Autonomous Vehicles – Roadway to the Future

Robert Neff

What will our life be like with autonomous vehicles? Will it be the anticipated utopia or will there are new concerns that have to be considered? How will people regard this disrupting technology as it evolves?

The presentation provides a brief history of Automated Vehicles and Highways going back to 1925. The speaker was Technical Leader for his company's participation in the 1997 National Automated Highway Demonstration where autonomous vehicles were successfully demonstrated to be technologically feasible on a prototype automated highway in San Diego.

Semi-automated features are being introduced on today's automobiles. Many more features are in product development and nearing production. The presentation will discuss adoption of these features and will show how sensors, software and vehicle to vehicle communication will facilitate the future of autonomous vehicles.

Finally, the presentation will offer a future vision of what business models might be disrupted and what life may be like with autonomous vehicles.

Robert's multimedia presentation describes:

- Some of the history of Automated Vehicles and Highways
- The National Automated Highway Demonstration in 1997
- Factors influencing automated features that have evolved since the demonstration in 1997
    - Military involvement
    - Automotive Manufacturers Involvement
    - Federal Communications Commission Involvement
    - US Department of Transportation Involvement
- How sensors, software and vehicle to vehicle communication will facilitate the future of autonomous vehicles
- Offer a future vision of what life could be like with autonomous vehicles.

Speaker Profile – Robert Neff

Bob is engaged in Sales and Marketing for companies involved in high technology products, projects and people. Sales and Marketing Insight is Bob's strategic marketing company.

Bob is a corporate officer in the Intrass Corporation, which is a startup company involved Vehicle-to-Vehicle (V2V) communications.

Bob is past Chairman of the SAE V2V Vehicle Safety Subcommittee and is a current member of the SAE Vehicle to Vehicle Communications Standards Technical Committee that has written the interoperability protocol standard SAE J2735 for vehicle communication with each other and with the infrastructure (V2V and V2I). The committee has recently published J2945 which displays the Common Performance Requirements for communication.

Bob retired from Eaton Corporation where he held various technical, marketing and managerial positions. The majority of Bob's time at Eaton was spent in the VORAD Division working on collision warning, adaptive cruise control and blind spot warning using 24 GHz and 77GHz radar. Bob was Technical Lead for Eaton's participation in the National Automated Highway Demonstration in 1997. Bob earned his Six Sigma Black Belt while at Eaton.

Following Eaton, Bob was part of the management team that established the Automotive Electromagnetic Compatibility Laboratory for Underwriters Laboratories in Novi, Michigan.

Bob has served since January 2014 as Chairman of IEEE Southeastern Michigan (SEM) Section and since 2007 as Marketing Chairman of IEEE SEM EMC Society's EMC Fest event. Bob was Marketing Chairman for the International Electromagnetic Compatibility Symposium at Detroit Cobo Center in August of 2008. Bob was also Marketing Chairman for the Professional Ski Instructors of America / American Association of Snowboard Instructors Central Division and a member of their Board of Directors. Bob is an Advanced Accredited ski instructor actively teaching at Mt. Brighton, Michigan during the winter and at Vail-Beaver Creek, Colorado in the Spring.