

# **Weigh-In-Motion Data Processing for MEPDG**

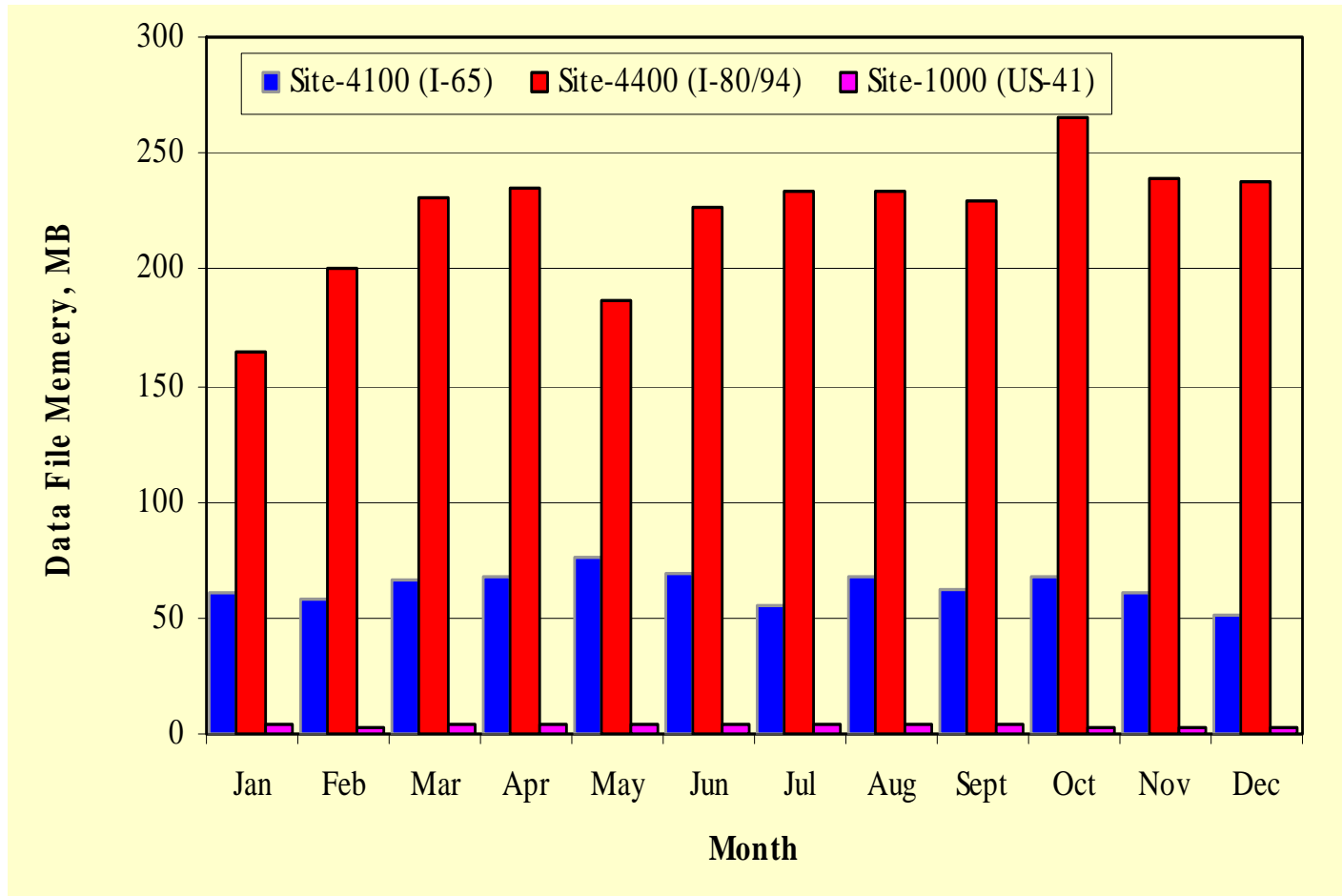
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# 1. Primary Issues

