

UCL CENTRE FOR ADVANCED SPATIAL ANALYSIS

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Harvesting the Crowd: Enhancing our Spatial and Temporal Understanding of Cities Through Crowd Sourcing and Data Mining

The Society for Location Analysis, 19th October 2010

Richard Milton, Steven Gray, Fabian Neuhaus, Andrew Hudson-Smith.

Centre for Advanced Spatial Analysis, University College London

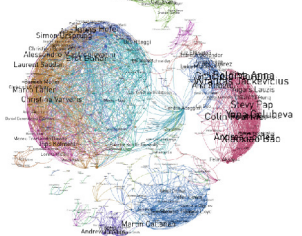



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Content

Using data mining and crowd sourcing to gain understanding of cities from a different perspective.

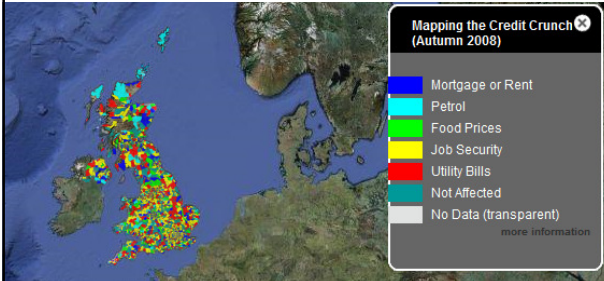
- Mood Maps
- MapTube
- SurveyMapper
- New City Landscapes - Tweetography



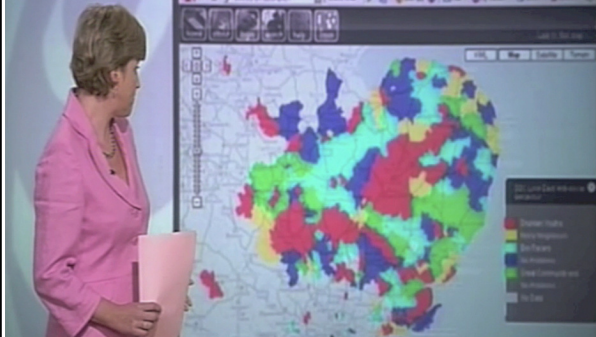
What is a Mood Map?

- Members of the public answer a question
- Collect Results of Surveys with Users' Postcodes
- Create dynamic maps of the data collected

Radio 4 questions with 22,000 responses



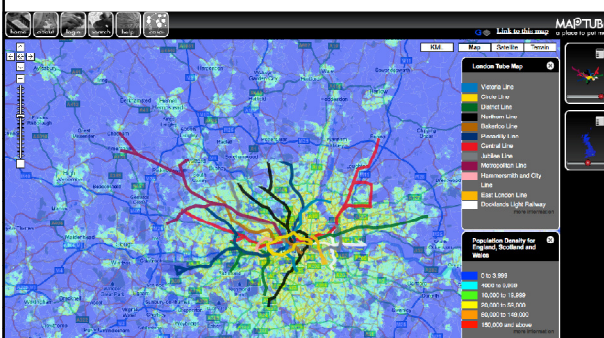
BBC Look East: Anti-Social Behaviour



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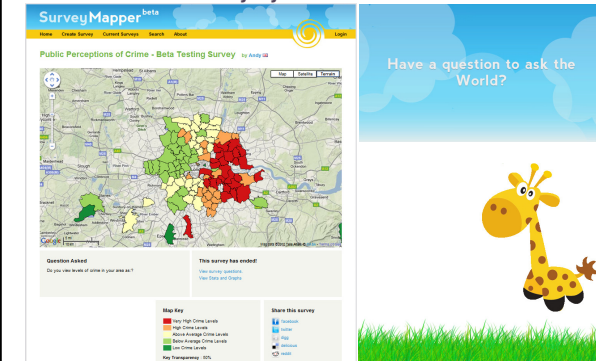
MapTube

- "A Place to put Maps" - <http://www.maptube.org>
- Creates Thematic Maps from Data Sets (Shapefile [.shp] and CSV files)




Introducing SurveyMapper

User Generated Survey System



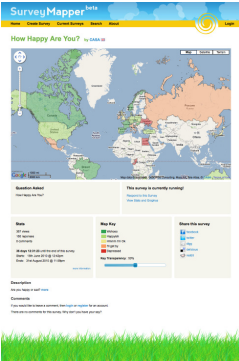
Have a question to ask the World?



