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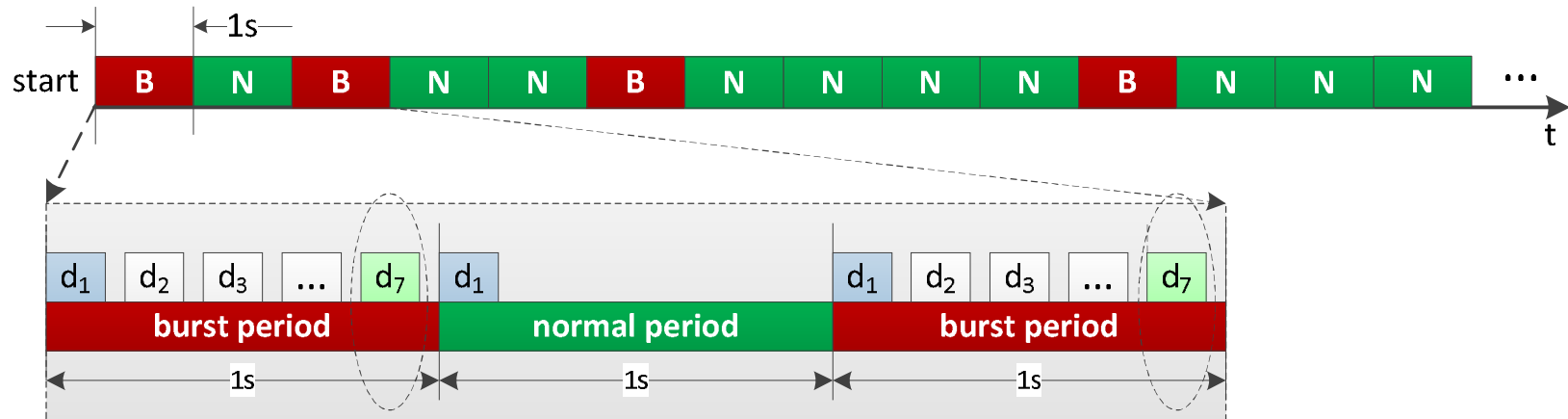


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pDelay Measurement in Burst Mode

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pDelay Measurement in Burst Mode



avg. propagation delay in the burst period is calculated at the end of each burst period by *

$$D_{avg} = avg(d_1, d_2, \dots, d_7)$$

neighborRateRatio is calculated based on a pair of successive d_1 measurements

$$(d_{1,k}, d_{1,k+1}) \Rightarrow neighborRateRatio \quad k: k_{th} \text{ measurement period}$$

- d_x A single pDelay measurement
- N Normal period with one pDelay measurement
- B Burst period containing a number of pDelay measurements

The number of normal periods inserted between two burst periods will increase in a pattern like (1s, 2s, 4s, 8s, ...) if neither reset nor faulty measurement occurs.

pDelay Measurement in Burst Mode

- ❑ Goal is to reach a fast startup of synchronization by quickly stabilizing the values of propagation delay in pDelay measurement on each link along the sync path.

- ❑ How to quickly stabilize the pDelay values
 - ❑ Note that pDelay measurement is a link local operation independent from sync process

 - ❑ Perform a series of pDelay measurements in burst to collect multiple propagation delay values within a short period

 - ❑ Compute average over the successive sample values to reduce the error effect caused by time measurement granularity, thus improving the accuracy of the pDelay measurement

The burst mode can significantly shorten the initialization phase of the applied average filter at the system startup or after a reset .

Thank you for your attention!



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