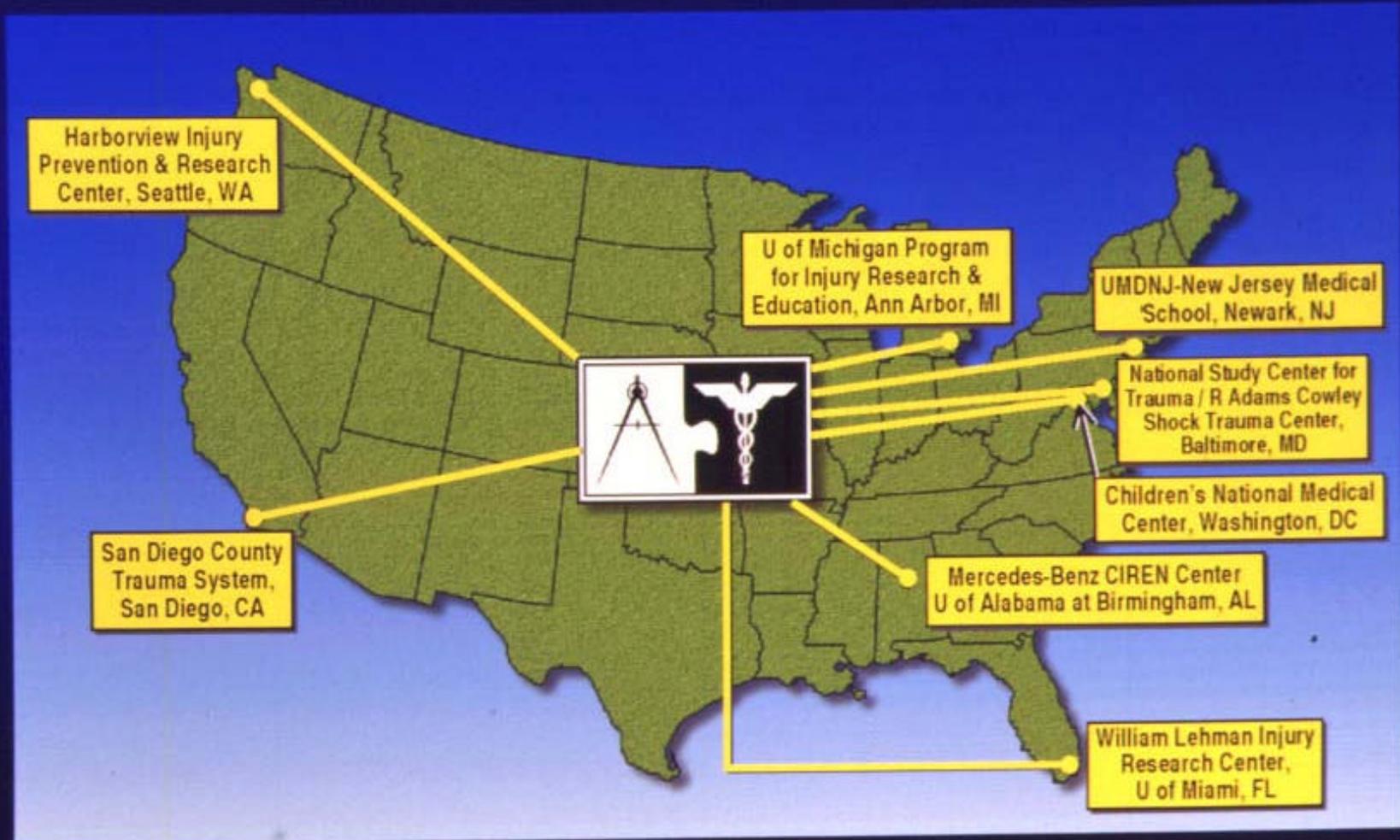
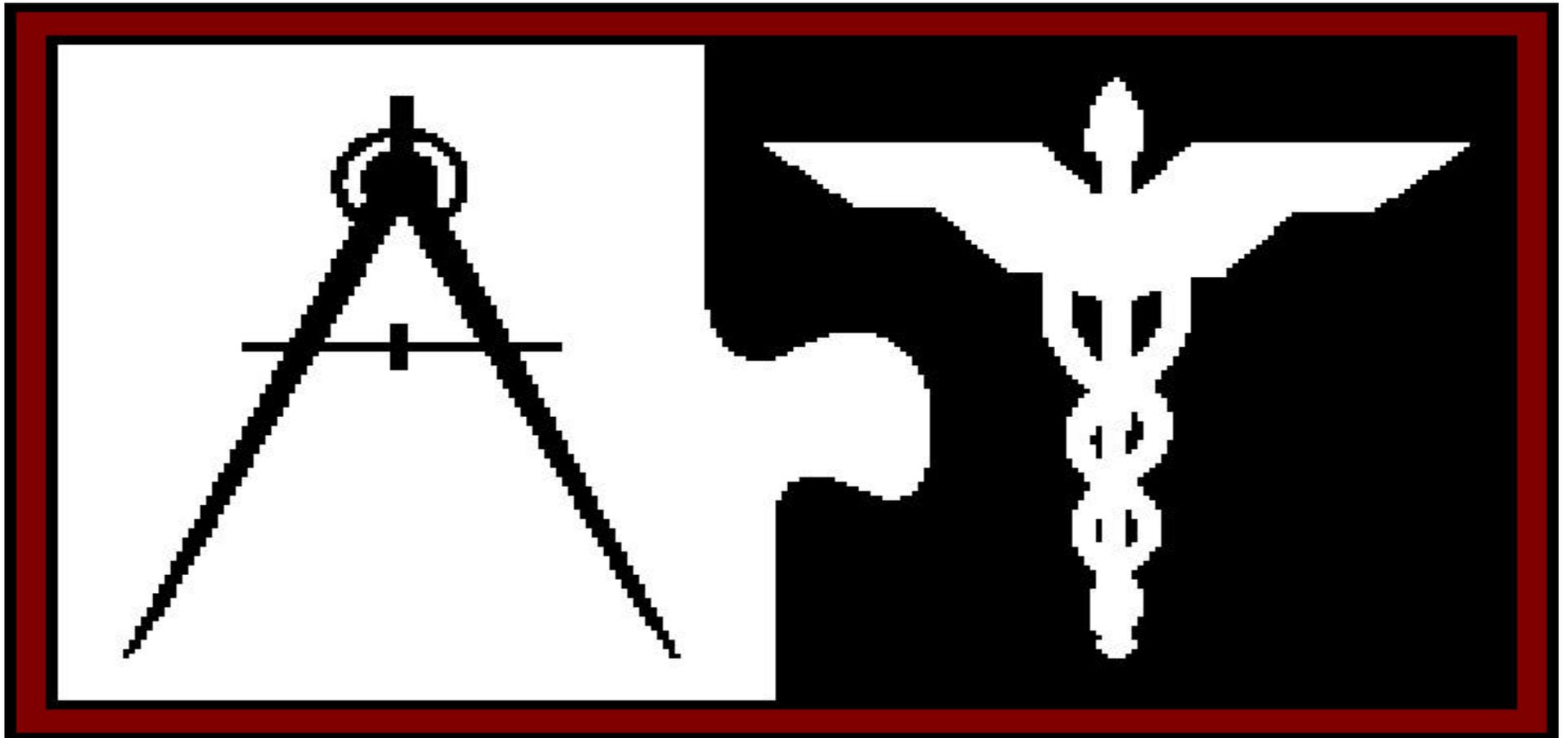


CIREN Network





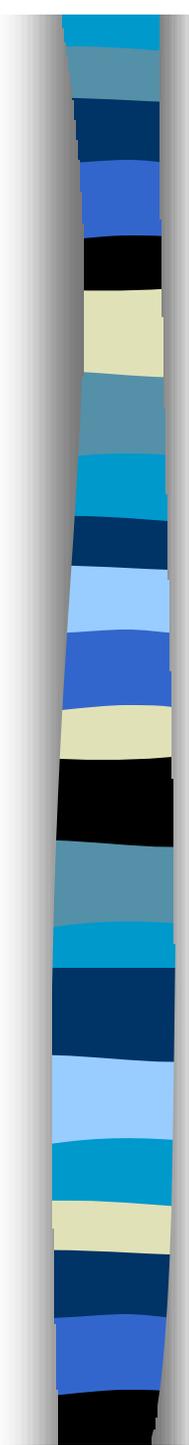
CIREN Computer Network

Version 1.20

Jerome T. Scally, MD/PhD

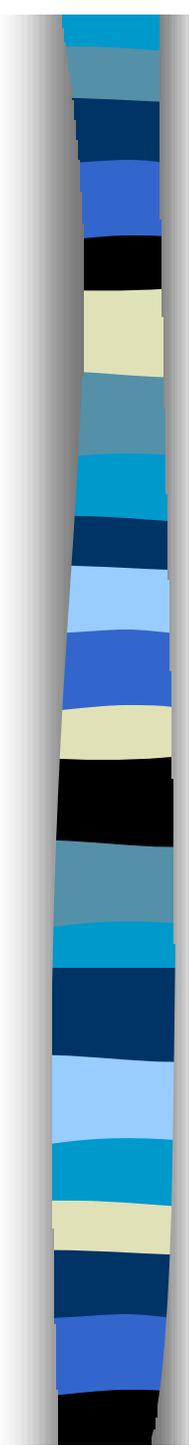
Volpe National Transportation Systems Center

Cambridge, Massachusetts



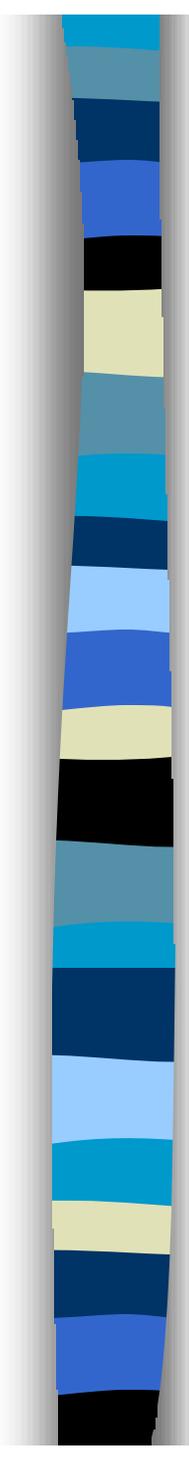
CIREN Computer System

- Objectives
- Requirements
- CIREN Data Requirements
- National Automotive Sampling System
- NASS History
- NASS Overview
- NASS Electronic Data System
- NASS/CIREN Network
- NASS Data Model



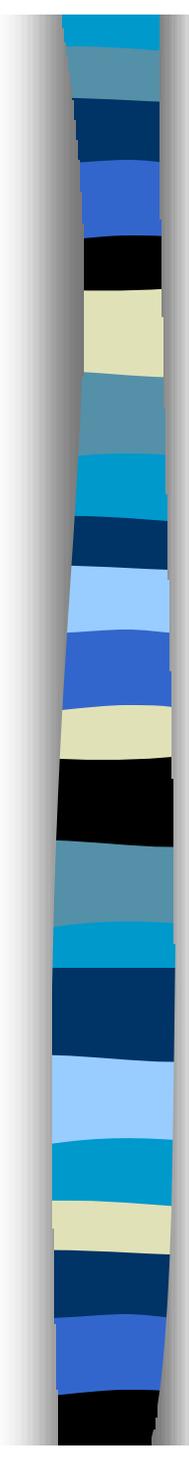
CIREN Computer System

- NASS Status and New Benefits
- CIREN Injury Approach
- CIREN Medical Data Model
- CIREN Data Collection Application
- CIREN Central Repository
- CIREN Quality Control
- CIREN Data Analysis



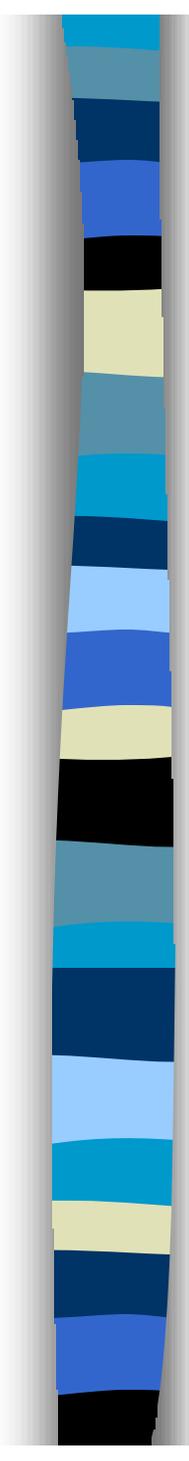
CIREN Computer System

- NASS/CIREN Analytic Capabilities
- NASS/CIREN Intranet
- CIREN Phase 2
- Future
- Future Today
- Contact
- Thank You



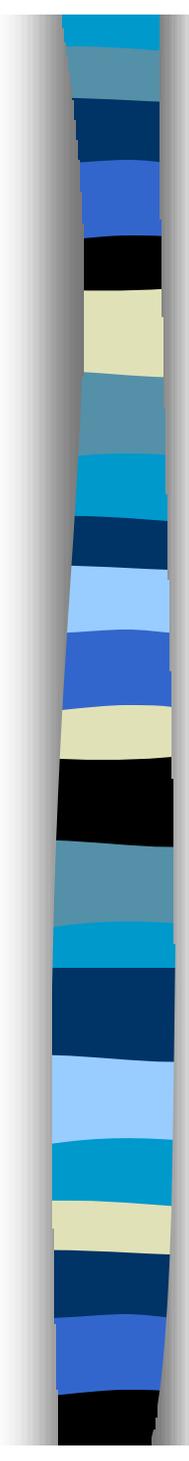
Objective

- Collect/Store Crash and Medical Data
- Standardize Variables across centers
- Standardize Crash Variables to enable universe comparison
- Enable cross center data sharing
- Enable cross center data analysis
- Enable data sharing and analysis between the engineering and medical community



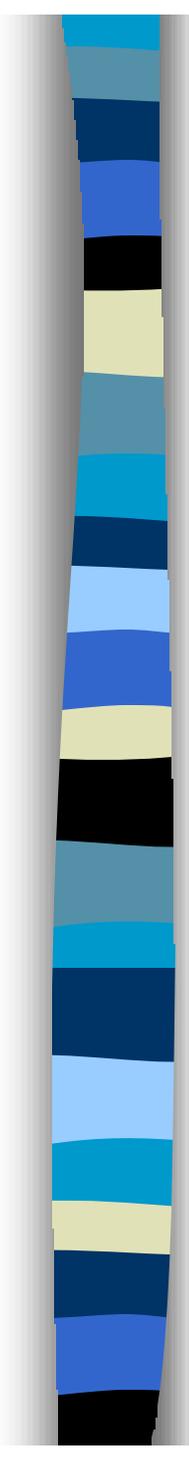
Requirements

- Network
- Database Engine - Oracle
- Crash data model
- Medical data model
- Data migration capabilities
- Interface Applications



CIREN Data Requirements

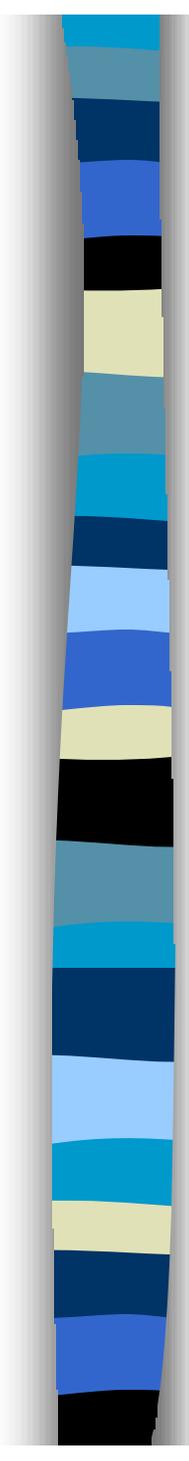
- Crash Data Akin to National Automotive Sampling System (NASS)
 - Extrication
 - Toe Pan Intrusion
 - Seat Intrusion
 - Steering System Failure
- Universe Comparison



