

## Overview of the Travel Time Data Collection Handbook

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This presentation provides an overview of the *Travel Time Data Collection Handbook* prepared for the Federal Highway Administration by the Texas Transportation Institute. The presentation summarizes the structure and content of the handbook and briefly discusses the various techniques used to collect travel time data. Electronic and paper copies of the handbook are available at this session and at FHWA's exhibit booth at the NATMEC conference. After the conference, the handbook should be available through the following web sites: "<http://ttibiker.tamu.edu>" or "<http://tti.tamu.edu>". The following paragraphs summarize the content of the handbook.

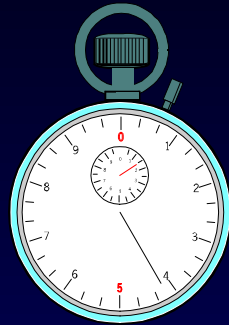
The Travel Time Data Collection Handbook provides guidance to transportation professionals and practitioners for the collection, reduction, and presentation of travel time data. The handbook should be a useful reference for designing travel time data collection efforts and systems, performing travel time studies, and reducing and presenting travel time data. Agencies new to travel time data collection may wish to adopt sections of the handbook as standard procedures, whereas agencies with data collection experience may wish to incorporate specific details or criteria.

Initial chapters of the handbook describe how to design data collection activities, including the determination of parameters such as study size and scope, data collection technique, and other critical study elements. Chapters 3 through 6 include a description of each data collection technique, major advantages and disadvantages, cost and equipment requirements, and step-by-step instructions. Related experience with the data collection techniques is included for examples of applications. Chapter 7 provides guidance for reducing travel time data and preparing tabular and graphical presentations.

The chapters of the handbook are as follows: Chapter 1, Introduction; Chapter 2, Developing and Implementing a Data Collection Plan; Chapter 3, Test Vehicle Techniques; Chapter 4, License Plate Matching Techniques; Chapter 5, ITS Probe Vehicle Techniques; Chapter 6, Emerging and Non-Traditional Techniques; and Chapter 7, Data Reduction, Summary, and Presentation.

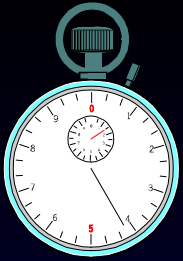
The following pages are the slides from the presentation at NATMEC 98.

# Travel Time Data Collection Handbook



Shawn Turner

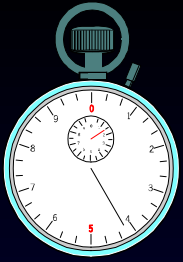
William Eisele, Robert Benz & Doug Holdener  
Texas Transportation Institute



# Current Status

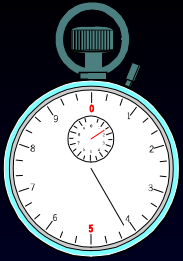
- Funded by FHWA, Office of Highway Information Management (HPM-30)
- Ralph Gillmann, Technical Contact
- Completed May 1998





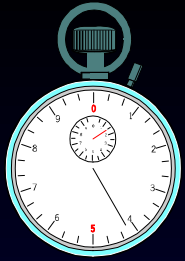
# Why Travel Time??

- Congestion management systems
- Multimodal analyses and funding
- Non-technical participation in transportation



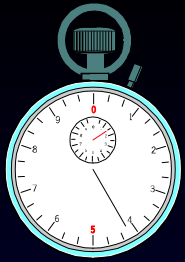
# Overview of Handbook

- Provide guidance on data collection, reduction, and presentation
- Companion handbook on applications of travel time data



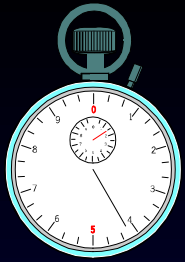
# Overview of Handbook

- 1 Introduction
- 2 Data Collection Planning
- 3 Test Vehicle Techniques
- 4 License Plate Matching Techniques
- 5 ITS Probe Vehicle Techniques
- 6 Emerging Techniques
- 7 Data Reduction, Summary & Presentation



## 2 Data Collection Planning

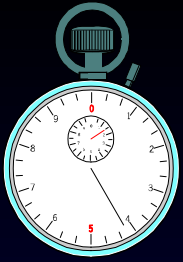
- Defining study scope
  - where? when? on which facilities?
- Selecting data collection method
- Scheduling and equipment
- Training
- Pilot Studies
- Quality Control



# 3 Test Vehicle Techniques

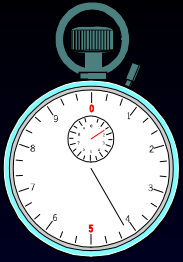
- Manual (stopwatch and paper)
- Electronic DMI
- GPS Receiver





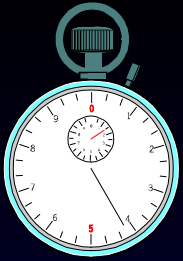
## 4 License Plate Matching

- Manual (audio recorder or paper)
- Portable Computer
- Video with Manual Transcription
- Video with Character Recognition



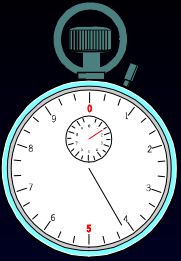
# 5 ITS Probe Vehicle

- Signpost AVL
- AVI/ETTM (toll tags)
- Ground-based Radio Navigation
- Cellular Phone Tracking
- GPS Receiver



## 6 Emerging Techniques

- Vehicle Signature Matching
  - loop detectors
  - WIM sensors
  - video and other sensors
- Platoon Matching
- Aerial Surveys



# 7 Data Reduction, Summary, and Presentation

- Summary statistics
- Dimensions of congestion
- Examples of graphic and tabular summaries

# Availability - CD-ROM and Paper

- FHWA's booth here at NATMEC
- Taking business cards
- Download at:
  - " <http://ttibiker.tamu.edu>" or
  - " <http://tti.tamu.edu>"