Clockwire on AIONYX Hive: Bringing Resilient Time Distribution to SCION

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Time Distribution for Critical Infrastructure



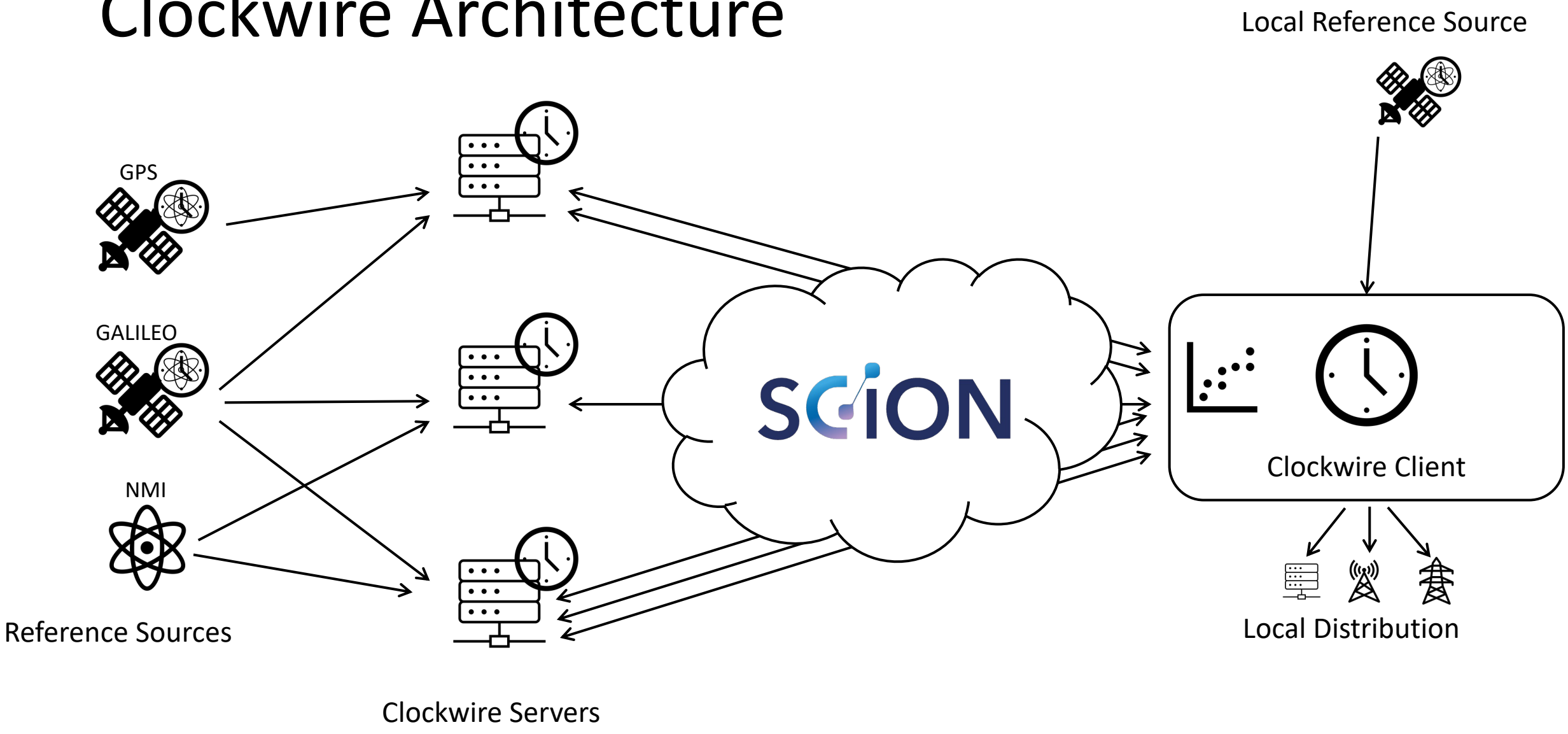
https://www.axpo.com/ch/en/energy/generation-and-distribution/solar-power/alpinsolar.html

- Finance, Telecom, Energy, Media Broadcast, Monitoring, etc.
- Typical accuracy requirements of 100µs to sub 10µs
- Implemented over dedicated, leased-line networks
- Focus on control, isolation, and security
- Increasingly constrained as infrastructures grow more distributed and demands for flexibility and cost efficiency rise