- **WIM data readily available, data quality not sure**
- **No reports on axle configuration and axle load distribution**
- **Huge database, large file size, data processing labor intensive and time consuming**
- **48 WIM sites with different sensors distributed statewide**
- **Up to 30% of the total vehicle counts not classified**

# IRD ASCII raw vehicles report data file sizes



## 2. Development of Computer Program

**WIM 2002 M-E PDG DATA PROCESSING**

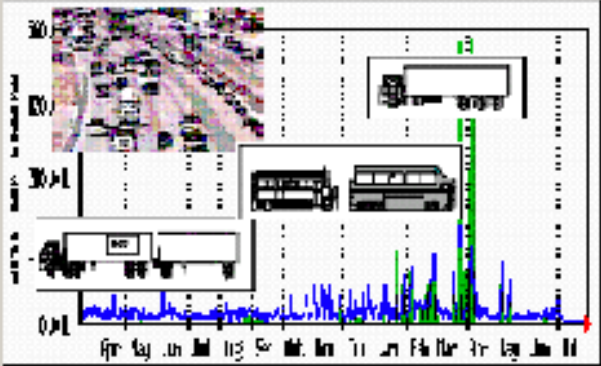
Time Distribution   Axle Configuration   Axle Load Distribution

### Load Spectra Data Processing Program

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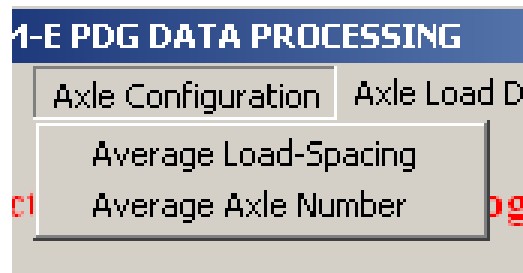
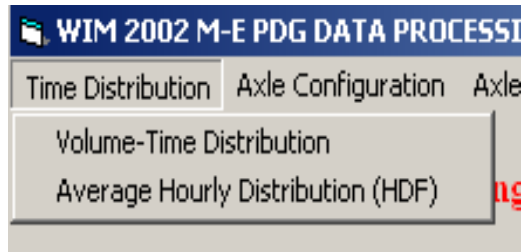
**Status of Processing:**

**FHWA-13**      **Exit**



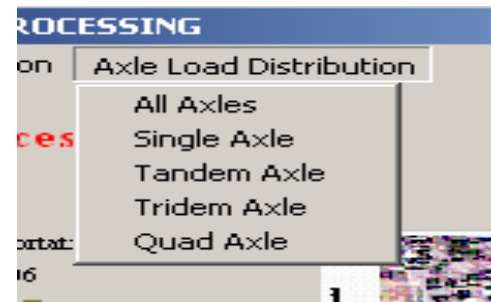
# • Development and Running Environments

