

SUPPORTING STATEMENT

Recruitment and Debriefing of Human Subjects for Research Related to Motor Vehicle Gear Selection Controls
OMB CONTROL NO. 2127-New

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

Subchapter V of Title 49 of the United States Code (U.S.C.) authorizes the Secretary of Transportation to “conduct motor vehicle safety research, development, and testing programs and activities, including activities related to new and emerging technologies that impact or may impact motor vehicle safety.” (49 U.S.C. § 30182) Pursuant to Section 1.95 of Title 49 of the Code of Federal Regulations (CFR), the Secretary has delegated this authority to the National Highway Traffic Safety Administration (NHTSA).

Background reasons for the Information Collection: The introduction of electronically-controlled transmissions has allowed much greater freedom in the design of driver interfaces, with the result that drivers are being confronted with new and different types of gear selector controls – joysticks, push buttons, rotary knobs, etc. This information collection is incidental to the recruitment of participants for human-factors studies designed to measure the ability of drivers to adapt to unfamiliar types of gear-selection controls. There is no known published usability research related to these new types of driver interfaces; this study addresses a knowledge gap in research.

DOT Strategic Goal supported by this information collection: Safety. NHTSA is requesting clearance to collect voluntary information from subjects to determine their eligibility to participate in the driving simulator study. The proposed study will examine driver response to non-traditional gear selector configurations in routine and emergency simulated driving scenarios, noting any potential safety issues that result from driver confusion, distraction or unintended consequences due to the unconventional gear selector configuration.

Information to be collected: The information being collected consists of that required for scheduling appointments and for balancing sample groups across age, gender, and previous experience with various types of gear selectors. The experimental data will contain the demographic and past-experience descriptors for each participant, but no personally identifiable information. During or after the experimental sessions, participants will be queried regarding their perceptions and preferences about various aspects of gear-selection controls.

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

In this study, participants will be tested individually in a driving simulator located at Volpe, the National Transportation Systems Center (Volpe), an element of the U.S. Department of Transportation (U.S. DOT), Office of the Assistant Secretary for Research and Technology

(formerly RITA). Volpe staff will collect the information and conduct the experiments under an Intra-Agency Agreement (IAA) with NHTSA.

The information to be collected would be used to:

- (a) Recruit volunteers meeting the eligibility criteria for this research study.
- (b) Classify study participants by age group, gender and previous driving experience with various types of gear selectors, so that the sample can be balanced in terms of these attributes.
- (c) Schedule appointments for volunteers to visit the Volpe Center.
- (d) Gather information about drivers' beliefs and attitude towards each gear selector configuration tested, and to explore respondent knowledge of how a motor vehicle will likely respond when shifted to positions other than Drive at highway speed.

Volunteers would be recruited from the general population within the Greater Boston Area, Massachusetts. Individuals interested in participating in the study would contact the Volpe Center and complete the eligibility questionnaire either by phone, email, or in person. Individuals that do not meet the eligibility requirements would be excluded.

Participation in the study involves a single visit to the Volpe Center. During or after the experimental sessions, each subject in this driving simulation experiment would also complete a post-experiment questionnaire. The participants' contact information will be deleted at the conclusion of the experimental study. A report describing the experiments, data analysis and conclusions will be prepared. The final report may be posted on NHTSA's website, which is accessible to the public.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

Recruitment will be done primarily via announcements posted on both government and commercial websites. Individuals interested in the study will contact the Volpe Center recruiting coordinator and complete an eligibility questionnaire by phone, email, or in person. Most of the scheduling of subjects (approximately 80%) is expected to be conducted electronically. The use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology is fundamental to the proposed collection of information. All of the participant responses to post-experiment queries will be recorded electronically.

4. Describe efforts to identify duplication.

This is a one-time information collection and is only applicable to the study related to motor vehicle gear selection controls. The information collected during recruitment is specific to a particular individual to determine that individual's eligibility to participate in the experiment. Similar information collected from other individuals is not relevant or applicable. The agency is not aware of any other sources of this information. This collection will not duplicate similar data or other information accessible to the agency.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

This collection of information involves individuals and does not involve small businesses or other small entities.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

If the information is not collected, NHTSA will not be able to conduct the research study because the agency would be unable to schedule participants for the study. The agency would be unable to confirm whether participants meet the criteria for eligibility for the study.

