

Parking and Transportation Committee Meeting Minutes

3/29/2022

Via Zoom

Members Present: Sam Avery, Paul Hanley, Pamella Hughes, Kara Park, Debra Trusty, David Wittenberg
Staff/Others Present: Brian McClatchey, Dan McGehee, Frank Mitros, Erin Shane, Debby Zumbach and Carrie Brus
Members/Staff Absent: David Keffala-Gerhard, Kevin Larson, Jacob Odgaard, Brian Shanahan, Rebecca Wilson

Meeting began at 3:02pm

Carrie took roll call based on Zoom attendance

Approval of Meeting Minutes

- Moved and seconded to approve minutes

Presentation given by Professor Dan McGehee

- 30th year at Iowa
- Came to Iowa after grad school
- 6 years ago, took over as Director at NADS (National Advanced Driving Simulator)
- National Advanced Driving Simulator Mission
 - Make our roads safer by researching the connection between humans and vehicles
 - Driving age ranges from 14 to over 100
 - Over 36k fatalities in US each year in vehicular accidents
 - Goal is to eliminate crashes
- Research vehicles on campus
- On-road research is becoming more valuable
 - Some vehicle examples:
 - Volvo XC90
 - Tesla Model S75D
 - Lincoln MKZ
 - Camry
 - Ford Transit shuttle bus
- Active Research
 - Automated vehicles
 - Transition of control
 - How quickly will drivers' transition?
 - How does interface design impact that transition?
 - How does a driver's understanding of adaptive cruise control affect driving performance?
 - Automated Driving System for Rural America
 - Lack of hard surface and lack of paint
 - Automated vehicles rely on paint on the road
 - Looking into different technology that can help
 - Improve safety
 - Represent rural roads in ADS testing
 - Enhance mobility
 - Provide data
 - Drowsy Driving Research
 - Drowsiness Alerts
 - Do they work?
 - How do they influence decision made by drivers?
 - Do drivers know how drowsy they really are?
 - Driving Safety Analyses
 - Tracking devices on farm equipment recorded passing vehicles
 - Adults in the back seat during crashes
 - Road conversions
 - Creating a crash data dictionary
 - Teens at the Wheel
 - Does a teen's ability to anticipate hazards change after new-driver training?
 - Analyzing crash rates of Iowa young drivers by license type
 - Cannabis and Driving
 - How do you ID who is too impaired to drive due to cannabis use?
 - Identify brain markers
 - Cannabis impairment detection app
 - Prevalence of drugs in crash subjects reported to the Emergency Dept
- Role of COVID
 - Human subjects testing

- Challenges ahead
 - Overmarketing of automation capabilities
 - Changing expectations
 - Surveys show that public not knowledgeable
 - Once you drive one, it can change your assumptions
- History
 - The automatic transmission in 1942
 - Cruise control became available in 1958
 - Called the “auto pilot”
 - Advanced Driver Assistance Systems (ADAS)
 - What cars can see today
 - Mycardoeswhat.org
 - Know more and drive safer
 - Subaru Eyesight
 - Adaptive Cruise Control
 - Set speed
 - Set gap
 - Lane keeping assist
 - Keep you in the center of the lane
- Levels of driving automation
 - Up to Level 2 in production right now
 - What does the human in the driver’s seat have to do vs what is automated?
- Operational Design Domain
 - Perhaps the most important element of automated driving
 - Roadway types
 - Geographic area
 - Speed range
 - Environmental conditions
- Cadillac Super Cruise
 - Referred to “freeway automation”
 - Must keep eyes straight ahead
 - Only works on specially mapped freeways
- Areas of leadership to consider
 - Robot parking attendants to write tickets 24/7
 - All-Electric Vehicles
- Questions/Feedback
 - Driving at night, blinding lights from other vehicles
 - Studying “adaptive headlights”
 - Detect pedestrians or bicycles
 - Aim a light at those groups from the vehicle
 - Would be interesting to experiment with that technology on CAMBUS
 - Volvo is the most advanced on this technology so far
 - Help with parking between lines in parking ramps
 - Tesla has the best technology for parking right now
 - Hi-def mapping
 - Original mapping
 - Constantly changing
 - Develop own maps
 - Gender equity issue with crash dummies
 - Extremely expensive to make
 - Air bags used improperly with a child in the front seat
 - Seat belts used improperly with pregnant women
 - Tracking equity in automated transportation
 - Where can people charge their electric vehicles?
 - Grocery stores are an option
 - Electric outlet in your garage

Housekeeping Items

- Next meeting is April 22 at 3pm via Zoom
- Continued meetings with UIHC regarding issuance of tickets to employees in parking ramps
- Would like to see a possible field trip out to see NADS

Adjourn

- Motion to adjourn and seconded
- Meeting ended at 3:53pm