2014 TRB Data Contest
Deadline for submission of results and short paper: November 30th, 2013

Please check the website regularly to see if there are any updates or comments/clarification on the dataset. Please direct all questions to Linda Ng Boyle (linda@uw.edu), Susan Chrysler (susan-chrysler@uiowa.edu), or Matthew Karlaftis (mgk@mail.ntua.gr). We will post responses to all questions on the website (we will NOT provide individual responses). Please note that we WILL NOT answer any questions on what the best model is, what is the right goodness of fit test, what are the model assumptions, how to compute X, Y or Z, etc.

1. Develop an analytical or statistical model using the data available on http://depts.washington.edu/hfsm/ to **identify differences in driver behavior in a dilemma zone while distracted.** You can use any statistical/analytical software program.

2. Your results and SHORT write up should be NO MORE than 6 pages total (this includes figures, tables, and references). It needs to include your Last Name and First Name in the filename (e.g, Boyle_Linda.pdf). Upload your results at http://depts.washington.edu/hfsm/
   NOTE: We have received many requests for the data. **Hence, we will NOT review those documents that do not adhere to the submission requirements.**

   a. Your name and affiliation
   b. Your problem formulation
   c. Your model and justification for your approach
   d. Model adequacy check: How do you know you have a good fitting model?
   e. Your solution
   f. Your assumptions
   g. The software used (and corresponding program or functions/call out procedure)
   h. The level that you reduce/aggregate the data for analysis (if any)
   i. The limitations in the dataset (including what variables you wish you had).
   j. A critical review of your solution process in terms of strengths and weaknesses

3. Brief Study Description: The dataset comes from a study previously conducted to examine the effects of wireless telephone use on driving performance in three age groups: young drivers (aged 18-25 years), middle (aged 30-45 years) and older (aged 50-60 years). The study was conducted at the U. Iowa National Advanced Driving Simulator (NADS), where participants were asked to drive through a signalized intersection while engaged in one of three secondary tasks. The traffic signal would transition from green to yellow to red to green again. There were three secondary task conditions: Baseline (no phone call), Outcoming call, and Incoming Call.

   The data was collected at 240 Hz (or 240 frames per second).

4. Event Description: The yellow light event is designed to present the driver with a dilemma of whether to stop or go at a signalized intersection. As the driver approaches the intersection, the traffic signal changes to yellow at one of two pre-determined timings (3.00 or 3.75 seconds). That said, the timing is not precise and can fluctuate around these values. The first timing (3.00 seconds) is intended to elicit a "go" response from the participant, whereas the second timing (3.75 seconds) is intended to elicit a "stop" response from the participant. Regardless of the timing chosen, ambient traffic remained similar at each event. The traffic signal was always green prior to the arrival of the driver. As the driver reaches a specific point before the

intersection, the traffic signal is triggered to change states to yellow. The light remains yellow for 4.00 seconds and then the light transitions to red for another 5.00 seconds before cycling back to green.

Each participant had three visits (drives). Each drive consisted of 3 equivalent segments which exposed the participant to 3 cell phone interfaces. For each visit, the participant experienced a different order of segments/interfaces (otherwise referred to as treatment) that are otherwise equivalent. The incoming and outgoing calls were started prior to the arrival at each segment.

5. **Data definition: The datafile (WUA_yldata for TRB contest.xls) contains 1157 rows of data and 17 variables (columns A to Q). Several redundant data points were removed and Column Q was added in the update posted Oct 13, 2013. The definitions of each variable have been moved to separate file.**