

# About Me

- Computer programmer doing PhD in Geography at FSU
- Dissertation is focusing on cross-jurisdictional issues with investigating internet fraud and theft (IFT) cases
- In the research (lit review) and data gathering phase of dissertation

# What do I mean by Internet Fraud/Theft

- Use of internet (cyberspace) to carry out theft or fraud of consumer in the online market place
  - Identity theft
  - Non-delivery of goods/service paid
  - Stock/investment fraud

# The Uniqueness of Internet Fraud/Theft Cases

- This research proposes that the case of fraud that occurs across cyberspace is not as technically difficult as it is socially complex.
- Law is connected to space primarily through jurisdiction and sovereignty. However, complicating ideas of legal space, cyberspace consists of who ever is connected at any given time, essentially a network of fluctuating nodes.
- Offers high-reward/low risk for criminals



Financial Institutions



Law Enforcement

# Internet Fraud/Theft

Crooks



Consumers



# Damage of Internet Fraud/Theft

- Decreased confidence in online market place
- Personal credit histories
- Organized crime, terrorism fueled
- Increased credit rates and cost... not clear who is paying the cost of internet fraud/theft

# Is it going to go away?

- Technology use will increase... hackers will too
- Companies sell private customer data via opt-out agreements (i.e. loan companies, Banks...)
- IT labor industry is a an unregulated and frequently outsourced market → customer data is easily breached
- Bottom line: E-commerce is an attractive connivance for both consumers and sellers.

# Where is Cyberspace?

- As researchers and analyst we often want to ask “why” crime occurs “where” it occurs.
- But... with internet fraud and theft the question of “where” is can be more complicated than any questions of “why”...



# Great Study Done on Identity Theft

U.S. Department of Justice  
Office of Community Oriented Policing Services



A NATIONAL STRATEGY TO  
COMBAT IDENTITY THEFT



# Natl. Strategy to Combat ID Theft

- Considered different methods being utilized in different cities towards investigating ID theft.
- Through collaborative methods (i.e. survey's and session with various representatives) developed valuable recommendations as to how improvements can be made.

# Natl. Strategy to Combat ID Theft

## I. Partnerships and Collaboration

Recommendation: Create state-level coordinating centers (or an adjunct function within all-crimes intelligence reporting centers) to provide crime analysis, victim assistance, statewide investigations, and other services; promote collaboration, cooperation, and intelligence fusion among public law enforcement agencies and other relevant entities.

## II. Reporting Procedures

Recommendation: All police agencies would take reports of identity theft in the geographic jurisdiction where the victim lives, regardless of where the crime occurs. The Uniform Crime Reports (UCR) section of the FBI would develop a consistent definition of identity theft for use by all agencies in reporting criminal incidents to the FBI.

## III. Victim Assistance

Recommendation: All police agencies would develop policies for responding to victims of identity theft that include written standard operating procedures and procedures to help victims find the assistance needed to resolve the impact on financial accounts, credit, and personal records.

# Other Recommendations...

IV. Public Awareness

V. Legislation

VI. Information Protection

VI. Training

# IACP Collaborative Strategy Study

- Local Law Enforcement's Response to Identity Theft Crimes: Strategies to Support the Investigative Role of the Police and Compliance with the F.A.C.T. Act of 2004
- Proposes best practices for law enforcement, and outlines current initiatives under way... centralized databases... good...

# What are victims doing with IFT?

- Generally... not filing police reports
- Contacting their banks/financial institutions  
→ this is an important step but shouldn't be the only step
- Internet Fraud Complaint Center (IC3) or FTC report (Sentinel)

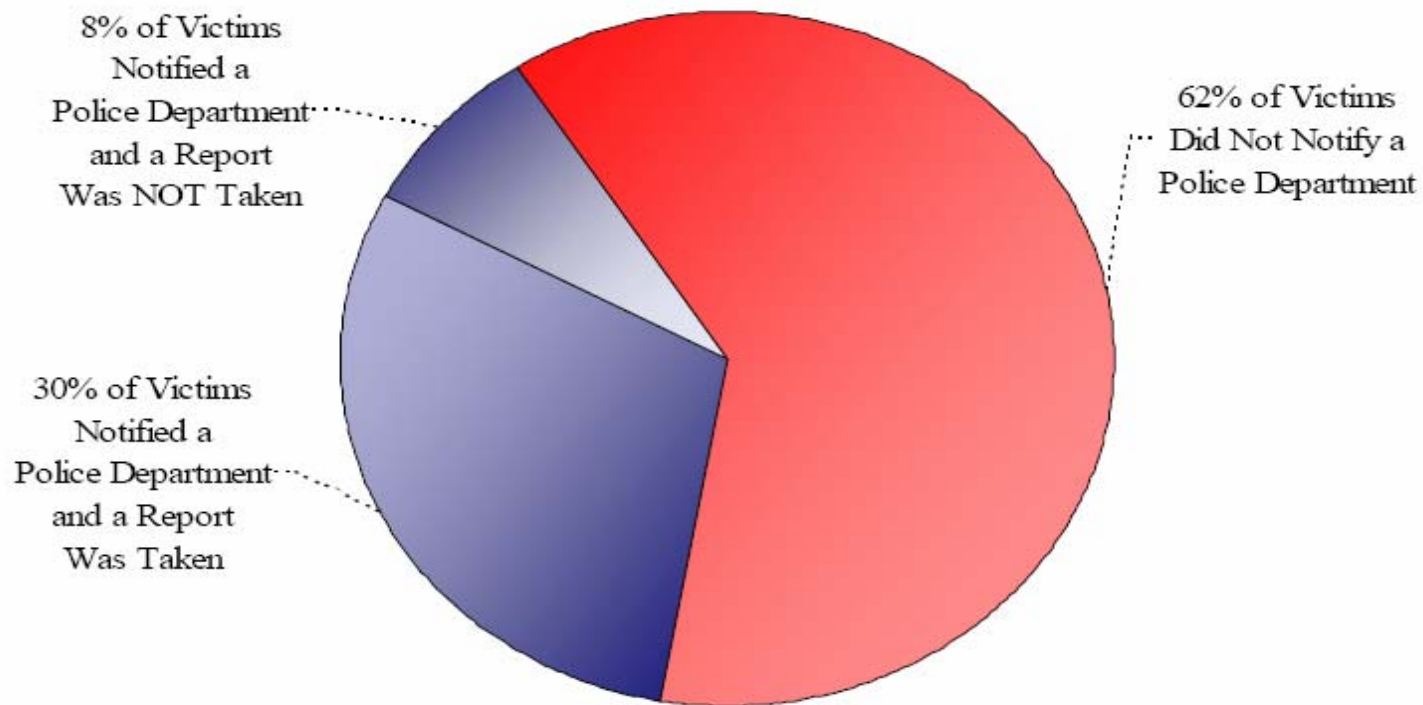
# FTC ID Theft Report

## IF YOU THINK YOUR IDENTITY HAS BEEN STOLEN, HERE'S WHAT TO DO:

- 1.** Contact the fraud departments of any one of the three consumer reporting companies to place a fraud alert on your credit report. A fraud alert tells creditors to follow certain procedures before open any new accounts... [more](#)
- 2.** Close the accounts that you know or believe have been tampered with or opened fraudulently. Use the [ID Theft Affidavit \(PDF, 56KB\)](#) when disputing new unauthorized accounts... [more](#)
- 3.** File your complaint with the FTC. You may print a copy of your complaint to provide important standardized information for your police report... [more](#)
- 4.** File a report with your local police or police in the community where the identity theft took place. Give the police a copy of your FTC ID Theft complaint form. Get a copy of the police report (or, at least, the police report number)... [more](#)

## Law Enforcement Contact<sup>1</sup>

*January 1 – December 31, 2006*



<sup>1</sup>Percentages are based on the total number of identity theft complaints where victims indicated whether they had notified a police department (233,509). 98% of the identity theft victims who contacted the FTC directly reported law enforcement contact information. Less than one percent of victims who informed the FTC that they had contacted a police department did not indicate if a report was taken.

