

WSTS 2024 AGENDA				
(Subject to change)				
Monday	6-May			
	5:00 PM - 7:00 PM	Welcome Reception Sponsored By Oscilloquartz		
Tuesday	7-May			
	8:15 AM - 8:25 AM	Day One Welcome Remarks	Marc Weiss	
	8:25 AM - 8:45 AM	KEYNOTE: DoT Complementary PNT Action Plan	Karen Van Dyke, DoT	
	8:45 AM - 9:00 AM	Timing's Critical Role in Capacity Expansion and Cost Savings for 5G Networks	Karim Traore, Microchip	Telecom
	9:00 AM - 9:15 AM	Timing and Sync in Real World Deployments (4G/5G), Challenges and Solutions	Kamatchi Gopalakrishnan, Juniper Networks	Telecom
	9:15 AM - 9:30 AM	O-RAN Synchronization Considerations	Greg Armstrong, Renesas	Telecom
	9:30 AM - 9:45 AM	The Increased Importance of Monitoring Net Sync Performance	Stefano Ruffini, Calnex Solutions	Telecom
	9:45 AM - 9:55 AM	Q&A Panel		Telecom
	9:55 AM - 10:25 AM	Morning Break		
	10:25 AM - 10:40 AM	Endpoint PTP Clocks	Kishan Shenoi, Intel	Telecom
	10:40 AM - 10:55 AM	Application of Optical Clock Network to Improve Reliability of 5G/6G Mobile Communications	Kota Nishiyama, NTT	Telecom
	10:55 AM - 11:10 AM	PTN/ePTs - Wide Area Network Synchronization	Magnus Danielson, Net Insight	Telecom
	11:10 AM - 11:25 AM	TBD		Telecom
	11:25 AM - 11:40 AM	End-to-End Sync Network Monitoring with Static and Dynamic Analysis Using a Centralized Monitoring System	Kamatchi Gopalakrishnan, Juniper Networks	Telecom
	11:40 AM - 11:55 AM	Q&A Panel		
	11:55 AM - 12:55 PM	Lunch Sponsored by Calnex		

12:55 PM - 1:15 PM	<b>KEYNOTE: Reliability of Timing Services in Datacenter using Clock Fusion</b>	Ahmad Byagowi, Meta	Data Centers
1:15 PM - 1:30 PM	Time Synchronization in Professional Sports Networks	Allan Armstrong, Meinberg USA	Data Centers
1:30 PM - 1:45 PM	Synchronizing in Broadcast: the Olympic challenge	Olivier Chambin	Data Centers
1:45 PM - 2:00 PM	Common Calendar and SMPTE Timecode	Brooks Harris, EdIMax LLC	Data Centers
2:00 PM - 2:15 PM	Highlights from SMPTE's 2nd Study Group Report on PTP Security	Leigh Whitcomb, Whitcomb Consulting	Data Centers
2:15 PM - 2:30 PM	Synchronizing the Super Bowl: A Look into Large-Scale Live Broadcast Timing	Michael Thompson, Game Creek Video	Data Centers
2:30 PM - 2:45 PM	Q&A Panel		
2:45 PM - 3:45 PM	<b>Poster Session #1 &amp; Afternoon Break</b>		
3:45 PM - 4:05 PM	<b>KEYNOTE: Democratizing Accurate Time for Distributed Applications</b>	Joshua Levinson, AWS	Data Centers
4:05 PM - 4:20 PM	Time Dynchronization Over Ultra-High-Speed Ethernet (200G-800G) Networks in Data Centers	Nir Laufer, NVIDIA	Data Centers
4:20 PM - 4:35 PM	Impact of Optical Components on Accurate Time Sync Delivery	Stefano Ruffini, Calnex Solutions	Data Centers
4:35 PM - 4:50 PM	Challenges in Hybrid Multi-Cloud Environments	Ankur Sharma, Equinix	Data Centers
4:50 PM - 5:00 PM	Q&A Panel		
5:00 PM - 5:45 PM	<b>Exhibitor Talks #1</b>		
5:45 PM - 5:55 PM	Day One Closing Remarks	Marc Weiss	
6:30 PM - 8:00 PM	<b>Networking Reception Sponsored by Microchip</b>		

