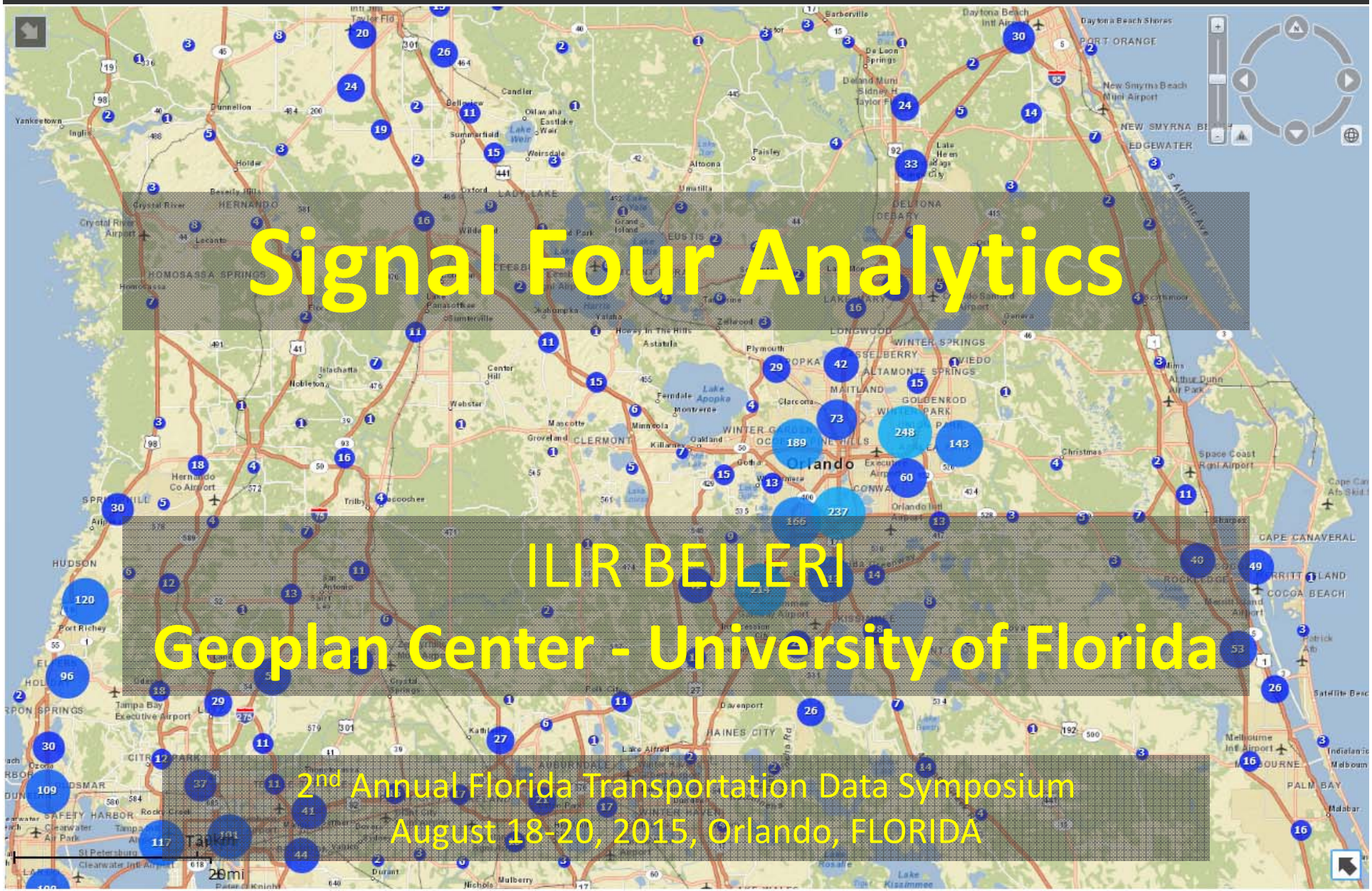
SIGNAL FOUR ANALYTICS



Signal Four Analytics

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Geoplan Center - University of Florida

2nd Annual Florida Transportation Data Symposium

August 18-20, 2015, Orlando, FLORIDA

Overview

- Signal Four Analytics is a statewide interactive, web-based geospatial crash analytical tool
- Grant funded by the State through Traffic Records Coordinating Committee (TRCC)
- Hosted at Geoplan Center, University of Florida
- Main site: **http://s4.geoplan.ufl.edu/**

Target Audience

- Florida government agencies in:
  - Law Enforcement,
  - Traffic Engineering,
  - Transportation Planning,
  - School Transportation,
  - Injury Prevention,
  - Universities
  - Any organization involved in traffic safety
- Contractors/Consultants contracted by Florida public agencies
- Access is free of charge

