



Teleoperation
Consortium

What is Teleoperation

- Teleoperation of vehicles, is the ability to remotely drive or assist a piloted or self-driving car. Telepresence is the ability to have sensory feedback from the remote system.
- The goal of producing a fully automated vehicle (AV) represents a culmination of automotive technology with sophisticated control software, AI-based models, ultra-low latency and reliable communications, and operational management systems occurring on the vehicle, on the cloud and over the network using a standards-based approach.
- A crucial part of the AV ecosystem is vehicle teleoperation (remote driving) and accordingly is receiving growing industry attention.
- It is time to coalesce the entities involved in developing vehicle teleoperations in order to stimulate growth, increase awareness, address issues and provide industry guidance for development and deployment.”

Who we are

The Teleoperation Consortium (TC) is a non-profit business league established to facilitate the interaction, and advance the interests, of the entities involved in the teleoperation ecosystem.

The Teleoperation Consortium enables the collaboration of companies, organizations, and governmental bodies engaged in developing bidirectional vehicle communications.

Membership is open to any corporation, public entities, standards and specification organizations and academic institutions.

Our Mission

COMMUNICATION

Our first effort is to understand who the stakeholders are, their objectives and ownership in this environment, and engage them to allow for a collective understanding of the ecosystem. We communicate what the initiatives are, and what has been developed to date with regard to technical, social and policy concerns.

COLLABORATION

We seek to build a dialog for examination of the proposals, pre-deployment plans and build outs within the affected business sectors, between businesses and agencies. In order to assure an effective means of accomplishing the important objectives, we must build consensus by those who will build, validate and operate the systems and infrastructures developed.

CONSENSUS

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Why we were created

- Tao Zhang, PhD, IEEE Fellow of NIST noted, “
- The Board of Directors of the Connected Vehicle Trade Association (CVTA) unanimously endorsed the formation of the Teleoperation Consortium in December 2020.

Benefits of participating

- **Committees:** Identify the key issues in vehicle teleoperation that can be best addressed by collaboration. The Teleoperation Consortium will have a number of standing committees, determined by the Board and Membership, devoted to Technology, Security, Training and Certification, Communications and other areas that members can participate in and lead to advance their interests and the teleoperation ecosystem.
- **Newsletter:** The Teleoperation Consortium will send out a condensed email to members of significant industry news, pilots, RFPs/RFQs, funding opportunities and global programs of interest to members in the teleoperation space.
- **Press Releases:** Members can have the Teleoperation Consortium send out Member's press releases, white papers, and other news to the Teleoperation Consortium's contact database.
- **Conference Partnerships:** The Teleoperation Consortium will negotiate marketing partnerships with conferences organizers annually, obtaining registration fee discounts, and usually able to suggest and have members allocated speaking or moderator positions to events in the US, Europe and Asia.

Benefits of participating, continued

- **Networking:** With the global contact database, the Teleoperation Consortium will be able to connect members to other companies needing channel partners for programs and product launches in every region of the world.
- **Summit, Forums and Workshops:** The Teleoperation Consortium will hold an annual Summit, as well as focused forums and Workshops on various topics for members to network, gain new insights, and connect with both members and non-members to advance their business interests.
- **Training:** Subject matter experts will be engaged to develop a Teleoperation Professional Credentialing program as a vendor-neutral comprehensive education and certification curriculum that signifies the requisite foundational understanding necessary to perform tasks in this ever-changing industry. Participants learn the latest in connected intelligent transportation and infrastructure, teleoperation principles, autonomous vehicles, in-vehicle safety, communication protocols, data, cybersecurity and security spaces.

Membership Levels

There are seven (7) classes of Membership in the Teleoperation Consortium:

- **Corporate Member.** A Corporate Member is a person or organization that operates a business which has interests in the vehicle communication environment. Corporate Members may have other types of business interests and still meet the criteria to be a Corporate Member. Corporate Members may be elected to the Board of Directors. Annual Dues: \$6,000.
- **Associate Member.** An Associate Member is any entity that qualifies as a Corporate Member that may join the Teleoperation Consortium at a reduced dues rate. Associate Members will have all the rights and responsibilities of Corporate Members, except that they cannot hold board seats or chair Board committees. Dues shall be at one-fourth Corporate Member dues at \$1,500.
- **Startup Member.** A Startup Member is any entity that qualifies as a Corporate Member self-funded or less than \$5 million in funding, pre-revenue, fewer than 10 members and under 5 years old. Startups may join the Teleoperation Consortium at no cost. Startup Members will have all the rights and responsibilities of Corporate Members, except that they cannot hold board seats or vote. Startup Members pay no dues.

