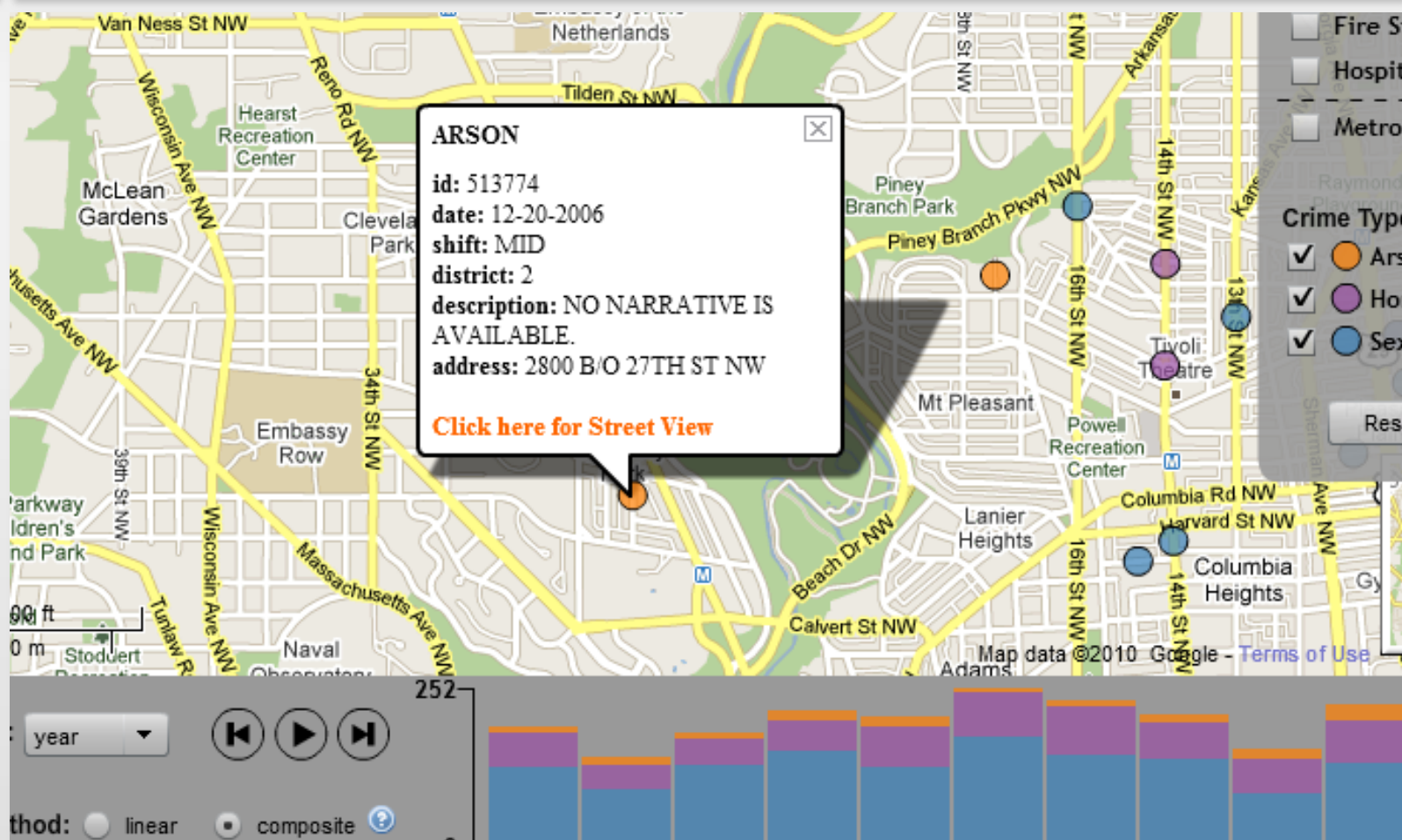
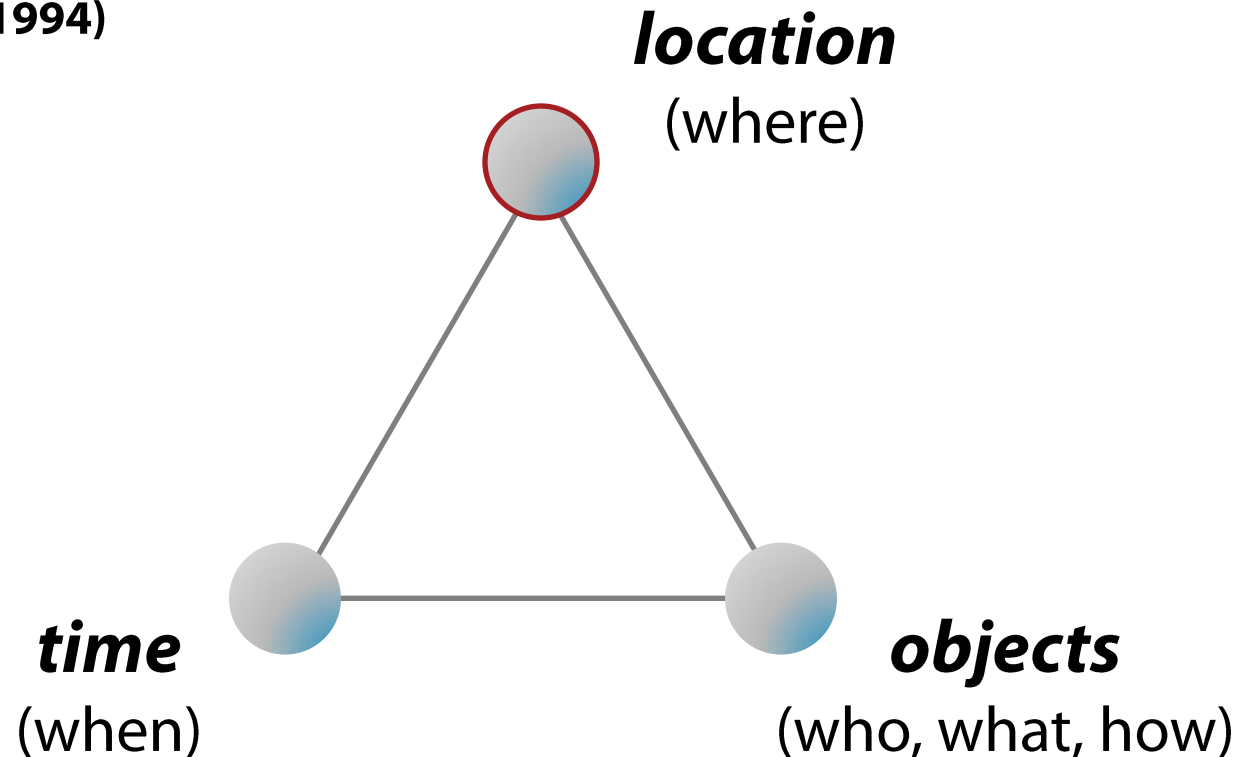


