Technical Report Documentation Page

1. Report No.	2. Government Accession No.	Recipient's Catalog No.
SWT-2017-3		
4. Title and Subtitle		5. Report Date
Cybersecurity Concerns with Self-Driving and Conventional		February 2017
Vehicles		6. Performing Organization Code
		383818
7. Author(s)		8. Performing Organization Report No.
Michael Sivak and Brandon Schoettle		SWT-2017-3
9. Performing Organization Name and Address		10. Work Unit no. (TRAIS)
The University of Michigan		
Sustainable Worldwide Transportation		11. Contract or Grant No.
2901 Baxter Road		
Ann Arbor, Michigan 48109-215		
12. Sponsoring Agency Name and Address		13. Type of Report and Period Covered
The University of Michigan		
Sustainable Worldwide Transportation		14. Sponsoring Agency Code

15. Supplementary Notes

Information about Sustainable Worldwide Transportation is available at http://www.umich.edu/~umtriswt.

16. Abstract

This study was an online survey of American adults about their level of concern with cybersecurity of personally owned self-driving vehicles (with and without driver controls) and current conventional vehicles.

Of interest in this survey were both vehicle security and data privacy. Within vehicle security, the issues examined were hacking vehicles to cause crashes, hacking by terrorists to use the vehicle as a weapon, disabling many vehicles simultaneously, and disabling the main traffic-management system. Within data privacy, the issues examined were gaining access to data on personal travel patterns and gaining access to personal information not related to travel. The survey also asked about the safe and appropriate minimum age to operate self-driving vehicles with and without controls. Completed surveys were received from 519 respondents.

The main findings are as follows:

- (1) Hacking of vehicles is of concern even for conventional vehicles.
- (2) Hacking of self-driving vehicles with controls is of greater concern than hacking of conventional vehicles.
- (3) Hacking of self-driving vehicles without controls is of greater concern than hacking of self-driving vehicles with controls.
- (4) The respondents expressed more concern about hacking to gain control of vehicles or the main traffic-management system than hacking of vehicles to get access to personal information.
- (5) Females expressed stronger concerns about cybersecurity than did males.
- (6) The oldest respondents expressed stronger concerns about cybersecurity than did the voungest respondents.

17. Key Words			18. Distribution Statement
cybersecurity, self-driving vehicles, conventional vehicles			Unlimited
19. Security Classification (of this report)	20. Security Classification (of this page)	21. No. of Pages	22. Price
None	None	15	