Connectivity Options for Time Distribution

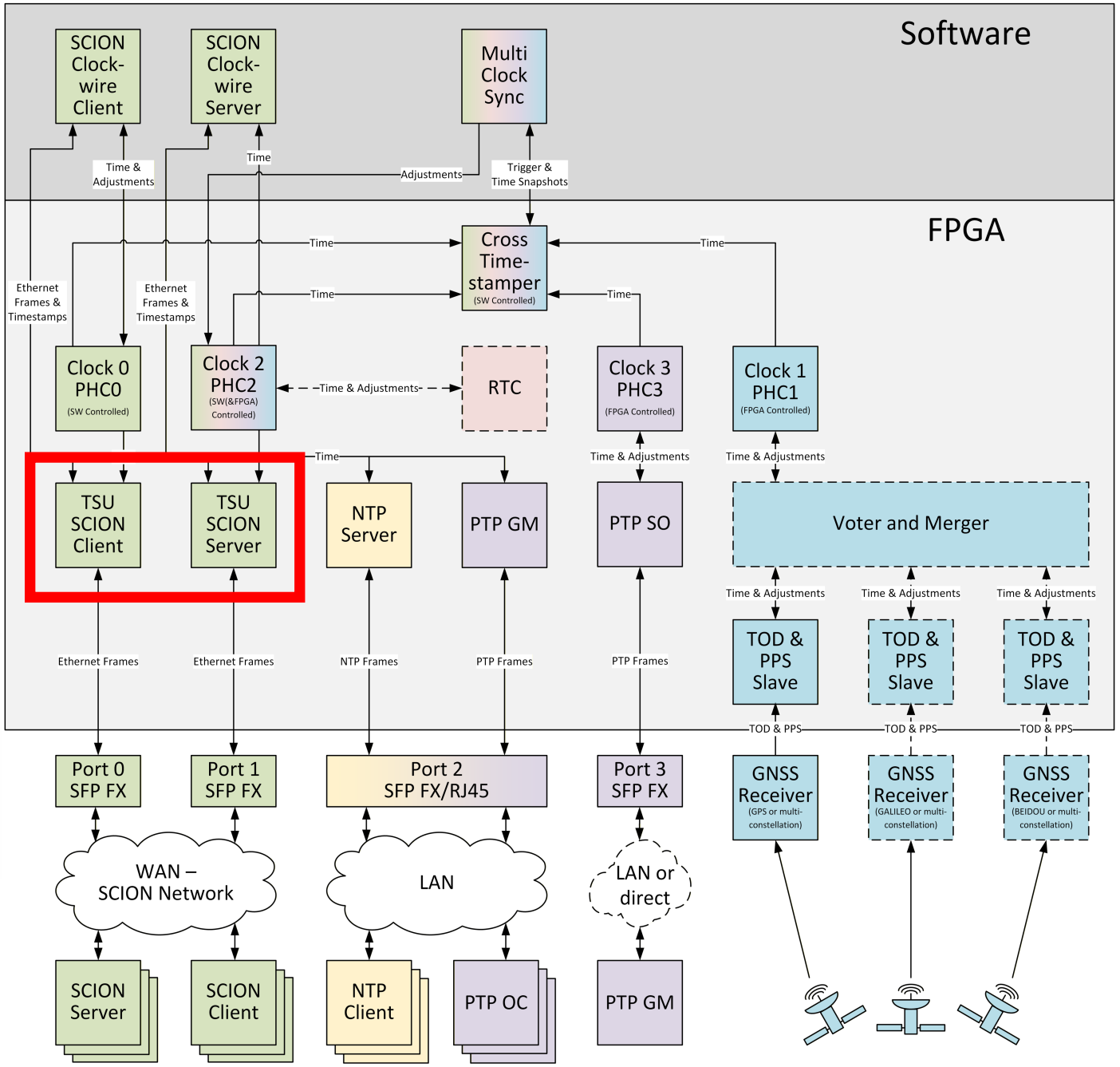
	Public Internet	SCION	Dedicated Networks
Flexibility	✅	✅	❌
Security	❌	✅	✅
Cost	✅	✅	❌
Control	❌	✅	✅

