



Traffic Safety and Technology Advisory Committee
Speaker's Conference Room, 6th Floor GAB
7/6/2006

Meeting Summary

Welcome: *Introduction of legislative and citizen members.*

Overview of JCOTS and Advisory Committee Structure: *Staff attorney Patrick Cushing will review the role JCOTS plays as a permanent legislative commission and how the advisory committees assist in that role.*

Presentation, Traffic Safety Training Center, VCU: *Trooper Rick Dowsett, a member of TSTC's Multi-disciplinary Crash Investigation Team will present the center's current work.*

Trooper Rick Dowsett gave a brief introduction on the issue of child restraint failure and incorrect child restraint use. He cited several incidents in the past six months that led to serious injury or death. The presentation also brought attention to an exception in Virginia's passenger restraint law. Currently, under § 46.2-1095(e) children are exempt from the child restraint law if they are riding in the rear cargo area of vehicles other than pickup trucks. Rick Dowsett will continue to report on the research being conducted at the TSTC and will have Bob Breitenbach help prepare some guidelines for legislation that may strengthen the passenger restraint laws in Virginia. Commenting on the accidents mentioned by Trooper Dowsett, Wayne Huggins noted that many of the accidents mentioned occurred on secondary roads. Wayne proposed looking at center-lane rumble strips as a potential low-cost technology.

The conversation then turned to another problem arising in Virginia; drift racing. The goal of drift racing is to complete a circuit course and come as close to losing control of the car as possible, while remaining on the course. Fairfax County recently conducted an operation to curb this form of racing but found the current statute that authorizes law enforcement officials to confiscate the vehicles of



individuals racing was somewhat cumbersome when applied to this new type of 'racing' because the competition is based on a point system, rather than a typical speed race. Patrick Cushing, JCOTS staff attorney, will follow-up on this problem to further define the issue and review the appropriate section of state code.

Workplan Development and Open Discussion: This will be an open discussion to help set the workplan for the Traffic Safety and Technology Advisory Committee.

Dan Papiernik from Transcore identified several issues that this advisory committee could study:

- Establishing data collection points (transponders) to analyze traffic patterns using existing EZ Pass users. There are close to 14 million EZ Pass tags in the U.S. (1 million distributed in Virginia, about half of those in active use in Virginia). Data collection points can be used to help analyze traffic flow and volume. Dan indicated that no identifying data would need to be recorded or stored; the information needed would just be the unique identifier in the EZ Pass to distinguish it from other EZ Passes.
- Application of 5.9 GHz communications bandwidth technology in vehicles. This high bandwidth technology can be used to help study transportation and traffic issues. Some of these technologies can be built into vehicles for advanced traffic safety applications. One proposed application would be real time vehicle awareness that would allow vehicles to communicate with each other for spatial awareness applications, such as automatic braking to keep a minimum distance from the lead car.
- Security issues such as container tracking through satellite/GPS.
- Maximizing the use of non-cash toll payment (EZ-pass, credit card). There were recently four armed robbery incidents in VA and a cashless system would improve road flow and toll safety.

Michael Zimmerman commented on many of the above potential study issues:

- Transponders can be used to help study traffic using EZ-Pass and can be used for incident detection, congestion relief, and traffic safety in general. Houston, Texas and NY have these systems.

The Virginia Joint Commission
JCOTS
on Technology and Science

- 5.9 GHz will likely be built into vehicles for toll and other uses. 5.9 GHz can help individual vehicles communicate to prevent collisions, especially around lighted traffic intersections.
- Generally Michael supported studying the issues identified by Dan Papiernik.

Senator Watkins would like someone from the automobile industry to talk about the 5.9 GHz technology and where the manufacturers see the technology going. Patrick will contact someone from the automobile industry to present on this issue at the next meeting.

Delegate Rust asked what the increased capacity per lane would be if we went to barrier free tolling. Is it worth the fight?