# From Fl State Attorney's Office Website

- Be persistent. Local authorities may tell you that they can't take a report. Stress the importance of a police report; many creditors require one to resolve your dispute.
- Be a motivating force. Ask law enforcement to search the FTC's Consumer Sentinel ID Theft database for other complaints in your community. You may not be the first or only victim of this identity thief. If there is a pattern of cases, local authorities may give your case more consideration.

<http://myfloridalegal.com>



# Spatial/Linkage Blindness

- When a crime series transgresses territorial boundaries, and the horizontal connections for sharing relevant intelligence are inadequate or non-existent, linkage blindness occurs (Warf 1997, Egger 1990, Sheptycki 2004).
- Local government... (law enforcement) can be viewed as a means of evening out the spatial blindness of overarching national policies through making them more sensitive to particular geographical areas and to local circumstances (Storey, p. 135, 2001).

# Consider Territoriality and IFT

- How does the “new” geographies of fraud play out in what Herbert describes as the normative orders of police territoriality (Herbert, p. 3):
  1. Law – legal parameters of police action
  2. Bureaucratic control – who’s jurisdiction is it?
  3. Adventure/machismo – Bill Gates v. Dirty Harry
  4. Safety – is IFT perceived a dangerous crime?
  5. Competence – technological complexity (cybercrime teams)
  6. Morality – defining the “bad guys”

# Organizational Pathologies (Sheptycki)

- linkage-blindness, noise, intelligence overload, gaps, duplication, intelligence hoarding and intra-agency subcultures.
- Points out that much of what is written about police intelligence systems focuses on how they should work instead of “how they actually do work”.

**Jurisdiction # 1**



**Cyberspace**



**Credit Corporation**  
Jurisdiction #4



**Online Market**  
Jurisdiction #5



**Jurisdiction # 2**

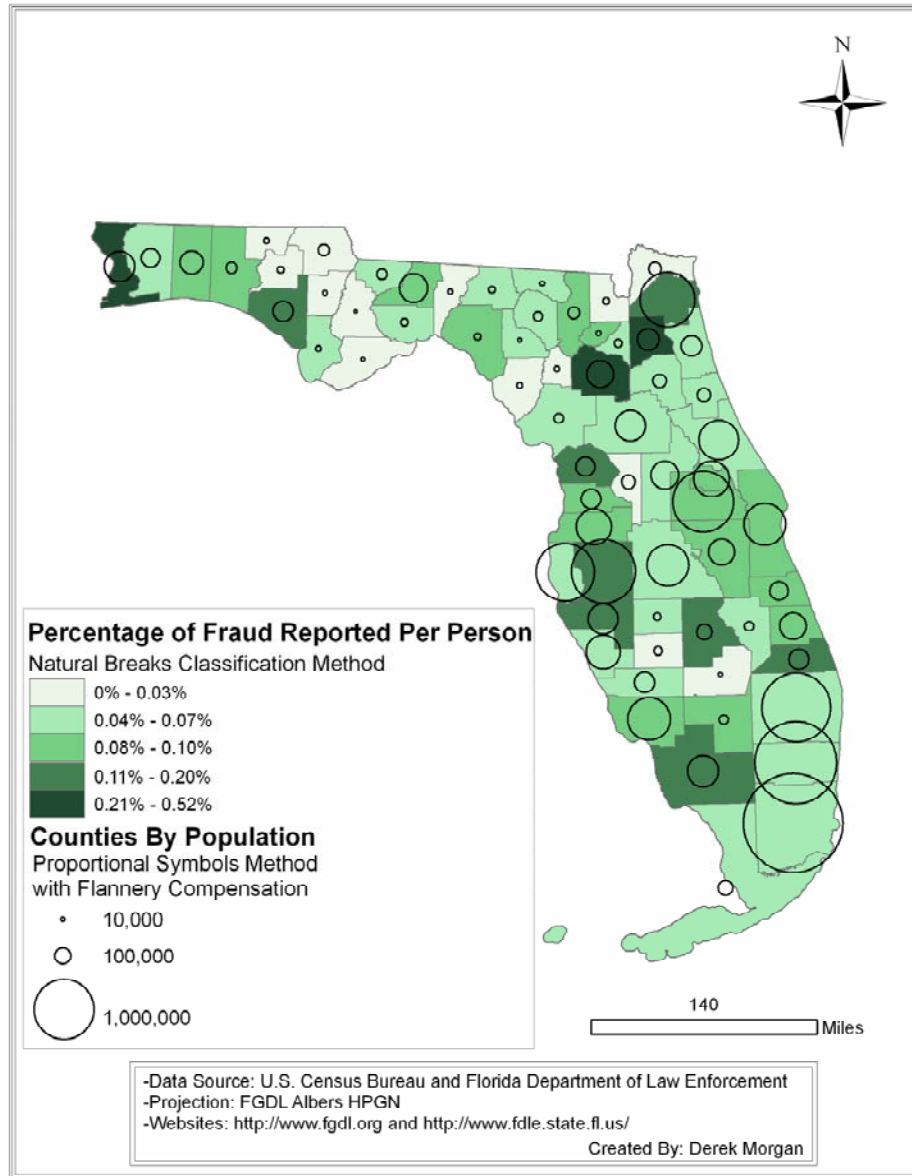


**Jurisdiction # 3**

# Difficult to define hotspots for IFT

- Where to we record the statistic needs to be defined for UCR... Victims residence (“National Strategy” report)
- Also a consistent definition(s) is needed for these types of crime
- In Florida there is a category for “fraud”

## Florida Fraud Rates By County For the Year 2005



# FDLE/UCR Fraud Definition

- **False Pretenses/Swindling**

The intentional misrepresentation of an existing fact or condition, or the use of some other deceptive scheme or device, to obtain another persons money, goods or other things of value.

- **Credit Card/ATM**

The unlawful use of a credit, debit card or automatic teller machine with fraudulent intent.

- **Impersonation**

Falsely, representing one's identity or position, and acting in the character or position thus unlawfully assumed, to deceive others and thereby gain a profit or advantage, enjoy some right or privilege, or subject another person or entity to an expense, charge or liability which would not have otherwise been incurred.