# GeoVisual Analytics for Crime Analysis and Homeland Security

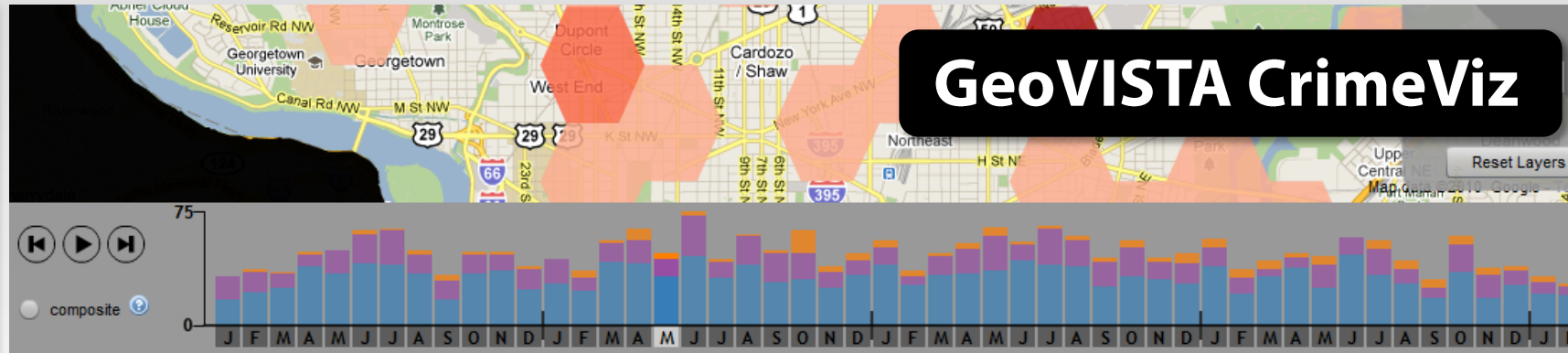
Robert E. Roth  
reroth@psu.edu



**Peuquet's (1994)  
TRIAD**



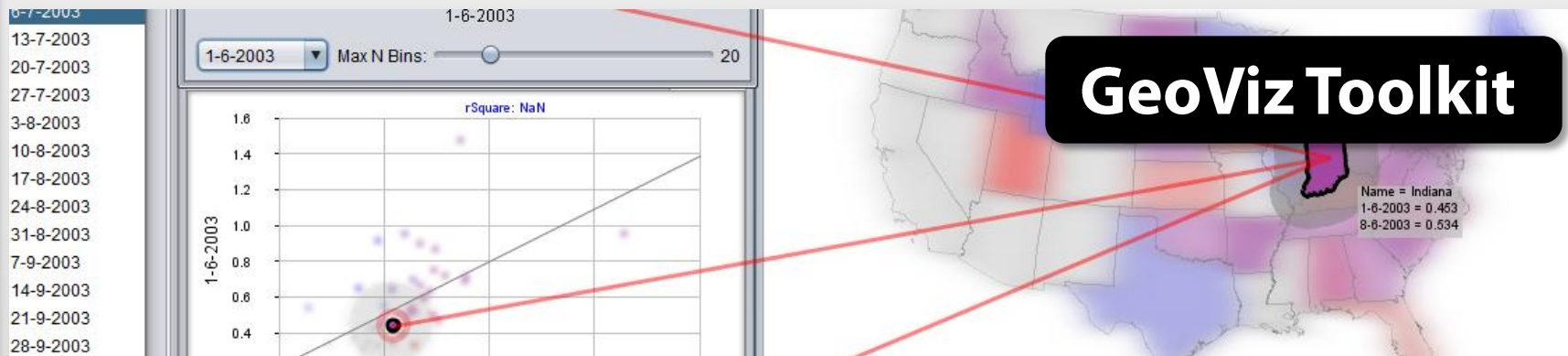
# GeoVISTA CrimeViz



# SensePlace

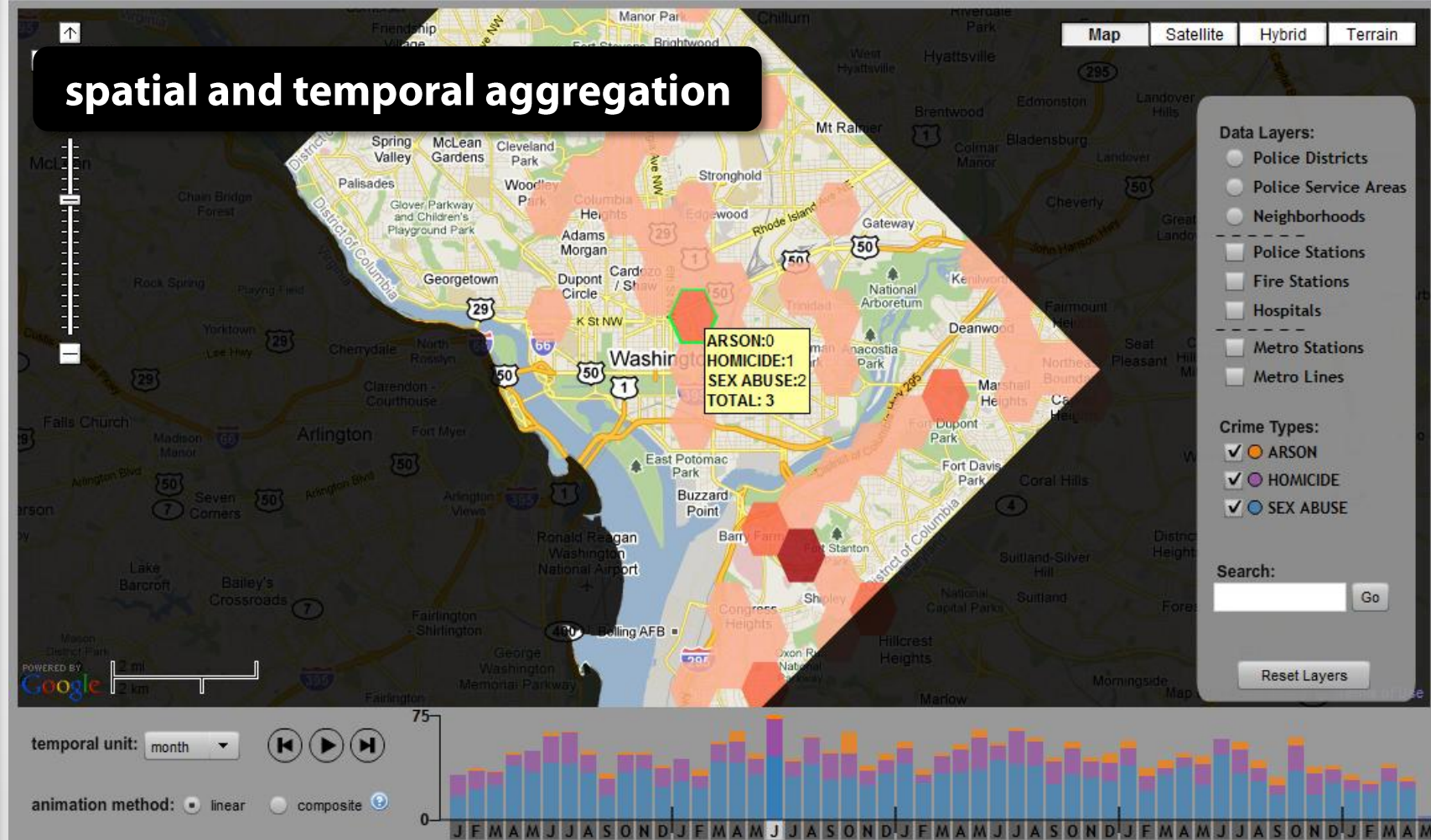


# GeoViz Toolkit



# GeoVISTA CrimeViz

an extensible