FUTURE OF TECHNOLOGY

Future of Technology
Friday, September 24, 2010 1:30 PM–6:00 PM
Saturday, September 25, 2010 10:00 AM–4:00 PM

TAUBMAN COLLEGE

Technologies for Simulating Cities

Modelling, Tracking, Visualising Futures for Cities

Michael Batty

University College London

m.batty@ucl.ac.uk
http://www.casa.ucl.ac.uk/

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Three Very Different Views of the City

Simulating Futures

Tracking the Present

Tagging the Material City

*& **Mapping** but I won't have time to talk about our crowdsourcing and mapping work*

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- ***Simulating Futures*** Land Use Transportation in Large Cities
- Key Challenges: Climate Change, Energy Issues, Aging
- *Symbolic Models*: Land Use Transportation Interactions: LUTI Models for Greater London
- *Iconic Models*: Visualising City Form
- Participation: Stakeholder Interaction
- Some Examples for London

- Desktop Running of Symbolic LUTI Models
- Visualisation of Every Stage of the Modelling Process – in terms of Data and Predictions and in terms of the Actual Operation of the Models
- Models linked to the Web under Various Kinds of User Control
- Linking Diverse Software packages together from the Desktop to the Cloud
- Running Models with Stakeholder Interaction

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Modes
Road
Bus
Heavy Rail
Light Rail
All Trips

Road: 38%; Bus: 12%: Heavy Rail: 12%: Light Rail 19%; Other (Walk, Bike, Fly): 19%