S4 Analytics Focus

- **Accessibility**
  - Makes it easy to get to the data, no special software required
- **Timeliness**
  - Crash data is up to date as reported by law enforcement to DHSMV
- **Utilization**
  - Web-based simple to use intuitive tools, minimal or no training required
- **Geospatial Analytics**
  - Various functions to look at the data spatially

Database

- Over 4 million **crash** records (2006-present) provided by DHSMV, updated daily
- Over 4 million **citations** -FHP only (2011 to present), updated daily
- Florida Unified **GIS Streets** basemap, 2015, Q1, updated quarterly
- Measured **traffic volumes** on local roads for selected counties

Utilization

- Over 2,000 users
- Over 300 agencies
- Activity last quarter:
  - 10,000 unique logins
  - 27,000 queries
  - 115,000 crash reports reviewed/downloaded

Live Demonstration

Road Ahead

- Complete citations query interface
- Expand Network Analysis
- Enhanced analytics and usability
- Inclusion traffic signals, red light running camera locations, schools etc.

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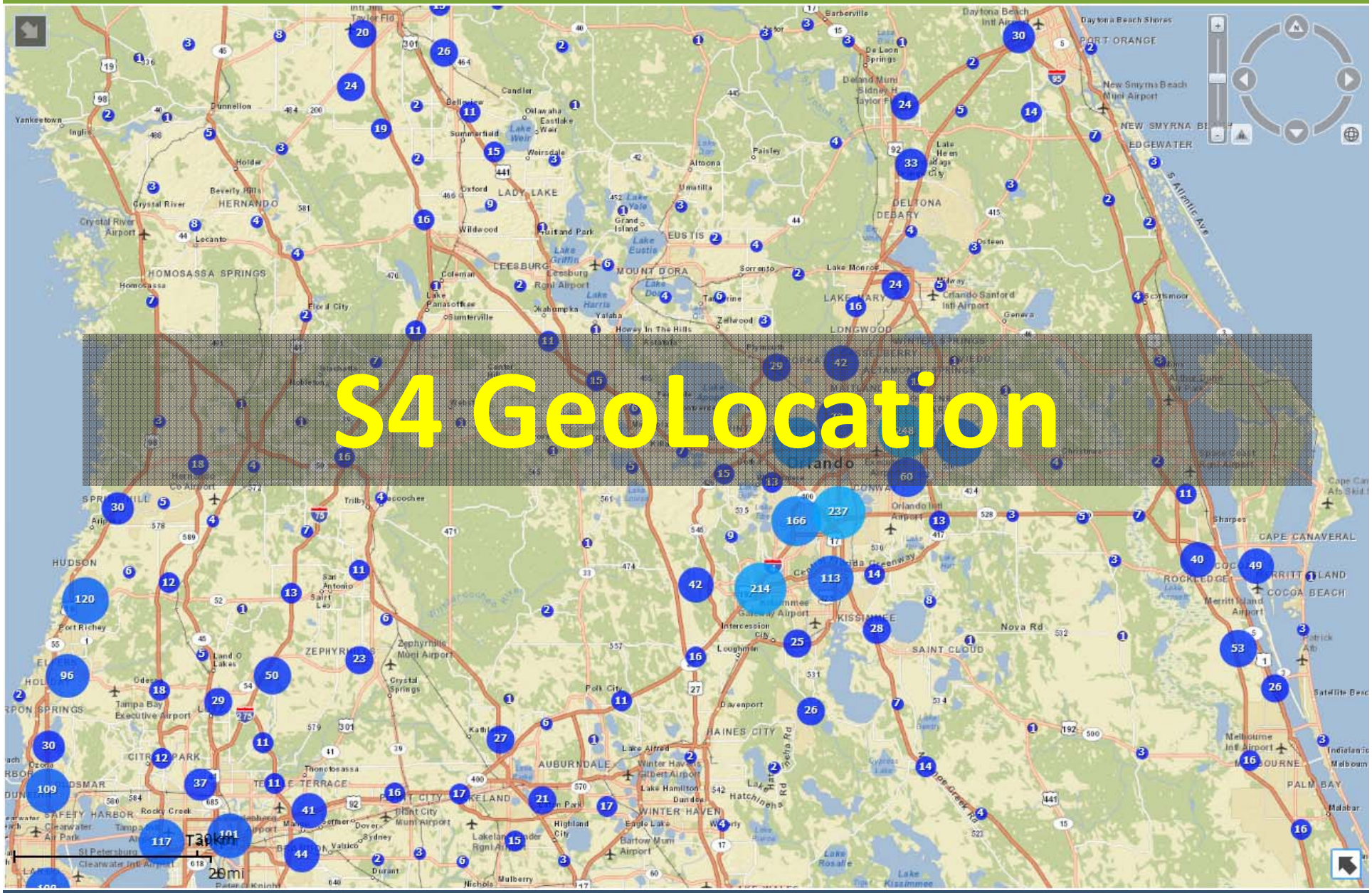


Problem

- Agencies map traffic events, e.g. crashes, after crash reports are completed
- This is because automatic mapping of text-based location works only partially
- Additional efforts, frequently multiplicated
- Quality not guaranteed

Challenges

- 600,000 – 700,000 crashes/year
- 4 million citations/year
- 320 law enforcement agencies
- 8-10 different proprietary e-crash software vendors

SOLUTIONS ?

