NATMEC 2002
Traffic Data Archiving

Michigan Department of Transportation

What will we talk about today?

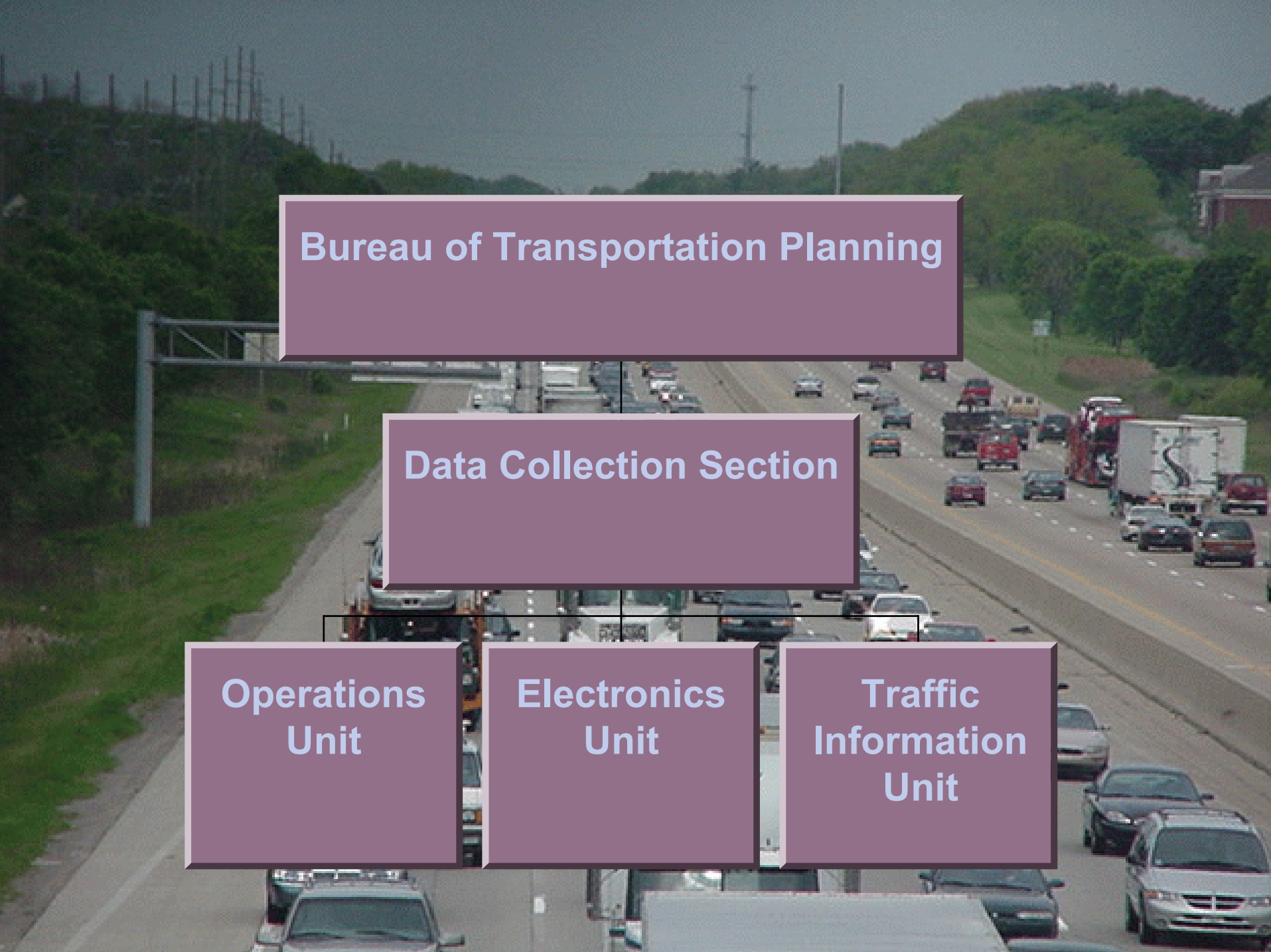
Michigan DOT organization

Import, edit, and archive data

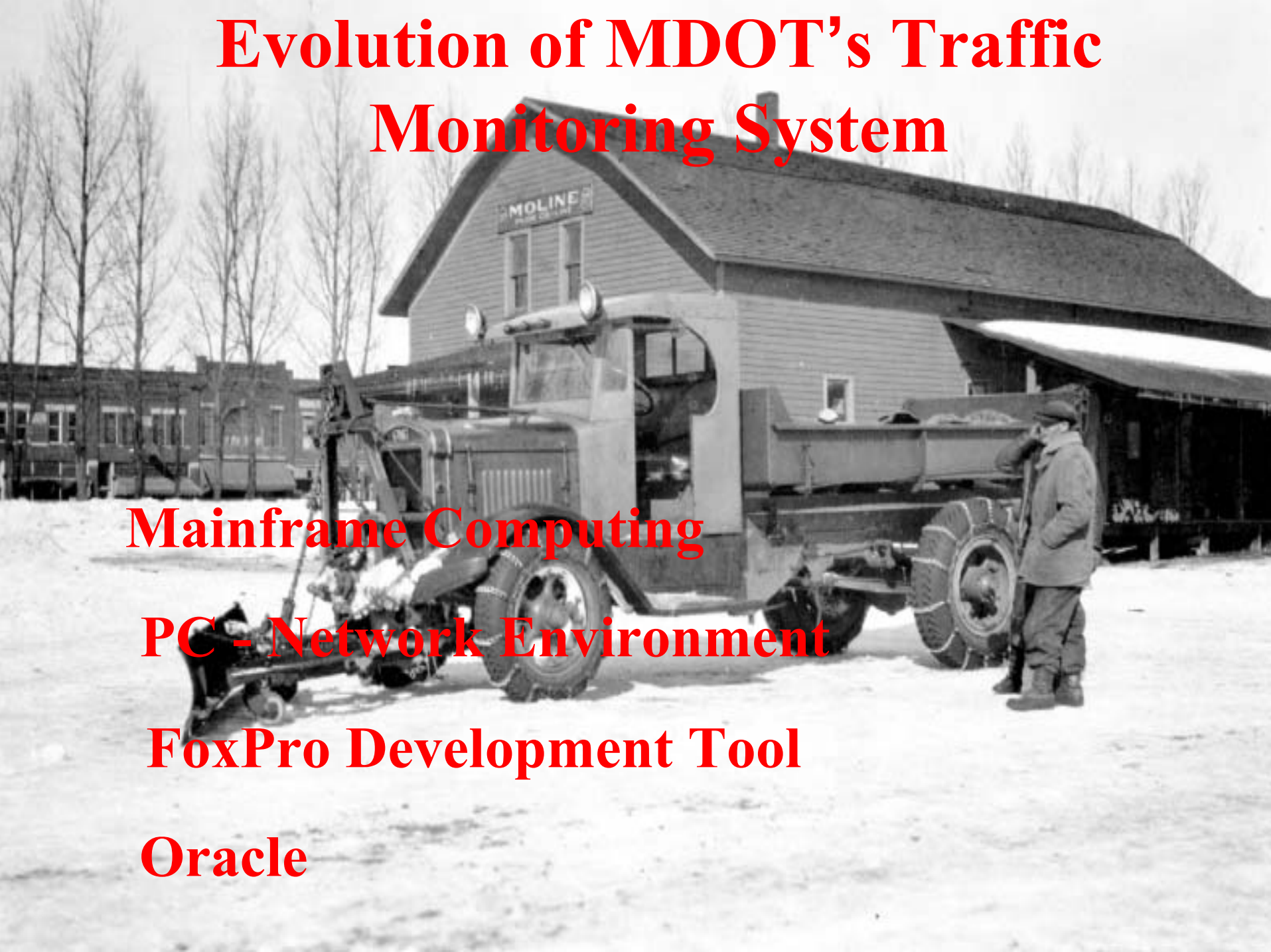
Local vs. corporate data

Access to the data

What's down the road


Bureau of Transportation Planning
Data Collection Section
Operations Unit
Electronics Unit
Traffic Information Unit

Evolution of MDOT's Traffic Monitoring System



Mainframe Computing

PC - Network Environment

FoxPro Development Tool

Oracle

Why Local, why FoxPro

- AADT estimation process was in Dbase
- Mainframe was going away
- Local maintenance/control of applications
- Oracle/development tools seemed too overwhelming to use
- FoxPro was a tool that was easy for staff to use for data editing, AADT development, and archiving to Oracle

