Under the Paperwork Reduction Act, a federal agency may not conduct or sponsor, and a person is not required to respond to 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-NEW (expiration date: MM/DD/YYYY). The average amount of time to complete the form is 15 minutes. The purpose of this research study is to examine drivers' interactions with advanced vehicle technologies and the relationships between attitudes, behaviors, and traffic safety. 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.

Knowledge and Opinions Questionnaire

- 1. For this set of items, assume you are shopping for a new vehicle. Ignoring any cost considerations, indicate whether having each of the following new technology systems available would influence your decision to buy a specific vehicle.
 - A. **Blind Spot Monitoring.** This system uses cameras and/or sensors to alert drivers when a vehicle is hidden in their left or right blind spots. The alert may be a sound and/or an indicator light on the side-view mirror, rear-view mirror, A-pillar, dashboard, or display screen.

Having this system available would:

□ Make me more likely to buy

□ Not influence my decision to buy

 \Box Make me less likely to buy

B. **Forward Collision Warning.** This system warns drivers that they are in danger of having a collision with a vehicle or object ahead of them. The warning can be a sound, vibration, or both, and may be accompanied by a visual alert on the dashboard.

Having this system available would:

□ Make me more likely to buy

□ Not influence my decision to buy

□ Make me less likely to buy

C. **Rear Cross Traffic Alert.** This system warns the driver with a sound, vibration, and/or indicator light if one or more vehicles, pedestrians, or bicyclists are about to enter the vehicle's path while it is backing. Vehicles, pedestrians, or bicyclists could be entering the path from the right or left.

Having this system available would:

□ Make me more likely to buy

□ Not influence my decision to buy

- □ Make me less likely to buy
- D. **Lane Departure Warning.** This system warns the driver with a sound, vibration and/or indicator light if the vehicle gets too close to the lane boundary.

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Having this system available would:

- □ Make me more likely to buy
- \Box Not influence my decision to buy
- □ Make me less likely to buy
- E. **Lane Keeping Assist.** If the vehicle starts to drift out of its current lane, this system will steer the vehicle back into the lane.

Having this system available would:

- □ Make me more likely to buy
- \Box Not influence my decision to buy
- □ Make me less likely to buy
- F. **Automatic Emergency Braking.** This system senses hazards in front of the vehicle, such as traffic that is slowing or has come to a stop, and automatically applies the brakes.

Having this system available would:

□ Make me more likely to buy

 \Box Not influence my decision to buy

□ Make me less likely to buy

G. **Adaptive Cruise Control.** When using this system, the driver sets a cruise speed and desired following distance. The system then maintains the cruise speed unless it has to slow down to avoid getting closer to the vehicle in front than the set following distance. The system will slow down or speed up to the set maximum as necessary without the driver having to touch the pedals.

Having this system available would:

- □ Make me more likely to buy
- \Box Not influence my decision to buy
- □ Make me less likely to buy
- H. **Lane Centering.** This system automatically keeps the vehicle in the center of the lane if adequate lane markings are present.

Having this system available would:

- □ Make me more likely to buy
- \Box Not influence my decision to buy
- □ Make me less likely to buy

I. **Fully Automated Vehicle.** A fully automated vehicle conducts all driving tasks independently without the need for a human driver.

Having this system available would:

- □ Make me more likely to buy
- \Box Not influence my decision to buy
- □ Make me less likely to buy

The next questions are related to your understanding of how an Adaptive Cruise Control system works and when it is okay to use the system. When answering these questions, assume you are driving a car equipped with Adaptive Cruise Control.