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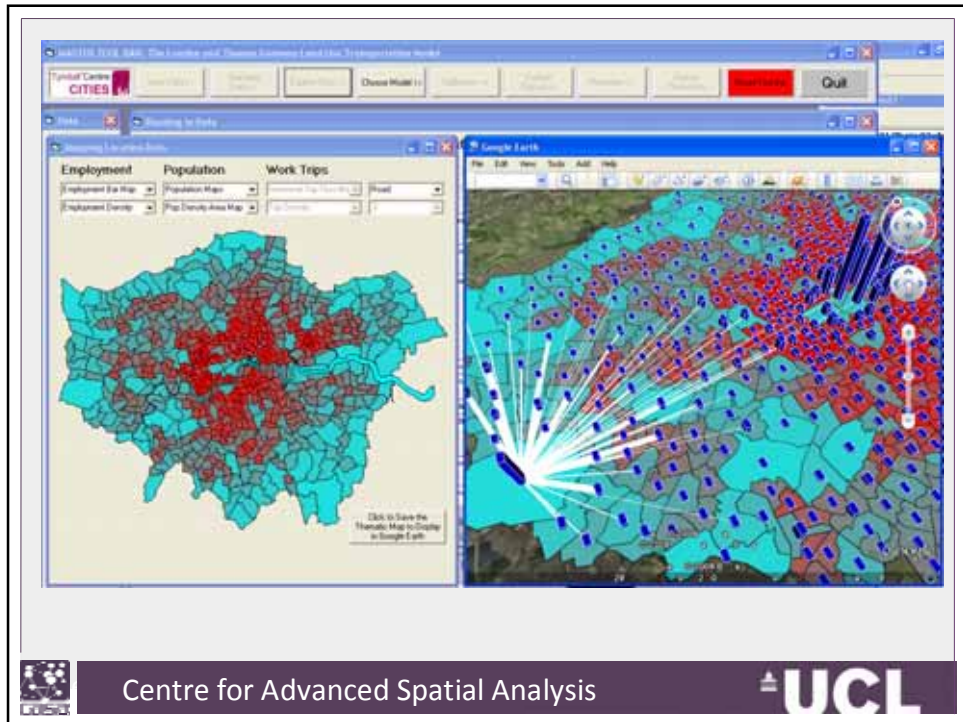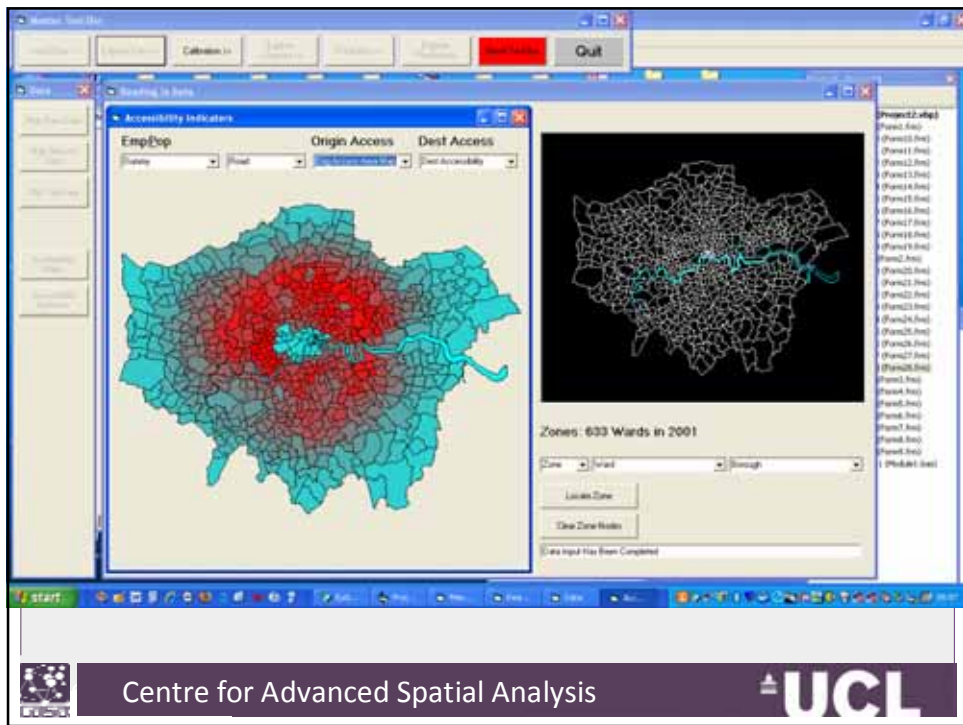
- Iconic Models: Virtual London
- For More Immediate and Obvious Visualisations of Urban Futures
- Pollution, Flooding etc.
- Running Models Online
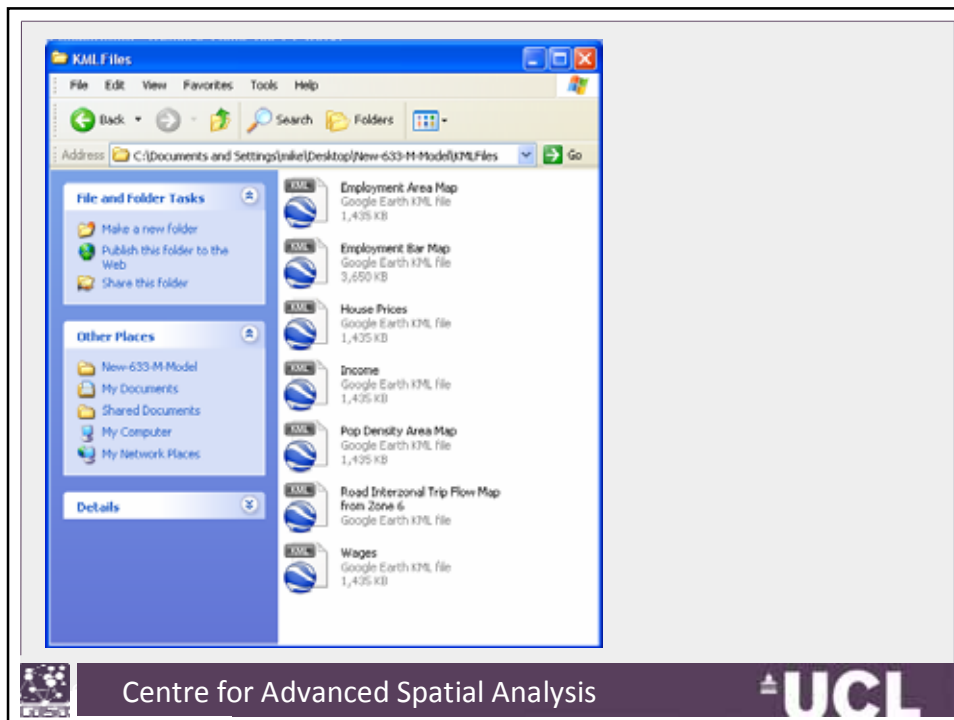- Models Under the Control of Different Types of User and Stakeholder