Types of Data

Continuous Counts

AADT & CAADT

Continuous Classifications

Station Locations

Continuous WIM

Speed

Short Term Counts

Short Term Classifications

Intelligent Transportation System

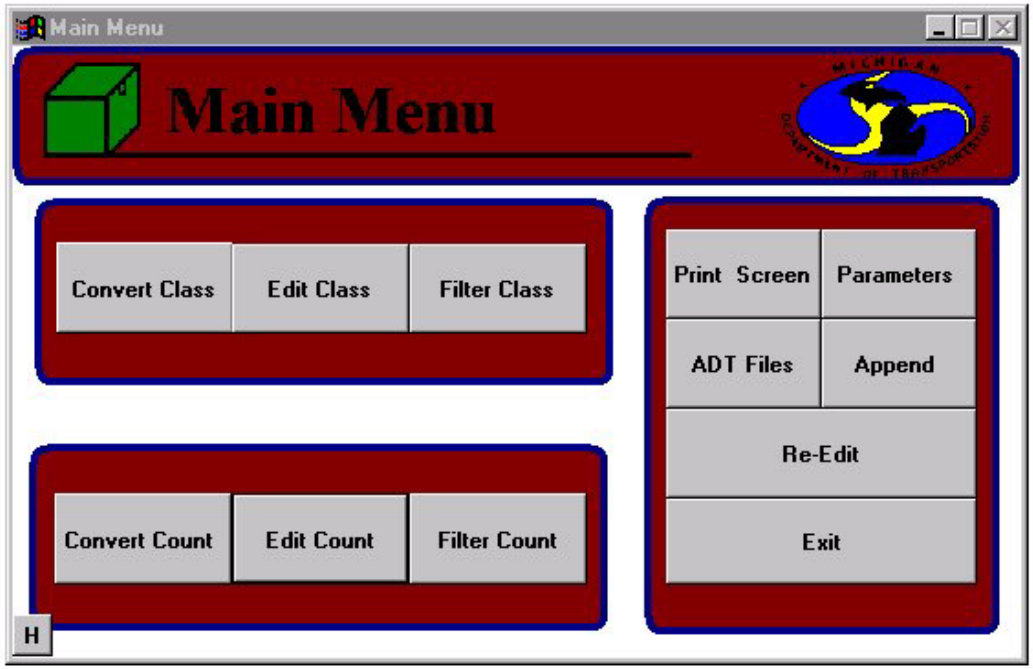
Import, Edit, Archive Data

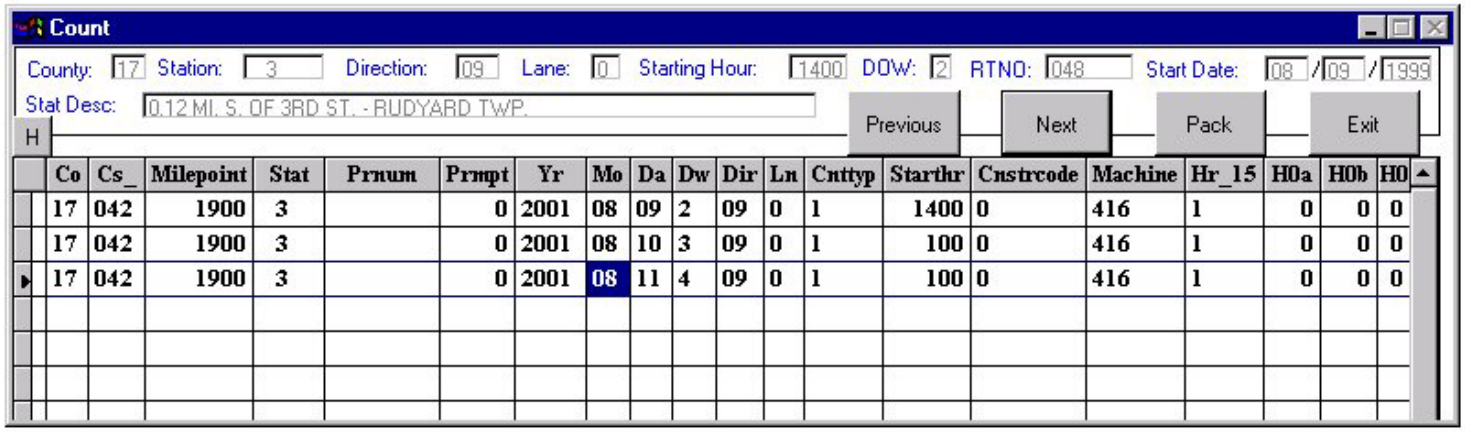
Station Description

Short Term Counts

Import, Edit, Archive Data

File Edit Window Help



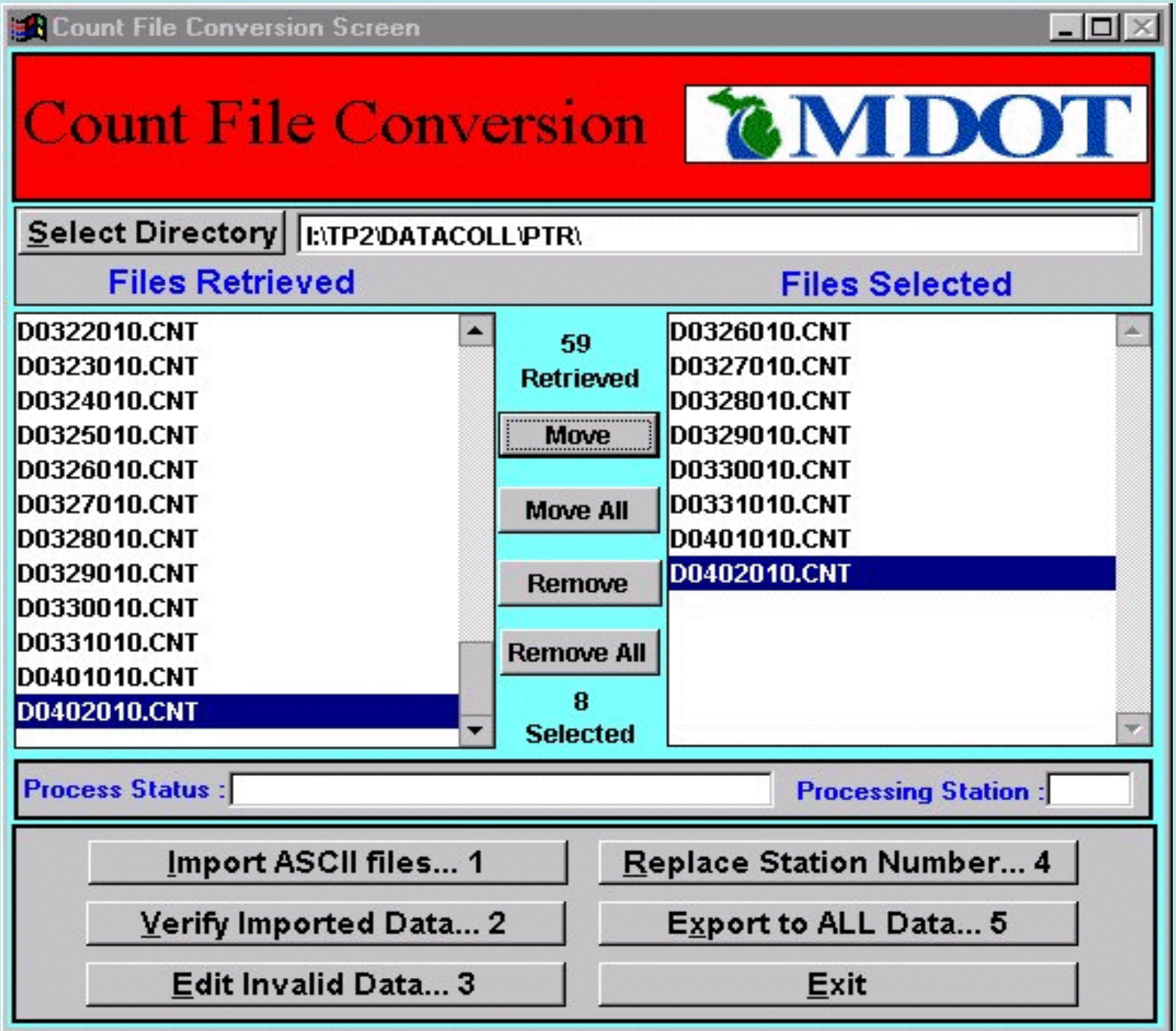


Co	Cs_	Milepoint	Stat	Prnum	Prmpt	Yr	Mo	Da	Dw	Dir	Ln	Cnttyp	Starthr	Cnstrcode	Machine	Hr_15	H0a	H0b	H0
17	042	1900	3		0	2001	08	09	2	09	0	1	1400	0	416	1	0	0	0
17	042	1900	3		0	2001	08	10	3	09	0	1	100	0	416	1	0	0	0
17	042	1900	3		0	2001	08	11	4	09	0	1	100	0	416	1	0	0	0

Import, Edit, Archive Data

Station Description	Short Term Counts	ATR	ATR Class

Import ATR Data From Network



Edit ATR Data Locally

GOODDATA

Stat.	Di	Ln	Year	Mo	Da	Dy	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	Total	De
9219	1	0	2002	2	1	6	136	115	80	76	60	143	406	797	784	707	658	786	847	990	1227	1635	1625	1595	1063	824	537	460	451	453	16455	F