Wednesday	8-May			
	8:15 AM - 8:25 AM	Day Two Opening Remarks	Marc Weiss	
	8:25 AM - 8:45 AM	<b>KEYNOTE: Critical infrastructure</b>	Brannan Villee, DHS	
	8:45 AM - 9:00 AM	How to Quickly Retrofit At-Risk GPS/GNSS Sites with a Resilient PNT Solution at a Fraction of the Cost	Nino De Falcis, Viavi Solutions	Alt PNT
	9:00 AM - 9:15 AM	Frequency-Dependent Design Considerations for Alternative PNT Systems	Trevor Landon, Satelles	Alt PNT
	9:15 AM - 9:30 AM	Resilience of Alternate PNT Compared to Traditional PNT Systems	Alyona Diachenko, Oscilloquartz Adtran	Alt PNT
	9:30 AM - 9:40 AM	Q&A Panel		Alt PNT
	9:40 AM - 10:10 AM	<b>Morning Break</b>		
	10:10 AM - 10:30 AM	<b>Keynote</b> - Case Study of Nation’s First Broadcast Positioning System (BPS) Deployment on a Live TV Station	Sam Matheny, National Association of Broadcasters	Alt PNT
	10:30 AM - 10:45 AM	IEEE Working Group for Resilient User Equipment in Positioning, Navigation, and Timing (P1952)	Shelby Savage, The MITRE Corp	Alt PNT
	10:45 AM - 11:00 AM	Real World Testing: Two-Way Satellite Time Transfer Enables Simplified Traceable Timing Directly to National Laboratories for Critical infrastructure	Greg Wolff, Microchip	Alt PNT
	11:00 AM - 11:15 AM	Precise Time as A Critical National Service	Tahmina Hoque, Net Insight	Alt PNT
	11:15 AM - 11:25 AM	Q&A Panel		Alt PNT
	11:25 AM - 11:45 AM	Department of Energy Strategy for Resilient Synchronization of Smart Grids	Daniel Burch, Adtran & Chris Cooper, Oakridge National Labs	Alt PNT
	11:45 AM - 12:00 PM	Time Synchronization Using LEO-PNT in Urban Canyons	Yoji Takayama, Furuno Electric Co.	Alt PNT
	12:00 PM - 12:15 PM	Transmitting Time and Frequency Data By Using Broadcast TV Signals Observed in Common-View	Judah Levine, NIST	Alt PNT
	12:15 PM - 12:25 PM	Q&A Panel		Alt PNT
	12:25 PM - 1:25 PM	<b>Lunch - sponsored by Keysight</b>		
	1:25 PM - 1:40 PM	<b>Keynote</b> - Emerging Technologies in 6G	Rajat Prakash, Qualcomm	
	1:40 PM - 1:55 PM	Advancing Synchronization in Wireless Environments: Wi-Wi Implementation on ESP32 Wi-Fi OFDM	Nobuyasu Shiga, NICT	Advancements in Time/Frequency Sources and Synchronization

1:55 PM - 2:10 PM	Simple and Effective Method for Improving Performance and Resiliency of GNSS Time Transfer	Zdenek Chaloupka, Timing Solutions	Advancements in Time/Frequency Sources and Synchronization
2:10 PM - 2:25 PM	Picosecond Timing System for High-Powered Lasers and Accelerators	Nicolas Bazoge, Greenfield Systems	Advancements in Time/Frequency Sources and Synchronization
2:25 PM - 2:35 PM	Q&A Panel		Advancements in Time/Frequency Sources and Synchronization
2:35 PM - 3:05 PM	Afternoon Break		
3:05 PM - 3:20 PM	IEC/IEEE 60802 – 1us Accuracy Over 100 Hops With Regular Xos and Silicon	David McCall, Intel	Advancements in Time/Frequency Sources and Synchronization
3:20 PM - 3:35 PM	A Proposal to Change the Method of Adding Leap Seconds to UTC	Judah Levine, NIST	Advancements in Time/Frequency Sources and Synchronization
3:35 PM - 3:50 PM	Demonstrating PTP Time Synchronization Over 5G	Alon Regev, Keysight	Advancements in Time/Frequency Sources and Synchronization
3:50 PM - 4:05 PM	Use of UTC(K) in the Coherent Network Primary Reference Time Clock	Lee Cosart, Microchip	Advancements in Time/Frequency Sources and Synchronization
4:05 PM - 4:15 PM	Q&A Panel		Advancements in Time/Frequency Sources and Synchronization
4:15 PM - 5:00 PM	Exhibitor Talks #2		
5:00 PM - 5:10 PM	Day Two Closing Remarks	Marc Weiss	
7:00 PM - 9:00 PM	Dinner Sponsored by Meinberg		