web-based spatiotemporal visualization tool for crime analysis



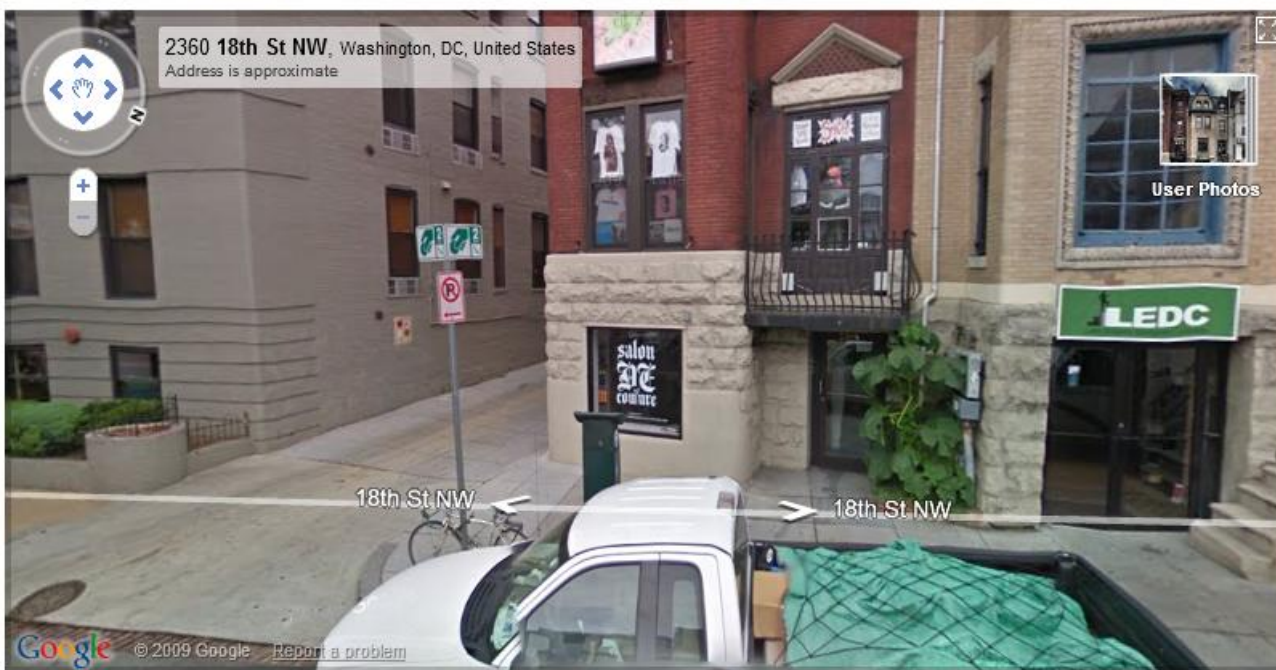




# GeoVISTA CrimeViz

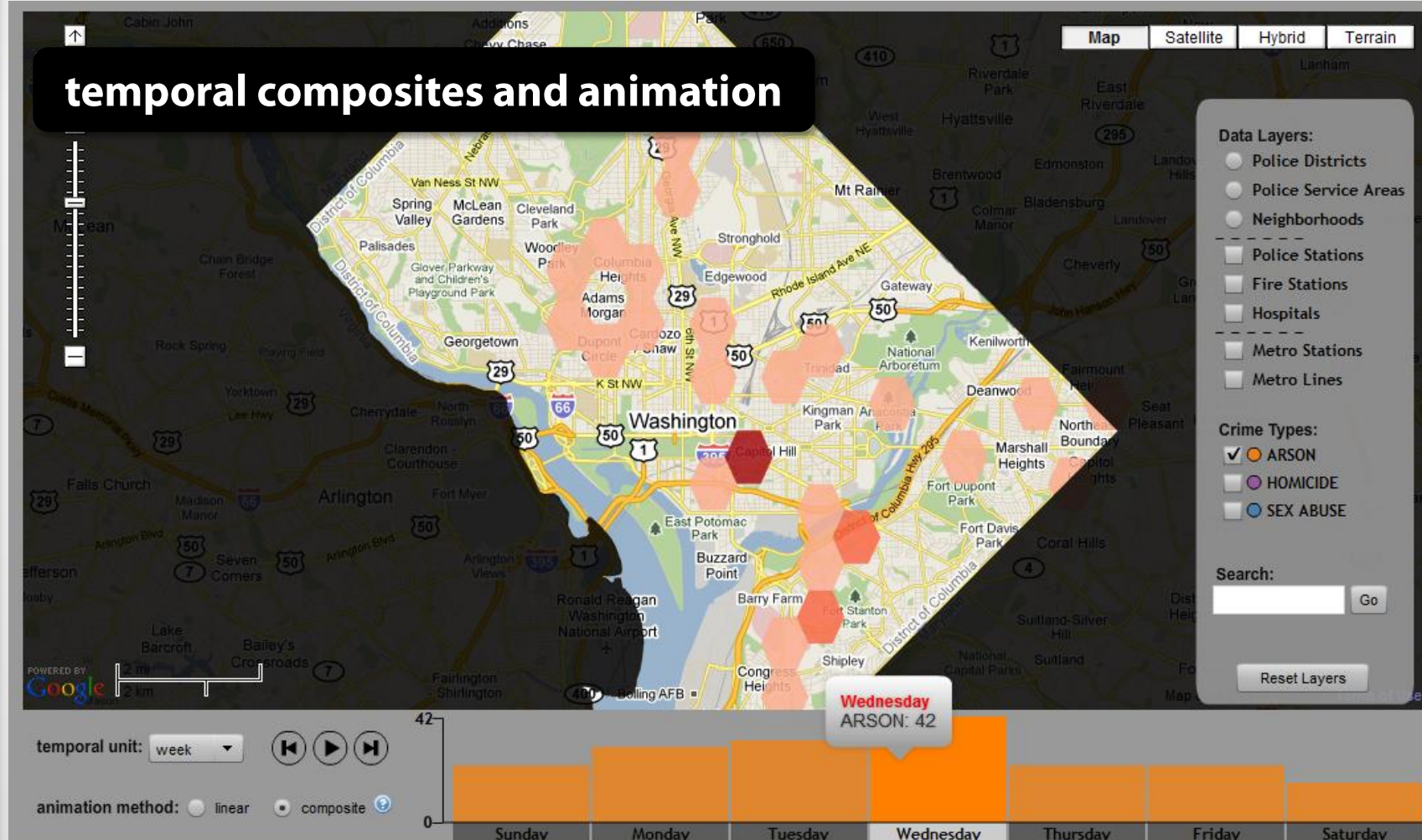
an extensible web-based spatiotemporal visualization tool for crime analysis

**drill-down to individual incidents**



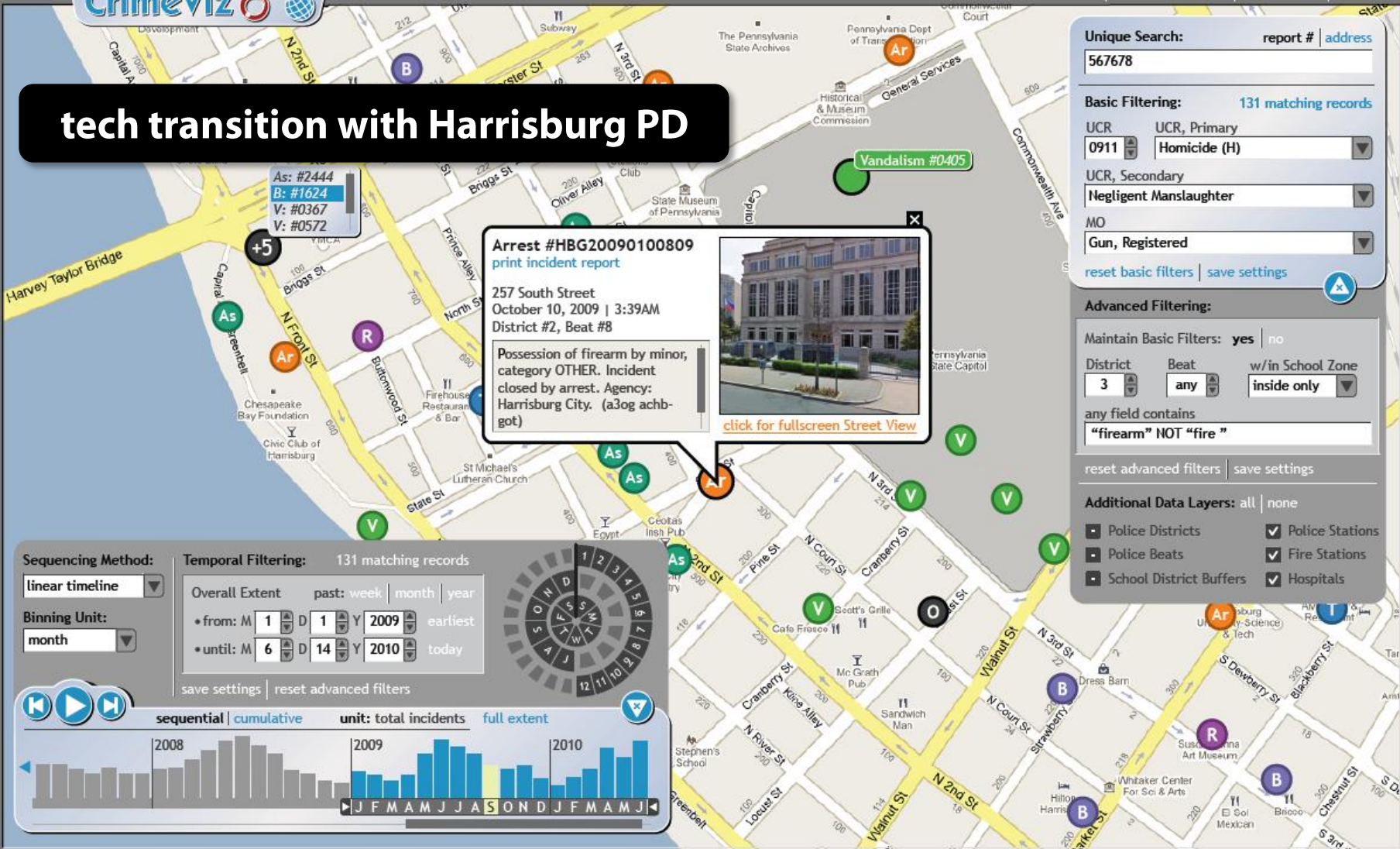
# GeoVISTA CrimeViz

an extensible web-based spatiotemporal visualization tool for crime analysis





# tech transition with Harrisburg PD





# SensePlace

geographically-centric document acquisition, contextualization, and sensemaking

The screenshot displays the SensePlace web application interface, divided into two main panels: "Data Views" and "Content".