9219	1	0	2002	2	2	7	328	134	130	106	71	94	244	331	532	682	834	999	1103	1169	1195	1308	1250	1224	1037	875	659	594	534	433	15866	F
9219	1	0	2002	2	3	1	248	139	123	90	55	83	134	161	179	385	547	761	897	1072	1126	1005	933	826	675	443	317	207	329	230	10965	F
9219	1	0	2002	2	4	2	129	67	57	43	62	182	442	1048	1155	926	851	987	969	1012	1295	1769	1793	1593	1052	626	456	381	311	261	17467	F
9219	1	0	2002	2	5	3	169	113	71	76	84	170	541	1244	1232	1031	1007	1053	1050	1061	1237	1795	1750	1669	1035	657	510	431	302	335	18623	F
9219	1	0	2002	2	6	4	173	111	69	59	73	175	591	1319	1208	1066	936	1030	1037	1050	1292	1865	1882	1764	1129	679	524	457	319	314	19122	F
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9219	1	0	2002	2	21	5	183	102	89	75	79	189	587	1303	1218	1029	893	1013	994	955	1298	1790	1705	1610	1031	619	511	441	354	336	18404	F
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9219	1	0	2002	2	28	5	171	107	69	94	83	179	563	1214	1149	1010	978	1142	1082	1071	1338	1791	1906	1602	1061	777	525	474	369	297	19052	F

