Researcher Dictionary
For
Eyeglance Data

Version 1.0
January 5, 2009

Revision History

Version	Date	Comments
1.0	01/05/2009	First version of document

Introduction

The following data dictionary describes the eyeglance reduction variables available in the naturalistic driving data for use by the research community. In addition to this introduction, the data dictionary includes the following five sections.

Revision History –This data dictionary should be considered a working document that will evolve over time. The revision history shown on the previous page provides a table which describes updates to the document.

Related Reading – A list of related subject areas and specific documents of value to users of the data set described in this data dictionary.

Description of the Data and Format – This section describes what data is available and how the data are stored.

List of Dictionary Fields – A description of the components or fields described in the dictionary for each variable entry.

List of Variables – A list of the entries (variables) in the dictionary which can be used as a table of contents to locate specific variables in the document.

Related Reading

Individuals working with these data are encouraged to become familiar with them, the method in which they were collected, and literature in the area of secondary data analyses. The following references are provided as starting points to assist the researcher in his or her efforts.

100-Car Study Overview

The 100-Car Naturalistic Driving Study was an instrumented vehicle study conducted in the Northern Virginia / Washington, D.C. area over a two-year period. The primary purpose of the study was to collect large-scale naturalistic driving data. To this end the instrumentation was designed to be unobtrusive, study participants were given no special instructions, and experimenters were not present. Approximately 100 vehicles were instrumented with a suite of sensors including forward and rearward radar, lateral and longitudinal accelerometers, gyro, GPS, access to the vehicle CAN, and five channels of compressed digital video. Collection rates for the various sensors ranged from 1Hz to 10Hz. This collection effort resulted in approximately 2,000,000 vehicles miles and 43,000 hours of driving data.

Methods

100-Car Methods

The methods used for collecting the data are described in:

Dingus, T. A., Klauer, S. G., Neale, V. L., Petersen, A., Lee, S. E., Sudweeks, J., Perez, M. A., Hankey, J., Ramsey, D., Gupta, S., Bucher, C., Doerzaph, Z. R., Jermeland, J., and Knipling, R. R.(2006) The 100-Car Naturalistic Driving Study, Phase II - Results of the 100-Car Field Experiment DOT HS 810 593.

Secondary Data Analysis

Use of data collected by other organizations is becoming increasingly common in this digital age. In some fields, such as the social sciences or business, the use of previously collected data is more common than, for example, in psychology or product development. The primary benefit of this approach is cost savings. There are also risks that can threaten the validity of analyses conducted in this manner. The following references include discussion and recommendations for secondary analysts.

Akerstrom, M., Jacobsson, K., Wasterfors, D. (2004). "Reanalysis of previously collected material" in Clive Seale, Giampietro Gobo, Jaber Gubrium, and David Silverman (eds), *Qualitative Research Practice*, Thousand Oaks, CA. Sage Publications Ltd.

Corti, L. Thompson, P. (2004). "Secondary analysis of archived data", in Clive Seale, Giampietro Gobo, Jaber Gubrium, and David Silverman (eds), *Qualitative Research Practice*, Thousand Oaks, CA. Sage Publications Ltd.

Dale, A. Arber, S., and Procter, M. (1988). *Doing Secondary Analysis*, Unwin Hyman Ltd., London.

Hyman, H. (1972). *Secondary Analysis of Sample Surveys*, Wesleyan University Press, Middletown, Connecticut.

Kiecolt, K. and Nathan, L. (1985). *Secondary Analysis of Survey Data – Sage University Paper Series on Quantitative Applications in the Social Sciences*, 53. Sage Publications, Beverly Hills, CA.

Description of the Data and Format

This dataset consists of a single tab-delimited file with frame by frame specification of driver eyeglance location. Each row in the file represents an eyeglance location for the 68 crashes or 760 near-crashes observed in the study for which eyeglance reduction could be completed.

Event Descriptions

Event narratives that provide situational context for each crash and near-crash event are provided in an associated pdf document, entitled 100CarEventNarratives_v1.pdf. These narratives can be used in conjunction with the detailed event, driver state, and driving environment variables contained in this video reduction data set to gain a better understanding of circumstances surrounding each event.

List of Dictionary Fields

For each of the variables, the dictionary provides the following fields:

1. Variable # – A number used for referencing the variables in the dictionary
2. Variable Name – A brief name for the variable
3. Variable Definition – A brief definition for the variable

List of Variables

The following variables are included in the text file.

Variable #	Variable Name	Variable Definition
1	webfile id	Unique identification for each crash and near crash event.
2	begin sync	The sync value (1/10 s) at which a given glance began.
3	end sync	The sync value (1/10 s) at which a given glance ended.
4	glance duration	The length of a glance, measured in syncs (1/10 s).
5	glance location	The location to which the driver has directed their gaze.

Eyeglance Location Definitions

Forward	Any glance out the straight forward windshield. Note that when the vehicle is turning, these glances may not be directed straight forward but towards the vehicle's heading. Note also that 'forward' glances may be directed to vehicles ahead in the adjacent lane or other external distractions slightly ahead of the subject.
Left Forward	Any glance out the left forward windshield.
Right Forward	Any glance out the right forward windshield.
Instrument Cluster	Any glance to the instrument cluster underneath the dashboard. This includes glances to the speedometer, control stalks, and steering wheel.
Rearview Mirror	Any glance to the rear view mirror or equipment located around it.
Left Window	Any glance to the left side window.
Left Mirror	Any glance to the left side mirror.
Right Window	Any glance to the right side window.
Right Mirror	Any glance to the right side mirror.
Center Stack	Any glance to the vehicle's center stack.
Cell Phone	Any glance at a cell phone, no matter where it is located
Interior Object	Any glance to an identifiable object in the vehicle other than a cell phone. These objects include personal items brought in by the participant (e.g., purse, food, papers), any part of their body that may look at (e.g., hand, ends of hair), electronic devices other than cell phones (e.g., iPod, laptop, blackberry), and also OEM installed devices that don't fall into other categories (e.g., door lock, window and seat controls). Glances to the center console (cupholder area between passenger seat and driver seat) will also be included in this category.
Passenger	Any glance to a passenger, whether in front seat or rear seat of vehicle.
No Video	Unable to complete glance analysis because the face video view is obstructed, of poor quality, or unavailable.
Eyes Closed	Any time that the participant's eyes are closed outside of normal blinking (e.g., the subject is falling asleep).