**Data Views Panel:**

- Search UI:** Includes tabs for "Search UI" and "Search Results".
- 1. Enter Search Terms:** A text input field with a green plus icon.
- 2. Select Terms to Use as the Query:** A list of suggestions including "gang" and "indiana", with "indiana" highlighted in blue. Includes a red minus icon and a yellow folder icon.
- 3. Select Geographic Scope:** A dropdown menu.
- Source Selection:** Radio buttons for "Google News" and "Google Archives" (selected).
- Start Date:** Input field with "07/12/2009" and a calendar icon.
- End Date:** Input field with "07/12/2010" and a calendar icon.
- 4. Select Number of Documents to Return:** A spinner control set to "10".
- 5. Select the Geocoder to Use:** Radio buttons for "SensePlace" and "Yahoo" (selected).

**Content Panel:**

- Concepts and ...:** A section with a "Repulsion" slider and a "Refresh" button.
- Concepts for doc: Man gets prison in biker gang marijuana case - ST**
- Concept Network:** A network diagram with red circular nodes connected by lines. Nodes include: "saureg\_uprising", "conflict", "uprising", "fighting", "strike", "riot", "Politics", "assassination", "election", "coup", "protest", and "mutiny".
- Calendar:** A partial calendar view showing months "Jun", "Jul", "Aug", and "Sep".

**acquisition of relevant unstructured documents**

# SensePlace

geographically-centric document acquisition, contextualization, and sensemaking

place, person, and organization contextualization

The screenshot displays the SensePlace interface, which is divided into two main sections: "Data Views" on the left and "Content" on the right. The "Data Views" section shows a list of news items with their titles, dates, and URLs. The "Content" section shows a Google News search result for "indiana gang" with a bar chart showing the number of results over time from July 2009 to July 2010. The interface also includes a search bar, navigation buttons, and a "Selected Item Details" section at the bottom left.

**Data Views**

- Rapper Waka Flame's Indiana Gig Turns Into Gang Gunfight**  
Mon Mar 8 2010  
null The Post Chronicle article you have requested has been archived and redirected immediately. Click here to view the article...  
[http://www.postchronicle.com/news/original/article\\_212288501.shtml](http://www.postchronicle.com/news/original/article_212288501.shtml)  
View in Google Earth View on the Map
- Man gets prison in biker gang marijuana case - STLtoday.com**  
Sat Jun 5 2010  
Law & Order Man gets prison in biker gang marijuana case  
POST-DISPATCH 06/05/2010 A member of a Midwest 'outlaw' biker...  
<http://www.stltoday.com/stltoday/news/stories.nsf/laworder/story/6FCA91F0C598D2EC86>  
View in Google Earth View on the Map
- Missing No. Nevada teen found in Indiana - My News 4**  
Tue Oct 6 2009  
93° Customize your home page: or to keep these settings no go! TEXT SIZE The 16-year-old teen who vanished while riding...  
<http://www.mvnews4.com/story.php?id=5681>

**Content**

Information Map Web Browser

Google news indiana gang Search

Search all prices Search content with no price

**News Archives** Results 1 - 10 of about 470 for indiana gang . (0.04 sec)

View recent news results for indiana gang

Jul, 2009 - Jul, 2010 From 2009/07/12 To 2010/07/12 Go

Jul, 2009 Sep Nov Jan, 2010 Mar

**Missing No. Nevada teen found in Indiana - My News 4**  
MyNews4 - Oct 6, 2009  
Investigators worked with the Reno office of the FBI and the Merrillville, Indiana Gang Investigation Team to locate Kaur. ...  
[Missing girl found unhurt in Indiana - News - ...](#) - Las Vegas Review-Journal - Las Veg  
[Missing NRI girl found with brother-in-law](#) - Sify  
[All 12 related - Related web pages](#)

**Rapper Waka Flame's Indiana Gig Turns Into Gang Gunfight**  
postchronicle.com - Mar 8, 2010  
by Staff. Rapper Waka Flocka Flame's concert in Indiana on Friday night (05Mar10) as rival gangs started shooting at each other just as ...  
[All 2 related - Related web pages](#)

**Selected Item Details:**  Toggle Named Entities

**Concepts Found:** gang indiana

marijuana case By **ST. LOUIS POST-DISPATCH** 06/05/2010 A member of a **Midwest** "outlaw" biker **gang** called the Invaders was sentenced Friday to 12 years in prison for his role in a major marijuana conspiracy. **Stephen P. "Sticky Steve" Morris**, 47, pleaded guilty to a drug conspiracy charge in November and admitted that he played a part in what prosecutors have said was a 15-year scheme that brought thousands of kilos of pot to the **St. Louis** area. **Morris'** lawyer, **Jeffrey Rosanswank**, told **U.S. District Judge Rod Sippel** that **Morris** had "quite an awakening" before the indictment was filed. It was "one thing" to ride around on motorcycles, **Rosanswank** said, "but things got out of hand." **Morris** was one of 15 men indicted last year in federal court in **St. Louis** on the marijuana charges. Additional methamphetamine-related charges were filed against others in **Indiana**. Officials believe that some local

# SensePlace

geographically-centric document acquisition, contextualization, and sensemaking

## place, person, and organization contextualization

go! TEXT SIZE The 16-year-old teen who vanished while riding...