Membership Levels, continued

There are seven (7) classes of Membership in the Teleoperation Consortium:

- **Affiliate Member.** An Affiliate Member is any standards or specification developing entity, patent pool or alliance, non-profit or similar entity that does not qualify for Corporate, Associate or Academic membership. Affiliate members have no voting privileges pay no dues.
- **Public Entity Member.** A Public Entity Member is any municipal government agency or any federal, state, territory, province or country involved in communications, vehicle safety, transportation management or related area. Public Entity Members have no voting privileges pay no dues.
- **Academic Member.** An Academic Member is any college, university or other educational institution as approved by the board. Academic Members have no voting privileges pay no dues.
- **Advisory Member.** An Advisory Member is any individual so appointed by the Board of Directors. They are typically individuals who have rendered specific services to the Consortium on an ongoing basis. They cannot be any public or private entity. Advisory members have no voting privileges and pay no dues.

Board of Directors and Advisor

Board Directors

- [Autonebula](#) – Sanjay Puri, Chairman
- [Designated Driver](#) – Manuela Papadopol
- [Green Hills Software](#) – Chuck Brokish
- [IMS](#) – Dr. Ben Miners
- [Mitsubishi Electric](#) – Mark Rakoski
- [VELN](#) – William Kohler, Vice Chairman

Founding Members

- [Autonebula](#)
- [Cogenia Partners](#)
- [Connected Vehicle Trade Association](#)
- [Designated Driver](#)
- [Digital.ai](#)
- [ESG](#)
- [GENIVI Alliance](#)
- [Geotab](#)
- [Green Hills Software](#)
- [Harris Poll](#)
- [Important Safety Technologies](#)
- [IMS](#)
- [Interpl.ai](#)
- [LiveRoad Analytics](#)
- [Mitsubishi Electric](#)
- [Mobile Video Computing Solutions](#)
- [Strategic Market Services](#)
- [The Next Education](#)
- [Underwriter's Laboratories](#)
- [VELN](#)

Officers (Office of the President)

President & CEO – Scott J. McCormick

Vice President industry Programs and Standards – Valerie Shuman

Director of Training and Certification – Elaina Farnsworth

Director of Member Engagement – Lissa Franklin

Director of Communications – (open)

Director of Marketing – (open)



Scott McCormick
President & CEO

- Scott has degrees in Mathematics, Mechanical and Aerospace Engineering, a Master's in Business Administration, and Doctoral Research in Artificial Intelligence. Scott is the president of the Connected Vehicle Trade Association, formed in 2005 at the request of the ten largest automakers. Prior to CVTA, Scott was the first President of the VII Consortium and before that the Executive Director of the Automotive Multimedia Interface Collaboration, a nonprofit research organization of the world's largest automakers.
- Scott is a former Advisor to the United States National Science Foundation and the Industrial Sector Representative to the US Federal Laboratories Technology Transfer Consortium. He was the founder and Chairman of the International Automotive Standards Organization, and the former Strategic Advisor to the United Nation's International Telecommunications Union (ITU-T) Advisory Panel on Communication Standards to Vehicles. Scott is a member of the US ISO Technical Advisory Group. He co-founded and Chaired the Global Telematics Forum with trade associations from Europe, Korea, Australia, Taiwan and China.
- In March 2012, 2014 and again in 2016, Scott was appointed by Congress to the ITS Program Advisory Committee to advise the Secretary of Transportation and Congress on matters relating to the study, development, and implementation of Intelligent Transportation Systems. In this capacity, Scott has chaired the Secretary's Security Subcommittee since 2012.
- On June 7th, 2016 Scott was inducted into the Automotive Hall of Fame in Detroit, Michigan. In August, 2016 the US State Department appointed Scott as the Transportation Consultant to the Asia Pacific Economic Community. In September, 2016, Scott was named Chief Advisor to the Shanghai International Auto Group's demonstration test bed. In 2021 Scott was elected as the Chairman of the EL Transportation Commission.



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