GPS ?

GPS is not it!

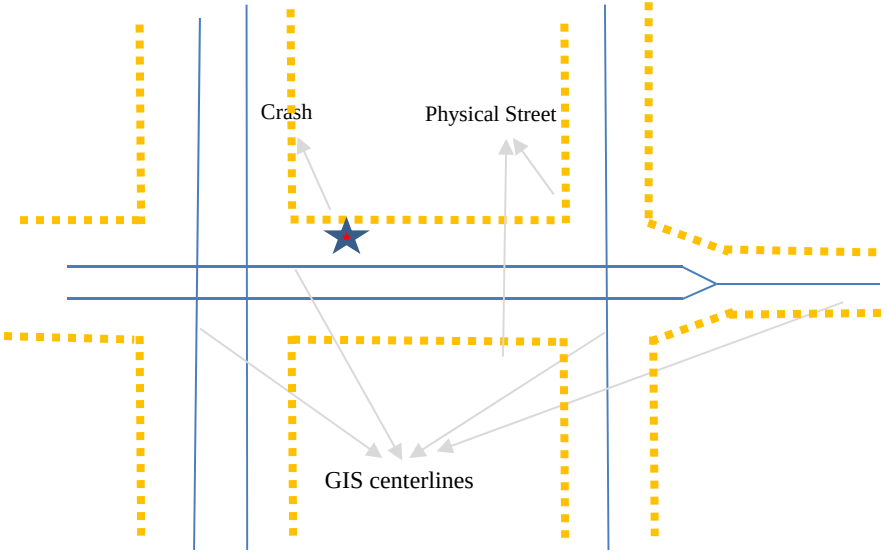
PROBLEMS WITH GPS

- Location of the officer's car, not the crash
- Device errors – 0,0 coordinates…
- And…

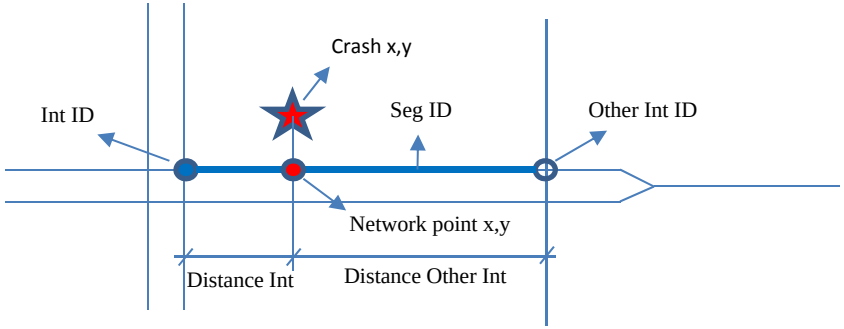
PROBLEMS WITH GPS

It’s not enough anyway

WHAT IS GEOLOCATION ?



Street Layout



Required Information

GEOLOCATION INFORMATION

- First harmful event x,y
- Corresponding x,y on the GIS network
- Street, intersection IDs
- Distances
- …..

SOLUTIONS ?

- Geolocation should be included in the crash report
- Give officers proper tools to make it:

Easier, Faster, More Accurate

- It should be a win-win situation both for officers and for crash data users

S4 Geolocation Tool

- A map-based tool intended to collect accurate location of roadway incidents – crashes, citations, EMS events
- To be used by law enforcement officers in the field
- Available also for post-report geocoding when necessary

Objectives

- Provides timely and accurate geolocation data
- Uses a unified and consistent geolocation mapping method statewide
- Uses a statewide reference map – the Florida unified GIS streets basemap, for all roads
- Map updated quarterly

Live Demonstration

Benefits

- Simple, fast, minimal training required
- Increases multifold location accuracy – better data
- It saves the state time and money
- The data will show up 100% mapped in S4 Analytics and DOT systems
- Makes data much more timely for utilization
- Win-win solution for officers and users of crash data

Status & Road Ahead

- Implemented by TraCS and Appriss so far and used in limited pilot capacity
- Expected to open up to all TraCS users early this fall
- Expected to be implemented by FHP and Lexus/Nexus agencies next
- Other vendors to follow

State's Expectation

- Few months of optional use – give the tool time to perfect. Get input and refine.
- Eventually the state will require that this tool becomes mandatory
- It's the state expectation that all LE will use this tool to map locations for each crash and citation


Thank you!
Questions/Comments ?
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