<http://www.mvnews4.com/story.php?id=5681>

Selected Item Details:  Toggle Named Entities

Concepts Found: gang indiana

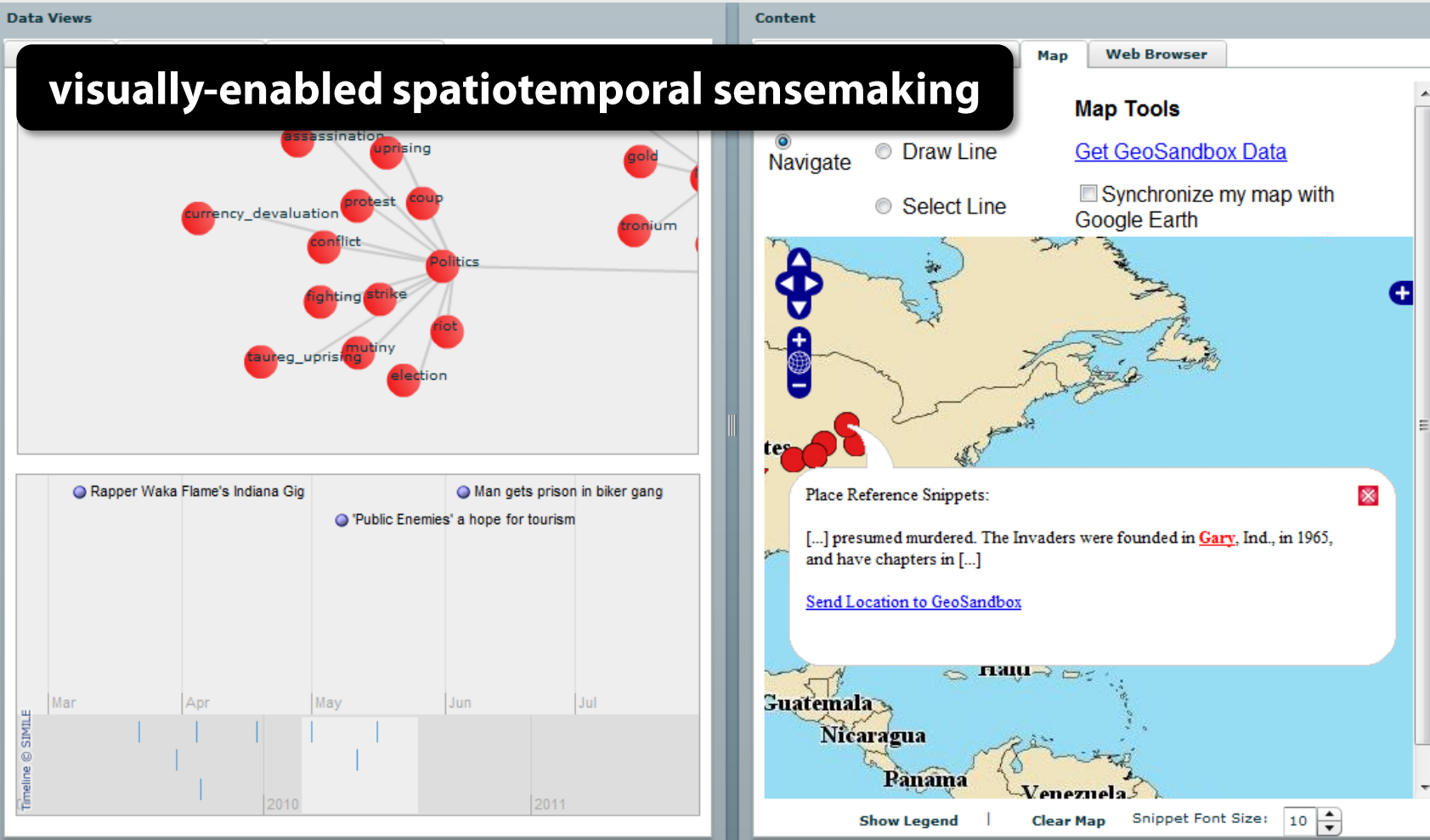
marijuana case By **ST. LOUIS POST-DISPATCH** 06/05/2010 A member of a **Midwest** "outlaw" biker **gang** called the Invaders was sentenced Friday to 12 years in prison for his role in a major marijuana conspiracy. **Stephen P. "Sticky Steve" Morris**, 47, pleaded guilty to a drug conspiracy charge in November and admitted that he played a part in what prosecutors have said was a 15-year scheme that brought thousands of kilos of pot to the **St. Louis** area. **Morris'** lawyer, **Jeffrey Rosanswank**, told **U.S. District Judge Rod Sippel** that **Morris** had "quite an awakening" before the indictment was filed. It was "one thing" to ride around on motorcycles, **Rosanswank** said, "but things got out of hand." **Morris** was one of 15 men indicted last year in federal court in **St. Louis** on the marijuana charges. Additional methamphetamine-related charges were filed against others in **Indiana**. Officials believe that some local



# SensePlace

geographically-centric document acquisition, contextualization, and sensemaking

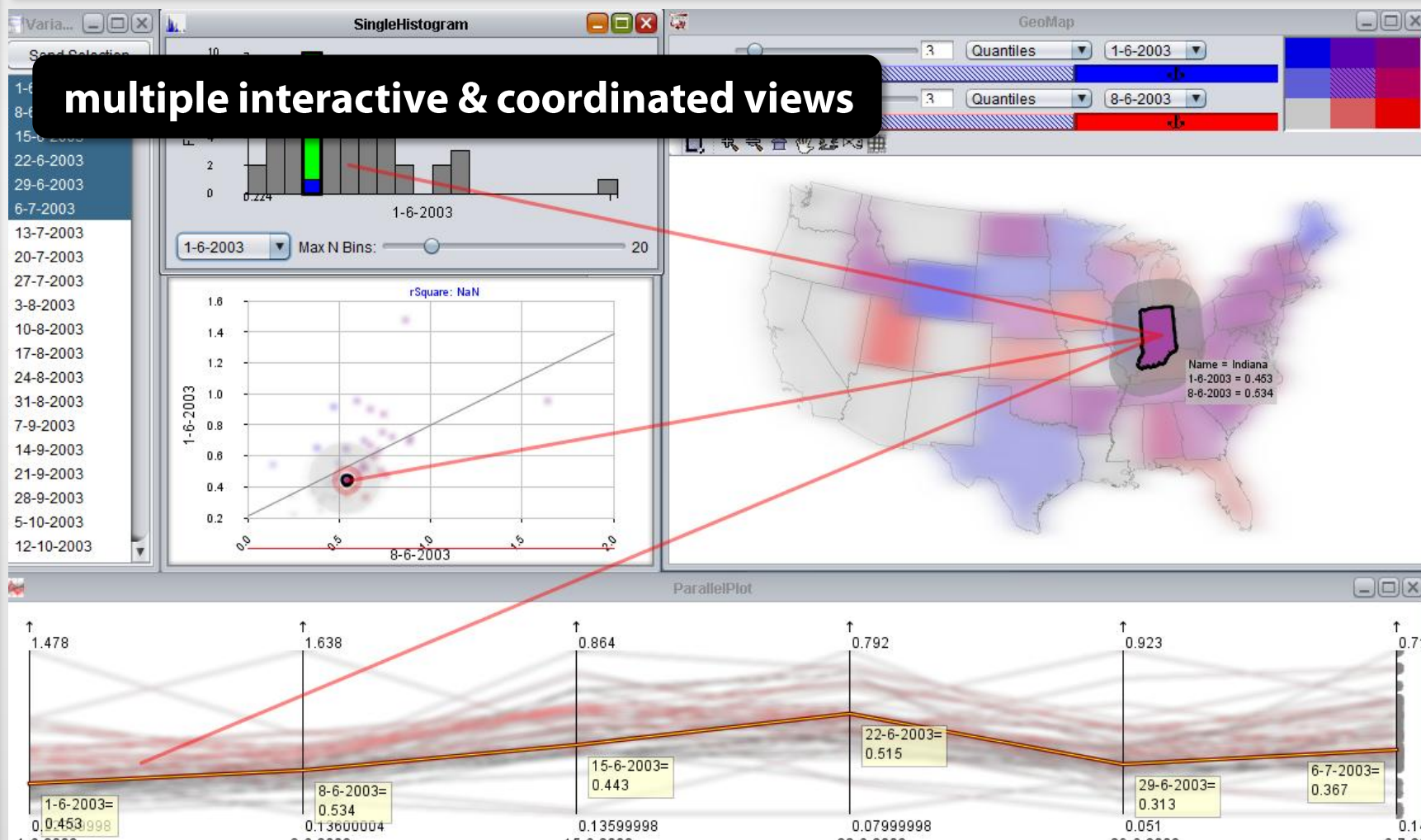
visually-enabled spatiotemporal sensemaking