CIREN Data Requirements

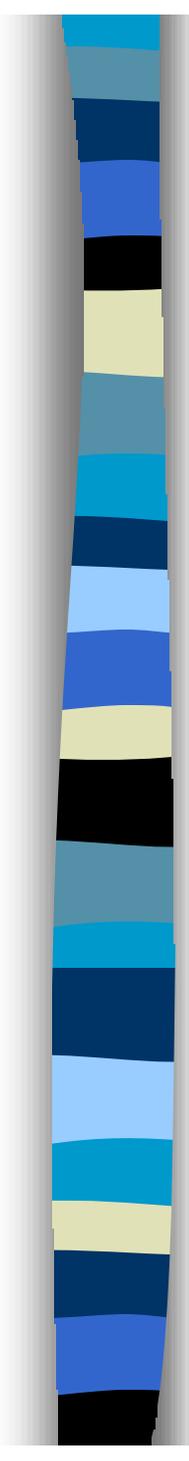
■ Medical Data

- Laboratory Data
 - Arterial Blood Gas (Base Deficit)
 - Others
- Comorbidity
- Demographics
- Anthropomorphic Measurements
- Admissions/Discharge with Diagnosis
- Ventilation
- Charges



CIREN Data Requirements

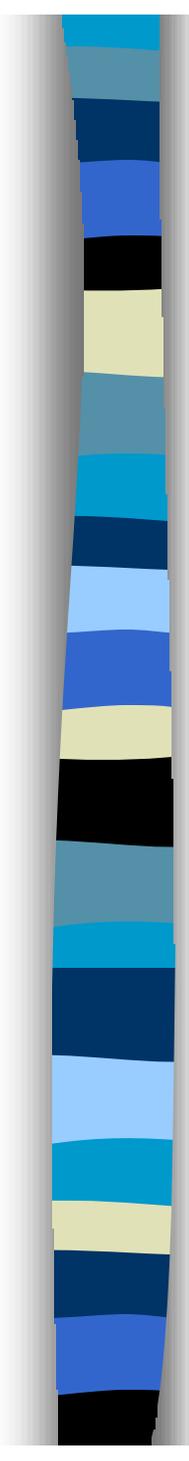
- Glasgow Coma Scale (GCS)
- Vital Signs
- Diagnostic Procedures
- Complications
- Clothing
- Outcome - CF36
- Pre-hospital (EMS)
- ... CIREN version 1.20 Design Document



CIREN Data Requirements

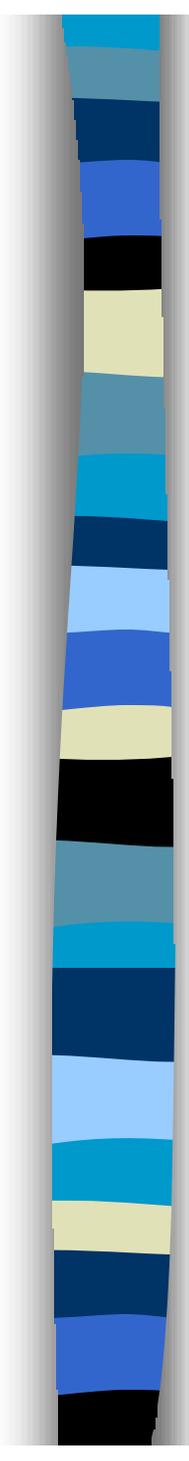
■ Injury Coding

- AIS
- OTA
- Associate Evidence
 - Diagnostic Procedures
 - Invasive Procedures
- Associate Crash Variables
 - Contacts
 - Intrusions



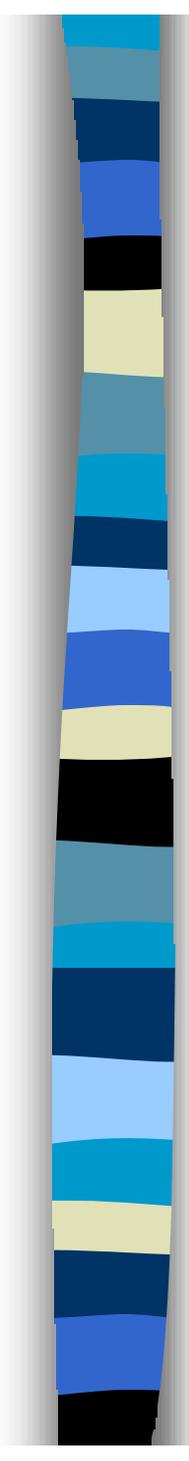
NASS History

- Created in 1978 during the Carter administration
- To aid NHTSA in the development, implementation, and evaluation of motor vehicle and highway safety countermeasures



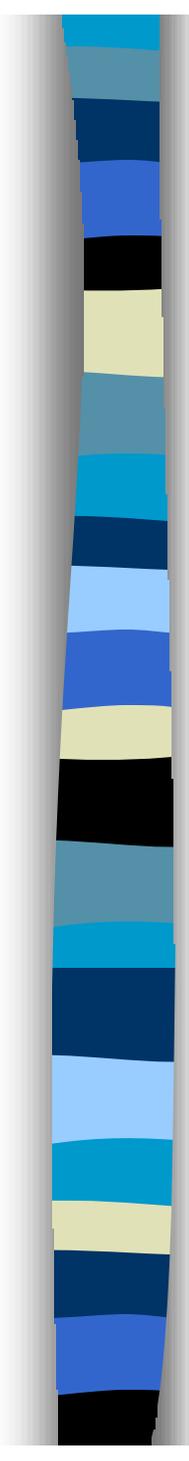
NASS History

- 1979 - First Data Collection
- 1988 - Creation of two divisions
 - CDS (Crashworthiness Data System)
 - GES (General Estimates System)



NASS GES

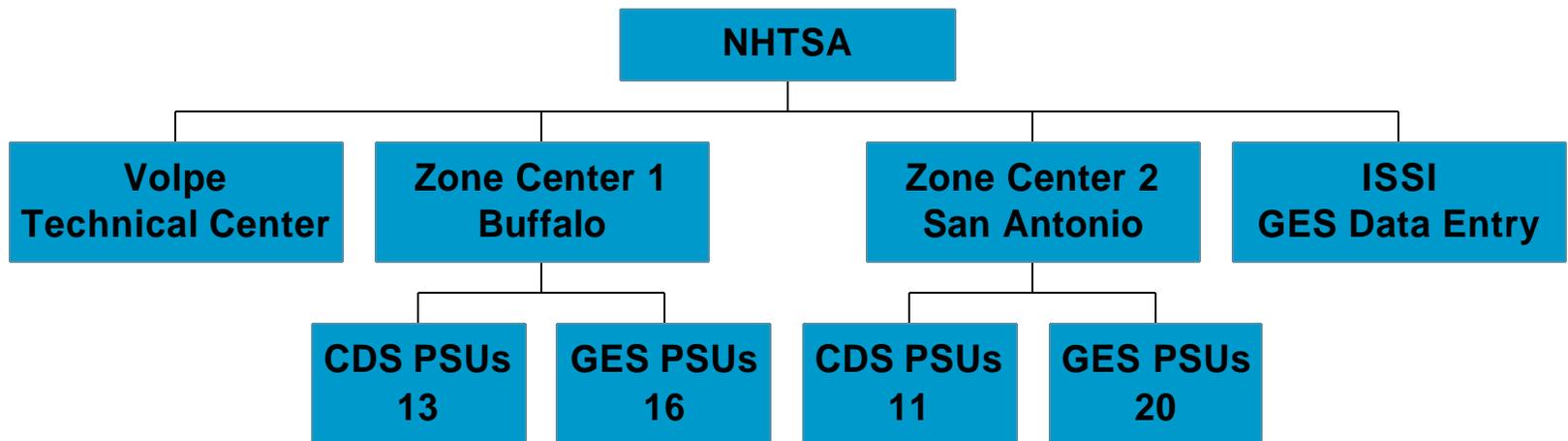
- General Estimates System
 - collects data on app 54,000 police reported traffic crashes annually
 - extracts data from the police crash reports
 - provides weighting and averaging



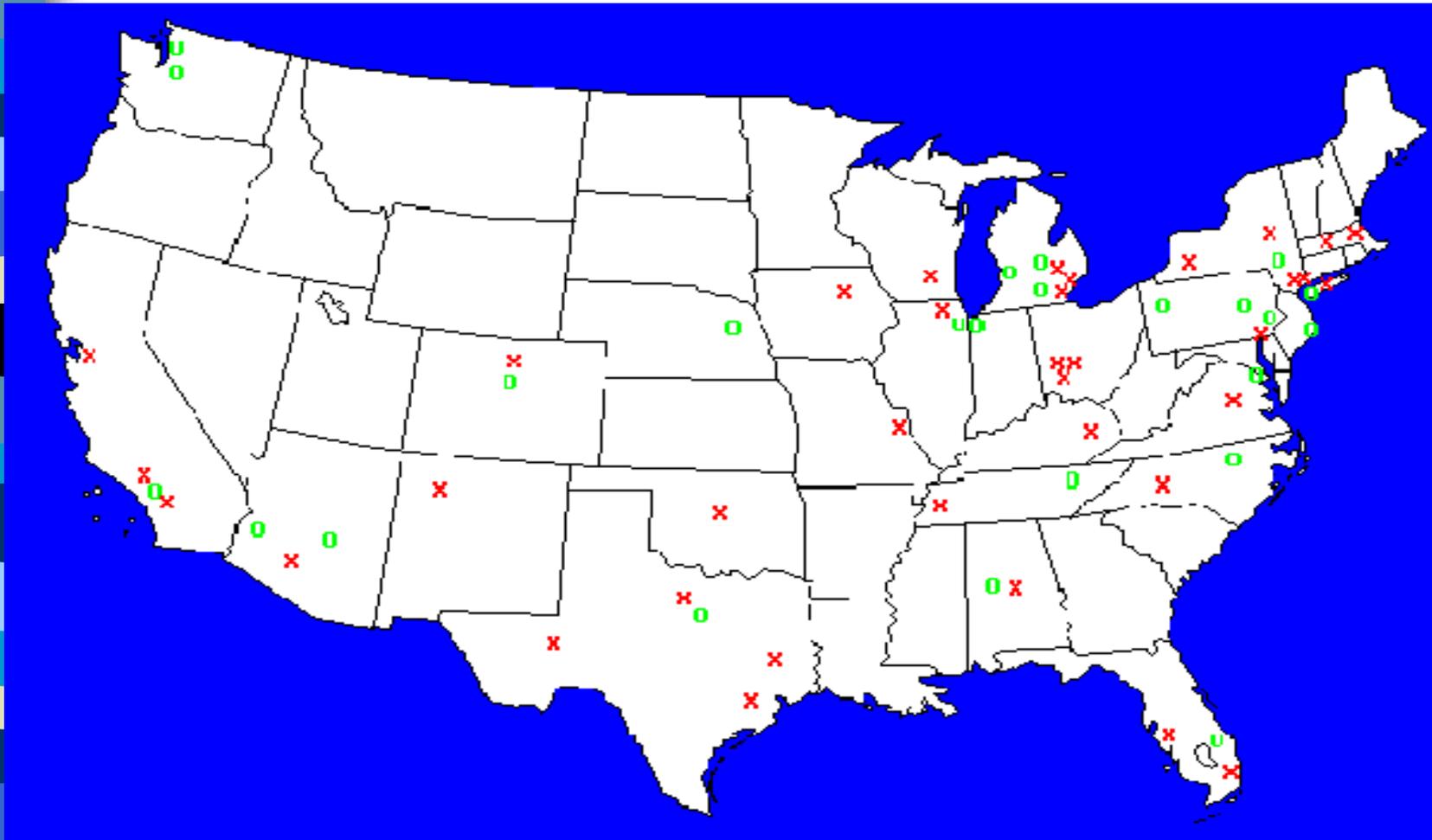
NASS CDS

- **Crashworthiness Data System**
 - collects detailed information on app. 5,000 crashes per year. Crashes must involve a passenger vehicle towed from the crash scene due to damage resulting from the crash
 - Passenger vehicles are defined as all passenger cars, pickup trucks, vans, and sport utility vehicles with a gross vehicle weight rating of $\leq 10,000$ lbs.

