



Privacy Concerns Associated with Geoinformation

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- Educate businesses and governments on current legal and policy environment with regards to location and other types of spatial data.
- Advocate development of consistent and transparent policy and legal frameworks for collection, use and distribution of spatial data.
- Identify solutions to legal and policy issues that limit the sharing of spatial data for critical transnational issues.
 - Climate change
 - Disaster response
 - Tracking spread of infectious disease

Perceptions of Privacy are Changing

- ▶ St Peter's Square – 2005



Luca Bruno/AP

Creating a Location Privacy Paradox

- ▶ St Peter's Square 2013

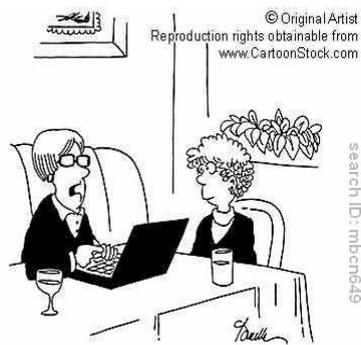


Michael Sohn/AP

New Disruptive Platforms



Innovative Uses for Geospatial Technology

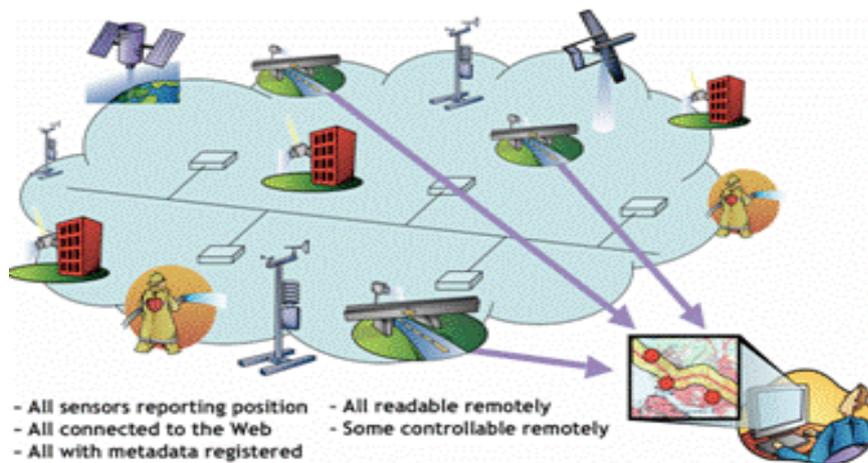


"I'm tracking my husband through his GPS unit. Right now, he's between a televised sporting event and the refrigerator."

Using Geoinformation In New Ways



New Uses for Sensors



- All sensors reporting position
- All connected to the Web
- All with metadata registered
- All readable remotely
- Some controllable remotely

Challenges: Unique Aspects of Geoinformation

- ▶ Much more difficult to define
 - Compared to other protected information – social security number, health records, credit information
- ▶ Temporal component
 - Present vs. historical?
- ▶ Cultural, gender, age, religious, social components
- ▶ **Location information is collected in many more ways**
- ▶ Privacy challenges are much more varied.
- ▶ We regularly provide our location to others.

Challenge: Fair Information Practice Principles (FIPPs)

- ▶ Privacy laws and regulations around the world are based upon FIPPs
- ▶ Elements of FIPPs include:
 - “**identified**” and “**identifiable**”
 - Notice and transparency
 - Consent and use limitation
 - Access and participation
 - Integrity and Security
 - Enforcement and Accountability
- ▶ Applying FIPPs to geoinformation is hard

Challenges: Geospatial Ecosystem

- ▶ Government, industry and citizens are both providers and users of geoinformation.
- ▶ They all collect, use and share geoinformation, often simultaneously.
- ▶ Government relies upon private sector and increasingly the crowd to provide critical geoinformation.
- ▶ **Laws, policies, etc. that impact one segment will have a ripple effect throughout the entire geospatial ecosystem .**

Evolving Legal and Regulatory Framework

- ▶ E.U. General Data Protection Regulation (GDPR) will protect location data.
- ▶ U.S. Federal Trade Commission initiates enforcement actions against companies collecting geolocation information without consent.
- ▶ Laws and regulations around the globe restricting collection of data from unmanned aircraft systems (drones).
- ▶ Legislation in Australia that would criminalize re-identifying an individual from de-identified data sets.
- ▶ Government agencies publishing industry-specific laws/guidelines regarding data protection.
- ▶ Law enforcements use of “stingray” technology and mobile phone tracking being challenged in courts and media.

Impact: Government Privacy Policies

- ▶ Government privacy policies are outdated
- ▶ Recent U.S. report found
 - Technologies of today do not fit into the definitions coined in 1974”
 - “Current government privacy laws do not provide sufficient limits on how location information can be used” once it is collected by a government agency.
 - “OMB should issue privacy guidelines on agency use of location information”

Impact: Development of Mosaic Theory

- ▶ U.S. v. Jones 132 S. Ct. 945 (2012)
- ▶ Supreme Court was asked to decide whether law enforcement was required before using a tracking device to monitor movements in public space
- ▶ Court found that the act of placing a device on auto was a violation
 - Trespass theory
- ▶ Majority of justices appear to believe that tracking individual’s movements in public over time can violate privacy
 - **Mosaic theory**

Impact: Law Enforcement

- Growing number of businesses are collecting location information.
- Law enforcement increasingly recognizing value of geospatial technology and geoinformation.
- Greater scrutiny (media + civil liberty organisations)
 - GeoFeedia
- Key questions:
 - What protections should there be in citizens location?
 - What obligations should businesses have to turn over geoinformation to government agencies?

Impact: Open Data Initiatives

- ▶ Growing push for government agencies to make data available to public.
- ▶ Many of these data sets are spatial-enabled.
- ▶ Concerns:
 - Adequate procedures to de-identify?
 - Power of location
 - At what point does aggregation of spatially-enabled government data encroach upon privacy interests of citizens?
 - Is geospatial community being consulted?

Conclusions

- ▶ We are struggling to understand location privacy.
 - Advancement in technology are changing expectations.
- ▶ Need to identify and weigh the true privacy risks.
 - Policy often involves trade-offs between public benefit and perceived risks.
- ▶ Location information doesn't easily fit into existing privacy protection constructs.
- ▶ Excessive regulation, conflicting and/or confusing legal and policy regimes will have a significant impact on ability of entire geospatial ecosystem to collect, use and distribute geospatial.
- ▶ **Geospatial community needs to play active role.**

Questions

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