- 2. I think the Adaptive Cruise Control will automatically accelerate to the speed I set when a vehicle: (Check all that apply)
 - \Box In front of me speeds up
 - □ In front of me moves over out of my way
 - □ Tailgates me (gets too close from behind)
 - $\hfill\square$ None of the above
- 3. I think the Adaptive Cruise Control will automatically slow my vehicle down when a vehicle: (Check all that apply)
 - $\hfill\square$ In front of me slows down
 - □ In front of me shows its brake lights
 - \Box Stops completely in front of me
 - \Box None of the above
- 4. I think the Adaptive Cruise Control will automatically bring the vehicle to a complete stop at a: (Check all that apply)
 - □ Yield sign
 - \Box Stop sign
 - □ Crosswalk
 - \Box Red light
 - $\hfill\square$ None of the above

- 5. I think the Adaptive Cruise Control will automatically bring the vehicle to a complete stop when a: (Check all that apply)
 - \Box Vehicle in front of me stops
 - □ Bicycle crosses in front me
 - □ Person walks in front me
 - □ Large animal runs in front me
 - \Box None of the above
- 6. I think it is okay to use Adaptive Cruise Control: (Check all that apply)
 - □ During darkness
 - □ During daylight
 - □ At dawn/dusk
 - \Box None of the above
- 7. I think it is okay to use Adaptive Cruise Control in: (Check all that apply)
 - \Box Clear weather
 - \Box Light fog
 - □ Heavy fog
 - □ Light rain
 - □ Heavy rain
 - \Box Light snow
 - □ Heavy snow
 - \Box Icy road conditions
 - \Box None of the above
- 8. I think it is okay to use the Adaptive Cruise Control system when driving: (Check all that apply)
 - □ Below 25 mph
 - □ 25-50 mph
 - □ 51-65 mph
 - □ Over 65 mph
 - $\hfill\square$ None of the above

- 9. I think it is okay to use the Adaptive Cruise Control system in: (Check all that apply)
 - □ Light moving traffic
 - □ Heavy moving traffic
 - □ Stop-and-go traffic
 - \Box None of the above
- 10. I think it is okay to use the Adaptive Cruise Control system on: (Check all that apply)
 - \Box Straight roads
 - \Box Curvy roads
 - \Box Hilly roads
 - □ Interstates/Freeways
 - □ Local two-lane roads
 - \Box Local four-lane roads
 - □ Parking lots
 - □ Unpaved roads
 - \Box None of the above

Indicate whether you believe the following statements about the Adaptive Cruise Control system are true or false.

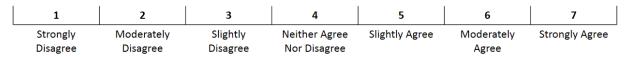
- 11. When the Adaptive Cruise Control system is on, I can take my attention off of driving because the vehicle will speed up and slow down on its own.
 - o True
 - o False

12. When the Adaptive Cruise Control system is on, I should keep both hands on the wheel.

- o True
- o False

Indicate whether you agree or disagree with the following statements regarding the use of Adaptive Cruise Control system.

13. I trust an Adaptive Cruise Control system to speed up and slow down appropriately after I set it.



14. I trust an Adaptive Cruise Control system will maintain a safe following distance.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Neither Agree	Slightly Agree	Moderately	Strongly Agree
Disagree	Disagree	Disagree	Nor Disagree		Agree	

15. I trust an Adaptive Cruise Control system will warn me when it is not safe to use the system.

1	2	3	4	5	6	7
 Strongly	Moderately	Slightly	Neither Agree	Slightly Agree	Moderately	Strongly Agree
Disagree	Disagree	Disagree	Nor Disagree		Agree	

16. I trust an Adaptive Cruise Control system will warn me if it experiences an error and cannot work properly.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

17. I can rely on an Adaptive Cruise Control system to safely control the vehicle while I am doing something else and not paying attention to the road.