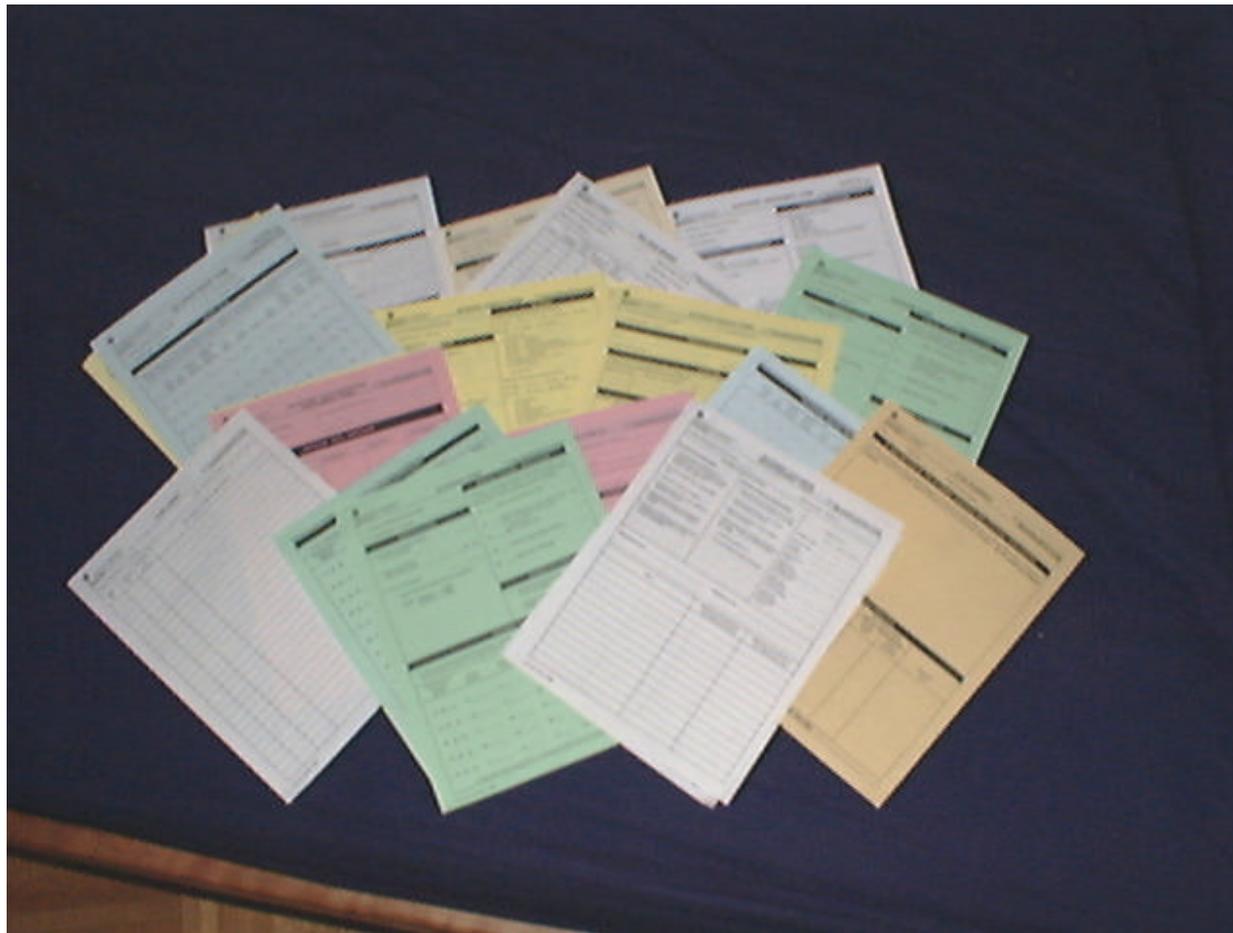
NASS Architecture



NASS PSU Locations



NASS Paper Forms



NASS PSU Process

- Field Data Collection



NASS PSU Process

- Forms in the Office



NASS PSU Process

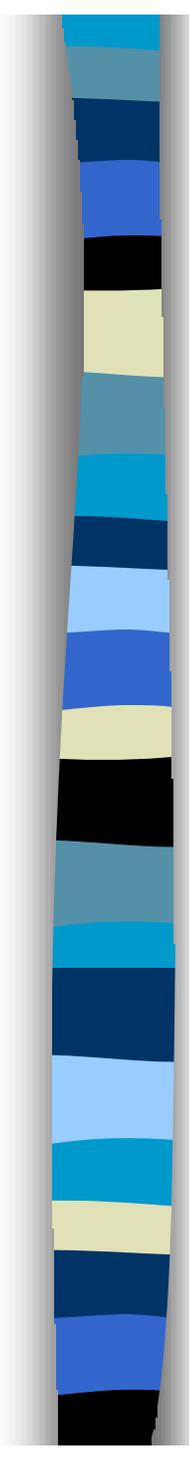
- Send Case to Zone Center



ZC Process

- Case Receipt and Registration





ZC Process

- Quality Control
- Edit Reviews
- Injury Coding
- Case Review
- Case Close Out

ZC Process

- Send Case to NHTSA



ZC Process

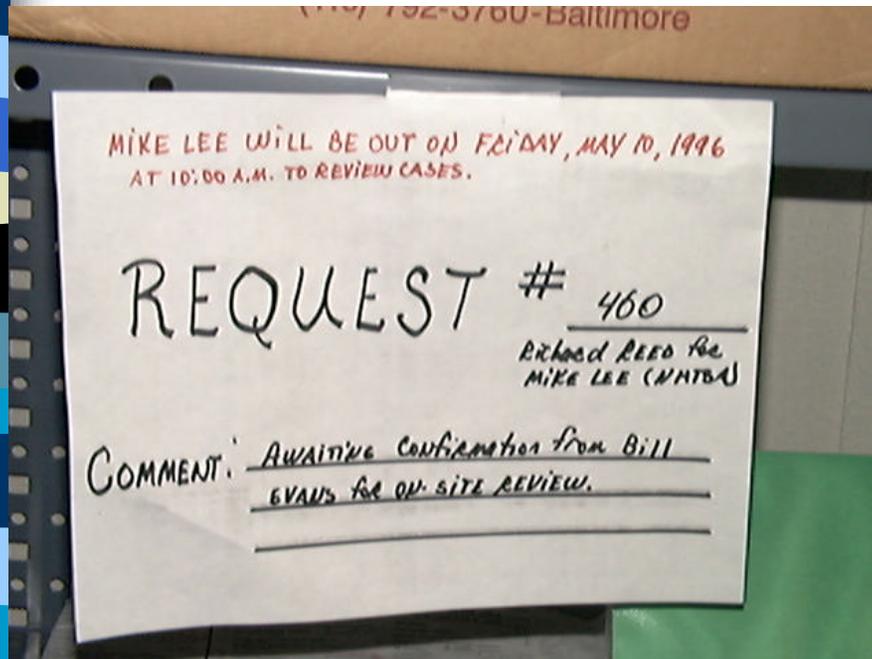
- Transporting cases - color coded



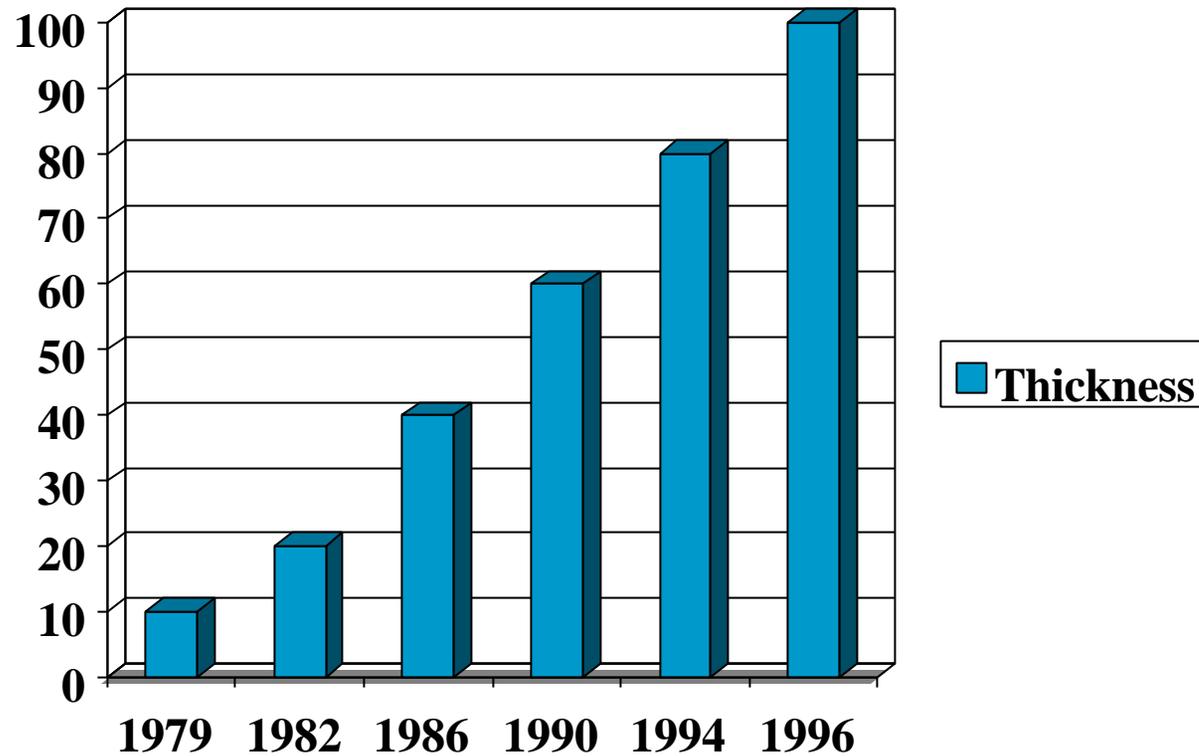
Case Storage

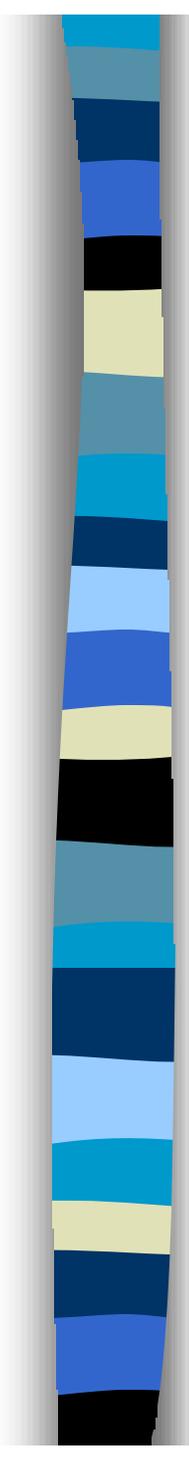


Case Retrieval



NASS Case Growth

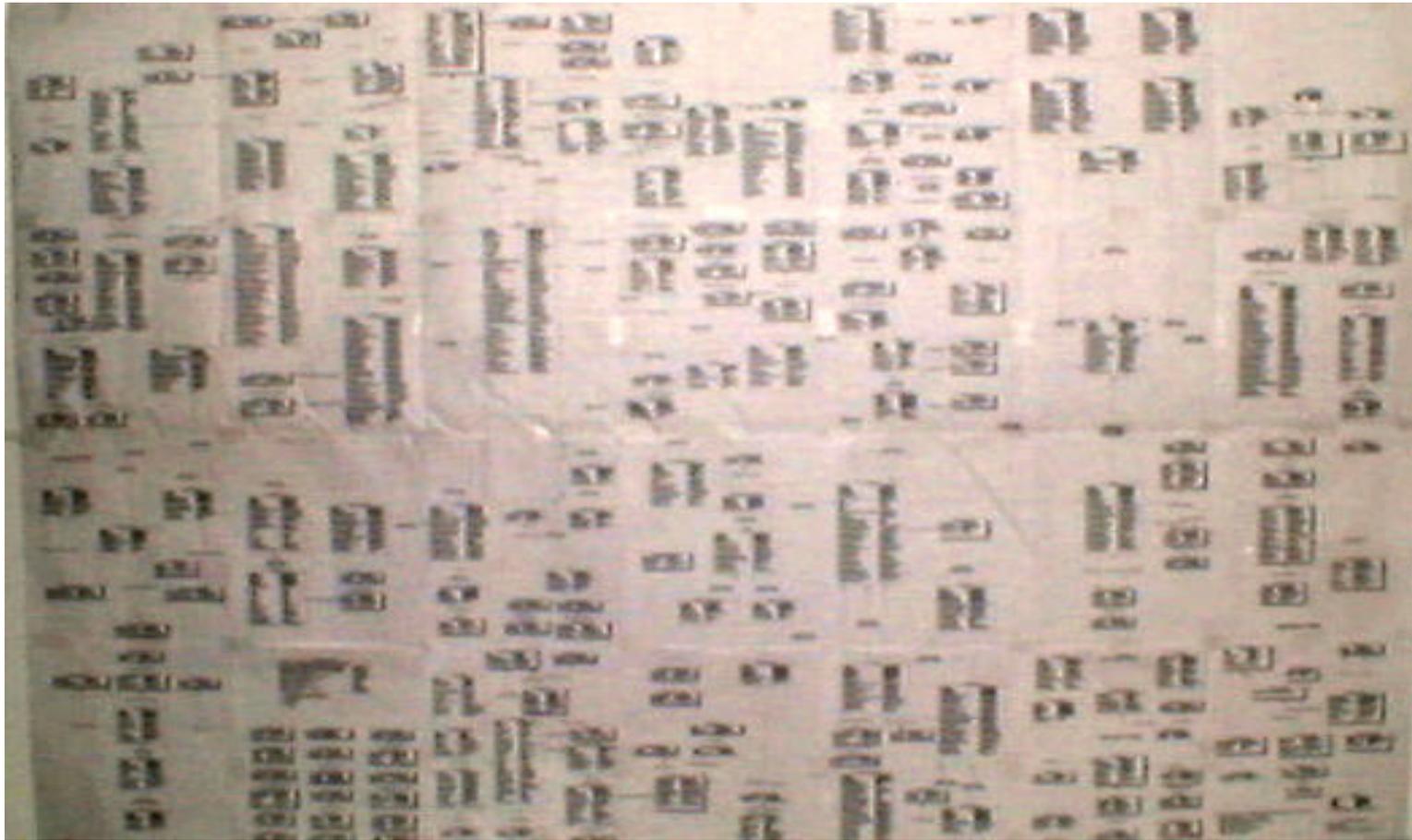




NASS Today

- EDCS - Electronic Data System
 - Relational Database
 - Hardware
 - state of the art technology to handle specific requirements
 - Communications
 - establishment of a WAN across the PSU architecture
 - Software
 - new electronic system using state of the art object oriented processes

Relational Model/ Oracle Database



EDCS Hardware

- PEN Computer at work



EDCS Hardware

- Digital Camera at work

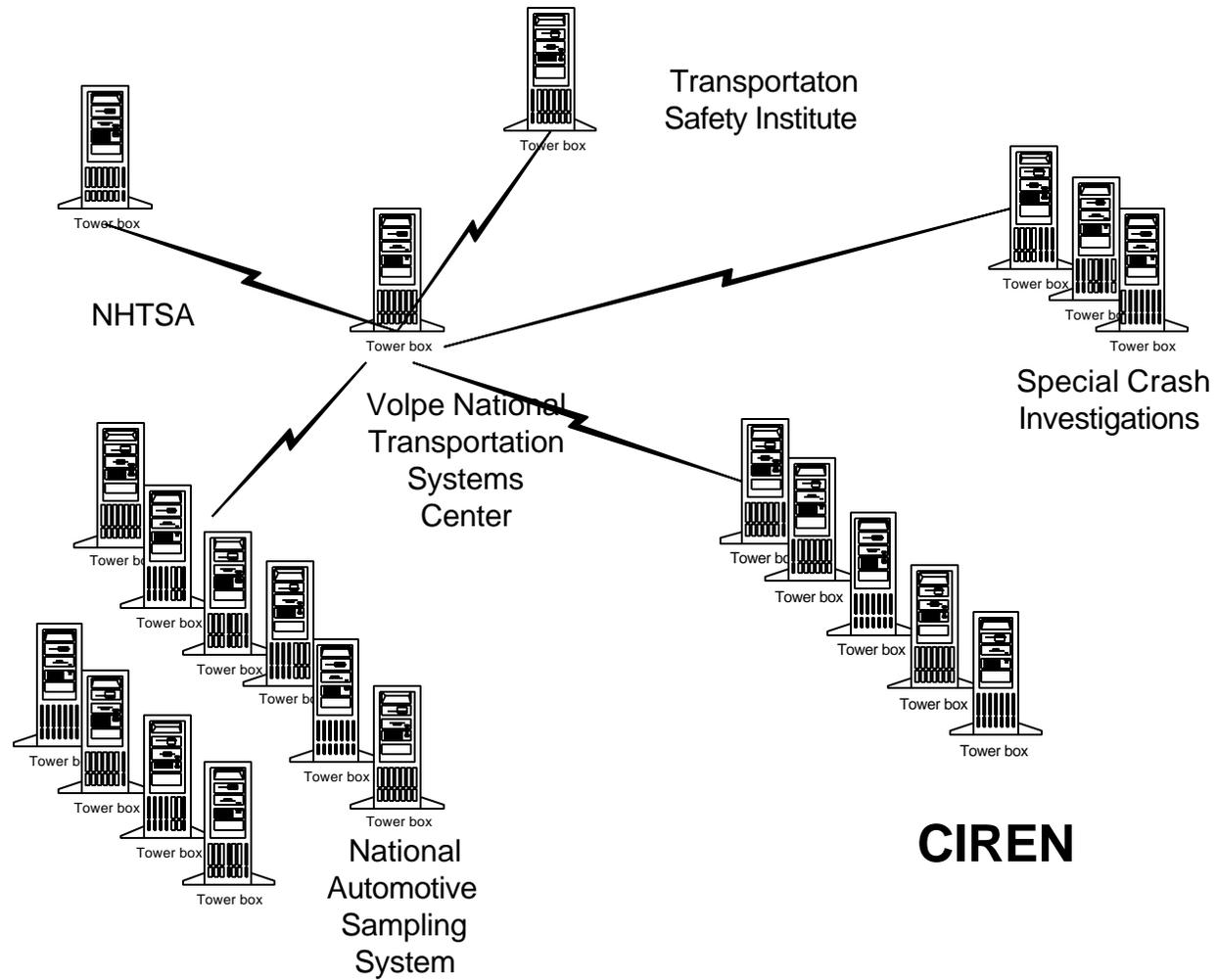


EDCS Hardware

- NT Servers and Windows 95 Desktops

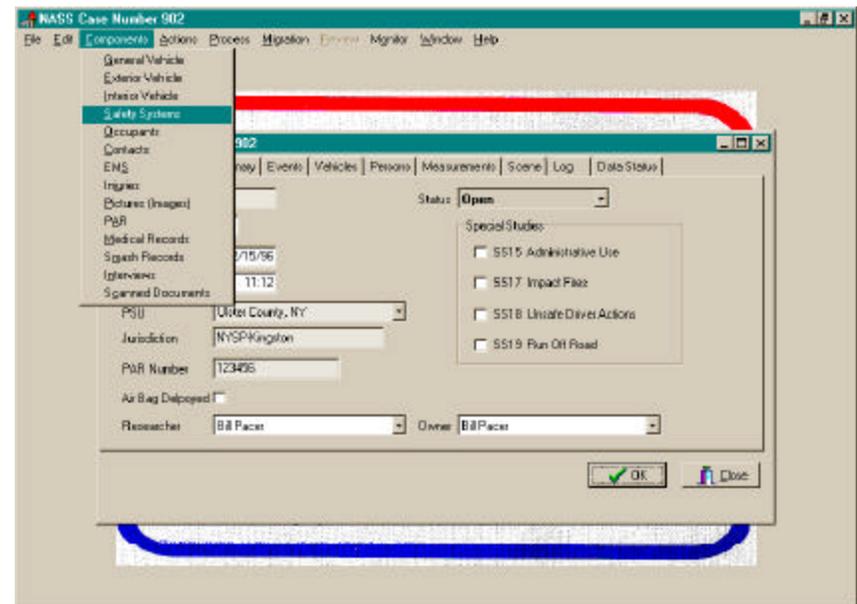


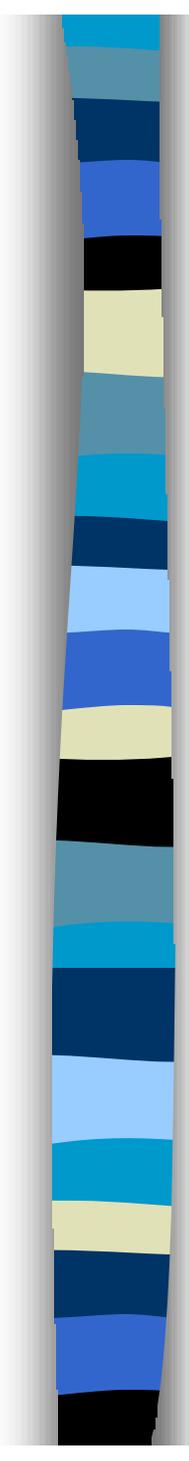
Wide Area Network



NASS Software

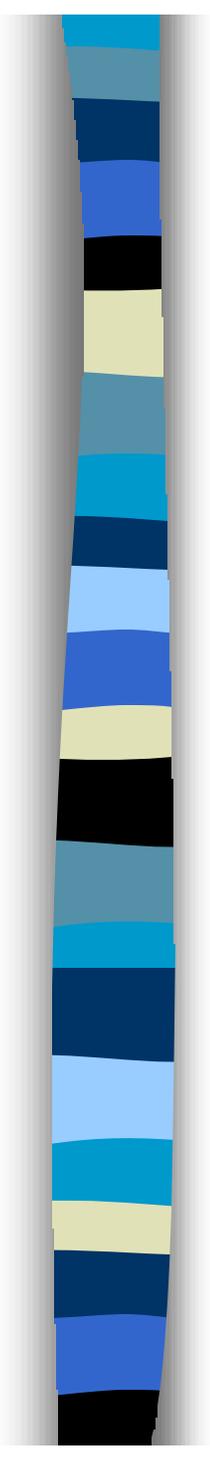
- 42 Applications
 - Sampling
 - PAR Data Collection
 - Crash Data Collection
 - Image Acquisition
 -





