NIST Vehicle Teleoperation Forum

November 13, 2020

9:00 am Welcome: Director, NIST

Dr. Walter Copan, Under Secretary of Commerce for Standards and Technology, and NIST Director /ITL Director Charles Romine

Overview of NIST mission and role in the context of vehicle teleoperation.

9:10 am Vehicle Teleoperation: Vision, Opportunities, and Challenges

Tao Zhang, NIST

9:20 – 9:50 am Keynote

Michelle Avary, World Economic Forum

9:50 am - 10:50 am Session 1 - Government Panel

Focus: Discuss related work at government agencies and potential roles of government agencies in vehicle teleoperation going forward.

Moderator: Chris Greer, NIST

1.	Elise Feldpausch	Michigan DOT
2.	Frank Konieczny	US Air Force
3.	Wim Vandenberghe	5G Blueprint Consortium
4.	Raj V. Ponnaluri	Florida DOT
5.	Ed Griffor	NIST

10:50 AM – 10:55 AM BREAK - 5 mins

10:55 am – 2:00 pm Session 2 - Industry Panel: Vehicle Teleoperation Today & Tomorrow

Focus: Discuss importance and use cases of vehicle teleoperation (not just for today but also tomorrow), state of the art, where teleoperation will go next, and key challenges to be addressed.

10:55am-11:55am: Session 2a

Moderator: Tao Zhang, NIST

1	Scott McCormick	CVTA
2	Elliot Katz	Phantom Auto
3	Amit Rosenzweig	Ottopia
4	Hariharan Krishnan	General Motors
5	Maarten Sierhuis	Nissan

11:55am-12:55pm: Session 2b

Moderator: Seval Oz, Oz Consulting

1	Manuel Zapata	Verizon
2	Walter Sullivan	Designated Driver
3	Syed Hosain	Aeris
4	Bert Kaufman	Zoox
5	Mansoor Nasir	Hyundai Mobis

12:55 pm - 1:00 pm BREAK 5 mins

1:00pm - 2:00 pm: Session 2c
Moderator: Scott McCormick, Connected Vehicle Trade Association

1	Roger Berg	Denso
2	Rajive Joshi	RTI
3	Mitchell M. Rohde	Quantum Signal AI (Ford)
4	Seval Oz	Oz Consulting

2:00 pm – 2:25 pm LUNCH BREAK 25 mins

2:25 pm – 3:35 pm Session 3 – Vehicle Teleoperation & Safety
　　Focus: Discuss safety issues related to vehicle teleoperation, e.g., how to measure safety of vehicle teleoperation? What are the key factors that will impact teleoperation safety? What are the key issues to address to increase teleoperation safety?
Moderator: Richard Wallace, HWA Analytics

1	Tim Dawkins	World Economic Forum (WEF)
2	Ashish Kundu	Ciphense
3	Maarten Sierhuis	Nissan
4	Sven Beiker	Silicon Valley Mobility
5	Rajive Joshi	RTI
6	Amit Rosenzweig	Ottopia

3:35 pm – 6:20 pm Session 4 - Vehicle Teleoperation & Infrastructure
　　Focus: Discuss infrastructure issues related to vehicle teleoperation. For example, networking requirements and challenges, potential roles of cloud and edge computing for assisting human teleoperators today and enabling automated teleoperation in the future, the roles of AI for vehicle teleoperation, and potentials for off-loading some automated driving intelligence from the vehicles to the cloud (benefits, feasibility, and challenges).

3:35pm-4:25pm: Session 4a
Moderator: Robert Bohn, NIST

1	Jeffrey Schweitzer	Verizon
2	Timothy Grayson	DARPA
3	Tom Schaffnit	USDOT Volpe National Transportation Systems Center
4	James Bikram Joshi	NSF

4:25 – 4:30 pm 5 min break

4:30pm-5:30pm: Session 4b
Moderator: Lotfi Benmohamed, NIST

1	Walter Sullivan	Designated Driver
2	Weisong Shi	Wayne State University
3	Sanjay Dhawan	Cerence Inc.
4	David Corman	NSF

5:30pm-6:20pm: Session 4c
Moderator: Sven Beiker, Silicon Valley Mobility

1	Youssef Abdelilah	American Tower
2	Chonggang Wang	InterDigital
3	Richard Wallace	HWA Analytics
4	Shai Magzimof	Phantom Auto

6:20 pm Adjourn

Pre-recorded Session: Session 5: Vehicle Teleoperation & Standards
   Focus: Discuss which areas in vehicle teleoperation will benefit from standardizations (e.g., taxonomy, operational design domains for vehicle teleoperation? performance and safety metrics, networking requirements? and interfaces?).
   Moderator: Lisa Carnahan, NIST

1	Walter Sullivan	Designated Driver
2	Stan Schneider	RTI
3	Clare Mutzenich	Royal Holloway, University of London
4	Sven Beiker	Silicon Valley Mobility
5	Elaina Farnsworth	The NEXT Education
6	Ashish Kundu	Ciphense