Michael Zimmerman provided the following preliminary figures:

Barrier Toll Collector:	300-350 vehicles an hour
Barrier Free 15 mph:	1000-1200 vehicles an hour
Barrier Free Open toll:	2200 vehicles an hour

Mike McGurrin commented on the 5.9 GHz technology stating that there is very little the state could do and it may be best to simply track the Vehicle Integration Information (VII) Program sponsored by the federal government. Patrick will organize a presentation on this program and brief the committee on what is being done on the federal level and in California, which has moved ahead on testing the 5.9 GHz technology. Mike Zimmerman will have the Mark IV President and ITS America Past President Martin Capper come to a future meeting to brief the Committee on the status of the 5.9 GHz movement.

Another possible study area mentioned by Nancy Rodrigues was to attempt to open public procurement contracts to allow companies the flexibility to submit bids using a wide range of technologies. Patrick is going to look at the RFP and PPTA procurement processes to help identify any areas that would give companies more flexibility in submitting bids, especially as it relates to technology requirements.

David Faria noted that interoperability was a major concern among EZ Pass and other vendors. Many companies refuse to release proprietary information that would help enable different systems to be used together, such as tolls, gas payment, etc.



Senator Watkins asked Nancy if there was a way to ensure interoperability was part of state contracts and whether the state could do anything to mandate interoperability requirements.

Zongwei Tao identified speed enforcement as a major issue in Virginia. The NHTSA estimates 1/3 of all accidents are caused by speeding. He would like to see the state use real time data to classify the most dangerous areas, perhaps using the 5.9 GHz technology.

On the issue of enforcement Wayne Huggins noted that Virginia needs more state troopers to protect Virginia citizens, for example, 1000 people will die on Virginia roads in a year and 350 will be murdered. Wayne also noted that the number of state troopers patrolling Virginia's Highways has changed very little over thirty years yet the number of miles of roads and cars has increased exponentially.

Judith Schnider introduced the idea of low tech solutions, such as center land rumble strips, which have resulted in a 15% drop in accidents in other states using the rumble strips.

Michael McGurrin discussed the use of photo-red. The group discussed possible applications such as extending yellow lights when a car is approaching an intersection at a high rate of speed or offering a longer delay between red in one direction and green in another.

Dan Papiernik introduced the idea of having the state look at road funding from a perspective that included a cost estimate for the additional state troopers needed to patrol the new road.

As part of the discussion on low-tech traffic safety technologies Zongwei Tao asked the committee if there were any technologies to enforce speed limits in small communities with children playing in the streets. One possible solution could be the use of traffic circles.

Review of Assignments for next meeting:

Nancy Rodrigues is going to look into open architecture and public procurement to determine if any changes could be made to allow vendors greater flexibility in



submitting proposals and what can be done, if anything, to mandate interoperability requirements.

Rick Dowsett will put together recommendations for improving child restraint laws. Research report will be published in July sometime and Rick will be able to present results when they are published.

Wayne Huggins will look at photo-red and talk to Alan Wambold about legislative options giving localities the authority to implement photo-red locally.

Mike Zimmerman will have the Mark IV President and ITS America Past President Martin Capper come to a future meeting to brief the Committee on the status of the 5.9 GHz movement.

Patrick Cushing

1. Review and present a summary of cell phone and driving laws in other states.
2. Contact Tom Dingus to talk about smart highways and current research at Virginia Tech.
3. Provide an update on drift racing and how the current racing statute is applied in drift racing.
4. Check with VDOT to provide the following:
 - a. Contact VII and determine their involvement with 5.9 GHz technology, if any, and what the current status is at federal level. Coordinate with Michael Zimmerman to organize a presentation on 5.9 GHz for a later meeting.
 - b. What is the state policy for signal timing and what type of technologies are being used and researched?
 - c. What are some low tech solutions to prevent accidents...what are the policies on rumble strips in Virginia? Can we use more traffic circles in low speed intersections?
 - d. Does VDOT have any numbers on a return on investment for each of these technologies that VDOT could use to prevent accidents?

Next Meeting

Our next meeting will be at Insurance Institute for Highway Safety Research Center in Greene County at 10:30 am on Tuesday September 19th.