Electronic NASS Benefits

- Expanded Variable Set
 - 280 to 650 variables
- Relational Model will permit data mining and knowledge engineering
 - Air Bag Analysis
- Data availability
 - Weekly RABS Report
- Network



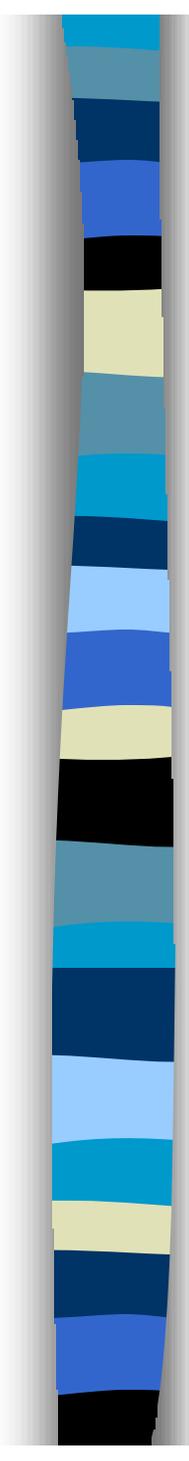
NASS Benefits

- Standardized Crash Dataset
 - SCI
 - NASS
 - GES
 - CIREN

Crash Data Collection

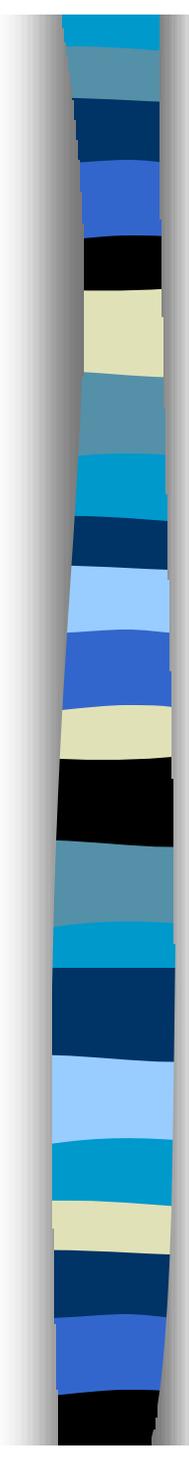


CIREN Crash
Data Collection
=
NASS Crash
Data Collection



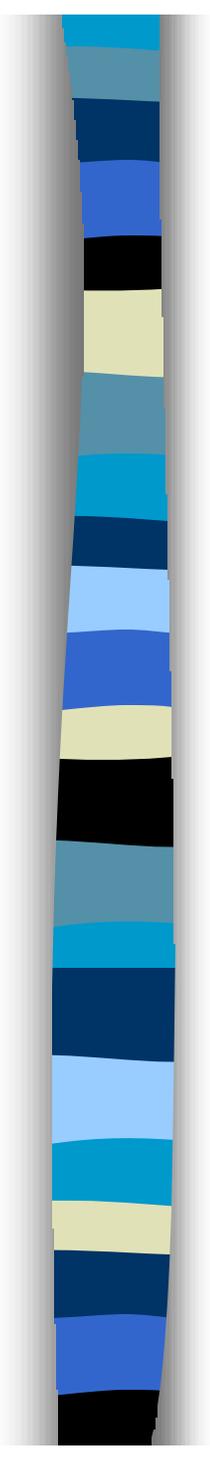
CIREN/NASS

- CIREN RUNS ON ELECTRONIC NASS
 - NASS NETWORK
 - NASS COMMUNICATIONS SYSTEM
 - NASS ORACLE DATABASE
 - NASS CRASH DATASET
 - NASS DATA MIGRATION SYSTEM



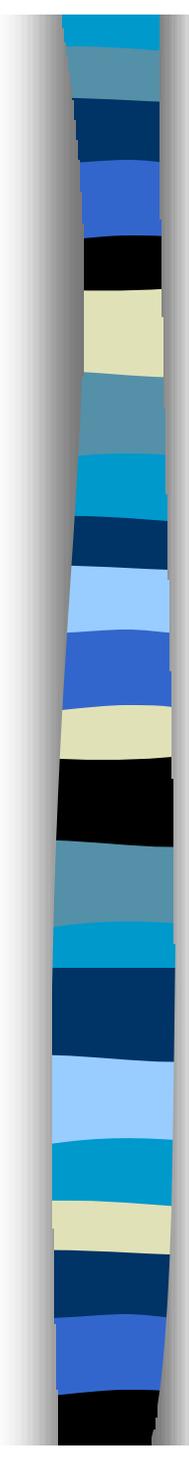
Requirements

- Network
- Database Engine - Oracle
- Crash data model
- Medical data model
- Data migration capabilities
- Interface Applications



CIREN Injury Approach

- NASS - starts from the crash
- CIREN - starts from the injured patient



Medical Data Model

- Standardized across all Centers
- Data Elements
 - CoMorbidity
 - Complications
 - GCS Scores
 - Invasive and Non Invasive Procedures
 - AIS Injury Coding
 - ...
- Oracle Database

CIREN Application

CIREN
File Edit Components Action Configuration View Window Help

Radiological Tests
Summary Detail

Intrusion
Worksheet Sketch

Row	Position	Area	Intruded Component	Comparison	Intruded	Intrusion	Magnitude	Crush Direction
▶	Second Se	Middle	Interior	Second seat back	84	37	47 >= 46 to < 61 cms	Longitudinal
	Second Se	Left	Interior	Second seat back	80	40	40 >= 30 to < 46 cms	Longitudinal
	Second Se	Right	Interior	Second seat back	87	71	16 >= 15 to < 30 cms	Longitudinal
	Second Se	Left	Interior	C-pillar	110	95	15 >= 15 to < 30 cms	Longitudinal
	Second Se	Left	Interior	Floor pan (includes	105	78	27 >= 15 to < 30 cms	Vertical
	Second Se	Left	Interior	Front seat back	32	9	23 >= 15 to < 30 cms	Longitudinal

Location: floor, Emergency Department, Emergency Department, Emergency Department, Emergency Department

OK Close

Injury Coding
Summary Detail Intrusion Points of Contact Biomechanics Radiology Operations Images Note

AIS Code	Description	Injury Source	Confidence
6502223	Cervical Spine fracture facet	Skin laceration blood loss > 20% by volume	POSSIBLE
6302142	Cervical Spine Brachial plexus incomplete plex	Belt restraint B-pillar or door frame attachment p	POSSIBLE
3906063	Skin laceration blood loss > 20% by volume	Air bag compartment cover-driver side	POSSIBLE
3906063	Skin laceration blo		
3906042	Skin laceration ma		
3908001	Skin avulsion NFS		
3908021	Skin avulsion supe		
2906021	Skin laceration mir		
2906063	Skin laceration blc		
4906063	Skin laceration blo		
4908001	Skin avulsion NFS		
7920061	Upper extremity 2n		
5906063	Skin laceration blo		
6302162	Cervical Spine Bra		

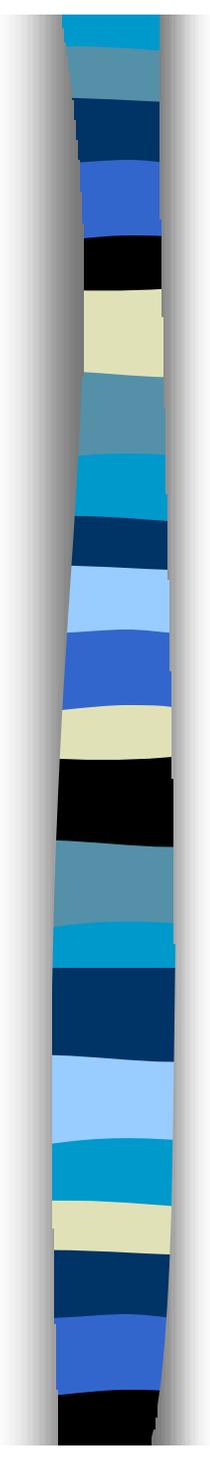
SF-36
Summary Detail Graph

Legend: 02/02/1999 (red), 04/02/1999 (green)

OK Close

Current Injury: 6502223 Cervical Spine fracture facet

OK Close



CIREN Application

- Core Data Acquisition

Anthropometric Measurements

<input type="text" value="160"/> Weight	<input type="text"/> Foot Length	<input type="text"/> Calf Circumference
<input type="text" value="67"/> Stature	<input type="text" value="1"/> Head to Trochanterion Distance	<input type="text"/> Ankle Circumference
<input type="text" value="5"/> Shoulder (Acromial Height)	<input type="text" value="1"/> Seated Height	<input type="text"/> Neck Circumference
<input type="text" value="8"/> Vertex to Symphysis Length	<input type="text" value="1"/> Knee Height, Seated	<input type="text"/> Scye (Armpit to Shoulder) Circumference
<input type="text" value="2"/> Waist Height	<input type="text" value="1"/> Head Length	<input type="text"/> Chest Circumference
<input type="text" value="9"/> Shoulder (Biacromial) Breadth	<input type="text" value="1"/> Head Breadth	<input type="text"/> Waist Circumference
<input type="text" value="1"/> Chest Breadth	<input type="text" value="1"/> Head Height (Vertex - Mentum)	<input type="text"/> Buttock Circumference
<input type="text" value="2"/> Waist Breadth	<input type="text" value="1"/> Bicep Circumference	<input type="text"/> Chest (Bust) Depth
<input type="text" value="2"/> Hip Breadth	<input type="text" value="1"/> Elbow Circumference	<input type="text"/> Waist Depth
<input type="text" value="5"/> Shoulder to Elbow (Acromium to Radiale) Length	<input type="text" value="1"/> Forearm Circumference	<input type="text"/> Buttock Depth
<input type="text" value="1"/> Forearm - Hand Length	<input type="text" value="1"/> Wrist Circumference	<input type="text"/> Interscye Distance
<input type="text" value="1"/> Tibiale Height	<input type="text" value="1"/> Thigh Circumference	
<input type="text" value="1"/> Ankle Height	<input type="text" value="1"/> Lower Thigh Circumference	
<input type="text" value="1"/> Foot Breadth	<input type="text" value="1"/> Knee Circumference	

All measurements are in centimeters

 Close

 OK

 Close

CIREN Case Form

Case Z99 Develop

CIREN Case #

Center Number

Center

Crash Date

Crash Time

Date Opened

Status

Patient Name

Date of Birth

Radiological Tests

Summary | Detail | Image #1 | Image #2

Date	Time	Cpt Code	Description	Location
07/25/1997	99:99	73000	Radiologic examination; clavicle, complete	Other (specify)
07/25/1997	99:99	70460	Computerized axial tomography, head or brain; with	EMS Vehicle
07/25/1997	99:99	70450	Computerized axial tomography, head or brain; with	Floor
07/25/1997	99:99	73510	Radiologic examination, hip, unilateral; complete,	Emergency Department
12/28/1996	99:99	70470	Computerized axial tomography, head or brain; with	Intensive Care Unit
12/28/1996	99:99	70460	Computerized axial tomography, head or brain; with	Intermediate Care Un
12/28/1996	99:99	75662	Angiography, external carotid, bilateral, selectiv	Emergency Department
12/28/1996	99:99	73510	Radiologic examination, hip, unilateral; complete,	Emergency Department

OK Close

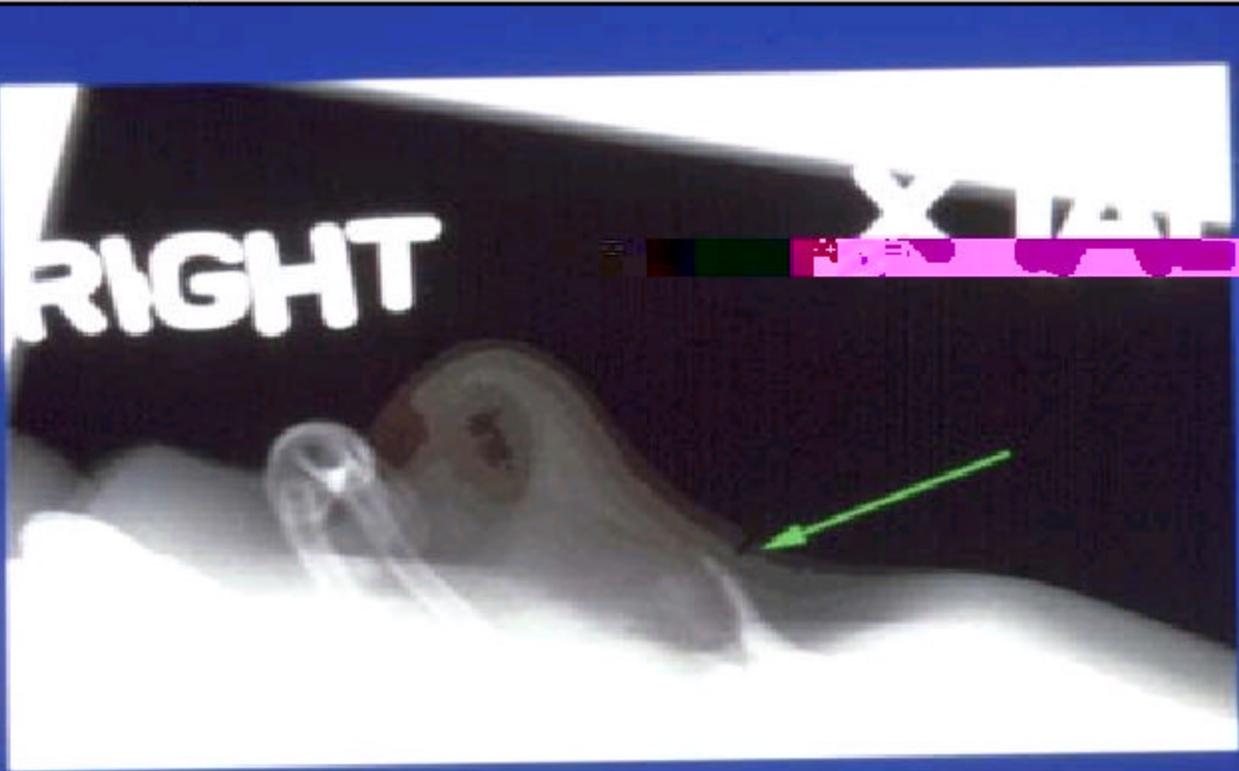
Close

Radiological Tests [min] [max] [close]