# GeoViz Toolkit

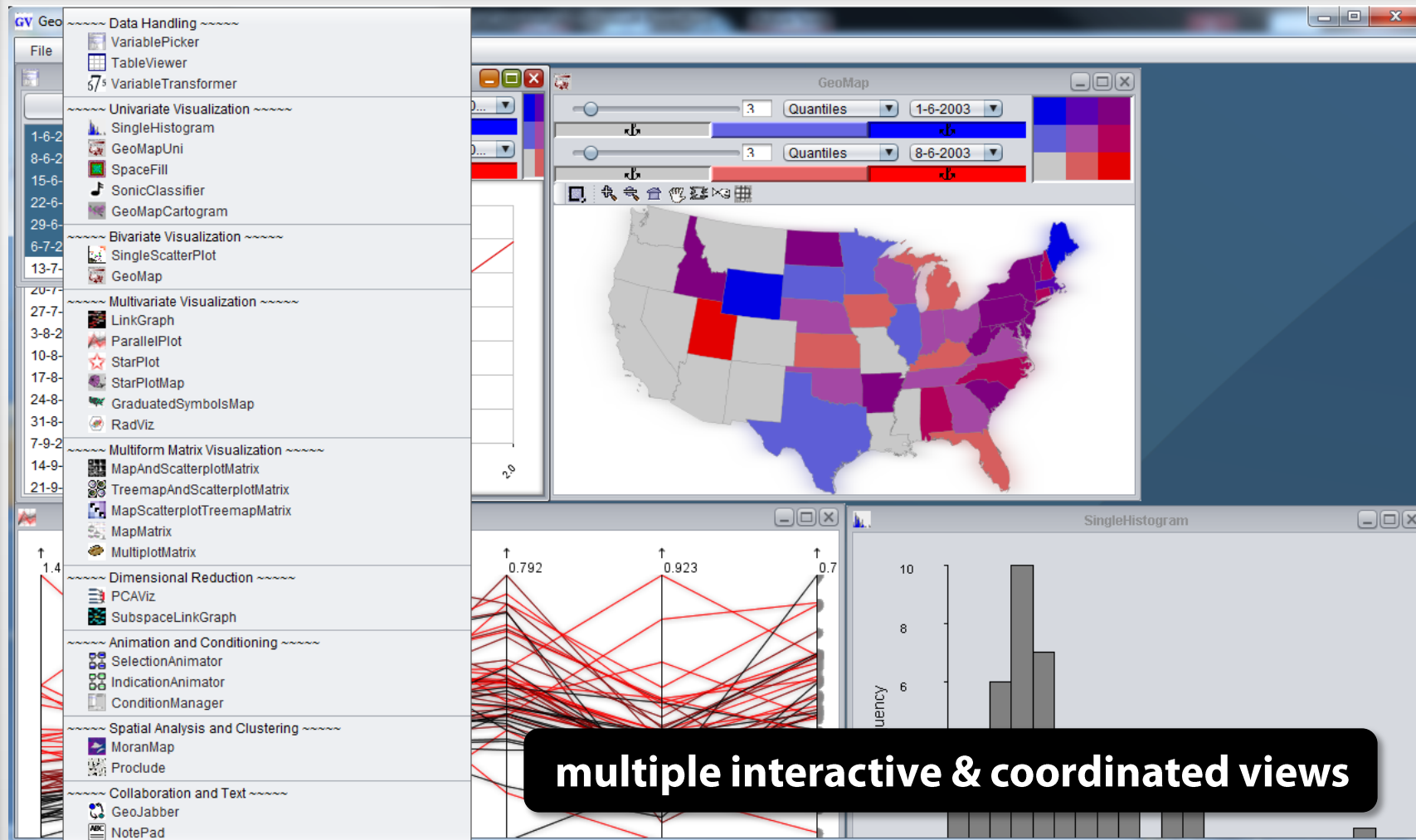
coordinated analysis of multivariate relationships in geographic space