Approval to commence the information collection is desired by the end of the 60 day period that OMB has to review and act upon each submission. Timely review and approval will maintain the currently planned project schedule to recruit subjects, conduct the experiments, analyze results, and prepare a written report before the IAA contract period of performance expires on September 30, 2015.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The information collection is consistent with the guidelines set forth in 5 CFR 1320.6.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments.

A Federal Register notice published on May 27, 2014 (79 FR 30230, Docket NHTSA-2014-0033) solicited public comments for 60 days. The comment period closed July 28, 2014. No comments were received on this matter during the first public review.

A Federal Register notice published on November 25, 2014 (79 FR 70270, Docket NHTSA-2014-0033) solicited public comments for 30 days. The comment period closed December 26, 2014. One anonymous comment was received on this matter in support of the research study, "Good Idea!"

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

To receive compensation, participants must complete the driving simulation task and respond to the debriefing questionnaire. Those respondents who meet the eligibility criteria, satisfy an opening in a sample group, complete a driving simulation task and the debriefing questionnaire will be compensated \$75 for their time spent participating in the experiment, as is customary in human-subjects experiments, and traveling to/from Volpe. Eligibility questionnaire respondents who do not voluntarily self-select into the research study, or who cannot be matched with an available time slot for a driving session, will not receive any compensation.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

Volpe will provide each participant with an informed consent form which explains to participants that Volpe and NHTSA will protect all personally identifying data and information collected in connection with this study to the extent provided by law. In order to maintain privacy, participants will be assigned a study number which will be used instead of their name to identify all experiment data collected.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

The questions in this information collection do not relate to information that is commonly considered private.

12. Provide an estimate in hours of the burden of the collection of information.

Table 1: Estimated Burden Hours

	Number of Respondent	Frequency of Responses	Number of Questions	Estimated Individual Burden	Total Estimated Burden Hours	Annualize Cost to respondents ¹
Form 1263, Eligibility questions	500 ²	1	8	3 minutes (0.05 hours)	25.00	\$678.00
Form 1263, Schedule appointment questions	360	1	4	5 minutes (0.08 hours)	30.00	\$813.60
Perform driving task; Complete Form 1264	360	1	14	90 minutes (1.50 hours)	540.00	\$14,644.80
Totals			26	98 minutes (1.63 hours)	595 hours	\$16,136.40

¹ Estimated based on the mean hourly rate for Massachusetts (all occupations) is \$27.12 as reported in the May 2013 Occupational Employment and Wage Estimates, Bureau of Labor Statistics.

http://www.bls.gov/oes/current/oes_ma.htm

² This includes 360 subjects and an additional 38% to account for the extra number of individuals that may respond to the eligibility questionnaire in order to get the 360 subjects needed. The 38% is an estimate and is based on experience with similar studies.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).

This is a one-time study. There are no additional costs to respondents or record keepers.

14. Provide estimates of annualized cost to the Federal government.

The costs of this information collection to the Federal government are included in the IAA awarded to Volpe and total \$50,000. Estimated costs include preparation of documents for the PRA approval (\$5,000), IRB approval (\$3,000), subject recruitment (\$15,000), and participant compensation for completion of the driving simulation task and debriefing questionnaire (\$27,000). There are no other costs to the government related to this information collection.

15. Explain the reasons for any program changes or adjustments.

There is an adjustment of adding the total estimated burden hours (595 hours) for this information collection to NHTSA's overall agency total.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Aggregate data for the number of participants and observations for a given group (age, gender and previous experience with certain types of gear selectors) may be tabulated. Personal information will not be published. An exact publication date has not been established but would occur no sooner than October 2015.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

NHTSA and Volpe are not seeking such approval.

18. Explain each exception to the certification statement.

There are no exceptions.