Year	Mon	MxDyVol	Day	Date	MxHrVol	Hour	Day	Date	Ave.Sun	No.Sun	Ave.Wk	No.Wkdays	Ave.Sat	No.Sat	ADT	No.Days	Tot. Traffic	% Gain	% Loss
2002	2	20995	FRI	22	2022	5PM	THU	14	11193	4	18632	20	15341	4	17099	28	478778	3.41	0.00

<- -> Station | <- -> Month | <- -> Year

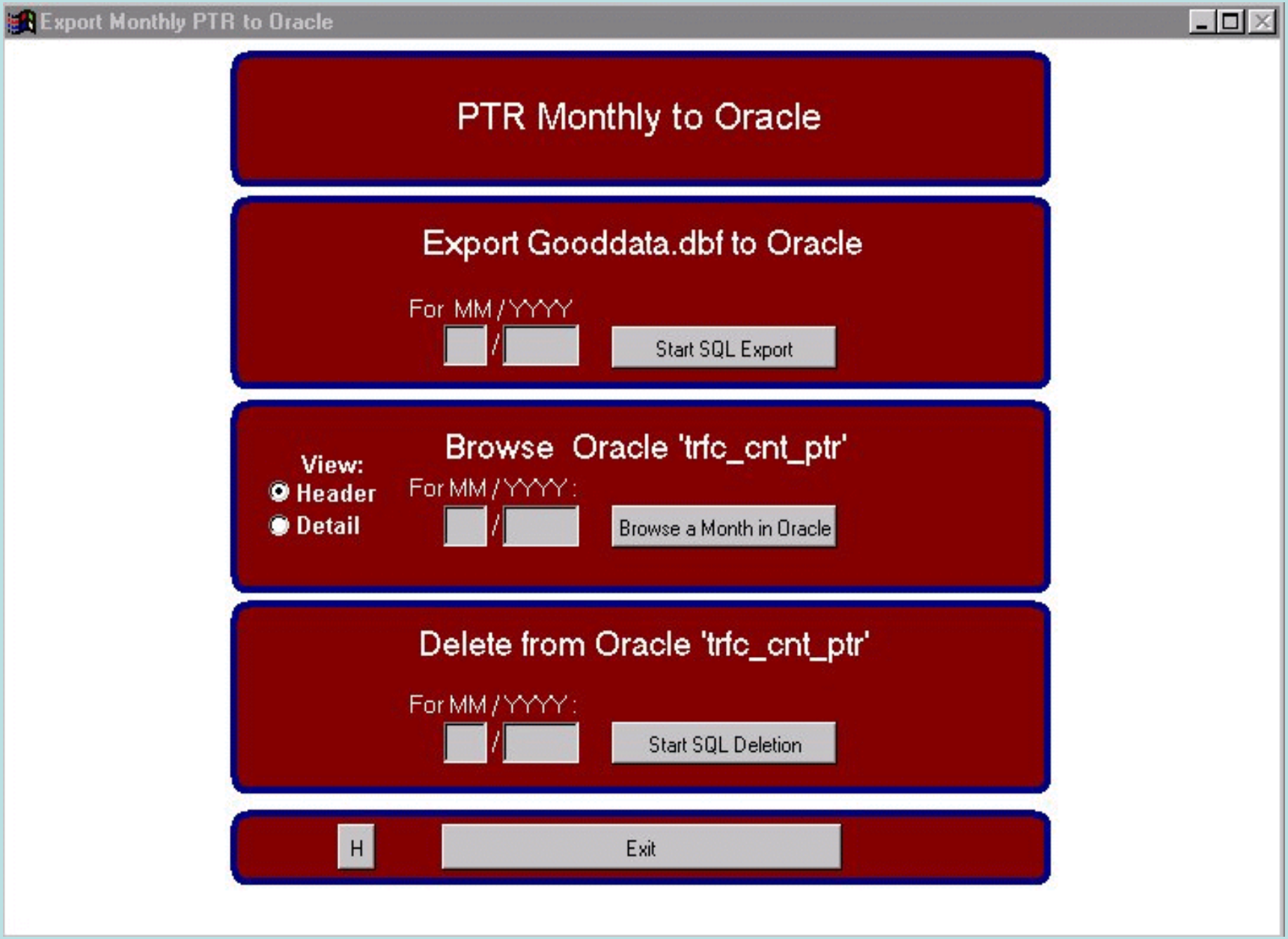
Station 9219 N 0 ?

Show Cmt Yr 2002 Mo 2

I-675 SAGINAW N. BD. AT SAGINAW RIVER.