Summary | Detail | Image #1

Case | Z99 Develop

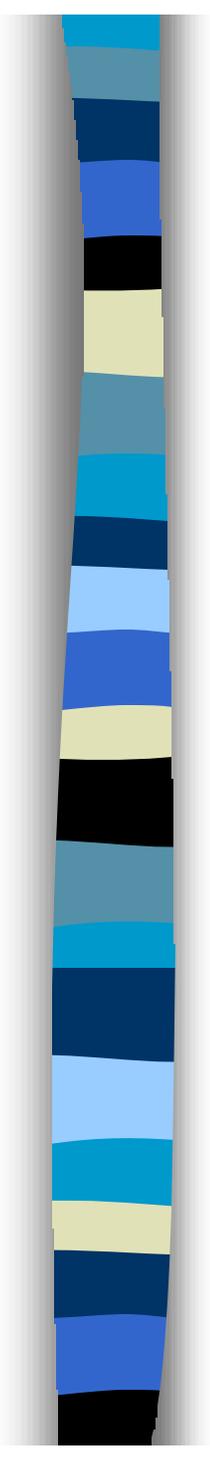
CIREN Case #
Center Number
Center
Crash Date
Crash Time
Date Opened
Status
Patient Name
Date of Birth



52-42-98

OK Cancel

Close



CIREN Application

- Injury Definition
- Injury Linking

CIREN Case I

Case | Z99 Dev

Injury
_ □ ×

Summary | Detail | Intrusion | Points of Contact | Biomechanics | Radiology | Invasive Procedures | Images | Note

AIS Code	Description	Aspect	Injury Source	Conf
I 1900991	Scalp NFS	Left;Unknown/Multiple F	Air bag-driver side and jewelry	CER
3904021	Neck/Throat Skin contusion	Right	Injured, source unknown	UNK
8904021	Lower Extremity Skin contusion	Left;Lower Leg	Center instrument panel and below	POS
1904021	Scalp contusion	Anterior/Front/Ventr	Front header	POS
8904021	Lower Extremity Skin contusion	Right;Thigh	Center instrument panel and below	PRO
8526002	Pelvis fracture NFS	Anterior/Front/Ventr	Steering column, transmission selector lever, othe	PRO
2904021	Facial Skin contusion	Inferior/Lower	Mirror	PRO
2904021	Facial Skin contusion	Inferior/Lower	Mirror	PRO
8530003	Symphysis pubis separation	Anterior/Front/Ventr	Steering column, transmission selector lever, othe	PRO
8518143	Femur fracture shaft	Right	Knee bolster	CER
8902021	Lower Extremity Skin abrasion	Left;Knee	Knee bolster	CER
8902021	Lower Extremity Skin abrasion	Right;Knee	Knee bolster	CER
2902021	Facial Skin abrasion	Superior/Upper	Sunvisor	CER
2510042	Nose fracture open/displaced/comminuted	Central	Mirror	CER
7520022	Carpus or metacarpus fracture	Right	Windshield	CER
7902021	Upper Extremity Skin abrasion	Right;Hand/Digits	Windshield	CER

Current Injury:

✓ OK
Close
Close

CIREN C

Center N

Center

Crash De

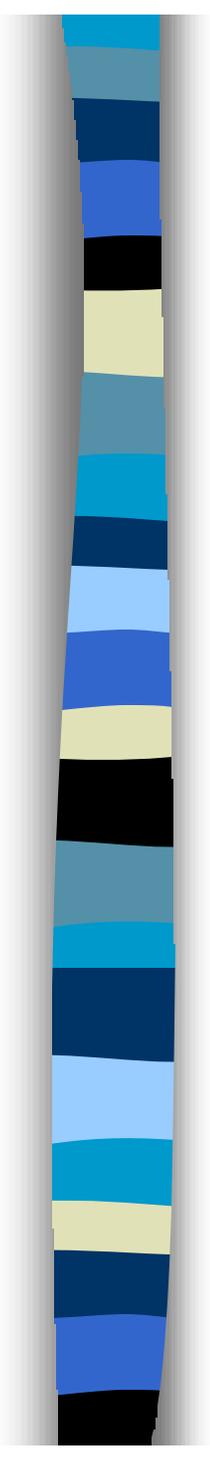
Crash Tir

Date Ope

Status

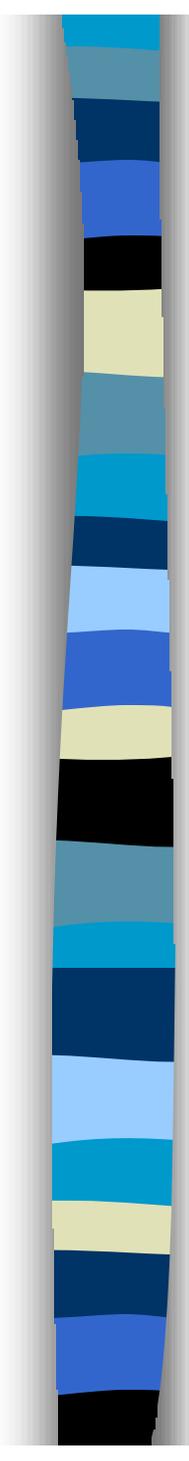
Patient N

Date of E



Central Repository

- Access to all cases from all centers
- Access to NASS Archive Data
- Central Query Capability - available by 11/1/99.



CIREN Quality Control

- Cross Center Crash Review
 - Crash Investigator Peer Review

General Vehicle Form, Case 1997-2-136H/ Vehicle #1

Vehicle | Official Records | Pre Crash Environment | DRIVER | AOPS | Rollover | Reconstruction | Delta V | LOG | QI | < | >

Pre-crash Environmental Data

General

Interchange or Junction: Intersection related / non-interchange

Trafficway Flow: Not physically divided (

Travel Lanes: Four

Roadway

Alignment: Straight

Profile: Downhill grade (>2%)

Surface Type: Bituminous (asphalt)

Surface Condition: Dry

Press F6 for Field Review

Conditions

Interchange or Junction

Original value
Intersection related / non-interchange

Suggested value

Error

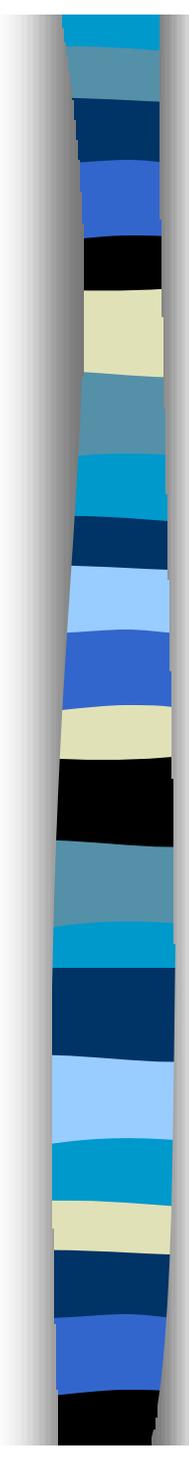
Reason

Comments

✓ OK

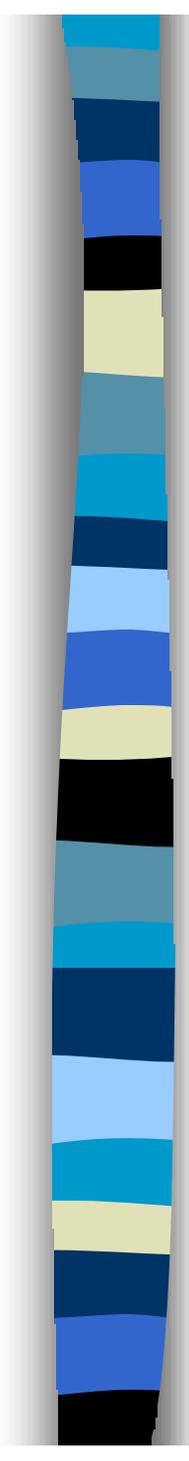
✗ Cancel

Close



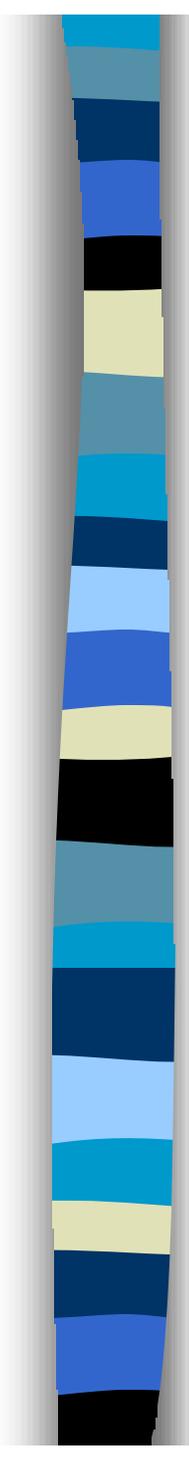
CIREN Quality Control

- Cross Center Medical Review
 - Re-Injury Coding another center's case.



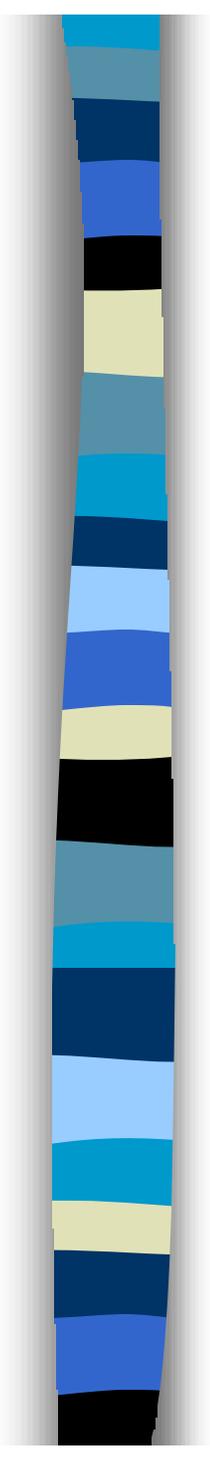
CIREN Cross Center Expertise

- Case Copying
- Industry Viewing



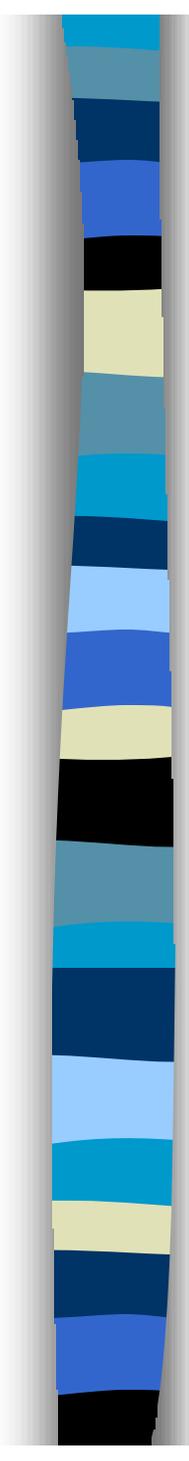
CIREN Capabilities

- Common Comparable Elements
- Central Repository
- Rapid Exchange
- Cross Center Expertise
- Links Surgeons to Crash Experts to Engineers
- Electronic Rounds



Compare to Objectives

- Collect/Store Crash and Medical Data
- Standardize Variables across centers
- Standardize Crash Variables to enable universe comparison
- Enable cross center data sharing
- Enable cross center data analysis
- Enable data sharing and analysis between the engineering and medical community



NASS/CIREN Intranet

- Tool to facilitate communication between Centers, Government, Development and Operations
- Facilitate Standards and Information



Electronic Data Collection System Intranet

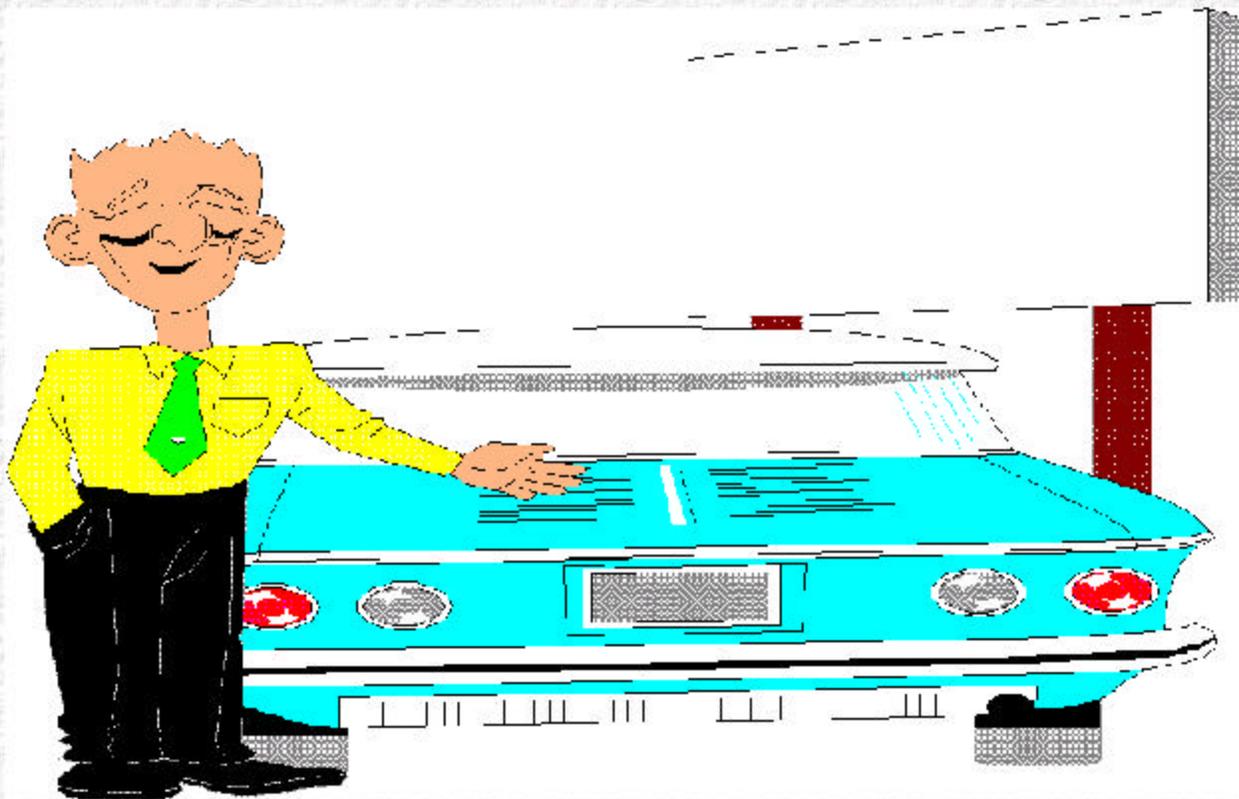


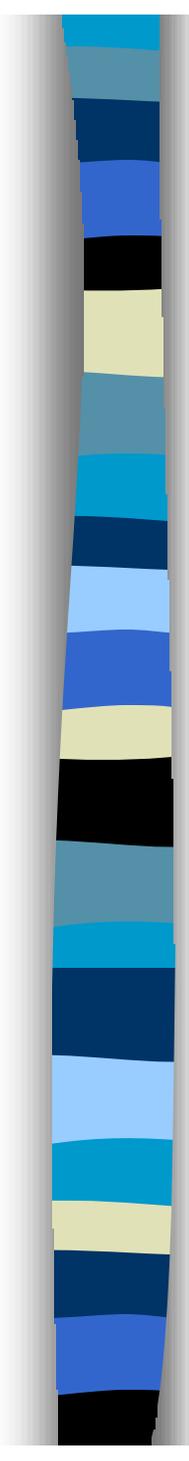
Welcome to the Electronic Data Collection System Intranet

- General
- [News](#)
- [AQs](#)
- [Software](#)
- [Hardware](#)
- [Meetings](#)
- [New Car Safety](#)
- [Features](#)