Thursday	9-May			
	8:30 AM - 8:40 AM	Day Three Opening Remarks	Marc Weiss	
	8:40 AM - 8:55 AM	Research into Meeting Needs of Future Space, Defense, and Commercial Requirements For Atomic Frequency Standards	Richard Overstreet, Microchip	Advancements in Time/Frequency Sources and Synchronization
	8:55 AM - 9:10 AM	A Sustainable Approach Towards integration of Ultraminiaturized Microwave Atomic Clocks and their Social Implementation	Motaoki Hara, NICT	Advancements in Time/Frequency Sources and Synchronization
	9:10 AM - 9:25 AM	Pushing the Limits of ePRTC – Timing the Future in the Face of increasing GNSS Vulnerabilities	Alon Stern, Adtran Oscilloquartz	Advancements in Time/Frequency Sources and Synchronization
	9:25 AM - 9:40 AM	A simplified DFT-based approach for fast and reliable wander transfer computation in timing PLLs	Tariq Haddad, Microchip	Advancements in Time/Frequency Sources and Synchronization
	9:40 AM - 9:55 AM	Development of the Chip-Scale Atomic Clock Based on Rb87 For Enhanced Stability	Martin Lin, Teledyne	Advancements in Time/Frequency Sources and Synchronization
	9:55 AM - 10:05 AM	Q&A Panel		
	10:05 AM - 10:35 AM	Morning Break		
	10:35 AM - 10:55 AM	Keynote TBD		
	10:55 AM - 11:10 AM	Lets Not Forget About TDEV	Greg Armstrong, Renesas Electronics	Advancements in Time/Frequency Sources and Synchronization
	11:10 AM - 11:25 AM	+ / - 1ppb Ovenized-MEMS Technology For Extended Holdover	Gary Guist, SiTime	Advancements in Time/Frequency Sources and Synchronization
	11:25 AM - 11:40 AM	Precise intra-System Time Synchronization in Commodity Server Systems	Wojciech Wasko, NVIDIA	Advancements in Time/Frequency Sources and Synchronization
	11:40 AM - 11:50 AM	Q&A Panel		
	11:50 AM - 12:50 PM	Lunch		
	12:50 PM - 1:10 PM	Keynote - Update on timing in 3GPP standards	Juan Montojo	
	1:10 PM - 1:25 PM	Physics-Aware Approach for Detecting PTP Clock Servo Attacks	Vuk Lesi, Intel	Emerging Applications
	1:25 PM - 1:40 PM	Timing Distribution in Emerging Automotive in-Vehicle-Network Scenarios	Ravi Subrahmanyam, Analog Devices	Emerging Applications
	1:40 PM - 1:55 PM	Exploring integration: TSN with MRR-Based Passive Optical Wireless Architecture for Space- and Air-borne Communications	Tiziana Fiori, Intel	Emerging Applications
	1:55 PM - 2:05 PM	Q&A Panel		

	2:05 PM - 2:20 PM	Delivering Nanosecond-level Time Synchronization to Containerized Software on a Virtual Machine	David Zage, Intel	Emerging Applications
	2:20 PM - 2:35 PM	Synchronizing the Cloud to Support AI Applications	Ullas Kumar, Rakon	Emerging Applications
	2:35 PM - 2:50 PM	Clock Management for Time Aware Systems	Christopher Hall, Intel	Emerging Applications
	2:50 PM - 3:00 PM	Q&A Panel		Emerging Applications
	3:00 PM - 3:10 PM	Conference Closing Remarks	Marc Weiss	