	1	2	3	4	5	6	7
_	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

18. I would increase how often I drive if my vehicle had an Adaptive Cruise Control system.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

19. I would increase the distance of the trips I drive if my vehicle had an Adaptive Cruise Control system.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Neither Agree	Slightly Agree	Moderately	Strongly Agree
Disagree	Disagree	Disagree	Nor Disagree		Agree	

20. Having an Adaptive Cruise Control system in my vehicle would make me a safer driver.

	1	2	3	4	5	6	7
_	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

21. List any safety-related concerns you have about an Adaptive Cruise Control system.

The next questions are related to your understanding of how a Lane Centering system works and when it is okay to use the system. When answering these questions, assume you are driving a car equipped with Lane Centering.

22. I think a Lane Centering system can: (Check all that apply)

- □ Swerve to avoid vehicles moving into my lane
- □ Bring my vehicle to a slow stop if it begins to depart from the lane
- □ Keep my vehicle's position in the middle of the lane
- □ Automatically pass another vehicle if I turn on my turn signal
- \Box None of the above
- 23. I think it is okay to use a Lane Centering system: (Check all that apply)
 - □ During darkness
 - □ During daylight
 - □ At dawn/dusk
 - \Box None of the above
- 24. I think it is okay to use a Lane Centering system in: (Check all that apply)
 - \Box Clear weather
 - \Box Light fog
 - □ Heavy fog
 - □ Light rain
 - □ Heavy rain
 - □ Light snow
 - □ Heavy snow
 - □ Icy road conditions
 - \Box None of the above
- 25. I think it is okay to use a Lane Centering system when the roadway is marked with: (Check all that apply)
 - \Box One lane line in the center of the road
 - \Box One lane line on the side of the road in my direction
 - □ Two lane lines (one center and one on side of road) in my direction
 - □ No lane lines at all
 - $\hfill\square$ None of the above
- 26. I think it is okay to use a Lane Centering system when driving: (Check all that apply)
 - □ Below 25 mph
 - □ 25-50 mph

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- □ 51-65 mph
- □ Over 65 mph
- \Box None of the above
- 27. I think it is okay to use a Lane Centering system in: (Check all that apply)
 - □ Light traffic
 - □ Heavy traffic
 - □ Stop-and-go traffic
 - $\hfill\square$ None of the above
- 28. I think it is okay to use a Lane Centering system on: (Check all that apply)
 - □ Straight roads
 - □ Curvy roads
 - □ Hilly roads
 - □ Interstates/Freeways
 - □ Local two-lane roads
 - □ Local four-lane roads
 - □ Parking lots
 - □ Unpaved roads
 - $\hfill\square$ None of the above

Indicate whether you believe the following statements about the Lane Centering system are true or false.

29. When a Lane Centering system is on, I can take my attention off the road because the vehicle will stay in the center of the lane.

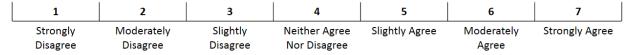
- 0 True
- o False

30. When a Lane Centering system is on, I should keep both hands on the wheel.

- o True
- o False

Indicate whether you agree or disagree with the following statements regarding the Lane Centering system.

31. I trust a Lane Centering system will keep my vehicle in the center of the lane.



32. I trust a Lane Centering system will see the lane lines if they are visible to me.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Neither Agree	Slightly Agree	Moderately	Strongly Agree
Disagree	Disagree	Disagree	Nor Disagree		Agree	

33. I trust a Lane Centering system will warn me when it is not safe to use the system.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

34. I trust a Lane Centering system will warn me when it experiences an error and cannot work properly.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

35. I can rely on a Lane Centering system to safely control the vehicle while I am doing something else and not paying attention to the road.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

36. I would increase how often I drive if my vehicle had a Lane Centering System.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

37. I would increase the distance of the trips I drive if my vehicle had a Lane Centering System.

	1	2	3	4	5	6	7
-	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

38. Having a Lane Centering system in my vehicle would make me a safer driver.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Neither Agree	Slightly Agree	Moderately	Strongly Agree
Disagree	Disagree	Disagree	Nor Disagree		Agree	

39. List any safety-related concerns you have about a Lane Centering system.

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