- ASS
- [User](#)
- [Issues](#)
- [Release](#)
- [Notes](#)
- [Manuals](#)
- [Lit](#)
- [Checks](#)
- [Poster](#)

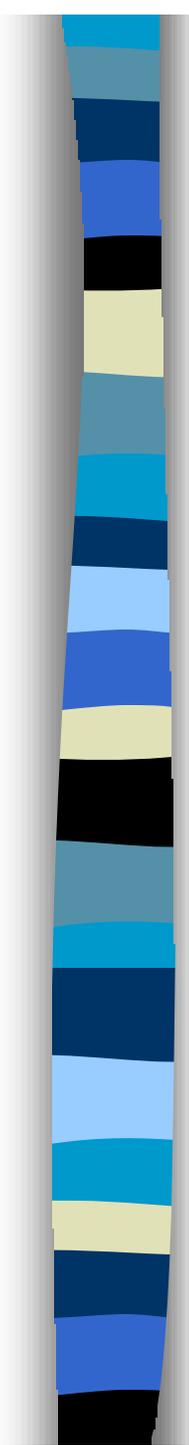
- REN
- [User](#)
- [Issues](#)
- [Release](#)
- [Notes](#)
- [Manuals](#)
- [Poster](#)





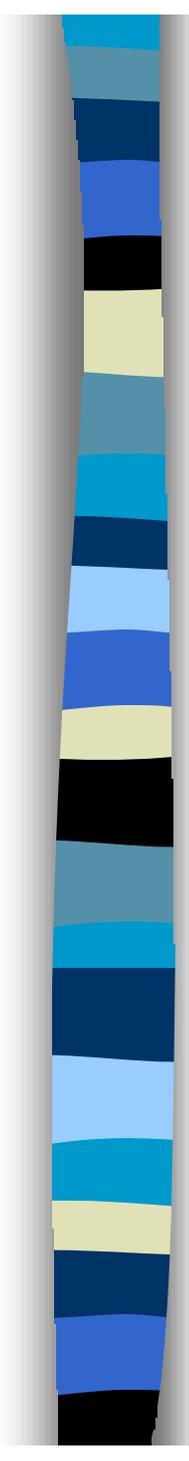
CIREN Phase 2

- Biomechanic Database Model and interface
- Event Data Recorder data import into the Oracle Database
- Electronic Rounds and improved data migration system
- Funded by General Motors



The Future

- Information
 - data becoming knowledge
- Data Repository
 - database with images
 - data becoming information
- OLAP - Online Analytical Processing
- IntraNet
- InterNet
- ExtraNet



The Future

- Disclaimer

- The following slides represent ideas, only. Data represented within them is fantasy

- Purpose is to stimulate ideas

NASS/CIREN Tomorrow

Netscape - [NASS Query System]

File Edit View Go Bookmarks Options Directory Window Help

Location: file:///J%7C/documents/VOLPE/nassquery.html

NASS Query System

Ask your question of the Query Vendor - not to be confused with a Car Salesperson.

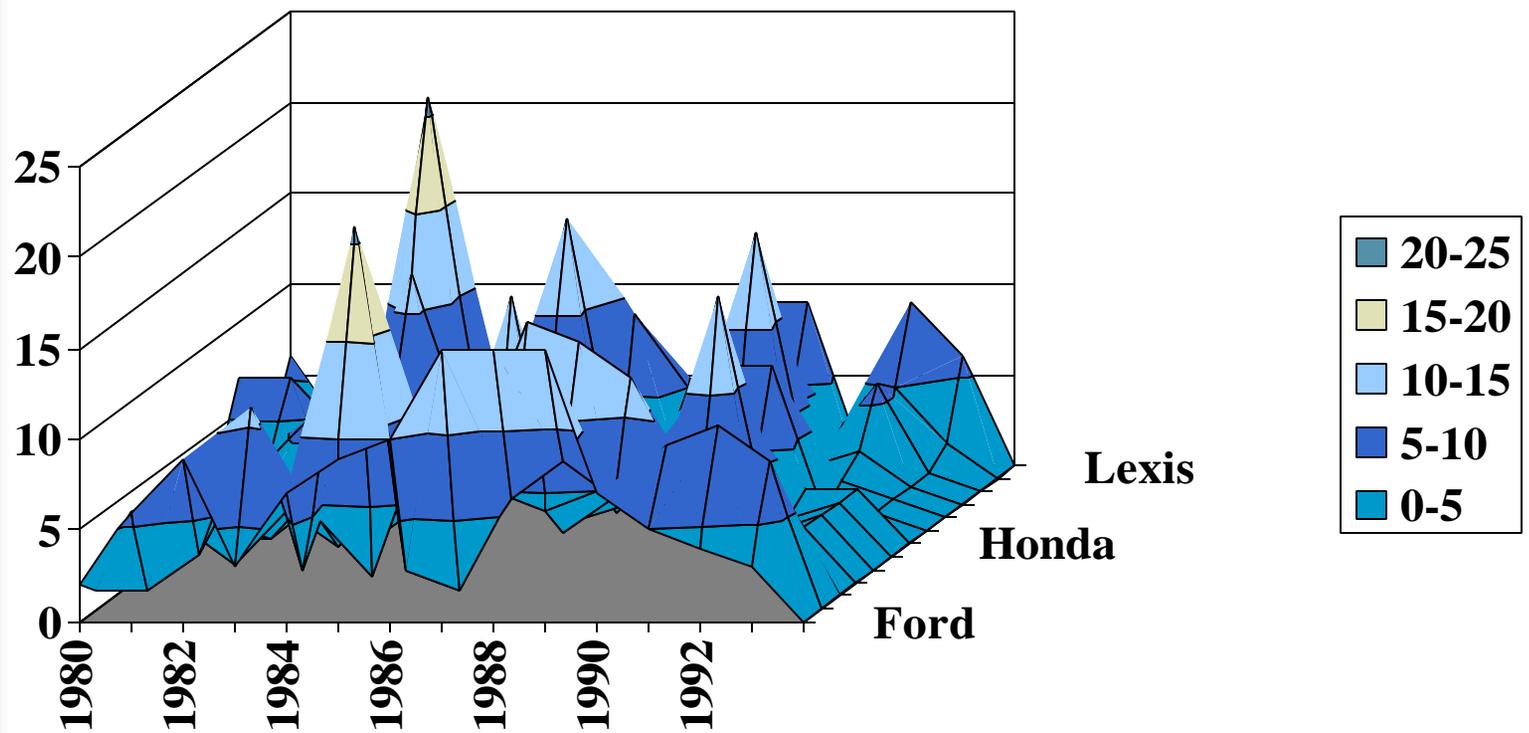


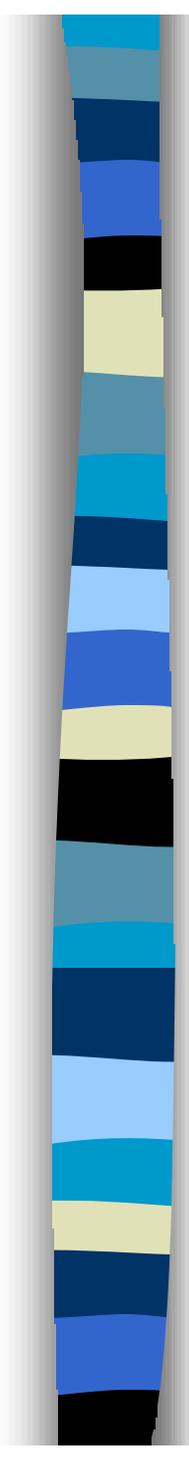
What is the distribution of Fires by Make/Model and Model Year?



Document: Done

NASS/CIREN Tomorrow





NASS/CIREN Tomorrow

■ Drill Down To Vehicles

Make	Model	Model Year	Crash Date	Case #
Ford	Fairlane	1988	1/12/92	102H
Ford	Fairlane	1988	2/14/89	213J
Ford	Fairlane	1988	6/11/92	222K
Ford	Arostar	1990	1/24/91	125A
Honda	Civic	1989	4/15/92	213B
Honda	Civic	1990	12/21/93	322C
Honda	Civic	1990	6/17/91	256H
Honda	Accord	1991	10/22/95	111A

NASS/CIREN Tomorrow

■ Drill Down to Vehicle

General Vehicle Form, Case 902/ Vehicle #1

Vehicle | Official Records | Pre Crash Environment | DRIVER | ADPS | Rollover | Reconstruction

Identification

Number: 1 | Identification Number: HLS303738711

Model Year: UNKNOWN | Vehicle Special Use: Taxi

Make: NISSAN / DATSUN | In Transport:

Model: Z-CAR, ZX

Body Category: Automobiles

Body Type: 3-door/2-door hatchback

Class: Subcompact/mini (wheelbase < 254 cm)

Weight

Curb Weight: 1221 Kgs

Source: Other (specify)

Cargo Weight: UNKNOWN Kgs

Source: Vehicle inspection

Inspection

Type of Inspection: No Inspection

Date:

OK Close



NASS/CIREN Tomorrow

■ Drill Down to the Case

NASS Case Number 902

File Edit Components Actions Process Migration Review Monitor Window Help

General Vehicle
Exterior Vehicle
Interior Vehicle
Safety Systems
Occupants
Contacts
EMS
Injuries
Pictures (Images)
P&R
Medical Records
Smash Records
Interviews
Scanned Documents

902

Primary Events Vehicles Persons Measurements Scene Log Data Status

Status: **Open**

Special Studies

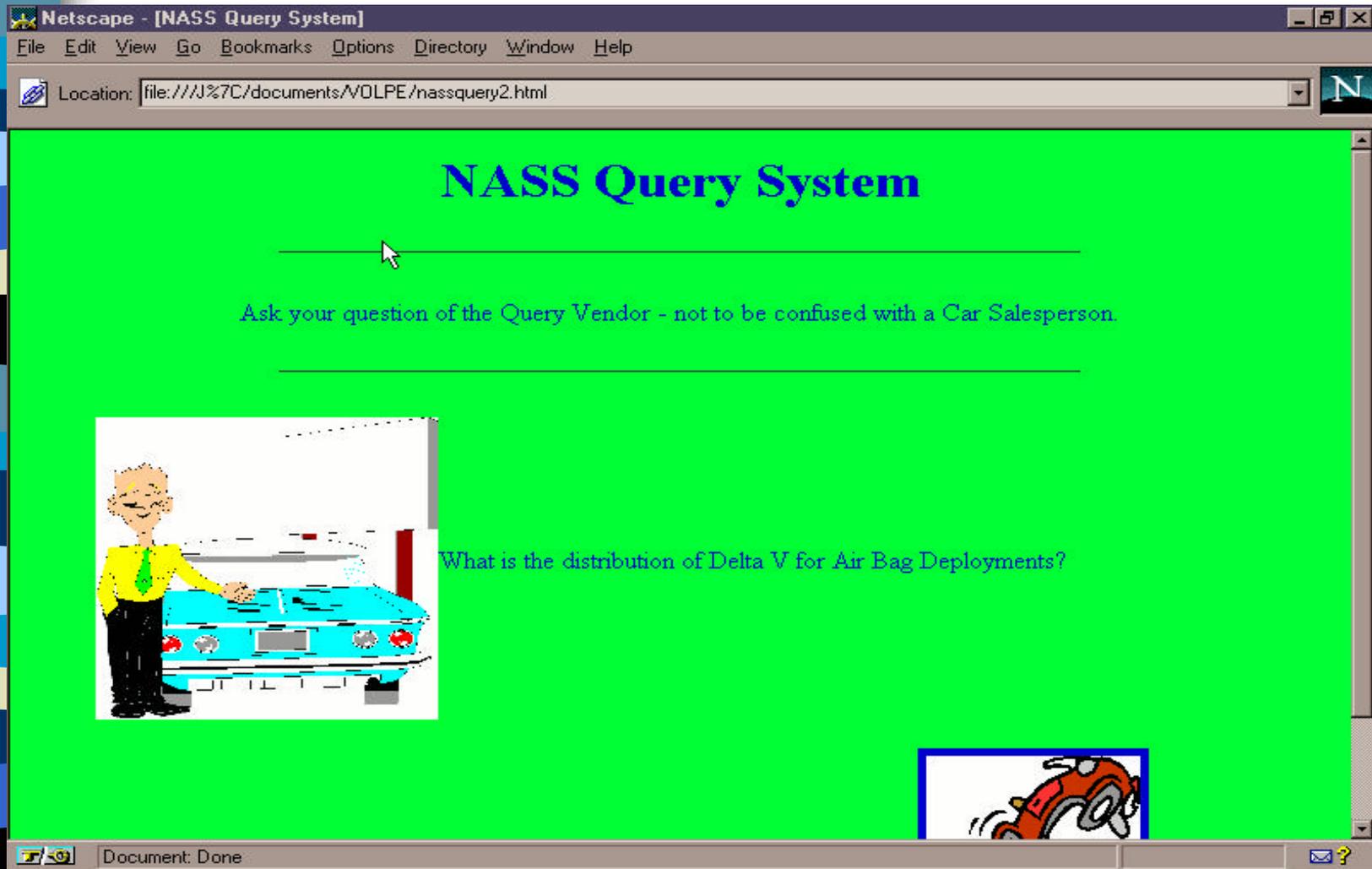
SS15 Administrative Use
 SS17 Impact Fires
 SS18 Unsafe Driver Actions
 SS19 Run Off Road

PSU: Ulster County, NY
Jurisdiction: NYSP-Kingston
PAR Number: 123456
Air Bag Deployed:
Researcher: Bill Pacer
Owner: Bill Pacer

OK Close



NASS/CIREN Tomorrow



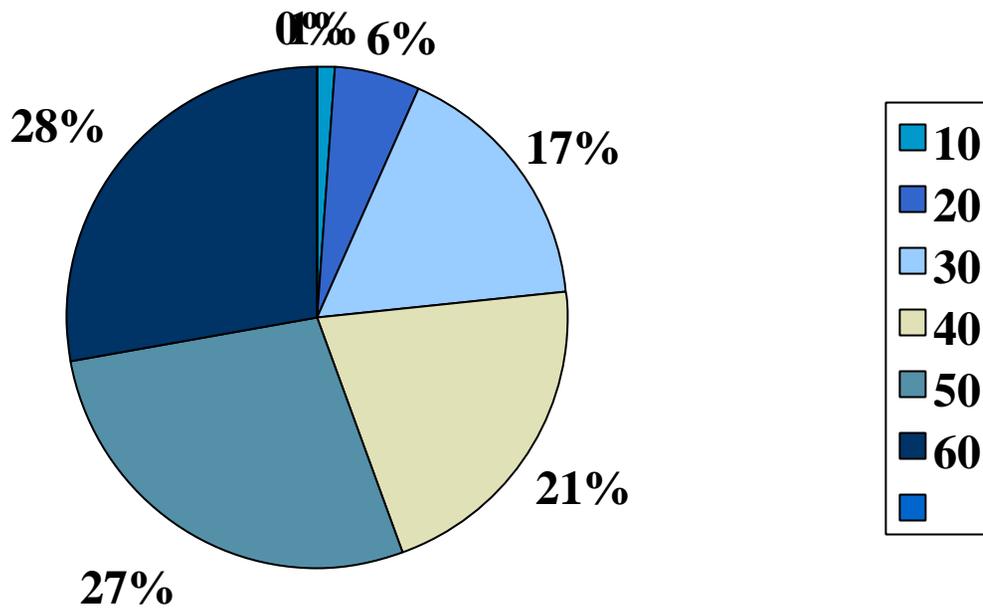
The screenshot shows a Netscape browser window titled "Netscape - [NASS Query System]". The address bar contains the file path: "file:///J%7C/documents/VOLPE/nassquery2.html". The main content area has a green background and features the following elements:

- NASS Query System**: A large blue title at the top.
-
- Ask your question of the Query Vendor - not to be confused with a Car Salesperson.**: A line of blue text with a mouse cursor pointing to it.
-
- : A cartoon illustration of a man in a yellow shirt and black pants standing next to a blue car.
- What is the distribution of Delta V for Air Bag Deployments?**: A blue question text.
- : A small cartoon illustration of a red car in the bottom right corner.

The browser's status bar at the bottom shows "Document: Done" and a help icon.

