

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Informed Consent for Participants In Research Projects Involving Human Subjects

Under the Paperwork Reduction Act, a federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control number. The OMB Control Number for this information collection is 2127-0731 (expiration date: **MM/DD/YYYY**). The average amount of time to review and complete the form is 15 minutes. The purpose of this research study is to examine drivers' use of rearview video systems. All responses to this collection of information are voluntary. If you have comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden send them to Information Collection Clearance Officer, National Highway Traffic Safety Administration, 1200 New Jersey Ave, S.E., Washington, DC, 20590.

Title of Project: Parking Study

Investigators: Justin Owens, Ph.D. & Jonathan Antin, Ph.D., CHFP

I. THE PURPOSE OF THIS RESEARCH PROJECT

This research examines the way drivers use in-vehicle technologies that help drivers with backing and object avoidance tasks. About 120 drivers age 60 and over from the New River Valley and Roanoke Valley will be recruited to participate. All study tasks will be performed on Virginia Tech Transportation Institute's Surface Street test track.

II. PROCEDURES

During the course of this experiment, you will be asked to perform the following tasks:

- 1) Show the experimenter your valid driver's license.
- 2) Read this Informed Consent Form and sign it if you agree to participate.
- 3) Complete a W-9 tax form for compensation purposes.
- 4) Complete some vision tests, a flexibility test, an informal hearing test, and a brief survey about your experience with the backup cameras in general.
- 5) Watch a brief (about 8 minute long) video about driving safety.
- 6) Drive an instrumented vehicle on the Surface Street test track at VTTI while completing backing tasks with a backup camera available. You will not go faster than about 35 miles per hour.
- 7) Allow us to record digital video and audio while you are in the vehicle. An experimenter will be with you whenever you are in the vehicle. He or she will have access to a passenger-side brake to allow emergency stops.
- 8) Perform a series of driving tasks that are similar to the following activities:
 - a. Backing out of a garage
 - b. Backing out of a parking space
 - c. Backing out of a long driveway
 - d. Backing into a parking space

You may use your mirrors at any time during these tasks.

- 9) While you are on the test track, we may place a traffic cone or other plastic object in the path of the vehicle to observe your response to an obstacle as you complete the driving task.

Today's total experiment time will be approximately 1.75 hours.

III. RISKS

The tasks described here are believed to pose no more than minimal risk to your health or well-being. The risks of driving the test vehicle on the Surface Street test track for this experiment are similar to that of driving an unfamiliar vehicle during daylight hours while using unfamiliar technology with no other traffic.

While the risk of participation in this study is considered to be no more than that encountered in everyday driving, if you are pregnant you should talk to your physician and discuss this consent form with them before making a decision about participation.

Please be aware that events such as equipment failure, changes in the test track, stray or wild animals entering the road, and weather changes may require you to respond accordingly. If at any point in the session the experimenter believes that continuing the session would endanger you or the equipment, he/she will stop the testing.

In the event of an accident or injury in an automobile owned or leased by Virginia Tech, the automobile liability coverage for property damage and personal injury is provided. The total policy amount per occurrence is \$2,000,000. This coverage would apply in case of an accident for all volunteers and would cover medical expenses up to the policy limit. For example, if you were injured in an automobile owned or leased by Virginia Tech, the cost of transportation to the hospital emergency room would be covered by this policy.

Participants in a study are considered volunteers, regardless of whether they receive payment for their participation; under Commonwealth of Virginia law, worker's compensation does not apply to volunteers; therefore, if not in the automobile, the participants are responsible for their own medical insurance for bodily injury. Appropriate health insurance is strongly recommended to cover these types of expenses. For example, if you were injured outside of the automobile owned or leased by Virginia Tech, the cost of transportation to the hospital emergency room would be covered by your insurance.

The following precautions will be taken to ensure minimal risk to you:

1. An experimenter will be with you at all times to monitor your driving and will ask you to stop if he/she feels the risks are too great to continue.
2. You may take breaks or decide not to participate at any time.
3. You will be required not to go faster than 35 miles per hour throughout the session and slower during the backing tasks.
4. The testing will take place on a closed, controlled test track.

5. The experimenter will be present while you are driving. As long as you are driving the research vehicle, it remains your responsibility to drive in a safe and legal manner.
6. You will be required to wear your lap and shoulder belt restraint system while in the car. The vehicle is equipped with a driver's side and passenger's side airbag supplemental restraint system, a fire extinguisher, and a first aid kit. The experimenter will also have a cell phone.
7. All data collection equipment is mounted such that, to the greatest extent possible, it does not pose a hazard to you in any foreseeable case.
8. On-road experimenters are in contact with in-vehicle experimenters at all times to notify them when objects are in place, and the research vehicle will be placed in park between trials to avoid accidental movement that could put experimenters at risk.
9. All objects are chosen and placed such that impact with them will not harm the driver. Testing will be cancelled in the event of poor weather resulting in the use of windshield wipers beyond an intermittent speed or if the pavement is or becomes icy.
10. To participate, you may not have any medical condition that would put you at a greater risk, including but not restricted to history of neck/spine injury, epilepsy, balance disorders, lingering effects of head injuries and stroke.
11. In the event of a medical emergency, or at your request, VTTI staff will arrange medical transportation to a nearby hospital emergency room.