- **Welfare**

The use of deceitful practices or devices to unlawfully obtain welfare benefits.

- **Wire**

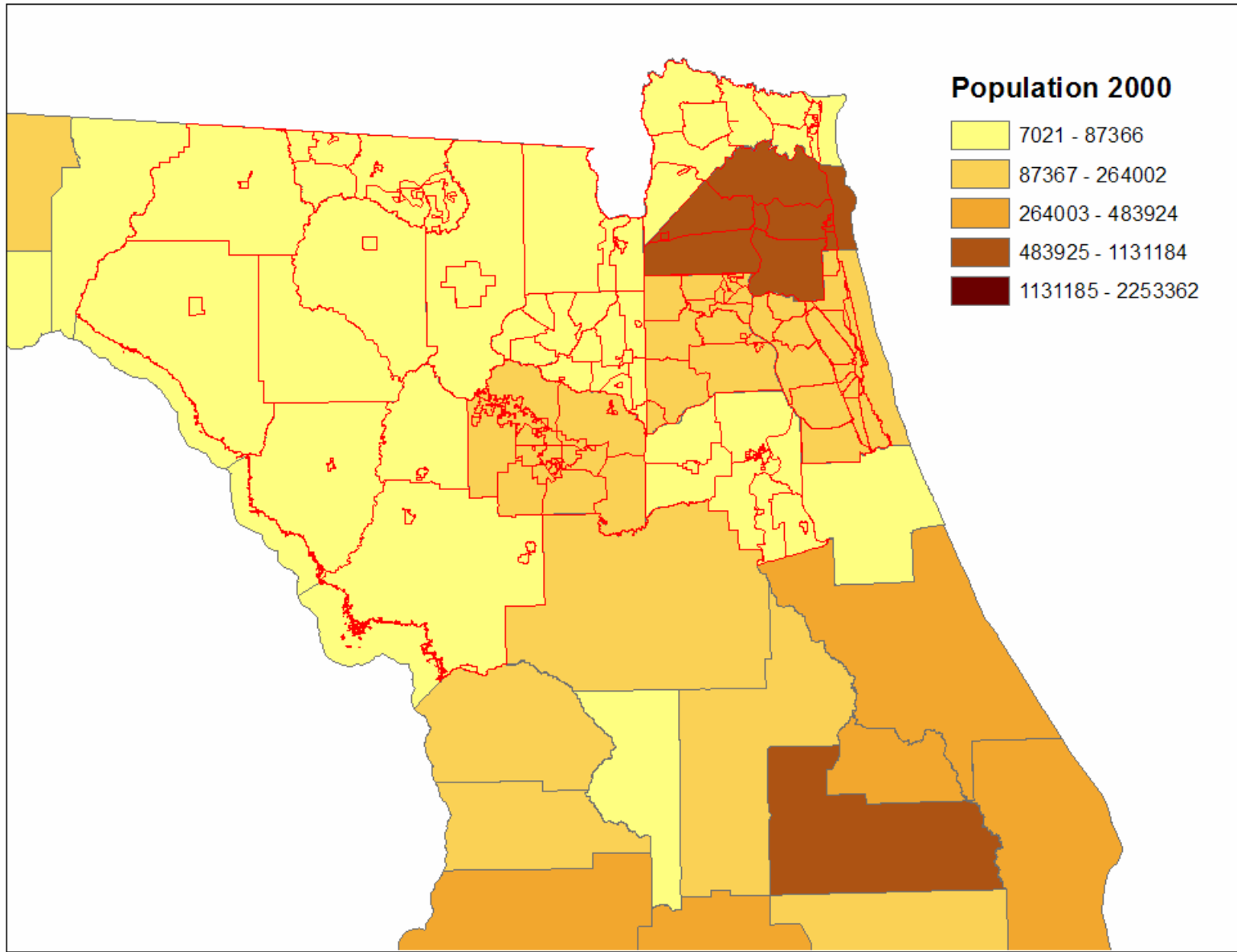
The use of an electric/electronic communications facility to intentionally transmit a false and/or deceptive message in furtherance of a fraudulent activity.

# FDLE Categories of Fraud 2005

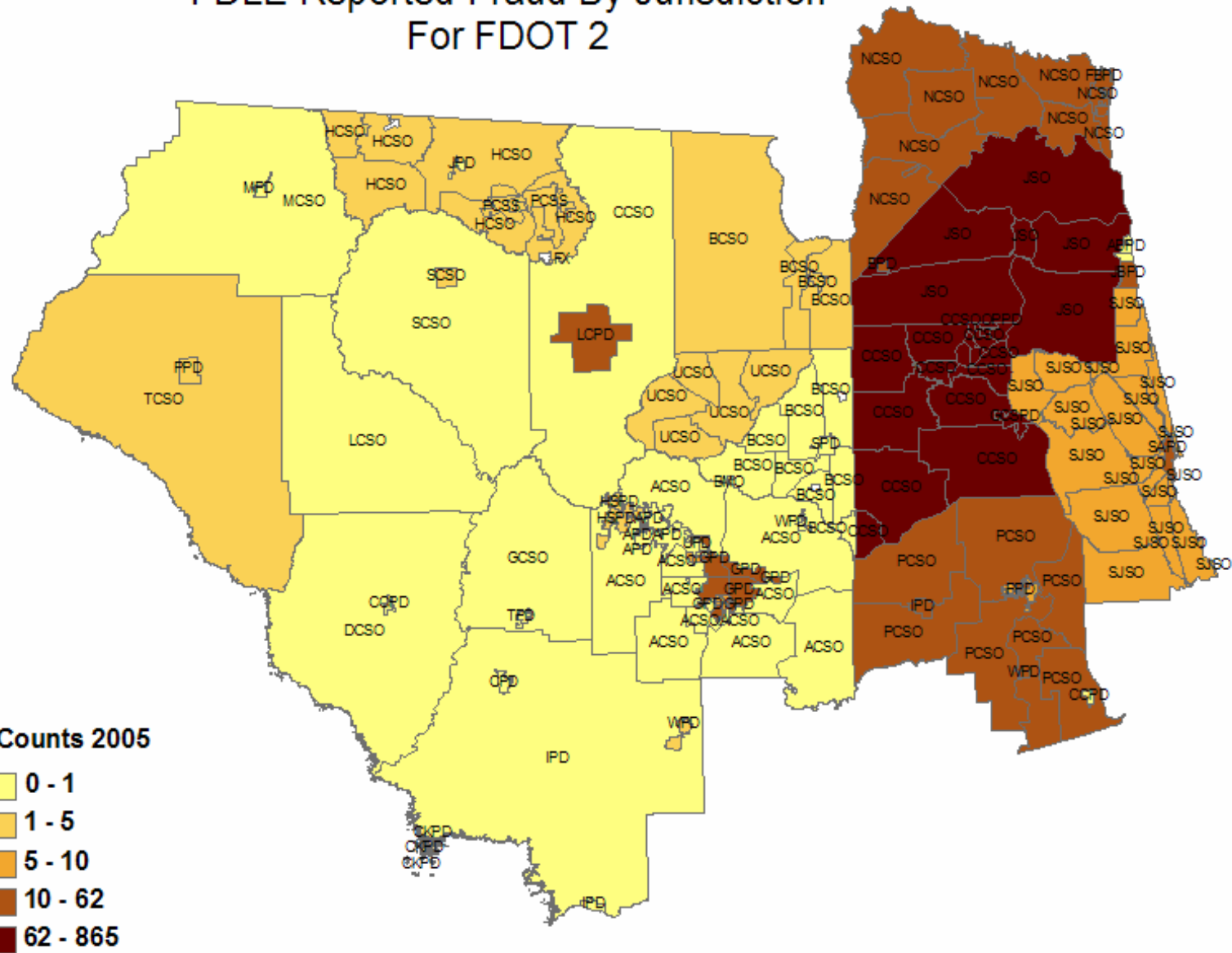
| Description               | Sum Of Total_Arrested |
|---------------------------|-----------------------|
| Wire                      | 42                    |
| Welfare                   | 64                    |
| Impersonation             | 1090                  |
| Credit Card/ATM           | 1366                  |
| False Pretenses/Swindling | 9790                  |
| Fraud                     | 12352                 |