Clockwire Architecture

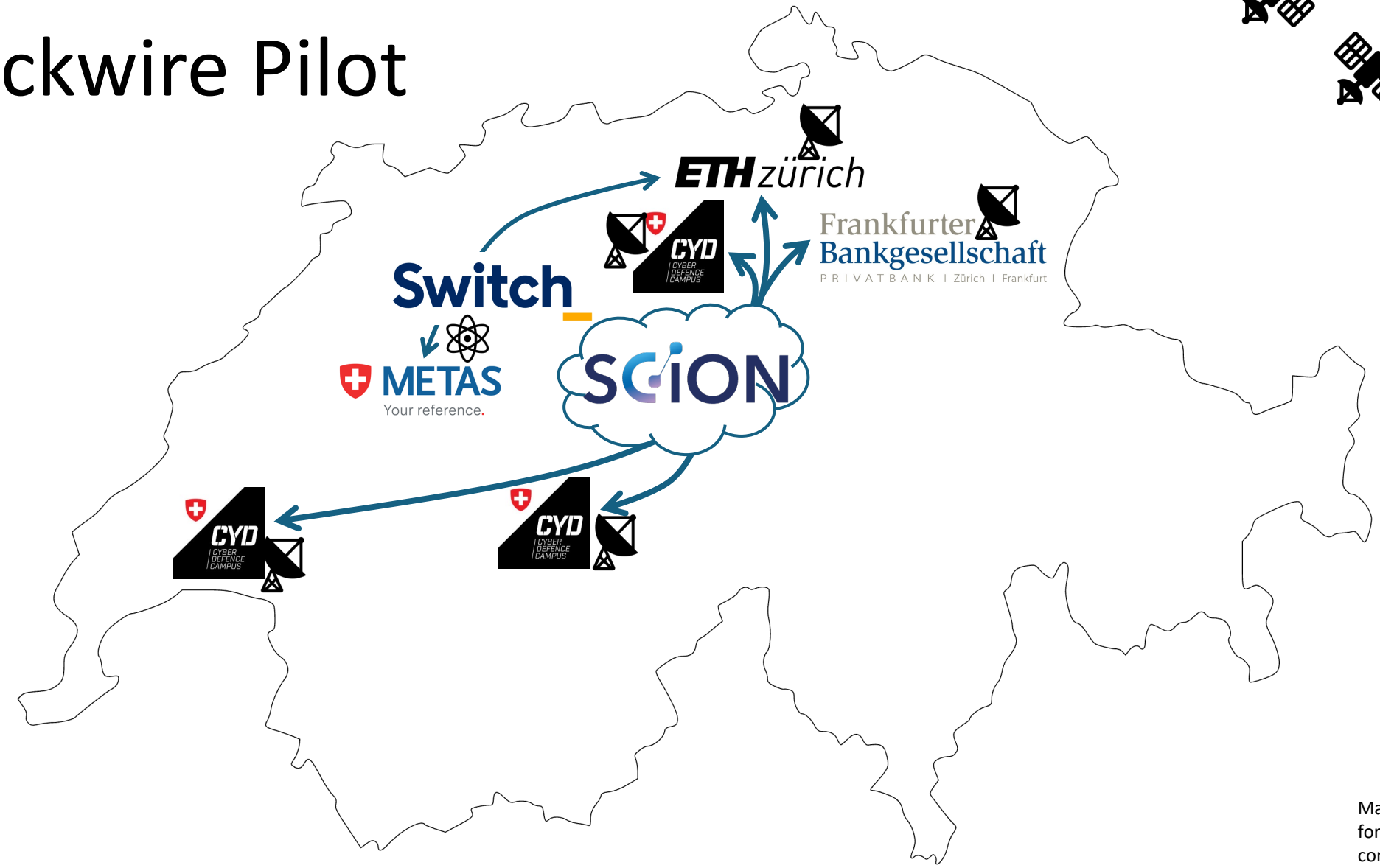


NetTimeLogic AIONYX Platform





Clockwire Pilot



Many thanks to all our partners for their support and for the continued collaboration on the Clockwire testbed deployment.