Retrieve | Locate | Delete | Statistics | Print | Exit

Export/Archive ATR Data to Oracle



Import, Edit, Archive Data

Station Description	Short Term Counts	ATR	ATR Class	ITS	Speed

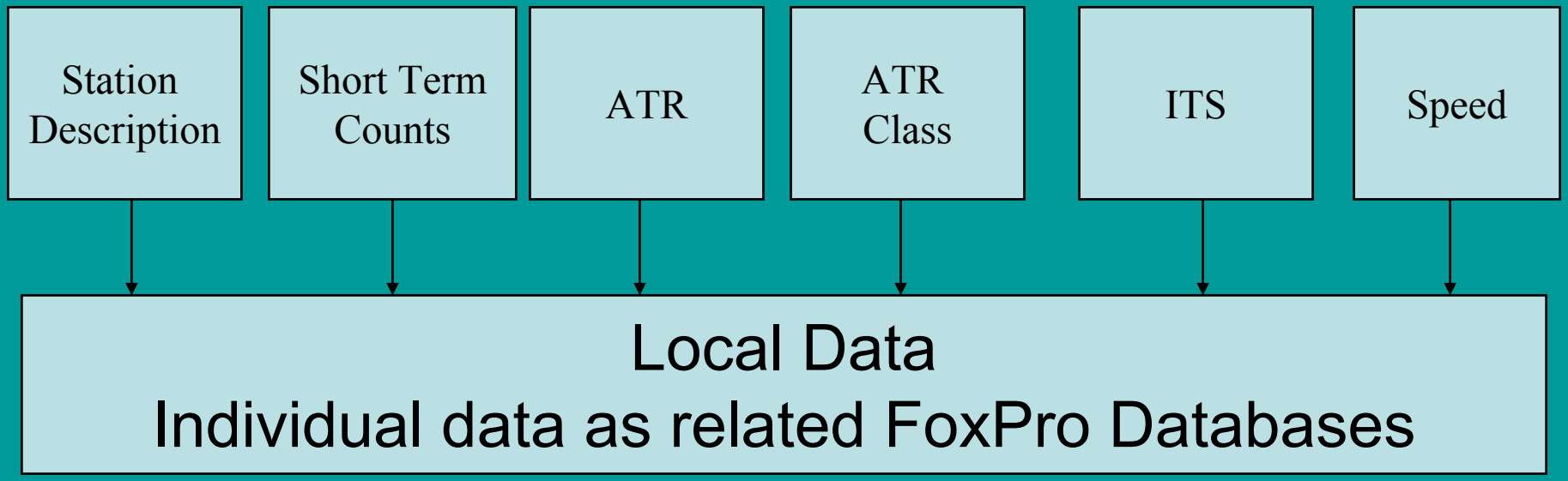
Intelligent Transportation System

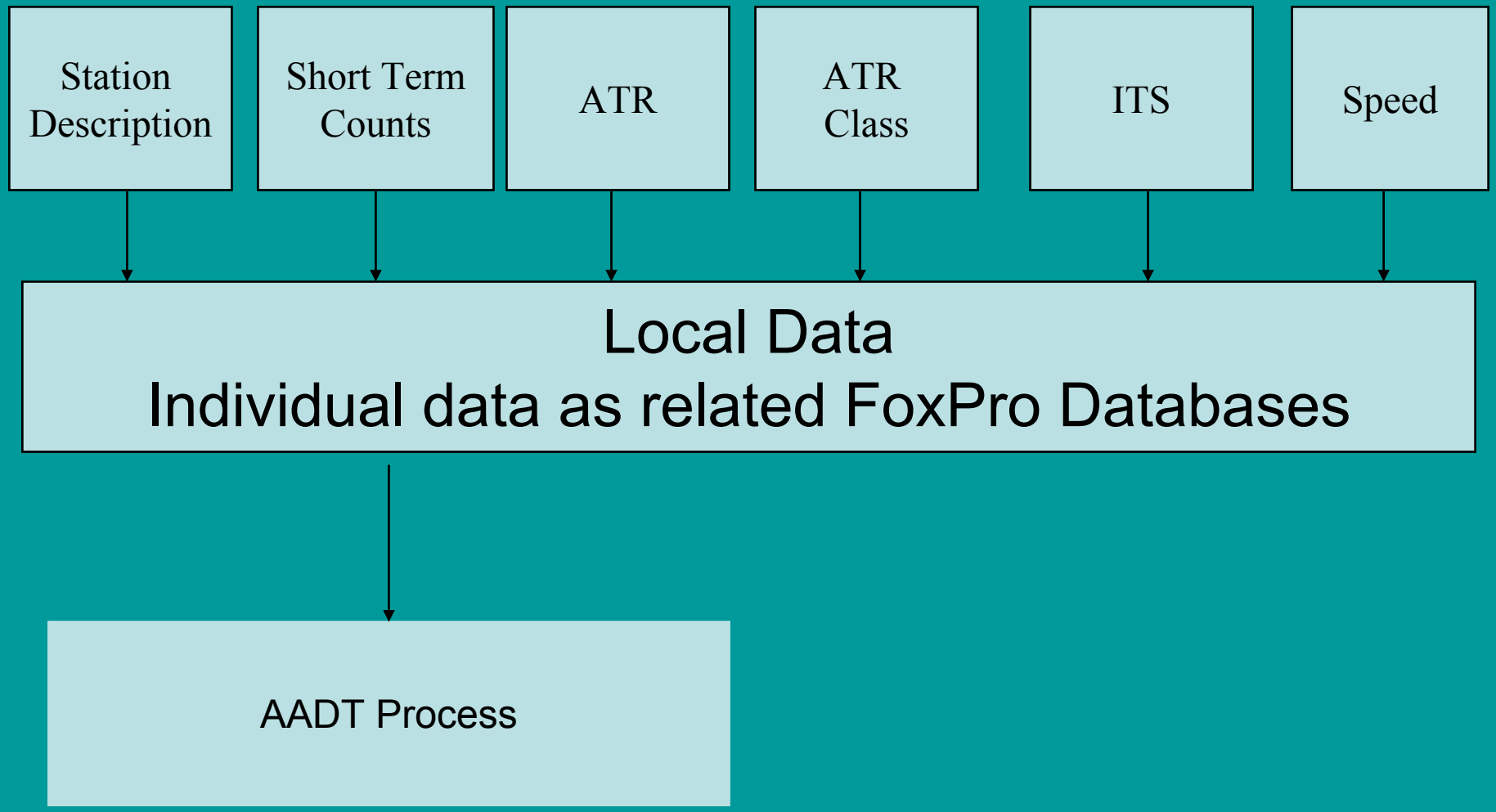
Intelligent Transportation System