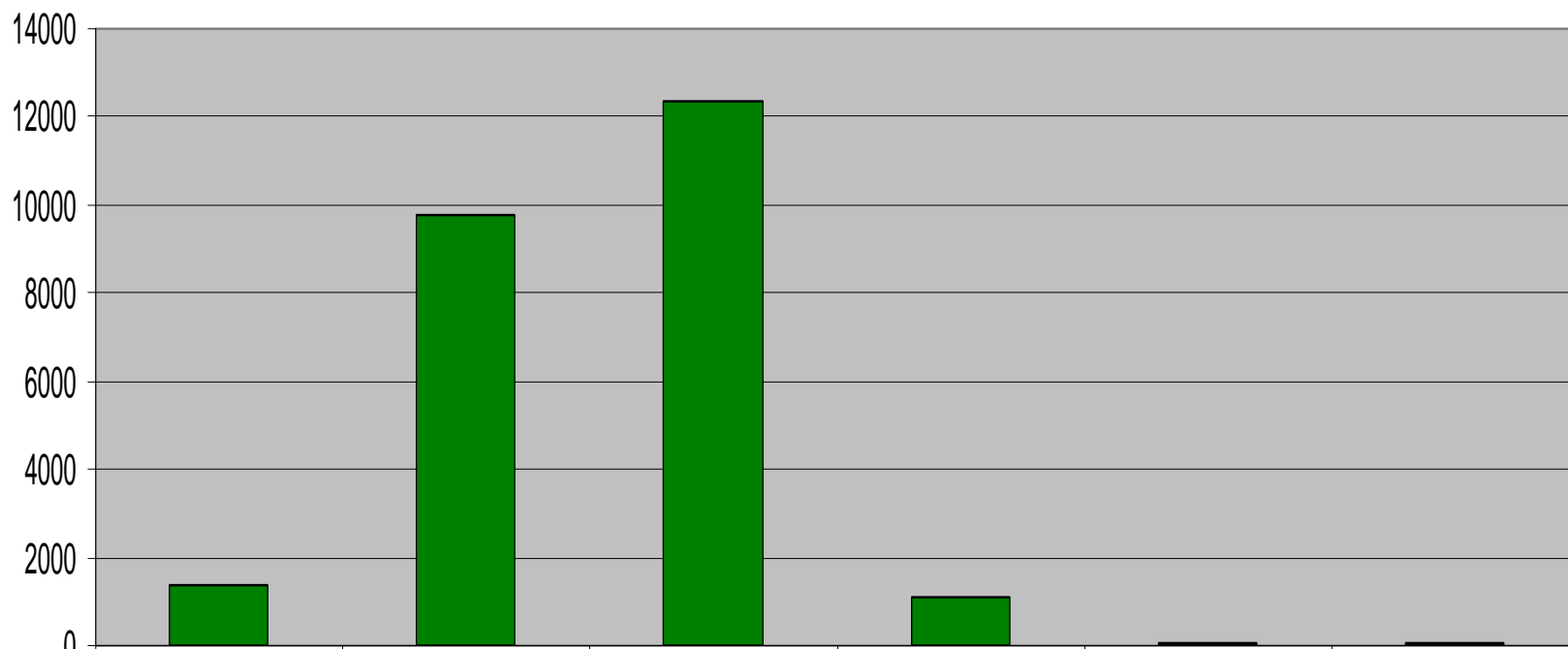
# Census 2000 By County



## FDLE Reported Fraud By Jurisdiction For FDOT 2



### Sum Of Fraud Types Across FI Jurisdiction 2005



|                         |      |      |       |      |    |    |
|-------------------------|------|------|-------|------|----|----|
| ■ Sum Of Total_Arrested | 1366 | 9790 | 12352 | 1090 | 64 | 42 |
|-------------------------|------|------|-------|------|----|----|

# Barriers to Cross-Jurisdiction Data Sharing

- Political pressure... (i.e. why would we want to advertise our shortcomings to the world?)
- Technological barriers...
- Common methods of Geocoding... (and accuracy for that matter)
- Privacy?
- Territoriality

# Four Categories of Internet Fraud/Theft

- Internet Auction Fraud
- Credit/ID Theft
- Stock/Investment Fraud
- Falsified Goods Sold

# Four “Places” of Internet Fraud/Theft

- Delivery addresses of goods - hard
- Brick & motor business transaction addresses - hard
- Wire/Money Order/Cash Advance addresses - soft
- Cyber-business transaction addresses (includes online financial transactions) - soft

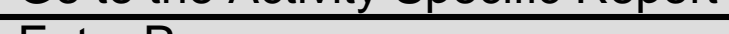
# Geo-locating URL/IP's

- There are companies/service that claim certain levels of accuracy in geolocating IP'S and URL's (i.e. whois)
- IP's and URL's can be spoofed further with wireless and public access of the internet  
geo-locating IP's/URL's is a uncertain (fuzzy) method

# Step 1: Type of Fraud/Theft Activity

Select The Type of Fraud/Theft Activity:

- Credit/ID Theft
- Stock/Investment Fraud
- Falsified Goods Sold

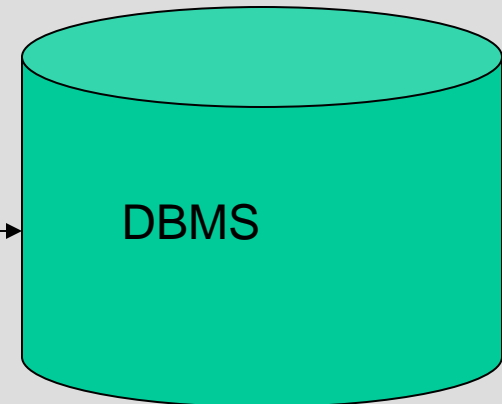
Go to the Activity Specific Report  
Entry Page 



