

Next live-demo :

**Phase/Time Synchronization: Source Failover
Ericsson, Huawei, Meinberg, Microsemi, Seiko, ZTE**

Clock Synchronization Test Case

Phase/Time Synchronization: Source Failover

Heiko Gerstung, Meinberg

Karim Traore, Microchip

April 9, 2019

MPLS+SDN Word Congress 2019, Paris

Clock Synchronization Test Case

Phase/Time Synchronization: Source Failover

- Two GNSS synchronized grandmaster clocks providing phase/time synchronization to a number of slave clocks via one telecom boundary clock
- Simulation of GNSS outage (disconnecting antenna)
- Slave clocks must maintain the required sync performance before, during and after the failover event
- Using ITU-T G.8275.1 (Multicast Layer 3) for GM → BC and BC → SC

Phase/Time Synchronization: Source Failover

Purpose of this test case:

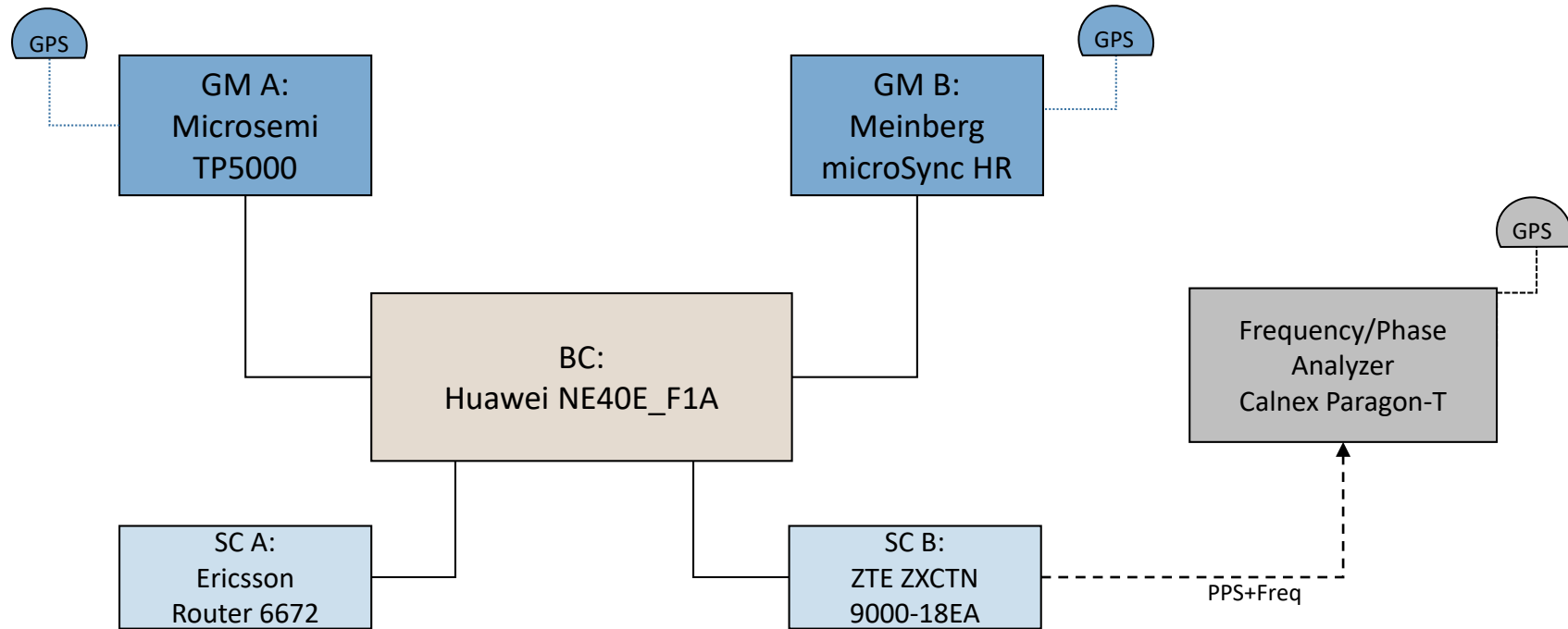
- Correct handling of failover scenarios by boundary clocks and slave clocks
- SC Maintaining accuracy as specified in ITU-T G.8271 (level 4): +/- 1.5 us
- Verification of correct behavior of BC (switching between GMs)

Participating Vendors:

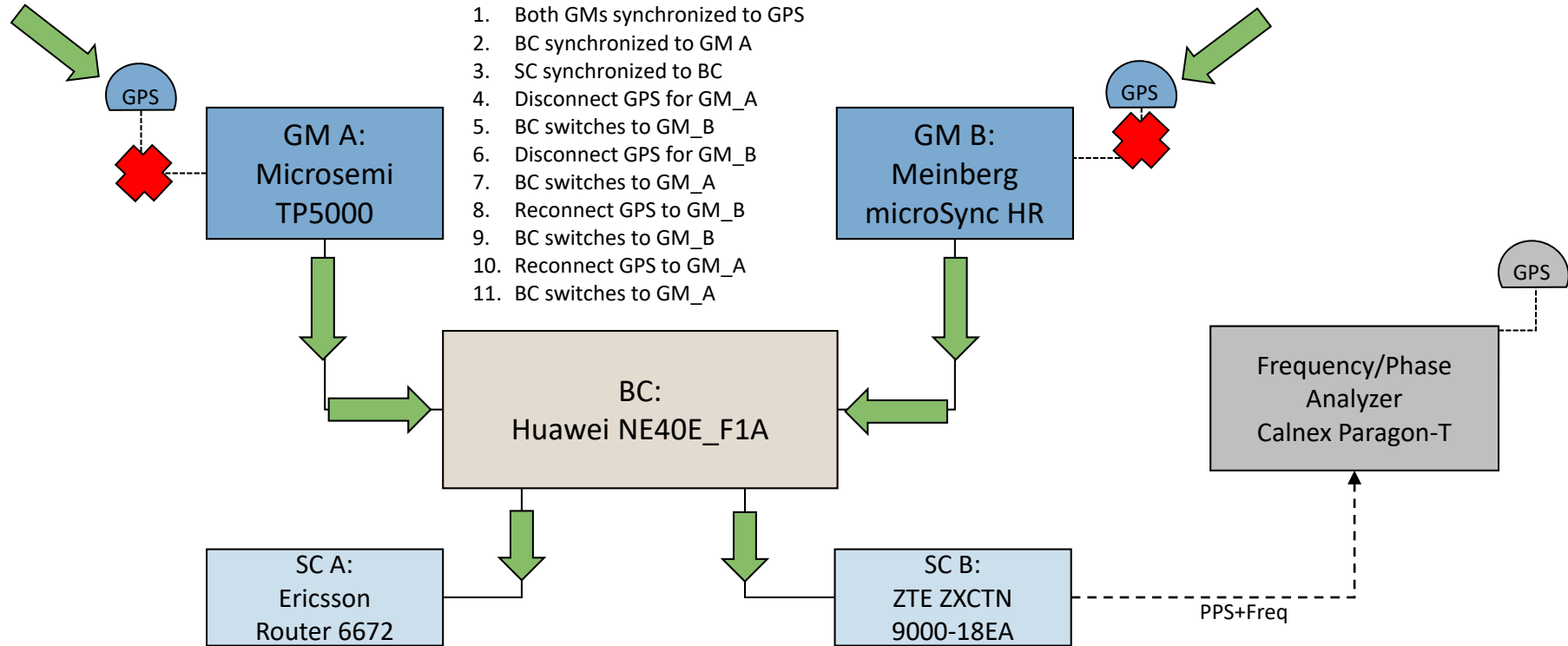
- GMs: Microsemi, Meinberg
- BC: Huawei
- SCs: ADVA, ZTE
- Measurement Device: Calnex Paragon-T

Other combinations in the Whitepaper!

Test Setup:



Test Procedure:



Phase/Time Synchronization: Source Failover

Results:

- Interoperability successfully demonstrated between participating devices
- Measured phase offset within 1.1 us (level 4 + 0.4 us additional error budget) for all successfully tested combinations
- Measured phase offset level 6 (+/- 260ns) for some combinations

Thank You for Your Attention!

Do not forget to grab a copy of the 2019 Edition of the EANTC Whitepaper!

You can get your electronic copy at www.eantc.de !

Questions?

- Right now, right here!
- After the presentation – come and see me or the EANTC team!
- Any time: heiko.gerstung@meinberg.de

Clock Synchronization Test Case

Phase/Time Synchronization: Source Failover

Heiko Gerstung, Meinberg

April 9, 2019

MPLS+SDN Word Congress 2019, Paris