APPENDIX Dataset Narratives

(A) Bicycle Dataset

Tables

performance and *location*

The schema bicycle contains two tables: *performance* (422 rows) and *location* (2 rows). The table performance contains data were extracted from video data collected at 2 intersections in Portland, OR by Dr. Figliozzi and his students. The table location defines the location of the data collection efforts:

- Madison/NE Grand (Flat Grade) Winter Collection Date and Time: 12/4/08, 7:30-10:30 AM; Summer Collection Dates and Time: 7/3/08-7/17/08, 7:30-9:30 AM
- Vancouver/Wiedler (Grade) Winter Collection Date and Time: 12/5/08, 3:00-6:30 PM and Summer Collection Dates and Time: 7/3/08-7/21/08, 3:00-7:00 PM

Figure 74 describes the data collection set up and the elements recorded in the *performance* table.

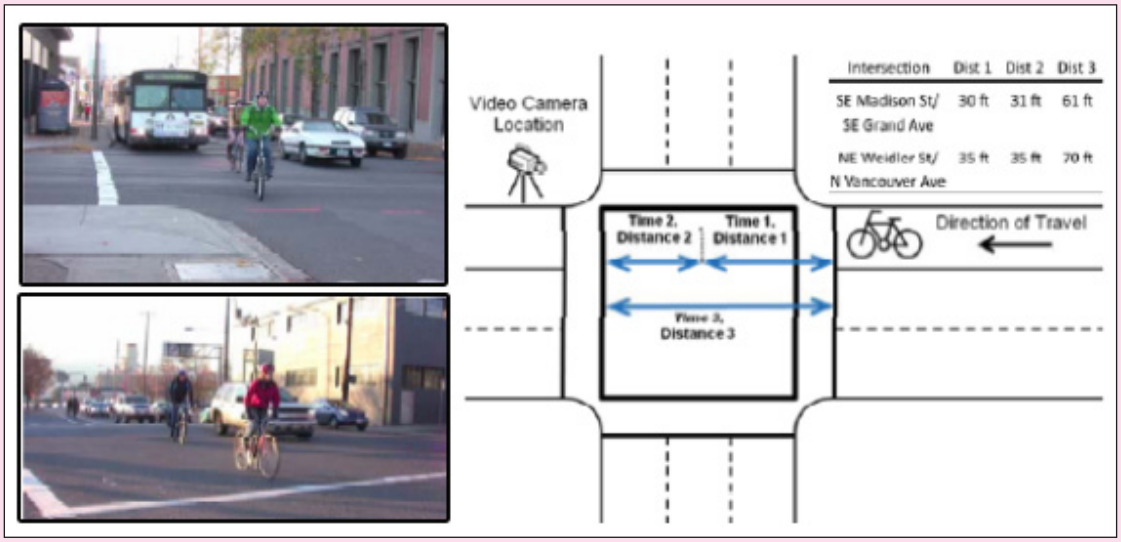

Figure 74

Information

A couple of notes about the data:

1) The rider numbers are not continuous; there are gaps in the numbering within the data that were used for analysis. This is because each rider was numbered in the field. Upon review of the data in video, some riders were excluded from analysis for various reasons (for example, if they stopped in the crosswalk instead of at the first crosswalk line). In order to be able to track a rider from analysis to our field notes, we did not change the numbering of the cyclist. This is why you may notice some rider numbers missing.
2) For the summer analysis, we did not gather the data from the video on baggage, bicycle type, or pedal type.
3) For the summer analysis, we attempted to also collect crossing time data from riders further back in the queue (the second or fifth rider back), when they were present. This is why the rider numbers in the summer are labeled with an "A": to correspond to the 1st rider. In the data I have linked to above, the 2nd and 5th rider's crossing times are NOT included (these rider numbers would be followed by "B" or "E").