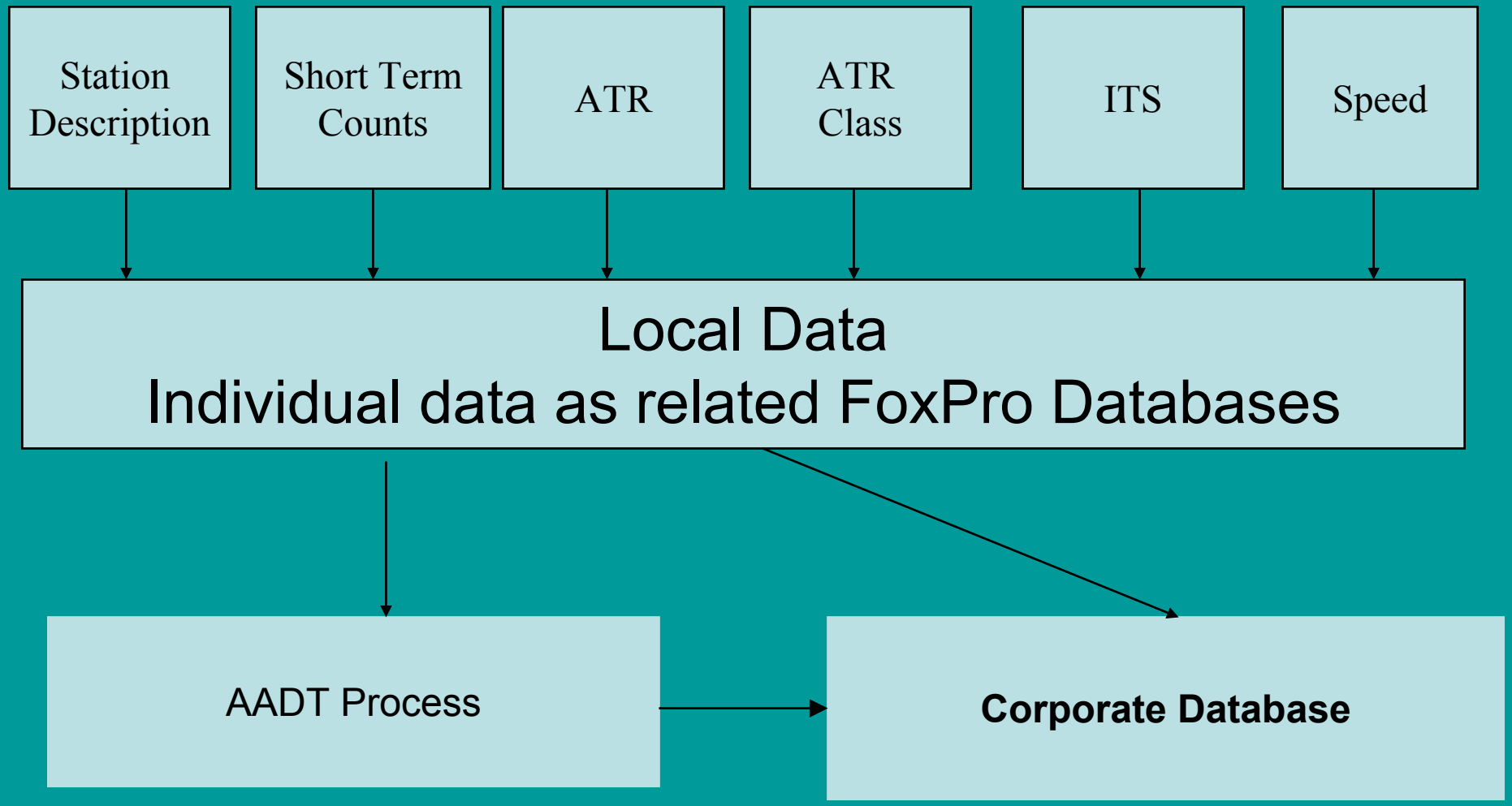
Importing over 200 sites of continuous data

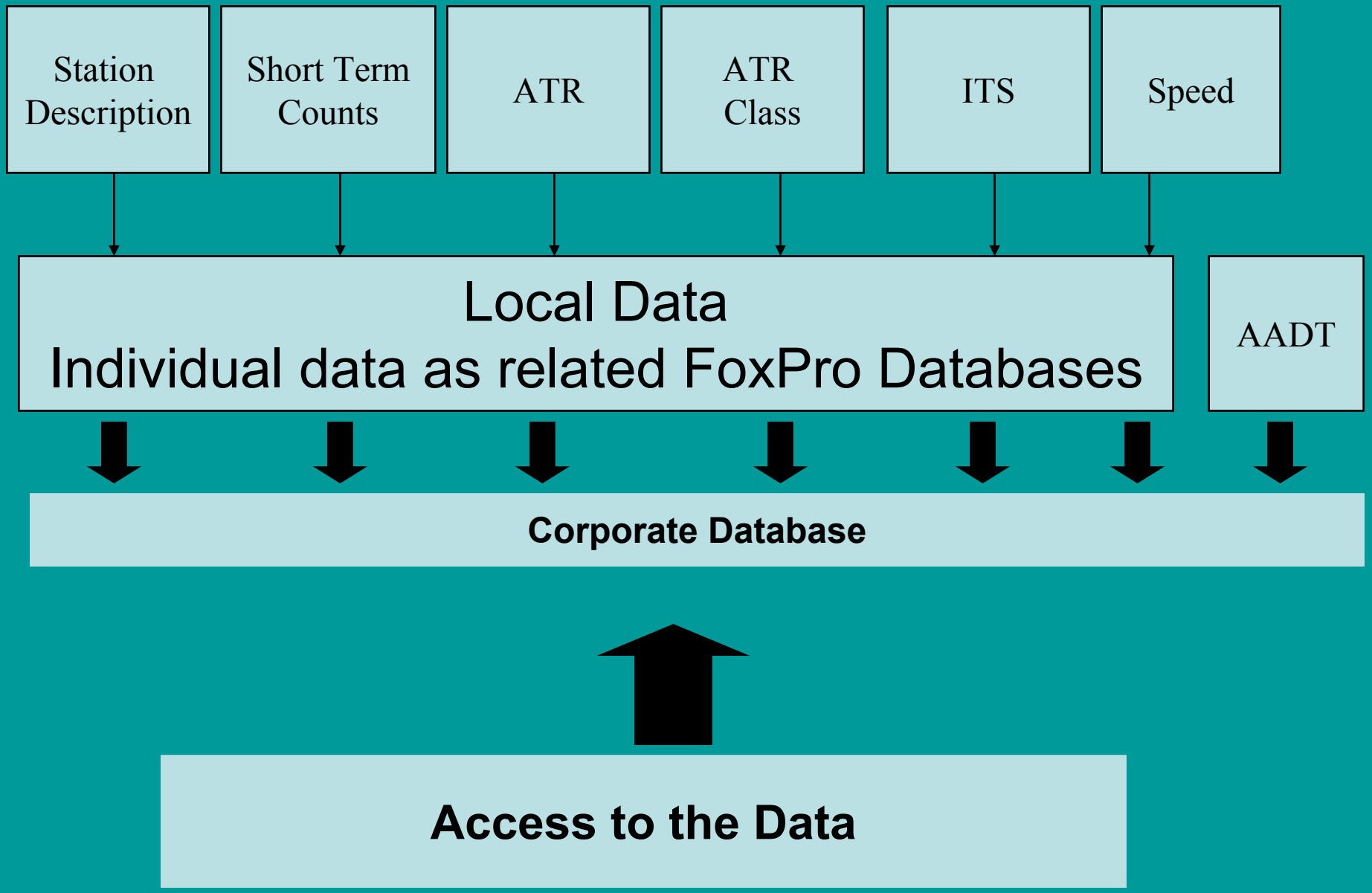
ITS Data

- Collected at the ITS center
- Store volumes by minute
- Summarize into hourly volumes and sent to Planning on a monthly basis (E-mail)
- Imported into local database and validated (FoxPro)
- Exported to corporate database (Oracle)