NASS/CIREN Tomorrow

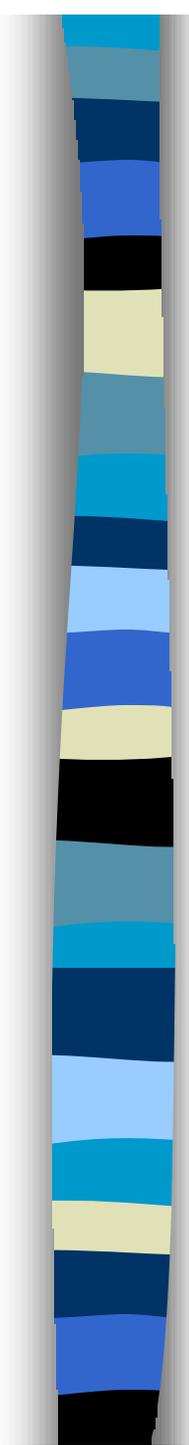
■ Delta V and Air Bag Deployment



NASS/CIREN Tomorrow

- Drill Down to Air Bags





Future Today

- NASS Web Site
- 9/20 Beta Testing by 20 Industry Users
 - Manuals
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 - SCI and CDS Electronic Cases
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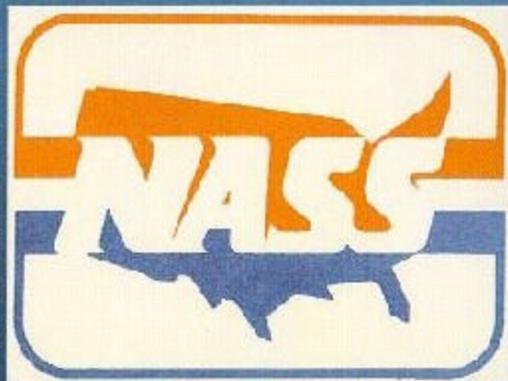
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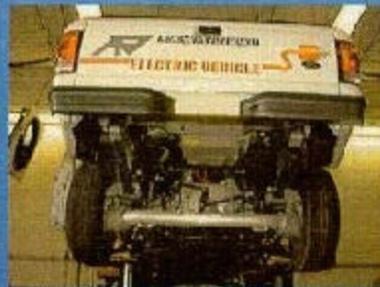


NATIONAL AUTOMOTIVE SAMPLING SYSTEM

SPECIAL CRASH INVESTIGATION



NASS MISSION
 To provide nationally representative data on motor vehicle traffic crashes for determining crash trends and use



SCI MISSION
 To examine the safety impact of new, emerging, and rapidly changing technology (such as air bags and alternative fuel



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HISTORY OF THE NATIONAL AUTOMOTIVE SAMPLING SYSTEM

Welcome to the **National Automotive Sampling System** (NASS). NASS is under the auspices of the National Highway Traffic Safety Administration's (NHTSA) National Center for Statistics and Analysis. The NASS program, formerly known as the National Accident Sampling System, is the mechanism through which NHTSA collects nationally representative data on motor vehicle traffic crashes to aid in the development, implementation, and evaluation of motor vehicle and highway safety countermeasures.

NASS was originally designed and implemented in 1979 to support highway and motor vehicle safety programs. The NASS program was reevaluated in the mid-1980's. The evaluation team concluded that the program should be redesigned to focus on enhanced in-depth analysis of passenger vehicle crash protection performance. This reevaluation resulted in changes which NHTSA implemented in January 1988. To enhance its applicability in addressing crashworthiness issues, the NASS was divided into two components: (1) the General Estimates System (GES) which collects data from an annual sample of approximately 55,000 police-reported motor vehicle traffic crash reports; and (2) the Crashworthiness Data System (CDS) which collects additional detailed information on an annual sample of approximately 5,000 police-reported motor vehicle traffic crashes involving a towed passenger car, light truck or van that is less than or equal to 10,000 pounds (4,536 kilograms) gross vehicle weight rating (GVWR).

The following are short descriptions of the NASS GES and CDS:

A. NASS GENERAL ESTIMATES SYSTEM

The NASS GES obtains its data from a nationally representative probability sample of approximately 55,000 police reported motor vehicle traffic crashes annually. The data are obtained by GES data collectors in 60 geographic sites across the United States. These data collectors make weekly, biweekly, or monthly visits to approximately 400 police agencies within the 60 sites. During the visit, the data collectors list all police traffic crash reports not previously listed and then select a sample of the listed police traffic crash reports. The collector obtains copies of these selected police traffic crash reports and sends them to their regional NASS Zone Center for coding. Trained personnel interpret and code data directly from the police traffic crash reports onto an electronic file. To protect individual privacy, no personal information such as names, addresses, specific crash location, etc., is coded.

B. NASS CRASHWORTHINESS DATA SYSTEM

In the NASS Crashworthiness Data System, a national representative sample of motor vehicle traffic crashes is selected for the collection of data in sufficient detail to support the Agency's standards development and evaluation programs. The NASS CDS collects data on



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CD - ROM LISTING FOR AVAILABLE SCI CASES

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[SBC1 - School Bus Crashes/Incident Case Reports](#)

[AFV1 - Alternative Fuel Vehicle Case Reports](#)

F1 FATAL AND SERIOUSLY INJURED CHILDREN NOT IN A RFCSS

RESTRAINT TYPE	CASE NUMBER	OCCUPANT DISPOSITION	CASE STATUS
CHILDREN	CA9200	FATAL	AVAILABLE
CHILDREN	CA9443	FATAL	AVAILABLE
CHILDREN	CA92005	FATAL	AVAILABLE
CHILDREN	CA92000	FATAL	AVAILABLE
CHILDREN	CA92001	FATAL	AVAILABLE
CHILDREN	CA92003	FATAL	AVAILABLE
CHILDREN	CA9601	FATAL	AVAILABLE
CHILDREN	DS9420	FATAL	AVAILABLE
CHILDREN	DS9611	FATAL	AVAILABLE
CHILDREN	DS9721	FATAL	AVAILABLE



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CDS SAS and Flat Files

The CDS SAS and Flat Files may be downloaded as self-extracting Zip files. The files per year are available as PC Mode SAS, Transport SAS, Flat File and the SAS Formats. Please note that the formats are stored separately.

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- [Transport SAS Files](#)
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crashes investigated. Agency procedure for release, accuracy and security of research data collected under the NASS program prohibit the dissemination of any information collected, assembled, derived or computed until all conditions of data gathering and reporting, case completeness, quality control and privacy have been completed. The cases available through the NASS web query system have met these conditions.

SELECT A SINGLE CASE

Case ID OR Year PSU Number

SELECT FROM A LIST OF CASES BASED ON CRITERIA BELOW

Crash Criteria		Vehicle Criteria	
Year	<input type="text" value="1997"/>	Make	<input type="text" value="All"/>
Month	<input type="text" value="All"/>	Start Model Year	<input type="text" value="All"/>
Mortality/Injury Severity	<input type="text" value="All"/>	End Model Year	<input type="text" value="All"/>
Air Bag Available	<input type="text" value="All"/>	Max # Vehicles	<input type="text" value="All"/>
Child Seat Involved	<input type="text" value="All"/>	Vehicle Type	<input type="text" value="All"/>
Occupant Type	<input type="text" value="All"/>	<input type="button" value="Get Case List"/>	<input type="button" value="Reset Filters"/>

Move to:
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Please send comments about this page to:
scally@volpe.dot.gov



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Case Summary, Case #1997-002-001 (CaseId: 1100081)

Crash | Structure | Summary | Events | Vehicles | Persons | Scene | Annotation | Components

Case Number

Stratum

Date of Crash

Time of Crash

Special Studies

- SS15 Administrative Use
- SS17 Impact Fires
- SS18 Unsafe Driver Actions
- SS19 Run Off Road

Air Bag Deployed

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Case Summary, Case #1997-002-001 (CaseId: 1100081)

Crash | Structure | **Summary** | Events | Vehicles | Persons | Scene | Annotation | Components

Case Summary

Crash Type

Configuration

Vehicle #1 traveling north on two lane undivided roadway negotiating a curve to the right. Vehicle #1 loses control on snow/ice covered roadway going off right side of road striking a culvert pipe continuing on and riding up a small embankment and rolling over to the left coming to rest on its roof. Vehicle #1 was towed due to damage. Operator complained of pain to his knee, but was not transported. It was snowing, the roadway was snow/ice covered and it was daylight at the time of the accident.

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File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://www-nass.nhtsa.dot.gov/BIN/NASSCaseCS.exe/NASSCaseCSScene?CASEID=1100081&CN=1997-002-001> Links

-2% grade at AFR
2% superelevation

small dirt embankment

gouge

small stone wall

culvert pipe

N

Done Internet zone

Internet zone

Spring - C:\WIN... | Inbox - Microsoft Du... | NASS Case - Micros... | FullShot 99 | pcAnywhere | Case Summary, ... | 6:07 PM

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Address <http://www-nass.nhtsa.dot.gov/NASS/>



NHTSA

Case Summary, Case #1997-002-001 (CaseId: 1100081) - Microsoft Internet Explorer

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Address <http://www-nass.nhtsa.dot.gov/BIN/NASSCaseCS.exe/NASSCaseCSScene?CASEID=1100081&CN=1997-002-001> Links

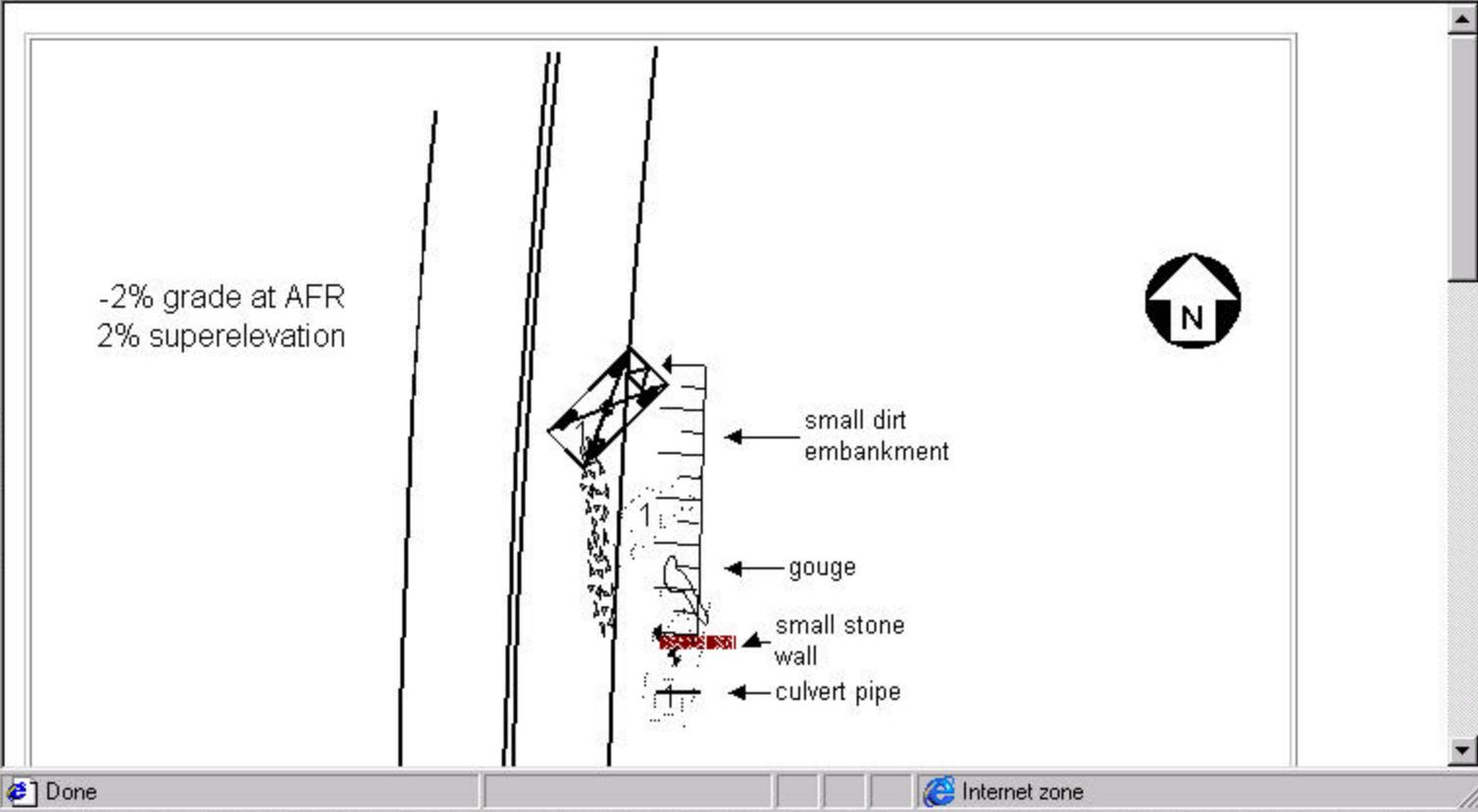
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Done Internet zone

Internet zone



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Exterior Vehicle, Case 1997-002-001/Vehicle 1 (CaseId: 1100081, VehicleId: 100009002)

[Vehicle](#) | [Damage](#) | [Specifications](#) | [Fuel](#) | [Fire](#) | [CRUSH PROFILE](#) | [CDC](#) | [SKETCHES](#)

Identification

Number	<input type="text" value="1"/>	Identification Number	<input type="text" value="JHMAB5226E"/>
Model Year	<input type="text" value="1984"/>	Vehicle Special Use	<input type="text" value="No Special Use"/>
Make	<input type="text" value="HONDA"/>	In Transport	<input checked="" type="checkbox"/>
Model	<input type="text" value="PRELUDE"/>		
Body Category	<input type="text" value="Automobiles"/>		
Body Type	<input type="text" value="2-door sedan, hardtop, coupe"/>		
Class	<input type="text" value="Subcompact/mini (wheelbase < 254 cm)"/>		

Weight

Curb Weight (Kgs)	<input type="text" value="1028"/>
Source	<input type="text" value="Automotive News"/>
Cargo Weight (Kgs)	<input type="text" value="0"/>
Source	<input type="text" value="Vehicle inspection"/>

Inspection

Type of Inspection	<input type="text" value="Complete Inspection"/>
--------------------	--

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[CDC Summary](#)

Event	Object Contacted	Force Dir	CDC	Total	Long	Lateral	Energy	Impact	Barrier	Est	Rank
1	Ditch or culvert	0	12FRWN2	UNK	UNK	UNK	UNK	UNK	UNK	Damage severity - Minor	2
2	Wall	300	10LPLN1	UNK	UNK	UNK	UNK	UNK	UNK	Damage severity - Minor	3
3	Overturn->rollover (excludes end-over-end)	Non-Horizontal	00TYDO3	UNK	UNK	UNK	UNK	UNK	UNK	Damage severity - Moderate	1



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Exterior Vehicle, Case 1997-002-001/Vehicle 1 (CaseId: 1100081, VehicleId: 100009002)

Vehicle | Damage | Specifications | Fuel | Fire | CRUSH PROFILE | CDC | SKETCHES

Details | CDC Summary

Event No. CDC No.

Object Contacted

Category
 Object
 Force Direction (degrees)
 Increment

 Override/Underride

Deformation

Location
 Long/Lateral
 Vertical/Lateral
 Distribution
 Extent
 Summary

DELTA V

Total	Longtdl	Lateral	Energy	Impact	Barrier	Estimated	Rank
UNK	UNK	UNK	UNK	UNK	UNK	Damage severity - Moderate	1

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- Lookback From Impact to PreCrash - #
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 - [EMBANKMENT](#)
- VEHICLE1
 - FRONT
 - [FRONT](#)
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 - Front/Left Oblique

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Address <http://www-nass.nhtsa.dot.gov/NASS/>



NHTSA

Case Image Detail, Case #1997-002-001 (Caselid: 1100081) - Microsoft Internet Explorer

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Address <http://www-nass.nhtsa.dot.gov/BIN/NASSCaselmg.exe/lmgDet?CASEID=1100081&IMAGEID=9157&VERSIONNUMBER=0> Links

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ACCIDENT
SCENE
LOOK BACK
BACK ALONG
PATH



VEHICLE FRONT FRONT



VEHICLE FRONT



VEHICLE FRONT FRONT



VEHICLE FRONT



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Select a category

Crash

Then specific variables

Day of Week for years 1988 to 1997

View the frequency and obtain the case list

This page allows you to run selected queries against the 1988 through 1997 NASS data sets. First select a general category, then specific variables. Finally, select the years to include in the query. For one year only choose the same year for both the beginning and end. The results of the query are a frequency table and pie and bar charts. The table presents both raw counts and National Estimates. The charts present raw counts only. From the table you can drill down to specific cases by clicking on a link. For 1997 cases you can view the electronic case, including images, by pressing the View Case button on the case list. Electronic data are not available prior to 1997.