- Linking Software from Diverse Sources, from the Desktop to the Cloud
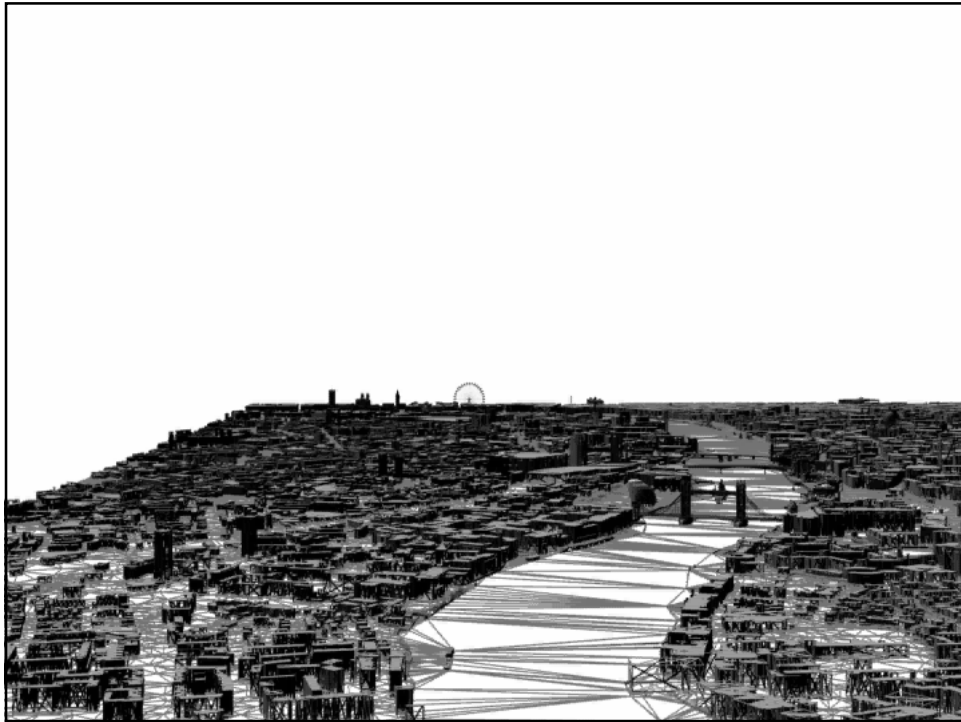
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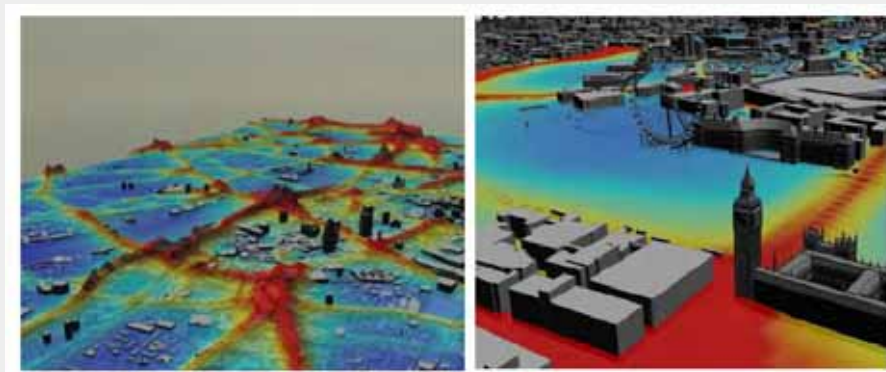
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http://www.londonair.org.uk/
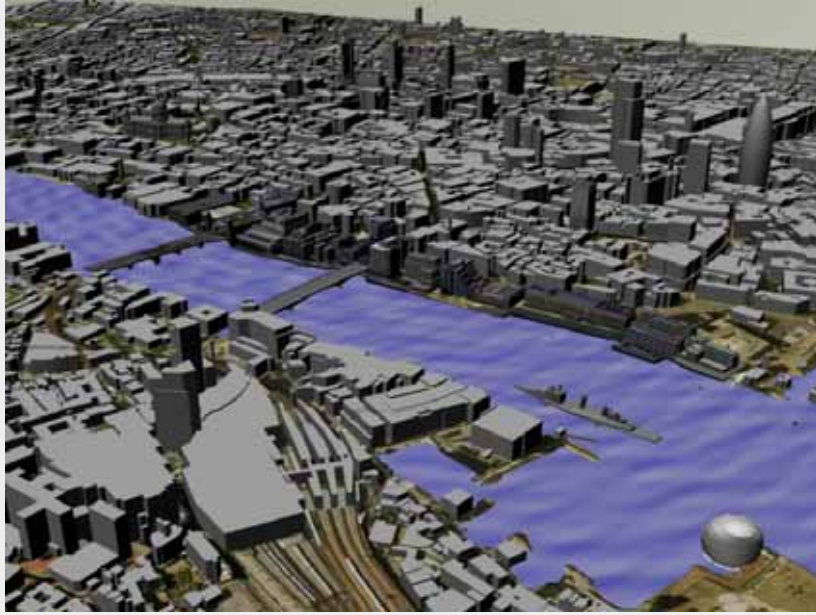
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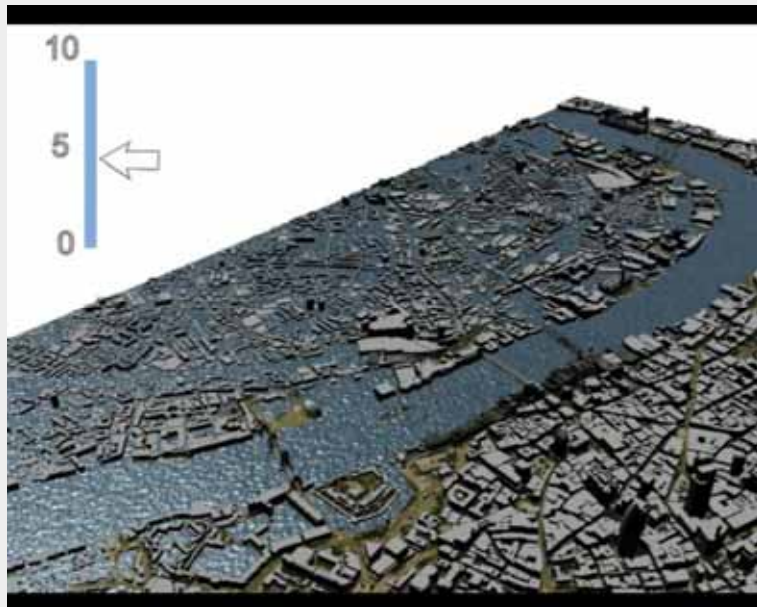