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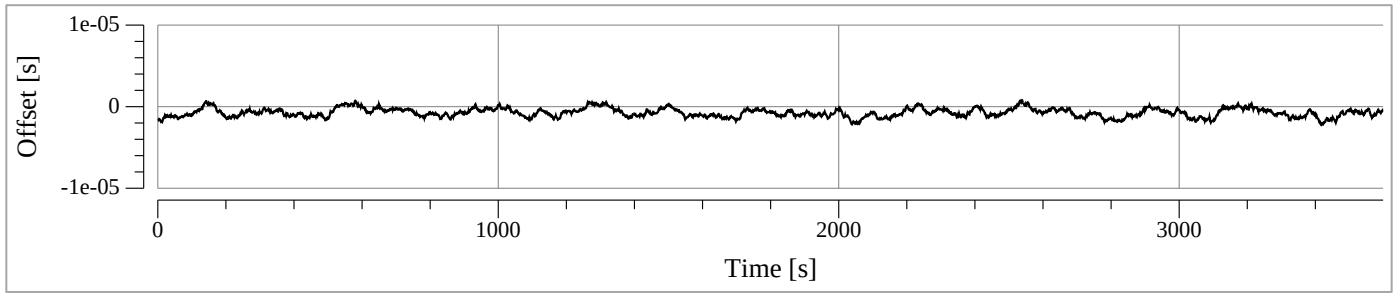
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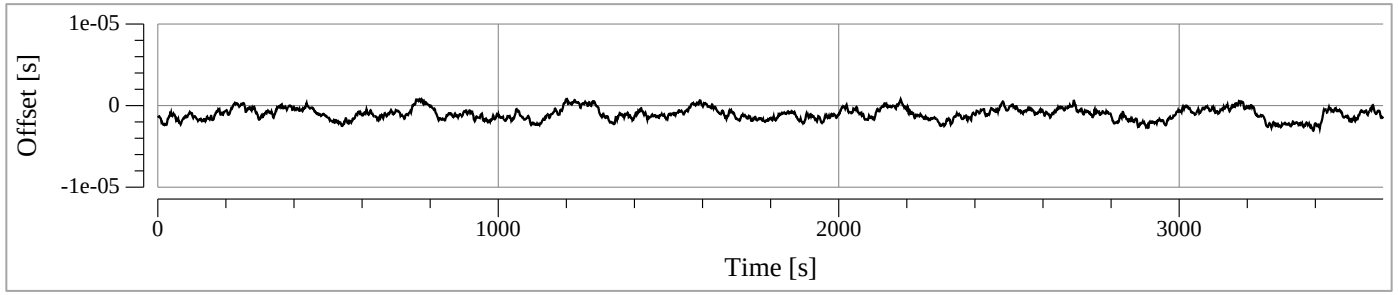
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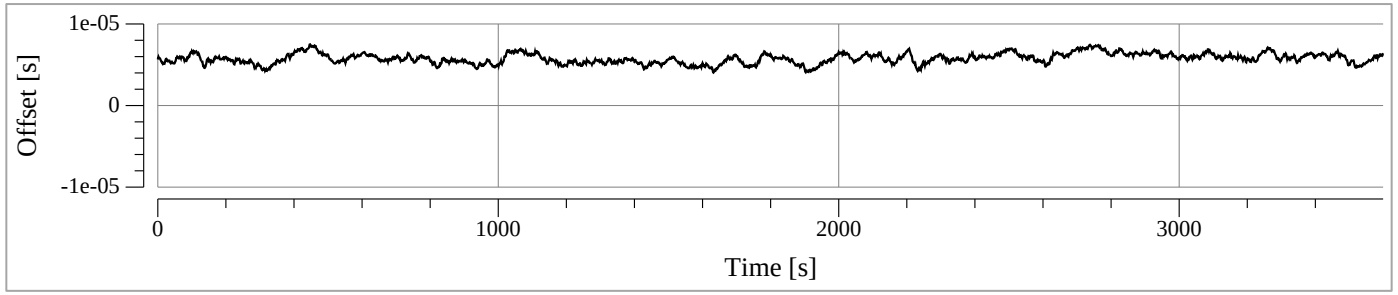
Zurich: -0.748 ± 0.536 µs, over 2 out of 2 SCION paths





Thun: -1.040 ± 0.734 µs, over 7 out of 208 SCION paths





Lausanne: +5.758 ± 0.628 µs, over 7 out of 110 SCION paths

Clockwire on AIONYX Hive: Vision



- Ongoing pilot deployments as a stepping stone **towards full-scale production quality**.
- Aiming at resilient time-as-a-service in an **open ecosystem for SSFN, SSUN**, etc.
- We invite interested partners to **contact us regarding potential collaborations**.

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