Version 6.5.6 Last updated September 2, 1999.



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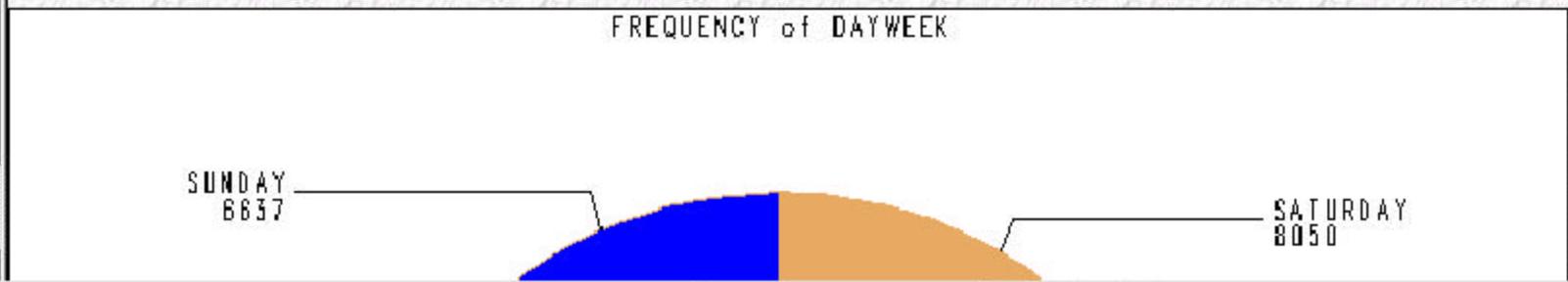
Frequency table for dayweek

For years 1988 to 1997

[View the pie chart for this query](#)

[View the bar chart for this query](#)

Category	Count	Weighted Count	Percentage
SUNDAY	6637	2242476.4	11.7
MONDAY	6540	2497678.0	13.0
TUESDAY	6473	2707674.1	14.1
WEDNESDAY	6457	2543984.1	13.3
THURSDAY	6575	2757508.0	14.4
FRIDAY	8013	3478854.1	18.1
SATURDAY	8050	2941595.2	15.3





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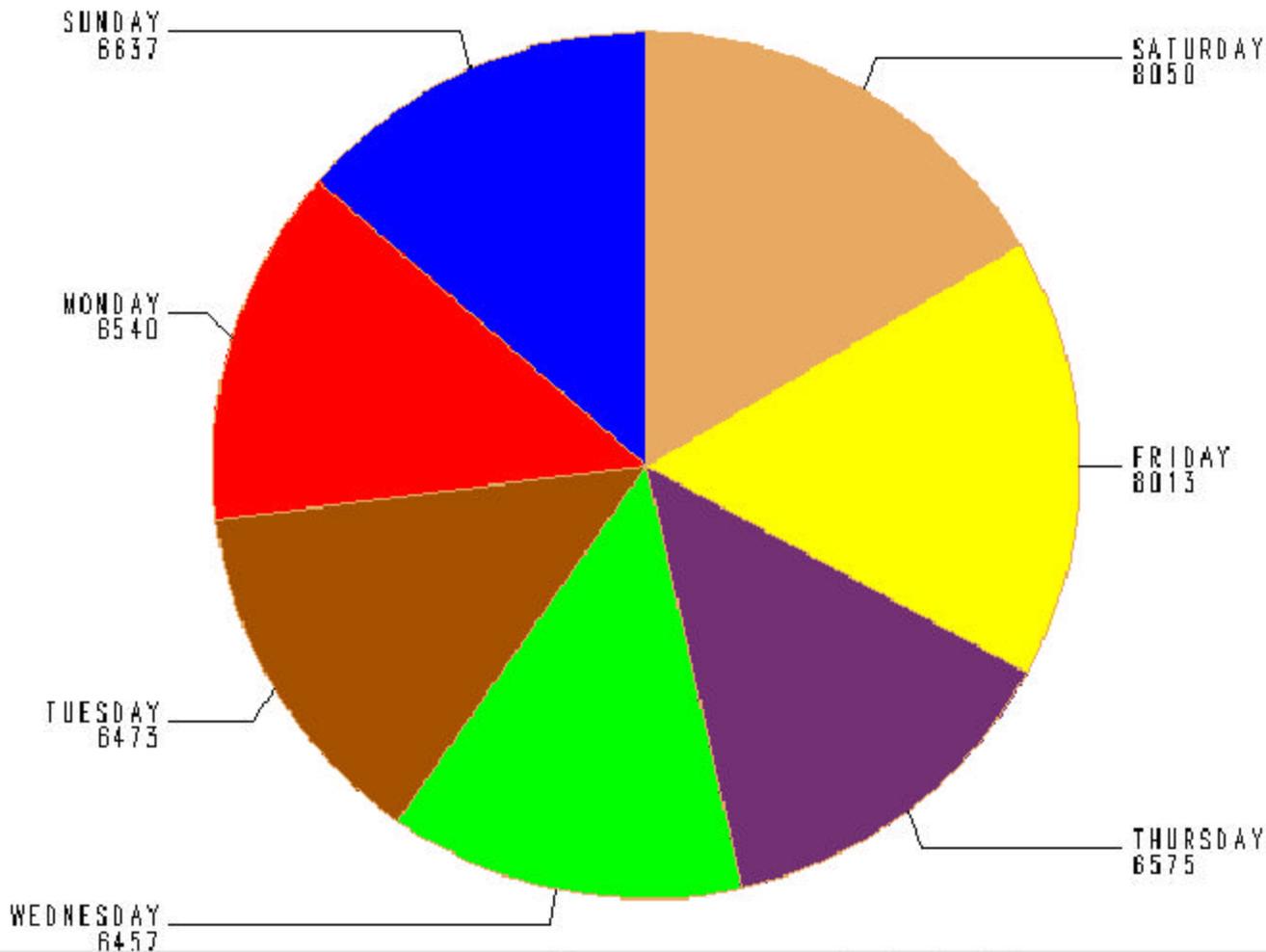
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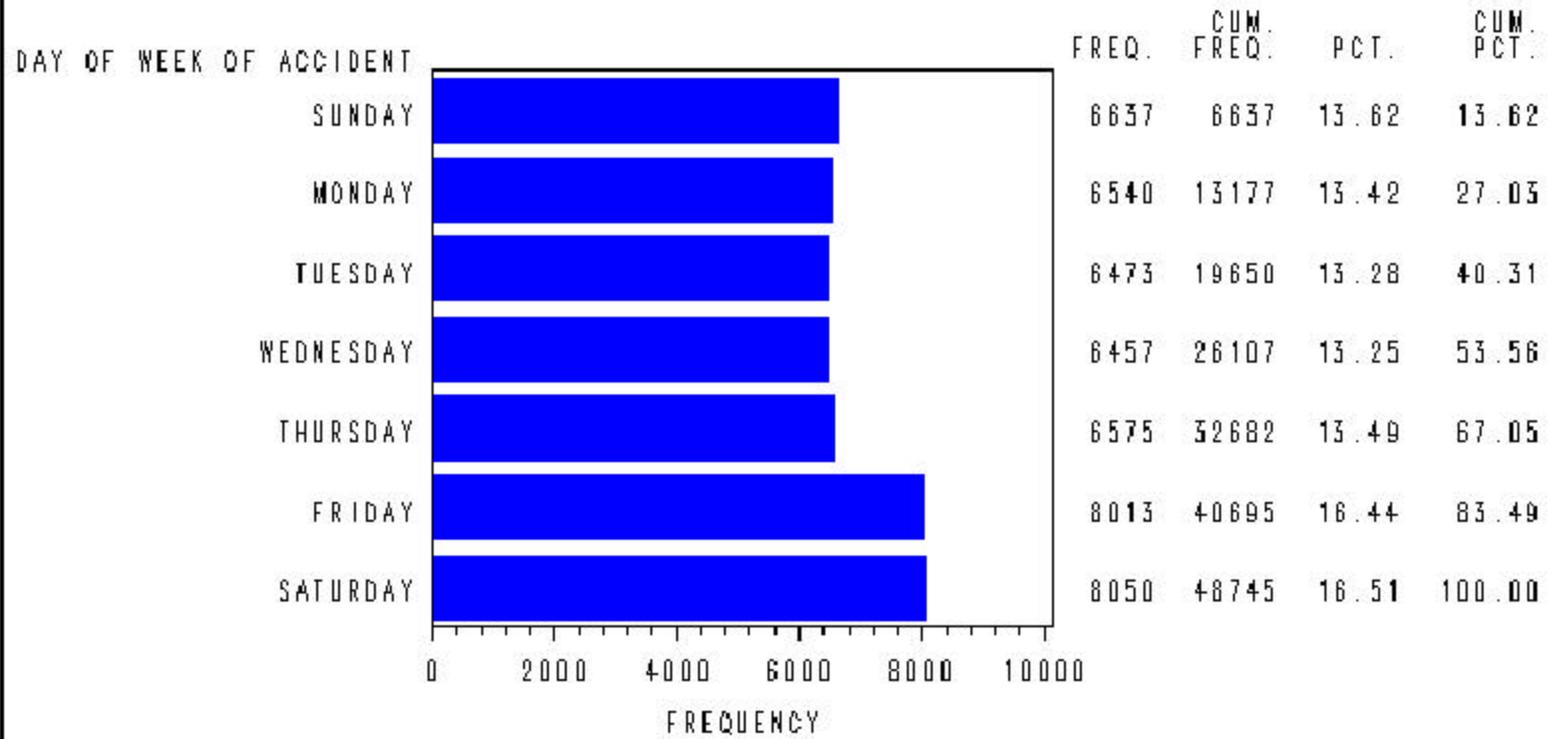
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6575 case(s) selected for dayweek equal to THURSDAY

For years 1988 to 1997

Electronic cases are available for 1997 only.

YEAR	PSU	Case number	
1988	001	004	No e-case available
1988	001	013	No e-case available
1988	001	015	No e-case available
1988	001	016	No e-case available
1988	001	018	No e-case available
1988	001	019	No e-case available
1988	001	026	No e-case available
1988	001	033	No e-case available
1988	001	034	No e-case available
1988	001	039	No e-case available
1988	001	055	No e-case available
1988	001	089	No e-case available
1988	001	098	No e-case available
1988	001	103	No e-case available
1988	001	118	No e-case available

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1997	082	140	View case
1997	082	149	View case
1997	082	154	View case
1997	082	157	View case
1997	082	160	View case
1997	082	167	View case
1997	082	171	View case
1997	082	178	View case
1997	082	180	View case
1997	082	183	View case
1997	082	184	View case
1997	082	191	View case
1997	082	202	View case
1997	082	205	View case
1997	082	219	View case
1997	082	221	View case
1997	082	227	View case
1997	082	501	View case



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Case Summary, Case #1997-082-167 (CaseId: 662100466)

Crash | Structure | Summary | Events | Vehicles | Persons | Scene | Annotation | Components

Case Number

Stratum

Date of Crash

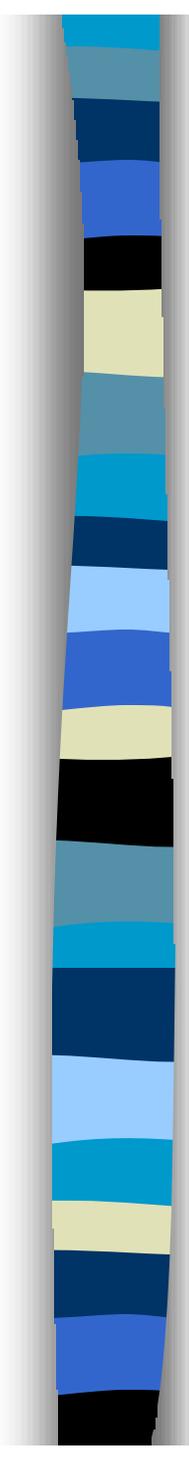
Time of Crash

Special Studies

- SS15 Administrative Use
- SS17 Impact Fires
- SS18 Unsafe Driver Actions
- SS19 Run Off Road

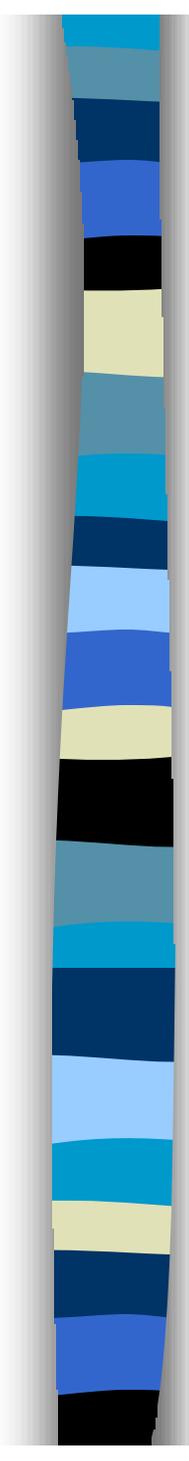
Air Bag Deployed

[Return to Case Query page](#)



CIREN NETWORK ACCESS

- WAN
 - Private Network
- WEB



WAN versus WEB

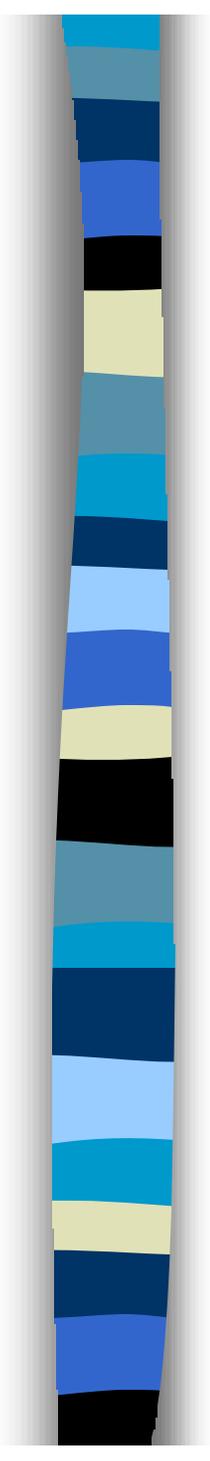
■ WAN

- Direct Connection
- Wide Bandwidth
- Full Analytic Capabilities
- Direct Access to NASS/GES Archive
- Electronic Rounds

■ WEB

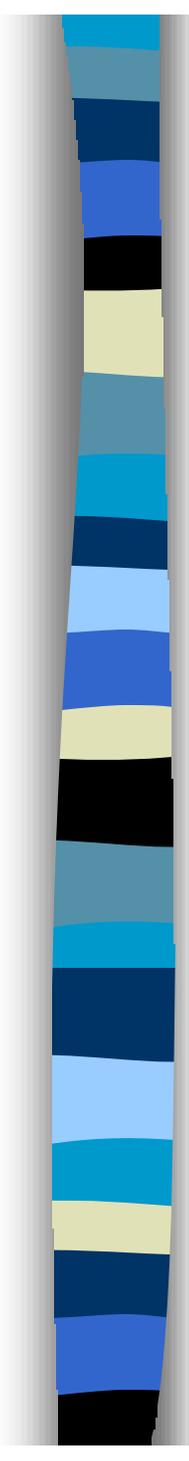
- Indirect Connection
- Narrow Bandwidth
- Canned Queries
- Single Case Viewing
- No Oracle data downloads

Oracle Data Mining and Knowledge Engineering



Thanks

- CIREN Centers
- Volpe
- General Motors
- Mercedes
- NHTSA



Contact

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