Station Description
Short Term Counts
ATR
ATR Class
ITS
Speed
Local Data
Individual data as related FoxPro Databases


Station Description
Short Term Counts
ATR
ATR Class
ITS
Speed
Local Data
Individual data as related FoxPro Databases
AADT Process


Station Description
Short Term Counts
ATR
ATR Class
ITS
Speed
Local Data
Individual data as related FoxPro Databases
AADT Process
Corporate Database


Station Description
Short Term Counts
ATR
ATR Class
ITS
Speed
Local Data
Individual data as related FoxPro Databases
AADT
Corporate Database
Access to the Data

Oracle Database Accessibility

- Web Application
- Transportation Management Systems
- Other applications and tools

Web Access

MDOT

Traffic Monitoring Information

Help

TRAFFIC DATA HOME
SEARCH TRAFFIC DATA
CONTACTS
DEFINITIONS

INTERCHANGE HOME

Traffic Data is collected on Michigan's trunkline system on an annual basis. There is a variety of data collected, which includes :

- Axle Counts Help
- Vehicle Counts Help
- Vehicle Classification Help
- Vehicle Speeds Help
- Annual Average Daily Traffic (AADT) Help

The traffic information you have access to is available shortly after the studies are complete.

Web Access

MDOT

Traffic Monitoring Information

Help

TRAFFIC DATA HOME
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DEFINITIONS

INTERCHANGE HOME

Identify your Location to Search for Traffic Data

Beginning Year:		Ending Year:	
County:		Station:	
Control Section(CS) Number:			
CS Begin Mile Point:		CS End Mile point:	
Physical Reference(PR) Number:			
PR Begin Mile Point:		PR End Mile Point:	
Route Designation:		Route Number:	

Look for Data | Clear Selection Criteria

Beginning Year and Ending Year must be entered for any type of selection criteria.

Please use the following types of Selection Criteria:

- County — Help
- County + Station — Help
- Control Section Number — Help
- Control Section Number + CS Begin Mile Point + CS End Mile Point — Help
- Physical Reference — Help
- Physical Reference Number + PR Begin Mile Point + PR End Mile Point — Help
- County + Route Designation + Route Number — Help

Web Access

MDOT

Traffic Monitoring Information

Help

TRAFFIC DATA HOME
SEARCH TRAFFIC DATA
AVAILABLE DATA
CONTACTS
DEFINITIONS

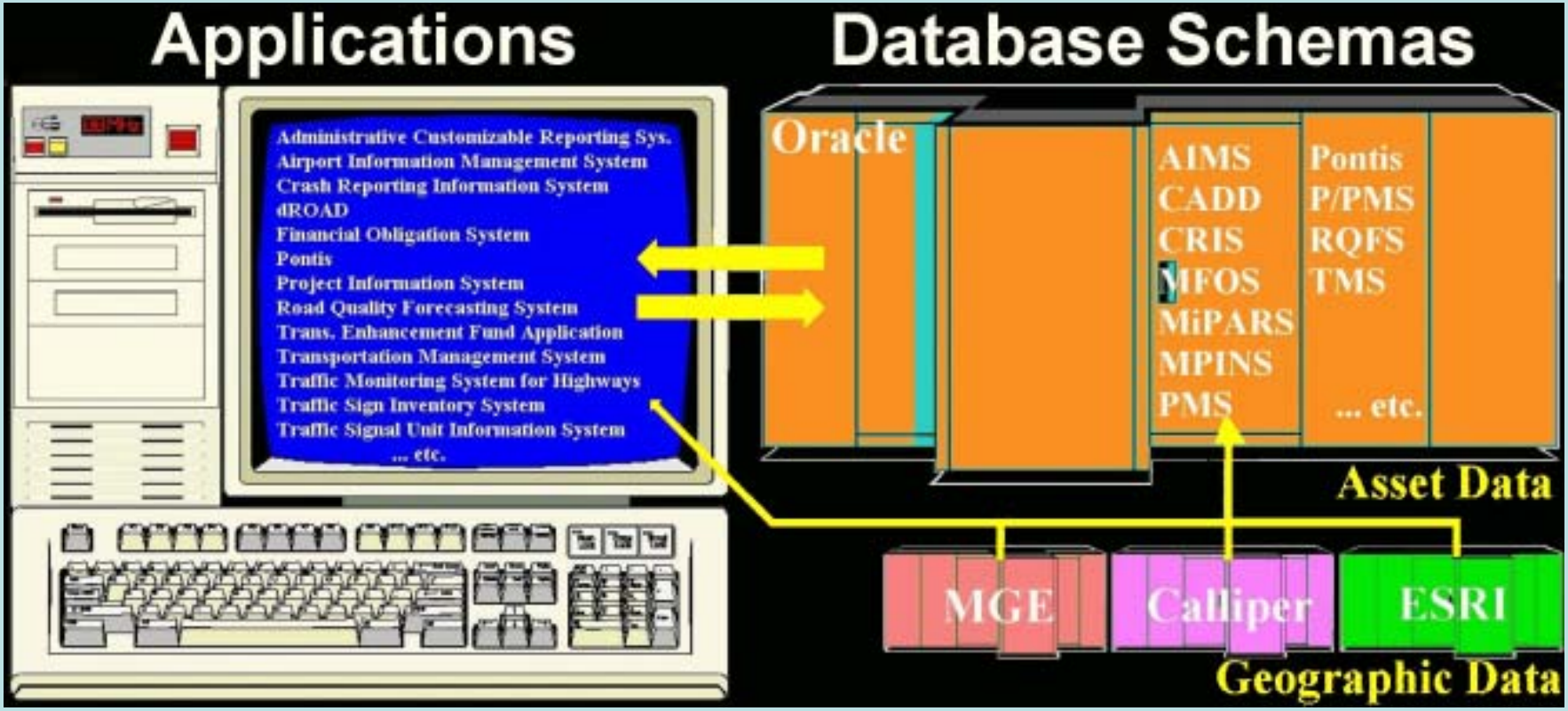
INTERCHANGE HOME

Available Data based on your selection criteria:

Selection Criteria: Count between 1995 and 2002 and County is Macomb

- Short Term Count Data (Hourly)
- Short Term Count Data (15 Minute)
- Short Term Vehicle Classification Data
- Permanent Traffic Recorder Count Data
- Permanent Traffic Recorder Annual Reports
- Intelligent Transportation System Data (Hourly)
- Permanent Traffic Recorder Vehicle Classification Data (Daily)
- Permanent Traffic Recorder Vehicle Classification Data (Monthly)
- Permanent Traffic Recorder Vehicle Speed Data (Daily)
- Permanent Traffic Recorder Vehicle Speed Data (Monthly)
- Traffic Estimates (AADT, DHV etc.)

Transportation Management Systems
And
Other applications



Local and Corporate Database

- **Local** - Allows staff to edit/validate data prior to department-wide access
- **Local** - FoxPro applications provide for
  - Direct control at the user level
  - Ability to conduct simple changes using internal staff
- **Corporate** – One data source

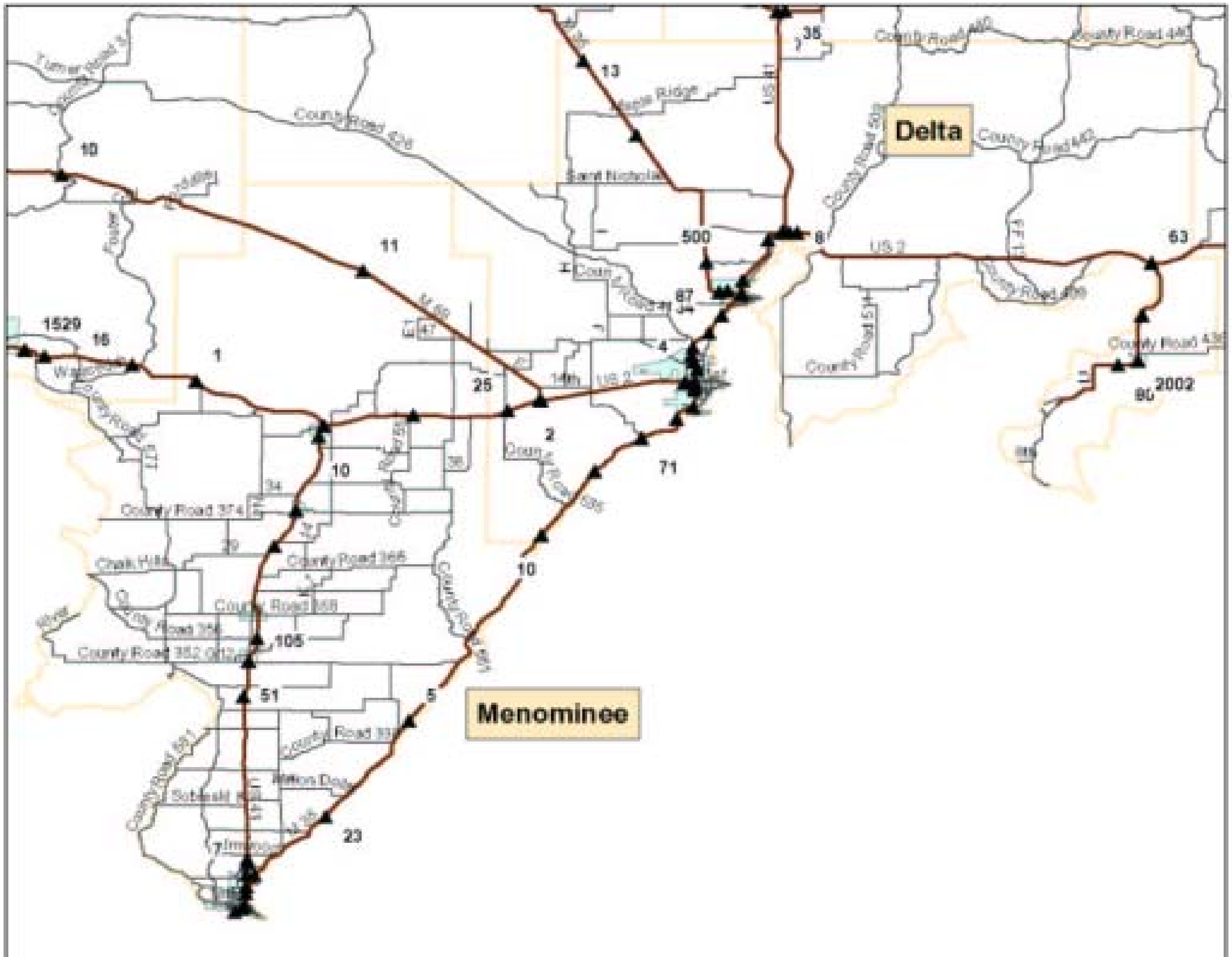
What’s Ahead at MDOT

- Framework
- GIS
- Weigh-in-motion

Framework

- Multi Department/Agency GIS with a common reference system for all roads, even private
- On a statewide “seamed” network
- Department of Information Technology is responsible for the reference changes (maintain the line work)
- Each Dept. is/will be responsible for identifying their changes/corrections
- MDOT – The road system is complete with some specialized attribution

Framework Geographic Information System Application



Truck Weight

- Import Weigh-in-motion Information From MDOT's Permanent Sites
- Gross Validation of the Data
- All in the Oracle Environment
- Primary Intent is to:
  - Process data
  - Make data accessible
  - Overweight analysis
  - Provide some analysis capability to pavement folks.

Access to Data
Internet vs. Intranet

- Public vs. Internal
  - AADT map is public
  - Traffic study information is internal

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