

Oscilloquartz SyncSeminar

Montreux, Switzerland, 02nd to 04th October



Speakers:

Hasnat Babar, Network Consultant

Alain Michaud, Director R&D and PLM Time & Frequency

Dominik Schneuwly, Manager Network Consulting

Preliminary Agenda - Monday, 02nd October 2017 Seminar: Synchronization Technologies

<i>13:00-13:30</i>	Registration
13:30-13:45	Opening Address (Jean Dubuis, Dominik Schneuwly)
13:45-14:40	The Need for Synchronization (Hasnat Babar) <ul style="list-style-type: none">• Synchronization needs in packet switched networks
14:40-15:10	Synchronization Sources (Alain Michaud) <ul style="list-style-type: none">• Primary reference frequency sources based on atomic Cesium clocks
<i>15:10-15:30</i>	Coffee & tea break
15:30-16:00	Synchronization Sources cont'd (Alain Michaud) <ul style="list-style-type: none">• Rubidium and quartz oscillators• Primary reference phase & time sources based on GNSS
16:00-17:20	Synchronization Distribution: General Principles (Dominik Schneuwly) <ul style="list-style-type: none">• Physical layer synchronization transfer• Packet-based synchronization transfer• Synchronization impairment

17:20-17:30 **Reviews, discussions, questions and answers**

17:30 ***Close***

18:00 ***Ice Breaker Event***

Preliminary Agenda - Tuesday, 03rd October 2017

Seminar: Synchronization Technologies (continued)

- 08:15-08:30* **Registration**
- 08:30-10:10 **Synchronization Performance Metrics** (Dominik Schneuwly)
- Metrics for frequency transfer over the physical layer
 - Metrics for packet-based frequency transfer
 - Metrics for packet-based phase & time transfer
- 10:10-10:30* **Coffee & tea break**
- 10:30-12:00 **Solution 1: Synchronous Ethernet** (Dominik Schneuwly)
- Working principle
 - Clocks and their specifications
 - Architecture and network engineering
 - Relevant standards
- 12:00-13:30* **Lunch**
- 13:30-15:00 **Solution 2: PTP (IEEE 1588) without Timing Support** (Dominik Schneuwly)
- Working principle
 - Clocks and their specifications
 - Architecture and network engineering
 - Relevant standards
- 15:00-15:20* **Coffee & tea break**
- 15:20-16:30 **Solution 3: PTP (IEEE 1588) with Full Timing Support** (Hasnat Babar)
- General introduction to phase synchronization with PTP
 - Working principle
 - Clocks and their specifications
- 16:30-16:40 **Reviews, discussions, questions and answers**
- 16:40* **Close**
- 17:00* **Social Event**

Preliminary Agenda - Wednesday, 04th October 2017

Seminar: Synchronization Technologies (continued)

- 08:15-08:30* **Registration**
- 08:30-09:15 **Solution 3: PTP (IEEE 1588) with Full Timing Support cont'd**
(Hasnat Babar)
- Architecture and network engineering
 - Relevant standards
- 09:30-10:10 **Solution 4: PTP (IEEE 1588) with Partial Timing Support**
(Hasnat Babar)
- Working principle
 - Clocks and their specifications
- 10:10-10:30* **Coffee & tea break**
- 10:30-11:00 **Solution 4: PTP (IEEE 1588) with Partial Timing Support**
(Hasnat Babar)
- Architecture and network engineering
 - Relevant standards
- 11:00-12:00 **Synchronization Assurance** (Dominik Schneuwly)
- Monitoring and probing
- 12:00-13:30* **Lunch**

Workshop: Applications and Demonstrations

- 13:30-15:00 **Product Presentations** (Gregory Binggeli)
- Oscilloquartz product overview
 - Detailed product presentations: OSA 5335, OSA 5410/11, OSA 5420/21 & OSA 5401
- 15:00-15:15* **Coffee & tea break**
- 15:15-16:15 **Live Demos with:**
- OSA 5335, OSA 5410/11, OSA 5420/21 & OSA 5401 in Grandmaster, APTS and probe configurations
- 16:15-16:30* **Farewell Address & Close** (Jean Dubuis)