Mapping Foundations

Mike Goodchild
It used to be difficult

- A professional skill
  - a fine-motor art
  - conventions and practices
- Where would the data come from?
- The cost of mistakes
- Computerization in the 1960s
  - pre-dating word processing
- The Web in the 1990s
  - an abundance of data
  - an abundance of software
The components

- A computer
- Data
- Software
- Motivation
Data

• A base map
  – a framework
  – imagery
    • Google Earth, Google Maps, Bing
  – streets
  – topography
  – historic maps
    • London 1843
Thematic data

• Points, lines, areas
  – specific meaning for application
• From online source
  – statistical agency
    • census
• Combined with base map
  – overlay
  – “mashup”
User-generated content

- Volunteered geographic information (VGI)
- Created by citizen amateurs
- Connected through a social network
Eastern tip of Uluru

The base circumference of Uluru is about 9km -- I walked solo around the rock in the early morning, stopping to photograph the long shadows and listen to the morning bird song. Uluru-Kata Tjuta National Park, Australia, 2005

Australia, Uluru, AyersRock, nationalpark...
Anyone can see this location

www.flickr.com
284631: 750 Spadina Ave

| Helen McLean |
| Anonymous   |
| Eva MacDonald |

- info@murmurtoronto.ca -
Jesusita Fire

Description
Size: Approximately 3.733 acres
Containment: 100% contained on May 18, 2009 at 6PM local time (source: InciWeb)
Ignition Time: 145PM PDT, May 5, 2009

Jesusita Fire Perimeter
Fire boundary interpolated from MODIS satellite imagery.

Delete
Cancel OK
The software

• High-end
  – ArcGIS from ESRI
  – industrial strength, expensive
  – 3-course sequence Geography 176

• Open-source

• Internet-based
  – Internet Explorer or Firefox
  – mapping services
    • mashups
    • user-supplied data
    • user-generated data