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- ***Tracking*** New Data Sources at the Fine Scale
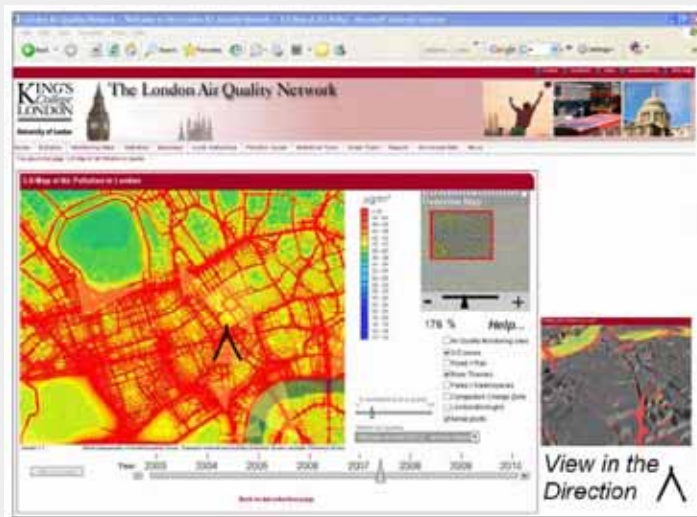- Tracking from Mobile and Fixed Devices
- Visualising Movements and Interactions
- Social Networks: Twitter Feeds: Background Radiation in the City
- Formal Tracking of Pedestrians and Vehicles equipped with GPS
- Examples

