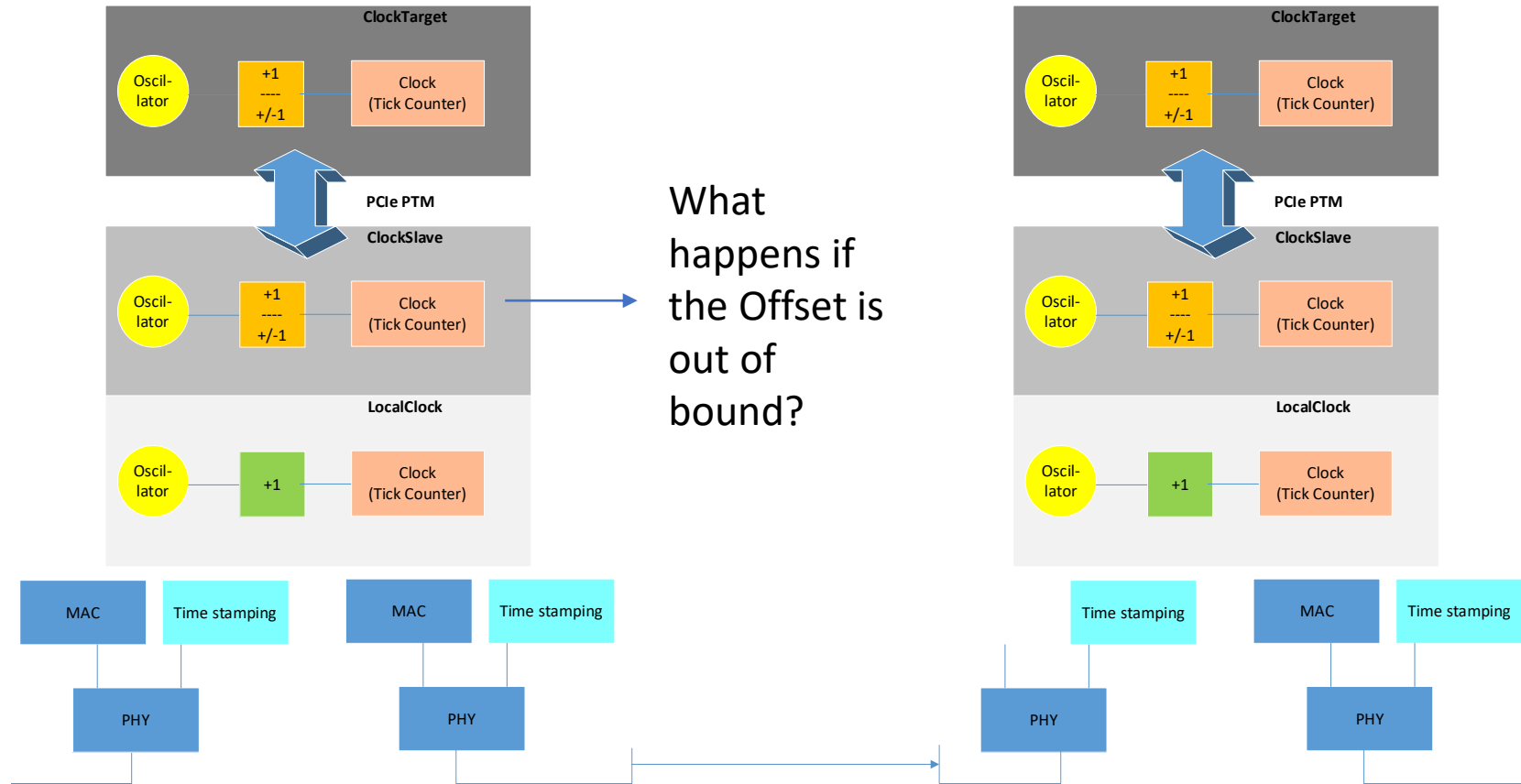
Offset-from-Master definition

Figure 10-6—ClockMasterSyncOffset state machine

Comment 13

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Offset out of 1µs bound

What happens if the Offset is out of bound?

Offset out of 1µs bound

We need:

1) A criterion when the offset >|1µs| becomes problematic, i.e. when the PTP-Instance goes into the NOT_SYNCED state.
   - An example: if N consecutive Offsets out of bound.

2) Decisions what to do the above happens. The following is possible
   - Stop providing time to the ClockTarget (the application)
   - Stop forwarding the time via Sync messages to the next Slave element
   - Do not do any above, just inform the user (how)?
   - Etc.

PAR:

    5.2.a Scope of the complete standard:

        This standard specifies protocols, procedures, and managed objects <u>used to ensure that the synchronization requirements are met for time-sensitive applications</u>, such as audio, video, and time-sensitive control, across networks, for example, IEEE 802 and similar media. <u>This includes the maintenance of synchronized time during normal operation</u> and following addition, removal, or failure of network components and network reconfiguration.

    5.2.b Scope of the project:

        … This amendment also addresses errors and <u>omissions</u> in the description of existing functionality.