Additional DTE Simulation Input

Mark Hantel 60802 August 6, 2021

Background

- https://www.ieee802.org/1/files/public/docs2021/60802-Hantel-Sync-Applications-0721-v01.pdf
- https://www.ieee802.org/1/files/public/docs2021/60802-Hantel-Sync-Temperature-Rates-0721-v01.pdf

Requested Test Parameters – Case 1

- **Objective: max|TE| of 1 µs over 64 hops, stretch goal of 100 hops**
- Mean Sync Interval: 1s
- Mean Pdelay Interval: 1s
- Residence time: 1ms
- Timestamp Granularity: 8ns
- Dynamic timestamp error: ±8 ns each with 0.5 probability
- Temperature Range: 0-60°c
- Temperature Rate of Change: 1°c per 10 seconds

Requested Analysis

- Can these test parameters which address 80+% of the industrial market, when run with the best clock filters from the simulations that have been done so far, meet the overall objective?
- If they do, stop. If not, analyze case 2

Requested Test Parameters – Case 2

- **Objective: max|TE| of 1 µs over 64 hops**
- Mean Sync Interval: 125µs
- Mean Pdelay Interval: 125µs
- Residence time: 1ms
- Timestamp Granularity: 8ns
- Dynamic timestamp error: ±8 ns each with 0.5 probability
- Temperature Range: 0-60°c
- Temperature Rate of Change: 1°c per 10 seconds

Thank you!