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Tweet-o-Meter & Crowd Sourcing Data

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Tweet-o-Meter

Capturing Geo-location Data from all over the world

- Collects data from Twitter (mainly Geo-located Tweets)
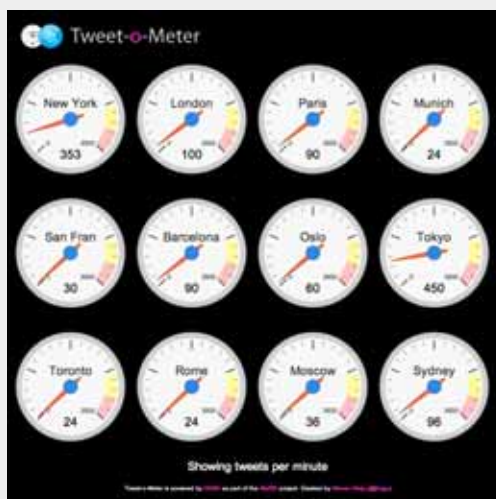- 30km radius from centre of each city
- Search for trends, specific topics using
  - Hash tags (e.g. #iPhone, #uksnow, #twitter etc)
  - Individual Words (e.g. CASA)
  - Groups (e.g. Carling Cup Final)
- First Experiment – Friday 22nd Jan to Monday 25th Jan
  - Area – London (All Tweets within M25)
  - **378,000** Tweets Captured
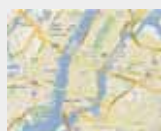 - **60,000** Geo-located Tweets