- Language: Visual Basic 6®
- Computer: IBM-PC Pentium-III, 933 MHz



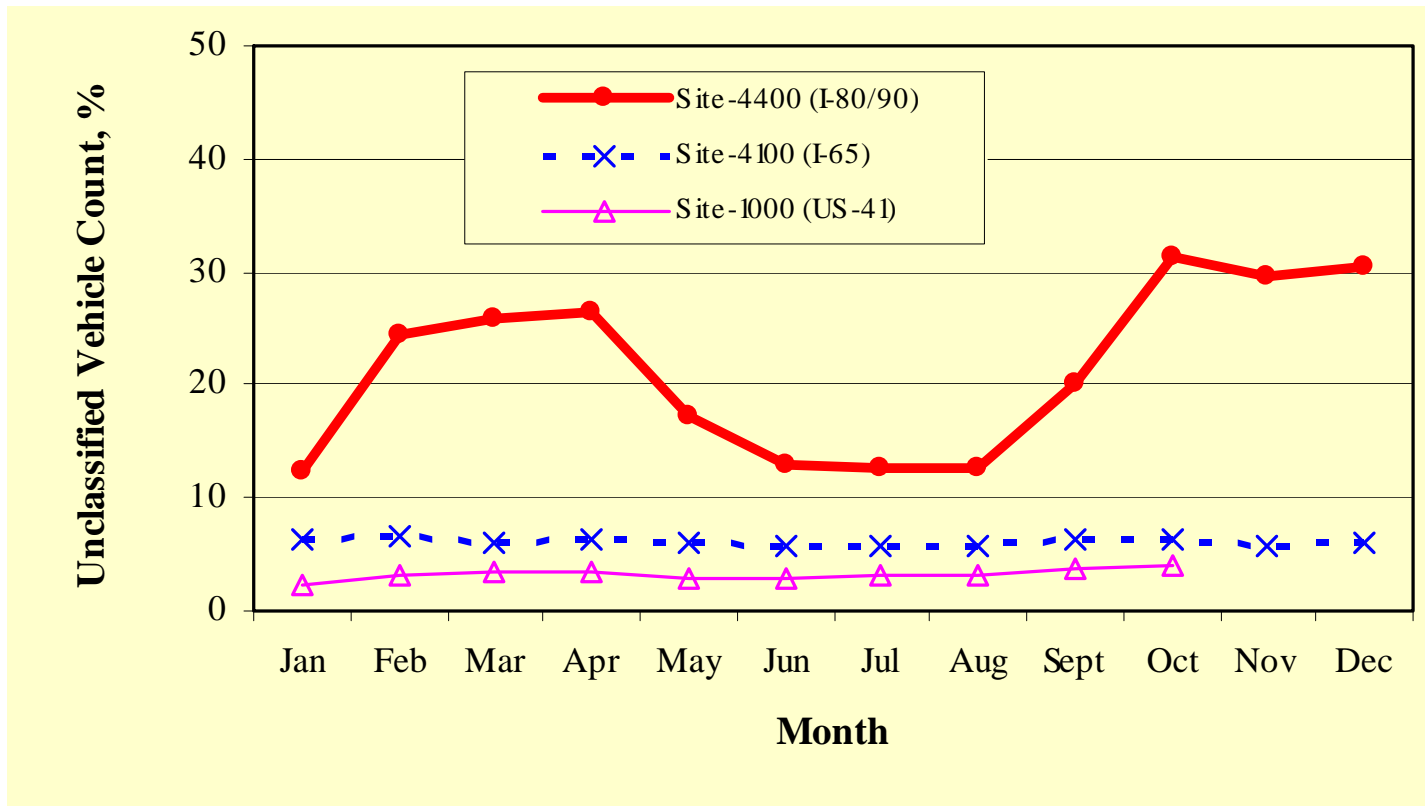
## • Modules

- Time distribution
- Axle configuration
- Axle load distribution

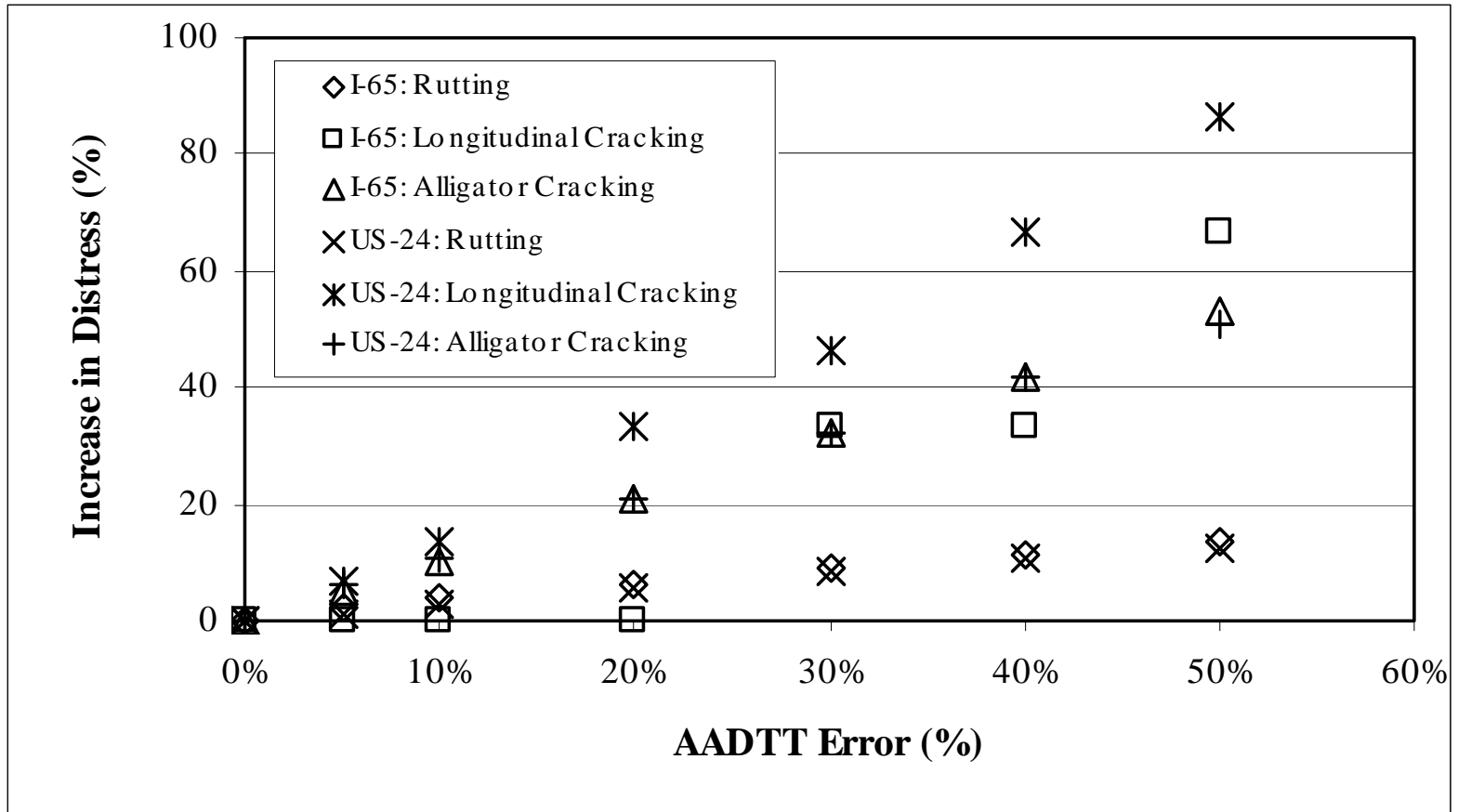


# 3. Progress

- Work on unclassified vehicles in progress



## HMA Pavement distress versus AADTT error



## Sensitivities of HMA Pavement Distresses to Truck Traffic Characteristics

Truck Traffic Characteristics	Pavement Distress			
	Roughness (IRI)	Rutting	Longitudinal Cracking	Alligator Cracking
Class Distribution	No	Fair	High	Medium
Monthly Distribution	No	Fair	Medium	Fair
Hourly Distribution	No	No	No	No
Axle Load Distribution	Medium ~ High	Medium ~ High	High	Fair ~ High
No. of Axles per Truck	No	No	No	No
Truck Count Accuracy	No	Fair	Medium	Fair
Operational Speed	No	Fair	Medium	Fair



- **WIM data QC/QA completed by Purdue University**
- **Computer program for WIM data processing completed**
- **2002 and 2004 WIM data analysis completed. Target data analysis 3-5 years**
- **Work on traffic inputs for Levels 1, 2, and 3 on going**

### **Example problem**

**Run Program**

- **WIM Site 1100, I-65, 4 lanes**
- **Data File: August, 2004, 77.5 MB**



**Thank You!**