IV. BENEFITS

While there are no direct benefits to you from this research, you may find the experiment interesting. No promise or guarantee of benefits is made to encourage you to participate.

V. EXTENT OF ANONYMITY AND CONFIDENTIALITY

The data gathered in this experiment will be treated with confidentiality. Shortly after participation, your name will be separated from your data. A coding scheme will be employed to identify the data by participant number only (e.g., Participant No. 1). You may elect to have your data withdrawn from the study if you so desire, but you must inform the experimenters immediately of this decision so that the data may be promptly removed.

All video and other data recorded in this study will be stored in a secured area at Virginia Tech. Access to the data files will be under the supervision of the Principal Investigator and lead VTTI researchers involved in the project. All data will be encrypted at the time of data collection and will be decrypted only for approved analyses. The study sponsor (the National Highway Traffic Safety Administration (NHTSA), part of the U.S. Department of Transportation) also will have access to the data collected throughout all phases of this experiment. After data collection is complete, one copy of deidentified study data will be transferred to the sponsor for storage and oversight. The project prime investigator, TransAnalytics, LLC, may receive de-identified or summary data.

VTTI research staff or the study sponsor may present video files in conference presentations or technical briefings. Those portions of video displaying your image will be de-identified (e.g., blurred) with video editing software prior to being shown.

The sponsor of this project, NHTSA, may publicly release data, in final reports or other publication or media for scientific, educational, research or outreach purposes. Additionally, NHTSA may be required to release data under the Freedom of Information Act (FOIA) or other Open Government Initiative request or court order. Generally, data: (1) will not be released in raw form so will not include personally identifying information; (2) will not be linked to your name or contact information; and (3) will be redacted or edited to remove personally identifying information. This includes editing of video files to remove personally identifying information if necessary.

It is possible that the Institutional Review Board (IRB) may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. COMPENSATION

You will be compensated \$50.00 for completing all study tasks. You will be compensated at the end of the session using a ClinCard MasterCard. If you choose to withdraw before completing all scheduled experimental tasks, you will be compensated for the portion of time of the study for which you participated at a rate of \$35 per hour.

Please allow one full business day for the card to be activated. Once activated, this card cannot be used past its expiration date. As stated in the ClinCard documentation you receive, the issuing bank will begin subtracting a monthly service fee of \$4.50 after three months of inactivity.

You will be asked to provide researchers with your social security number for the purposes of being compensated for your participation. For tax recording purposes, the fiscal and accounting services office at Virginia Tech (also known as the Controller's Office) requires that all participants provide their social security number to receive compensation for participation in our studies.

VII. FREEDOM TO WITHDRAW

As a participant in this research, you are free to withdraw at any time without penalty. If you choose to withdraw, you will be compensated for the portion of time of the study for which you participated. Furthermore, you are free to not answer any question or not respond to experimental situations without penalty. If you choose to withdraw during the study session, please inform the experimenter of this decision and he/she will drive you back to the building.

VIII. APPROVAL OF RESEARCH

This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University.

IX. PARTICIPANT'S RESPONSIBILITIES

If you voluntarily agree to participate in this study, you will have the following responsibilities:

1. To follow the experimental procedures as well as you can.
2. To inform the experimenter if you have difficulties of any type.
3. To wear your seat belt.
4. To maintain safe operation of the instrumented vehicle at all times.
5. To adhere to a 35 mph (maximum) speed limit on the Surface Street test track for this experiment.

X. PARTICIPANT'S ACKNOWLEDGMENTS

Check all that apply:

- I am not under the influence of any substances or taking any medications that may impair my ability to participate safely in this experiment.
- I am in good health and not aware of any health conditions that would increase my risk including, but not limited to lingering effects of a heart condition.
- I have informed the experimenter of any concerns/questions I have about this study.
- I understand that digital video including my image and audio will be collected as part of this experiment.

XI. QUESTIONS OR CONCERNS

Should you have any questions about this study, you may contact the Principal Investigator or co-Principal Investigator:

Justin Owens (PI) jowens@vti.vt.edu (540) 231-1010

Jon Antin (Co-PI) jantin@vti.vt.edu (540) 231-1579

Should you have any questions or concerns about the study's conduct or your rights as a research subject, you or need to report a research-related injury or event, you may contact the Virginia Tech Institutional Review Board at irb@vt.edu or (540) 231-3732.

XI. PARTICIPANT'S PERMISSION

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project. **If I participate, I may withdraw at any time without penalty. I agree to abide by the rules of this project.**

Participant's name (Print)

Signature

Date

Researcher's name (Print)

Signature

Date