



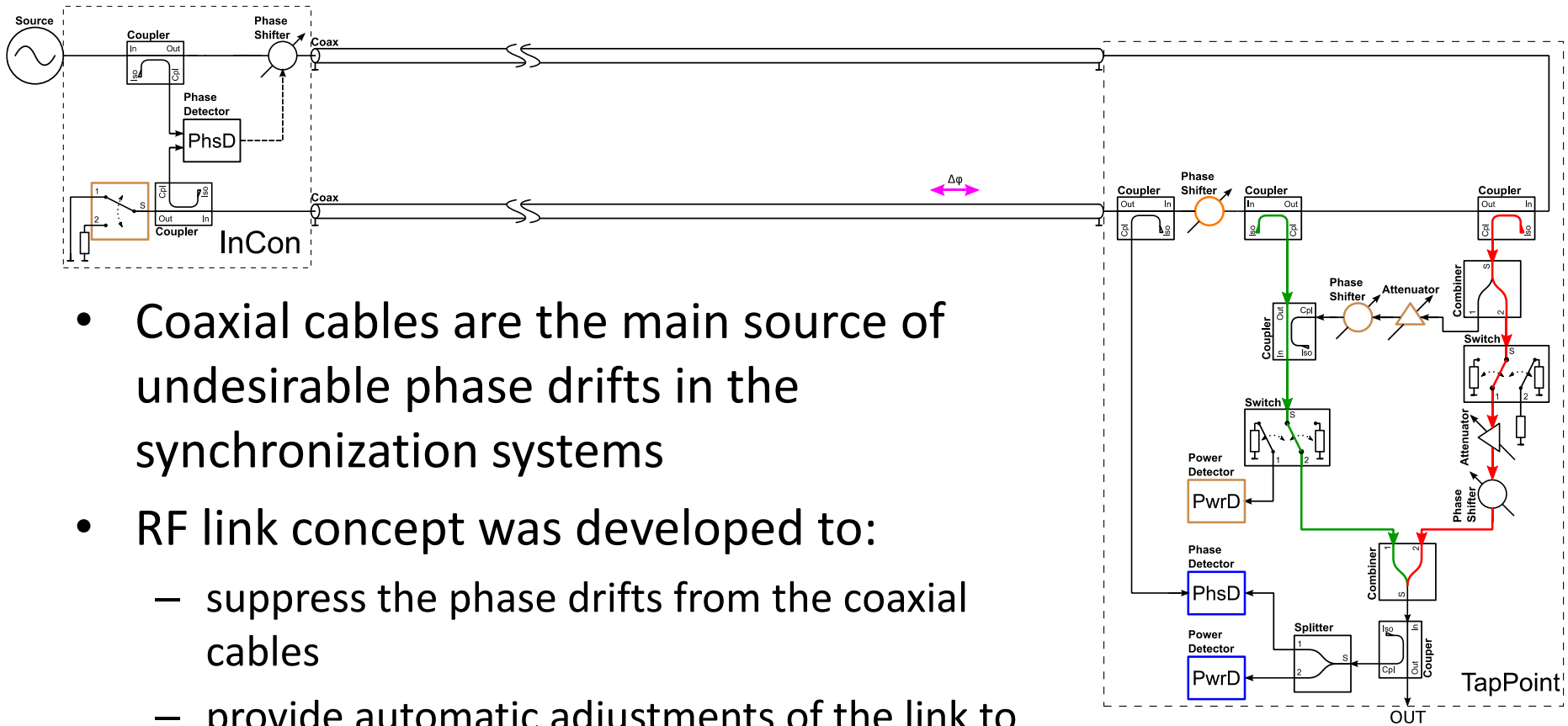
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Phase Drift Compensating RF Link for Femtosecond Synchronization of E-XFEL

Dominik Sikora

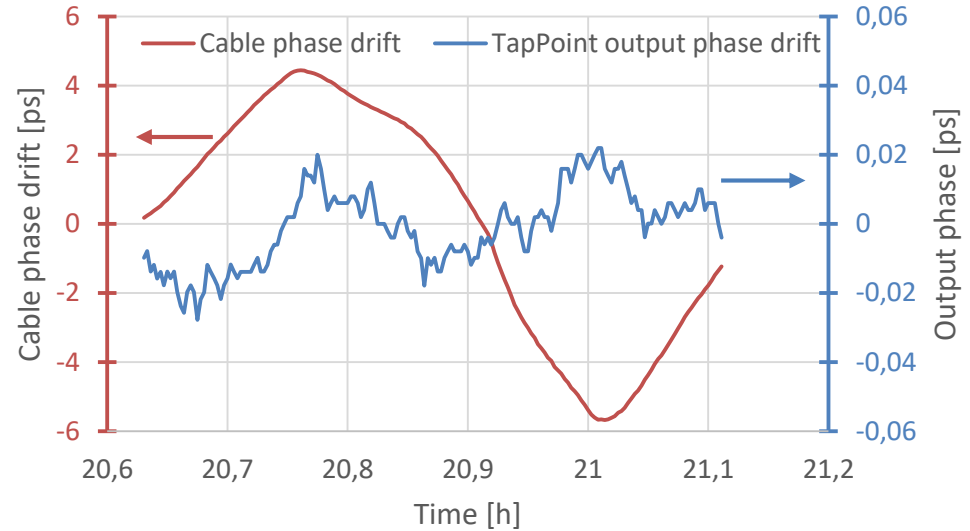
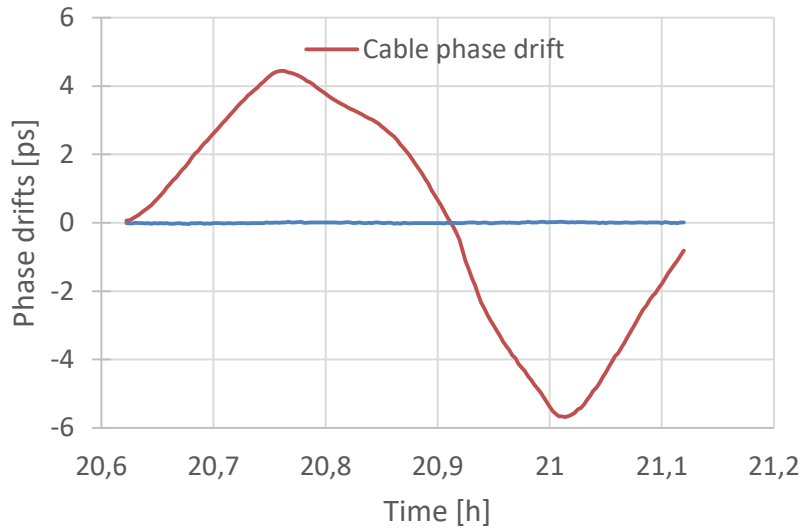
Real Time Conference 2018

Introduction



- Coaxial cables are the main source of undesirable phase drifts in the synchronization systems
- RF link concept was developed to:
 - suppress the phase drifts from the coaxial cables
 - provide automatic adjustments of the link to operate with maximum suppression factor

Results



- Significant suppression factor of cable phase drifts was measured (higher then 150):
 - Cable phase drift: 10.1 ps
 - Phase variations at the RF link output: 0.05 ps