multiple interactive & coordinated views



# GeoViz Toolkit

coordinated analysis of multivariate relationships in geographic space

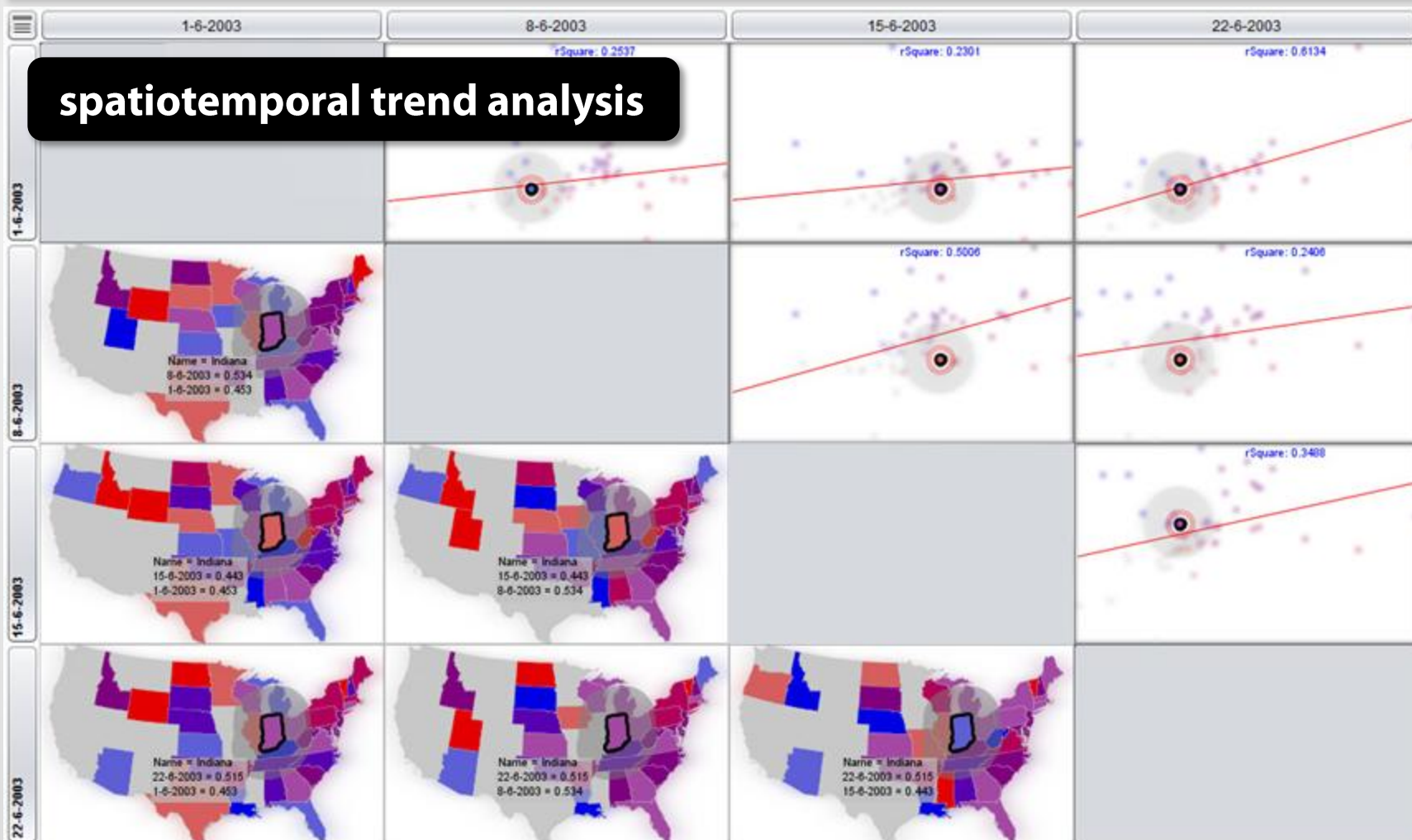




# GeoViz Toolkit

coordinated analysis of multivariate relationships in geographic space

spatiotemporal trend analysis



# Penn State GeoVISTA Center

<http://www.geovista.psu.edu/>

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<http://www.personal.psu.edu/rer198/>

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Wei Luo | [wul132@psu.edu](mailto:wul132@psu.edu)

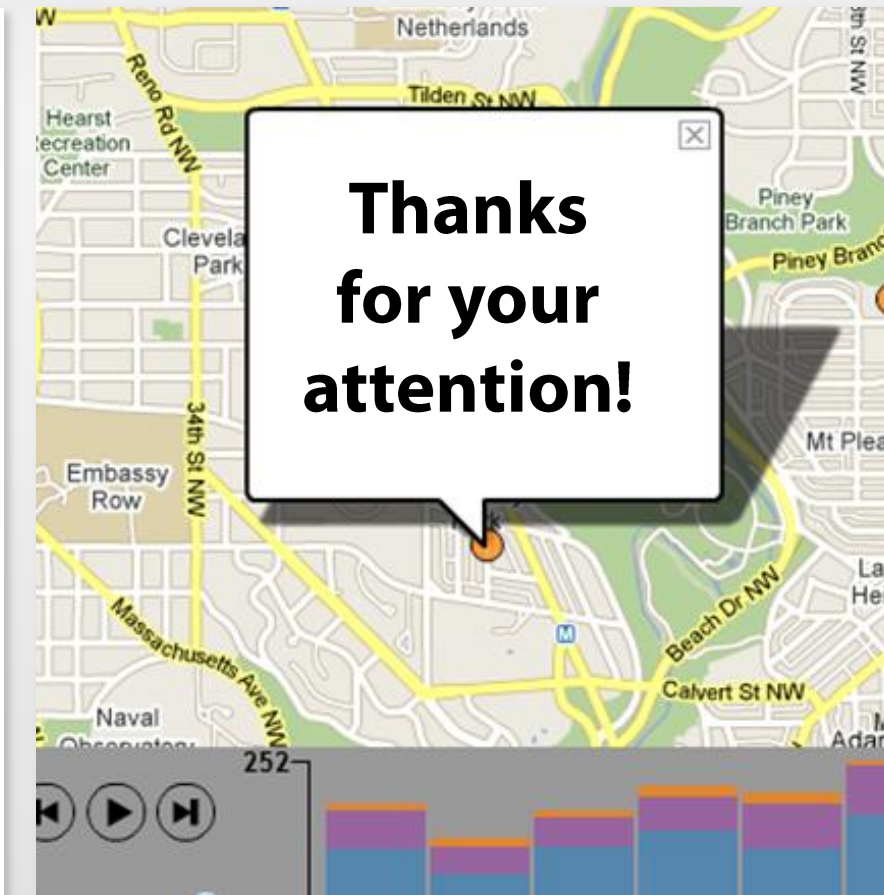
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**Thanks  
for your  
attention!**