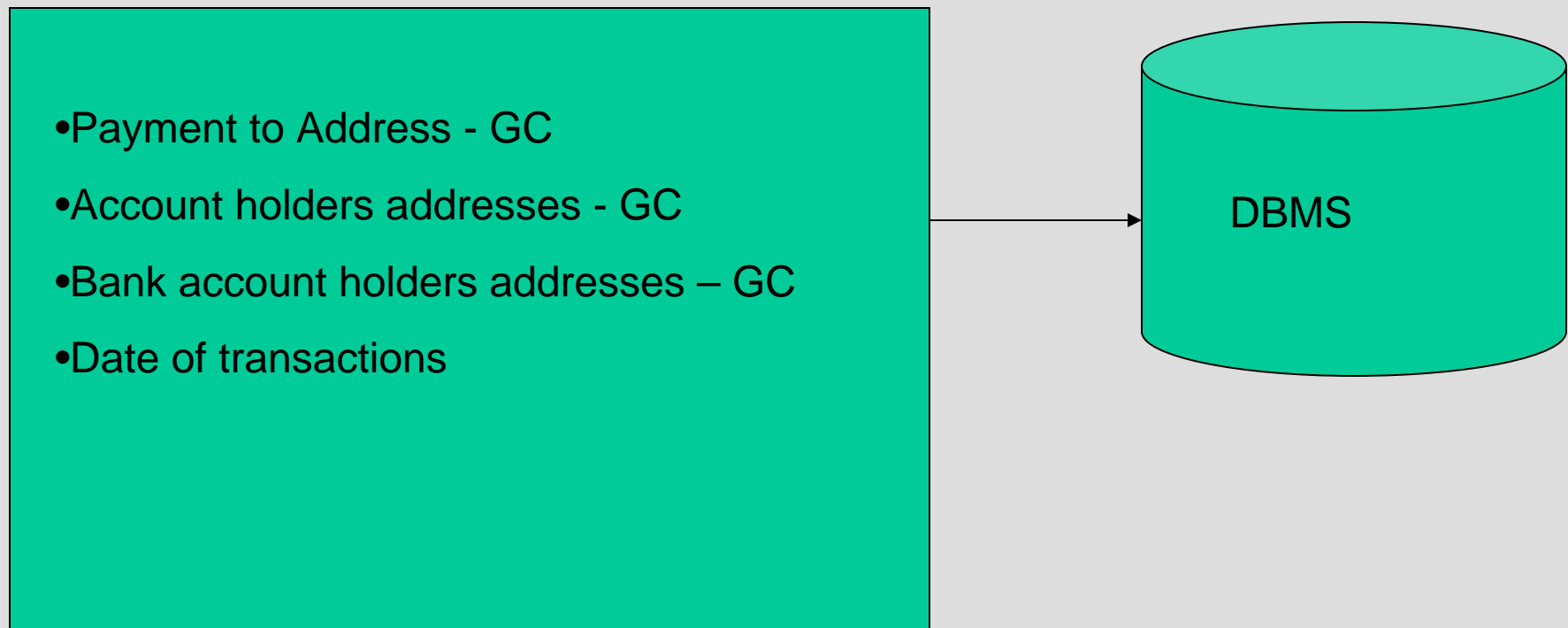
# Step 2: Credit/ID Theft

## Transaction History:

- Transaction Type (credit, wire...)
- Date
- Amount
- Transaction Retail Addr. - GC
- Website URL - GC
- Delivery Address's of good – GC
- Wire locations Addr. - GC



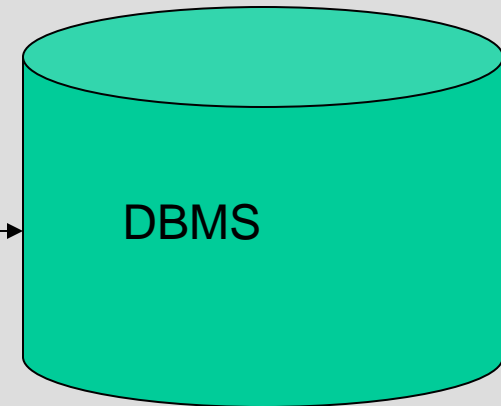
# Step 2: Stock/Investment Fraud

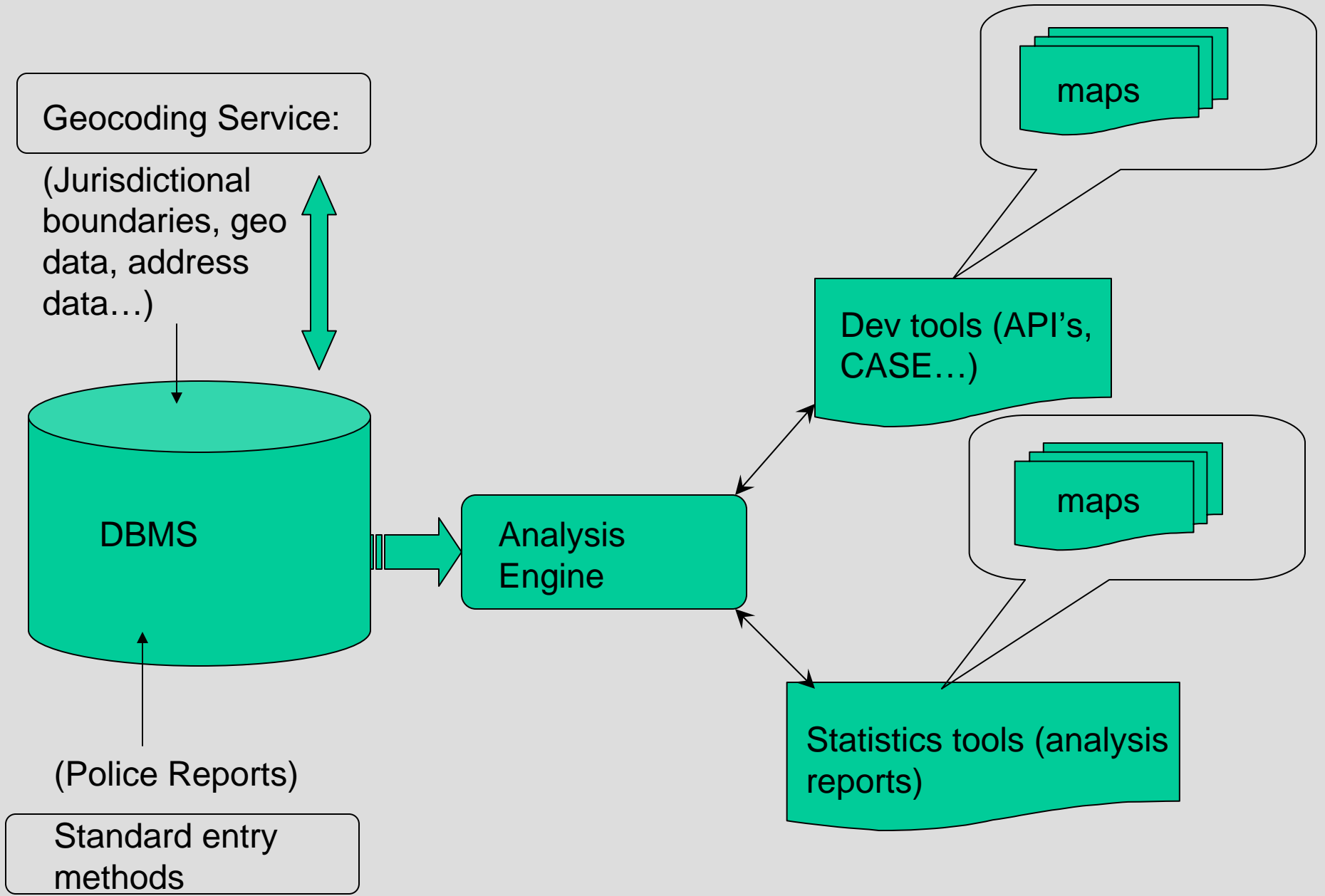


# Step 2: Falsified Goods Sold

Select The Type of Fraud/Theft Category:

- Type of good sold (loan, tickets...)
- Web Site Addr. (i.e ebay.com) - GC
- Payment method (wire, credit...)
- Payment to Addr. – GC





# Types of Queries Investigators Could Utilize

- Nearest Neighbor analysis
- Hot Spot Analysis
- Buffer Zone Analysis
- Repeat location crime events
- Export/import into other tools such as CrimeStat

## Reoccurring delivery address

| <u>trans_type</u> | <u>victim # 1</u>   | <u>trans_type</u> | <u>victim # 2</u>                                   | <u>trans_type</u> | <u>victim # 3</u>                                     |
|-------------------|---|-------------------|---|-------------------|---|
| retail            | 3200 Capital Circle<br>Tallahassee, FL 32308              | retail            | 350 N Alafaya Trail<br>Orlando, FL 32828            | retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239      |
| web;delivaddr     | boatsrus.com; <b>8700 southside blvd jacksonville, fl</b> | phone;delivaddr   | 407-232-1111;1315 S ORANGE AVE<br>Orlando, FL 32806 | retail            | 4911 Penn Ave<br>Pittsburgh, PA 15224                 |
| retail            | 1400 Village Square Blvd<br>Tallahassee, FL 32312         | retail            | 7500 International Dr<br>Orlando, FL 32819          | retail            | unknown   |
| retail            | 200 W Tharpe St<br>Tallahassee, FL 32303                  | retail            | 6107 S Orange Blossom Trl<br>Orlando, FL 32809      | retail            | unknown   |
| retail            | 1830 N Monroe St<br>Tallahassee, FL 32303                 | retail            | 1106 E Colonial Dr<br>Orlando, FL 32803             | web;delivaddr     | zbay.com; <b>8700 southside blvd jacksonville, fl</b> |
| web;delivaddr     | clamazon.com;unknown                                      | retail            | 1315 S ORANGE AVE<br>Orlando, FL 32806              | retail            | 7795 McKnight Rd<br>Pittsburgh, PA 15237              |
| retail            | 518 Us Highway 98<br>Apalachicola, FL 32320               | retail            | 7500 International Dr<br>Orlando, FL 32819          | retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239      |

# Geocoding code then ID the relevant Jurisdiction (Locality)

## Address

8700 Southside Blvd  
Jacksonville FL 32256  
(30.209928, -81.552258)

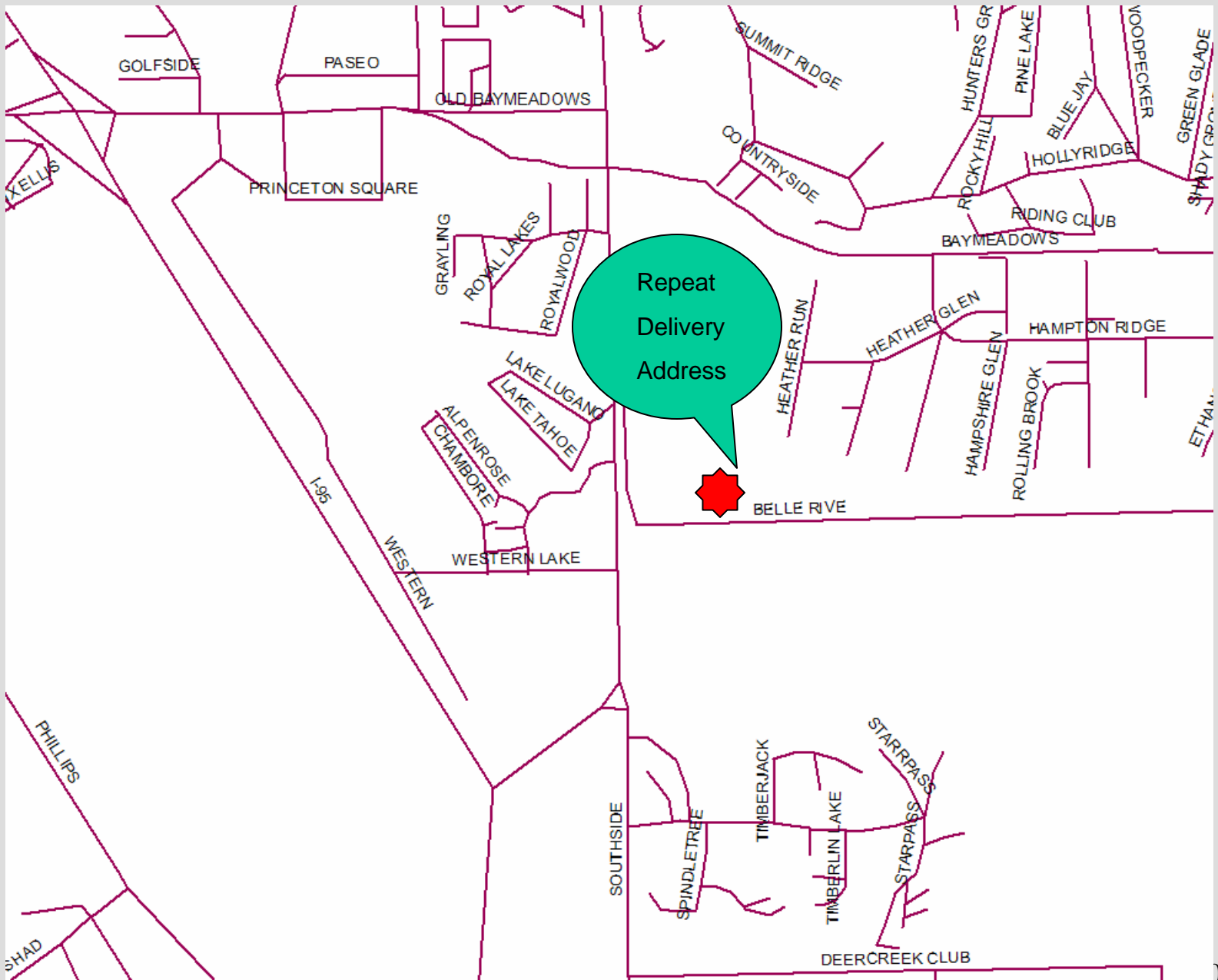
## Latitude

30.209928 °  
N 30 ° 12' 35.7"  
30 ° 12.5957' (degree  
m.mmmm)