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Location Based Twitter Data

New City Landscapes compared

Tweets collected using Tweet-o-Meter over a week in an urban area. We build Interactive City Landscapes showing density of geo-located 'Tweeters' that provide their actual location and message through the Twitter API
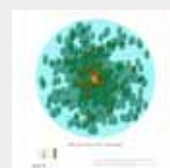
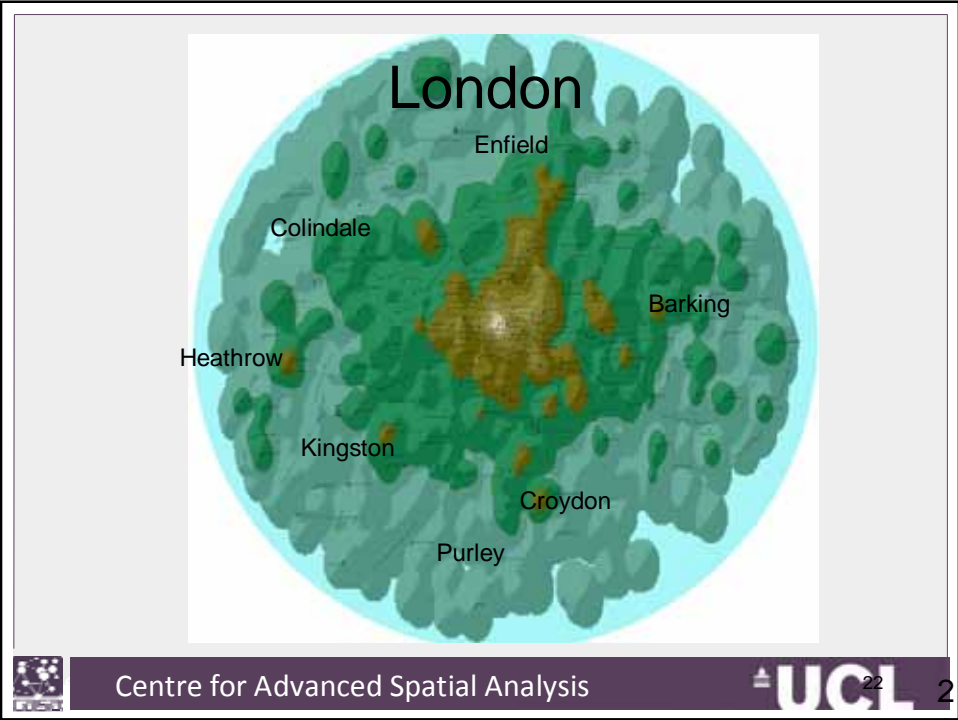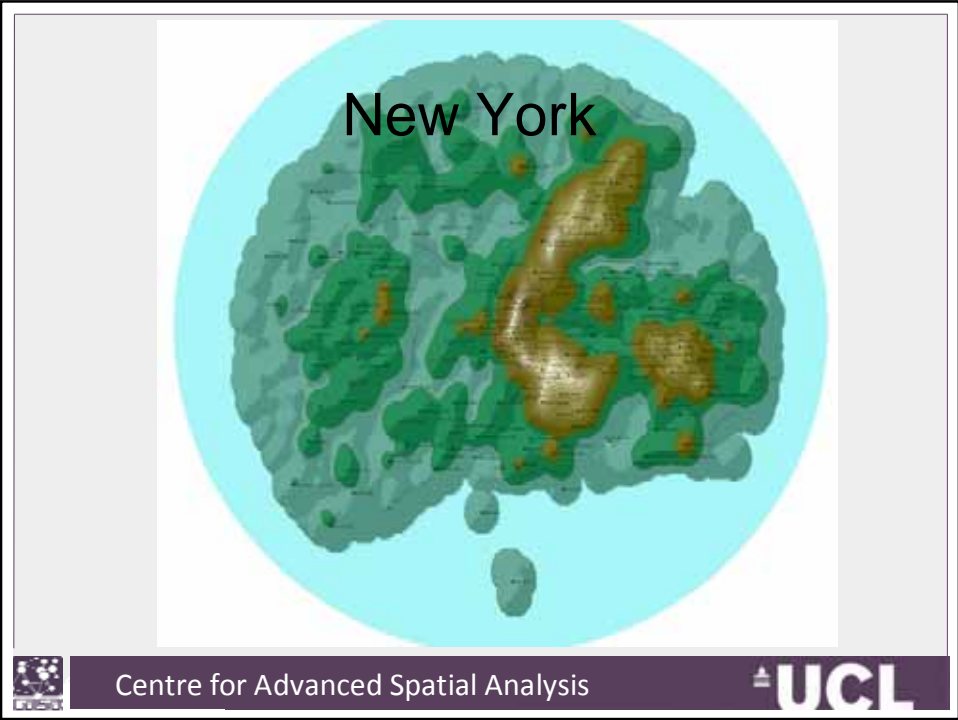New York   London   Paris   Moscow

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New York

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London

Enfield

Colindale

Barking

Heathrow

Kingston

Croydon

Purley

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- ***Tagging*** Objects in the City
- Tagging and Interacting with Fixed and Movable Objects
- The Internet of Things, Things being anything but in our Context Objects that define the City
- Social Networks from Tagging
- Tracking of Objects that are Tagged
- Examples

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what if objects
could hold memories
and be aware of their
surroundings?

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**what if memories
could be 'added' to objects?**

**what if objects
could tweet?**

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For more Information, you can view our research at:

CASA Website

http://www.casa.ucl.ac.uk

Urban Tick Blog

http://www.urbantick.blogspot.com

Digital Urban Blog

http://digitalurban.org

Maptube: http://www.maptube.org

Survey Mapper: http://www.surveymapper.com