(B) Bluetooth Dataset

Tables	*sensors* and *stations*
Information	The schema *bluetooth* in the class database contains data obtained during a 1-week collection period (May 10-17, 2010) on Powell Boulevard in Portland, OR. The bluetooth sensors are placed at intersections described in table *bluetooth.stations*. The actual sensor readings are given in table *bluetooth.sensors*. The sensors read MAC addresses for devices (cell phones mostly) broadcasting to another device wirelessly. This unique signal has been truncated to 7 characters but is sufficient to be considered a unique match. Matching unique MAC addresses between 2 stations can be assumed to be the travel time between those 2 stations.

(C) Incidents Dataset

Tables	*incidents_217_2009* and various lookup tables
Information	The schema *incidents* contains the table *incidents_217_2009* as well as various look-up tables for the incident data. The incident data is generated from Computer aided dispatch(CAD) from ODOT's TMOC. Portland's ATMS includes a comprehensive incident management system, which in turn generates a large computer-aided dispatch (CAD) database, which then contains nformation about all recorded incidents on Portland's freeway system. This information includes the type of incident, the lanes that were blocked as a result of the incident, and the start and end time of the incident. The TMOC can record the X–Y coordinates of an incident, but it is required only if the incident was severe enough to cause significant delay.

(D) Loop Dataset

Tables	*loopdata_5min_217sb_2009* and stations, ramps, highways, detectors [a document describing all tables in this schema]
Information	The schema *loop* in the class database contains data obtained from inductive loop sensors on OR-217 SB at 5-minute aggregations for calendar year 2009. The loop sensors collect volume, speed, occupany and metrics on vehicle-miles-traveled, vehicle-hours-traveled, delay and information about bad detector readings in table *loop.loopdata_5min_217sb_2009*. The loop schema also contains tables *highways*, *detectors*, *ramps*, and *stations*. Detectors are related to ramps and stations.

(E) Weather Dataset

Table	*metar_2009*
Information	The table *weather.metar_2009* contains hourly precipitation data gathered the METAR weather observations provided the National Oceanic and Atmospheric Administration (NOAA). METAR is the international standard code format for hourly surface weather observations which is analogous to the SA coding currently used in the US. The acronym roughly translates from French as Aviation Routine Weather Report. Weather observations are collected from three points in the Portland region: Portland International Airport and the suburbs of Hillsboro and Troutdale, located west and east, respectively, of the city of Portland.

(F) TriMet Dataset

Tables	*route19* and *trimet_stop_amenities*
Information	TriMet Bus Dispatch System (BDS) data for Route 19 for 2009 is incluced in this schema. The BDS includes automatic vehicle location via a satellitebased Global Positioning System (GPS) on all buses as well as automatic passenger counters installed on a majority of the existing fleet and all new bus acquisitions. The BDS records contain the route number, direction, trip number, date, vehicle number, operator identification, bus stop identification, stop arrival time, stop departure time, boardings, alightings, and passenger load. Also recorded is whether the doors of the bus were opened, whether the lift was used, the dwell time, maximum speed between previous and current stop, and GPS coordinates.

(G) Weigh-in-motion (WIM) Dataset

Tables	*wim* and *stations*
Information	The schema *wim* in the class database contains data from 1 month period (August 2009) from the 22 reporting weight-in-motion stations around the state of Oregon. At each of the Green Light stations, approaching trucks are directed into the appropriate lane on the mainline highway. At a location upstream from the static weigh station, if a truck is equipped with a transponder, it is identified by the reader. The unique aspect of Oregon's system is that this unique transponder identification and subsequent data are recoded together. At this same location, the vehicles are weighed in motion by load cells in the pavement. The observation consists of left and right axle weights as well as the spacing of these axles. The data also include speed, a timestamp and the lane of observation (some stations are multilane), length, gross vehicle weight, and a count of the number of axles. As part of the proprietary control program by International Road Dynamics (IRD), a sieved-based classification algorithm uses the axle spacing parameters to classify vehicles.

Student Notes