## Longitude

-81.552258 °  
W 81 ° 33' 8.1"  
-81 ° 33.1355' (degree  
m.mmmm)







# Importance of Transaction Histories

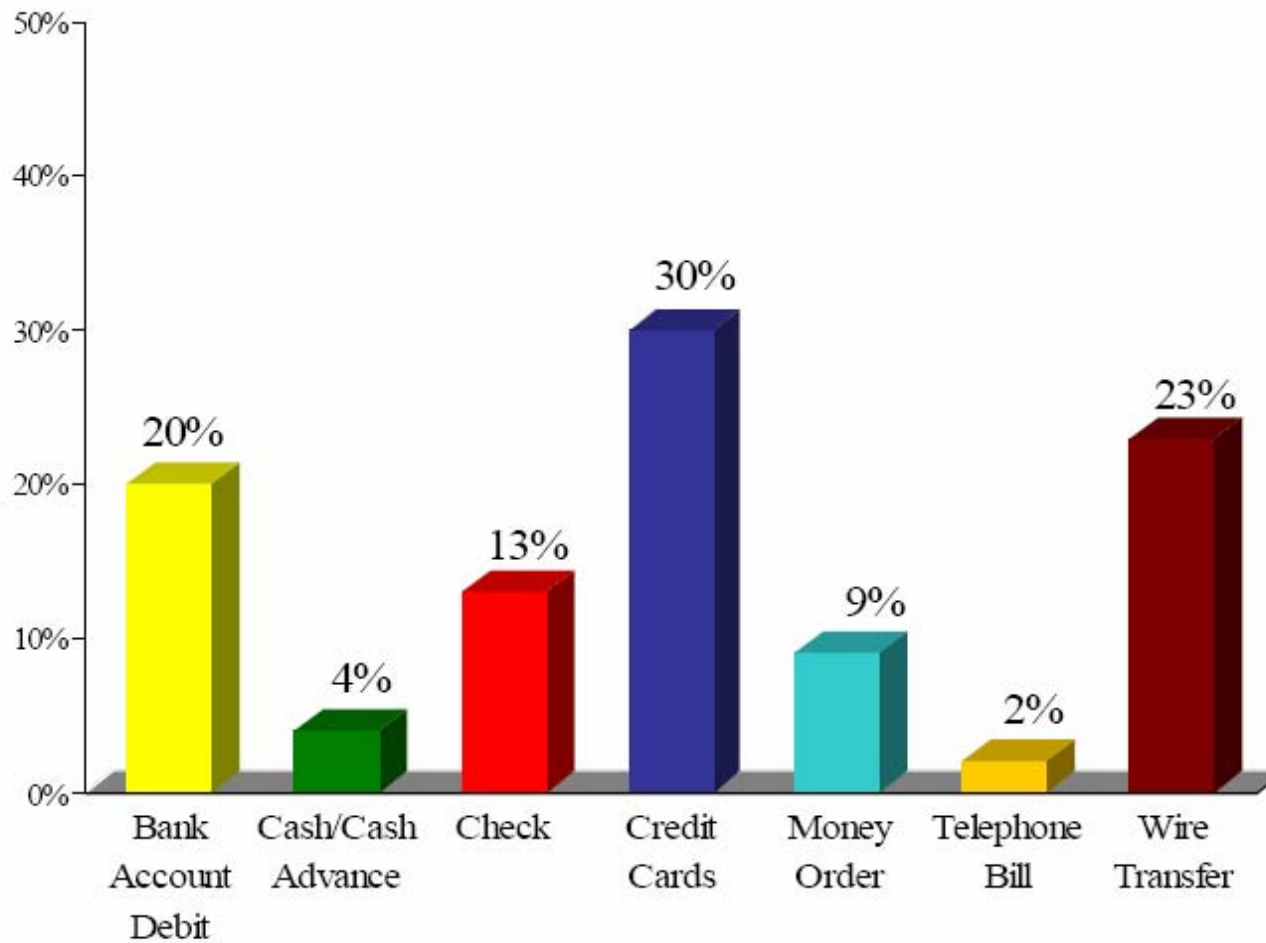
- Who had access to key account information.
- Where did they use it
- When did they use it
  - Developing a spatial pattern could be a key part to investigating IFT cases

# Importance Local Knowledge

- Knowledge of area (buildings, neighborhoods, populations...) → *Geocoding*
- Knowledge of local administrative processes, cognitive spatial knowledge
- Knowledge of local inter-agency cooperation's
  - Bottom Line: local law enforcement should be most familiar with their own beats

## Methods of Payment Reported by Consumers<sup>1</sup>

*January 1 - December 31, 2006*



## Reoccurring website or wire routing number

| <u>trans_type</u> | <u>victim # 1</u>                                    | <u>trans_type</u> | <u>victim # 2</u>                                      | <u>trans_type</u> | <u>victim # 3</u>                                |
|-------------------|--|-------------------|--|-------------------|--|
| retail            | 3200 Capital Circle<br>Tallahassee, FL 32308         | wire              | 121212   | retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239 |
| Web;<br>delivaddr | zbay.com;101 south<br>st, pitts pa                   | phone;delivaddr   | 407-232-1111;1315<br>S ORANGE AVE<br>Orlando, FL 32806 | retail            | 4911 Penn Ave<br>Pittsburgh, PA 15224            |
| Retail            | 1400 Village Square<br>Blvd<br>Tallahassee, FL 32312 | retail            | 7500 International Dr<br>Orlando, FL 32819             | retail            | unknown  |
| retail            | 200 W Tharpe St<br>Tallahassee, FL 32303             | retail            | 6107 S Orange<br>Blossom Trl<br>Orlando, FL 32809      | retail            | unknown  |
| Retail            | 1830 N Monroe St<br>Tallahassee, FL 32303            | retail            | 1106 E Colonial Dr<br>Orlando, FL 32803                | Web;<br>delivaddr | zbay.com;<br>unknown                             |
| wire              | 12121212   | retail            | 1315 S ORANGE<br>AVE<br>Orlando, FL 32806              | retail            | 7795 McKnight Rd<br>Pittsburgh, PA 15237         |
| Retail            | 518 Us Highway 98<br>Apalachicola, FL 32320          | retail            | 7500 International Dr<br>Orlando, FL 32819             | retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239 |

## Reoccurring Retail Establishment

| <u>trans_type</u> | <u>victim # 1</u>                                    | <u>trans_type</u> | <u>victim # 2</u>                                   | <u>trans_type</u> | <u>victim # 3</u>                                    |
|-------------------|--|-------------------|---|-------------------|--|
| Retail            | <b>3200 Capital Circle<br/>Tallahassee, FL 32308</b> | Retail            | 350 N Alafaya Trail<br>Orlando, FL 32828            | Retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239     |
| web;delivaddr     | boatsrus.com;8700 southside blvd<br>jacksonville, fl | phone;delivaddr   | 407-232-1111;1315 S ORANGE AVE<br>Orlando, FL 32806 | Retail            | 4911 Penn Ave<br>Pittsburgh, PA 15224                |
| Retail            | 1400 Village Square Blvd<br>Tallahassee, FL 32312    | Retail            | 7500 International Dr<br>Orlando, FL 32819          | Retail            | unknown  |
| Wire num;addr     | 407-199-1234;  | Retail            | 6107 S Orange Blossom Trl<br>Orlando, FL 32809      | Retail            | unknown  |
| Retail            | 1830 N Monroe St<br>Tallahassee, FL 32303            | Retail            | 1106 E Colonial Dr<br>Orlando, FL 32803             | Wire num;addr     | 407-199-1234;  |
| web;delivaddr     | clamazon.com;unknown                                 | Retail            | 1315 S ORANGE AVE<br>Orlando, FL 32806              | <b>Retail</b>     | <b>3200 Capital Circle<br/>Tallahassee, FL 32308</b> |
| Retail            | 518 Us Highway 98<br>Apalachicola, FL 32320          | Retail            | 7500 International Dr<br>Orlando, FL 32819          | Retail            | 2820 Golden Mile Highway<br>Pittsburgh, PA 15239     |

# Collaborative System for overcoming spatial/linkage blindness

- Overcomes barriers to data sharing
- Uses key data to uncover spatial patterns and links related case information
- Key point: Driven by locally (jurisdictional) level data management

# Learning from GIS Partnerships For Law Enforcement

- COMPSTAT: re-implemented in Australia, Philadelphia and other places
- San Diego County's Automated Regional Justice Information System (ARJIS)

## *CompStat (computer and comparative statistics)*

- One of the most successful collaborations of GIS and policing strategy (Ratecliffe, p. 259, 2005).
- Roots back to 1994 in the New York City Police Department (NYPD).
- Collaborative meetings and crime maps used across jurisdictions to drive decision making and analysis



# CompStat Process

- Basic aim is quick and accurate information for strategic decision making
- Rapid and accurate Geocoding of crime-related knowledge
- Key part is meetings across key personnel of operational and central and local levels (Chainey and Ratcliffe)

## *CompStat linking of incidents*

- One of the most successful collaborations of GIS and policing strategy (Ratcliffe, p. 259, 2005).
- Roots back to 1994 in the New York City Police Department (NYPD).
- Crime maps used across jurisdictions to drive decision making and analysis

# CompStat...

- The process of linking incidents makes CompStat a powerful crime fighting tool.
- This is the sort of method that could be used in tracking internet fraud cases

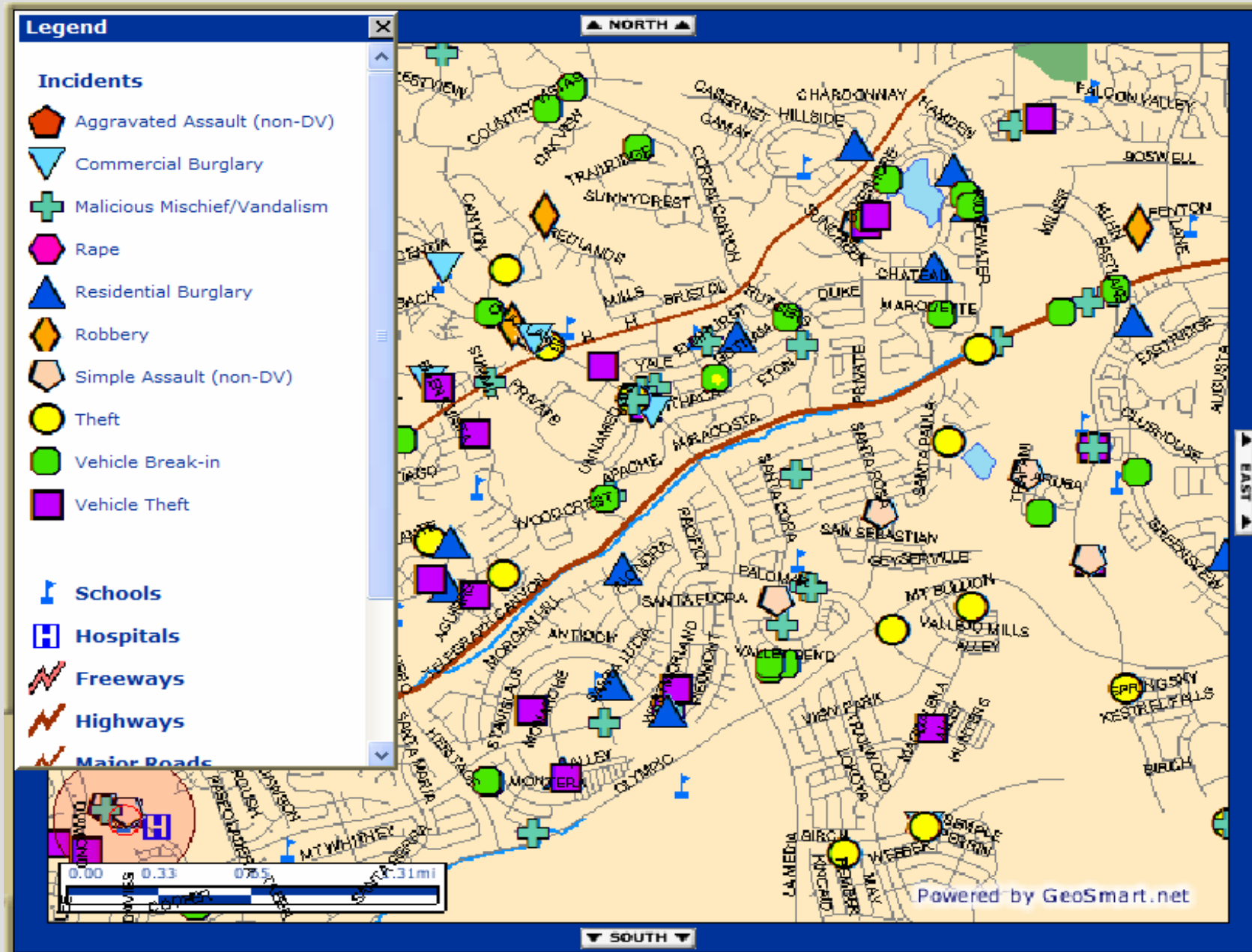


<https://maxvps019.maximumasp.com/v019u36fub/nsc/images/compstat-3.jpg>

# ARJIS - Automated Regional Justice Information System

- First multi-agency, interactive crime mapping website in the country in late 1999 (crime mapping news)
- ARJISNet integrates over 2,500 workstations and printers throughout the 4,265 square miles of San Diego County. There are over 10,000 registered and authorized users generating over 35,000 transactions daily (.arjis.org).
- For public site puts incident address at 100-block for privacy

# ARJIS



# The End

- Thank you very much
- I have enjoyed the conference and learned quite a bit by attending the sessions
- If you have any questions for me the future you can email me [jdmorgan@mailier.fsu.edu](mailto:jdmorgan@mailier.fsu.edu)