SurveyMapper

www.surveymapper.com

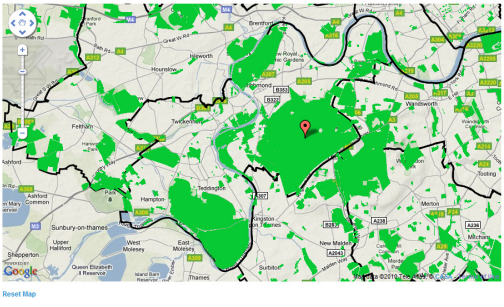
- Real-time Geographic survey tool
- Up to 10 questions per survey
- Up to 10 answers per question
- Live stats and graphs
- Geographic Regions:
 - Worldwide Countries
 - European Countries
 - UK Counties
 - UK Postcode
 - Adding more soon
- Frequently updating regions
- More complex spatial analysis
- Protection against malicious users



Mayor's Office Parks Survey, 28th September

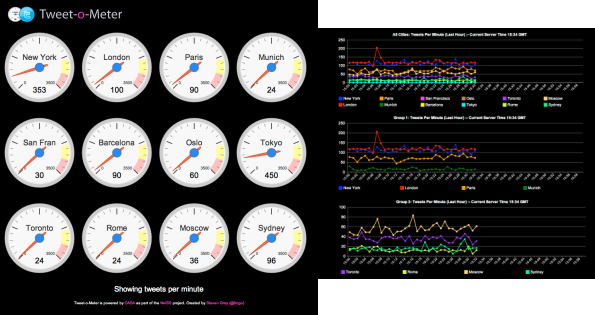
Q5: Where is your local park?
 Richmond upon Thames | Richmond Park

Or select your local park by dragging and dropping the pin



e-Social Scientist Toolset


Tweet-o-Meter & Crowd Sourcing Data



Tweet-o-Meter

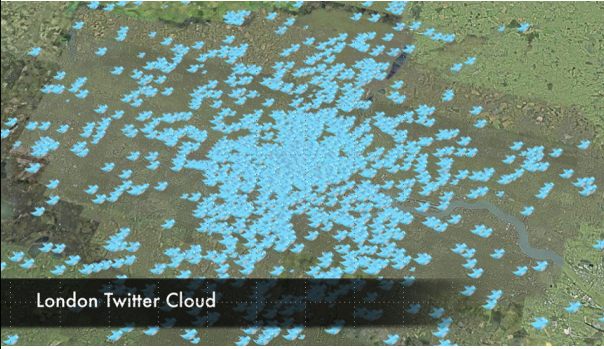
Capturing Geo-location Data from all over the world

- 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



Tweet-o-Meter

Analysis of London Weekend Tweets

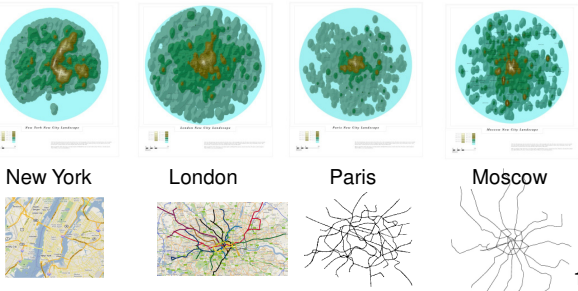


London Twitter Cloud

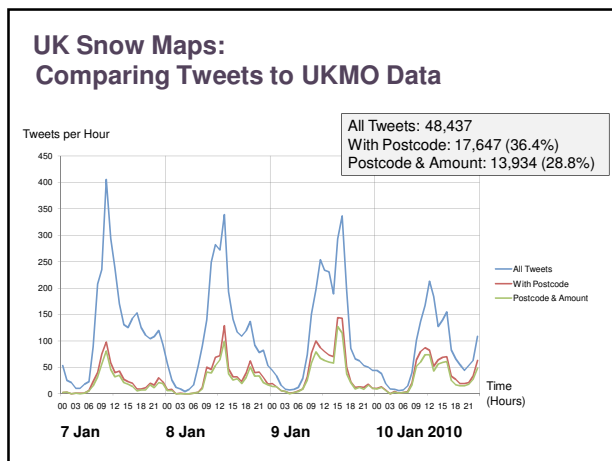
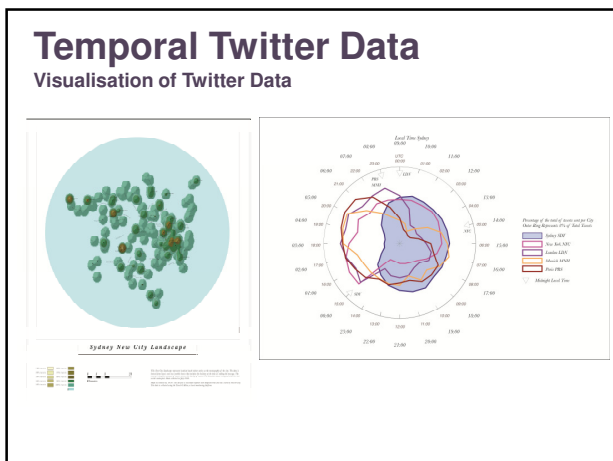
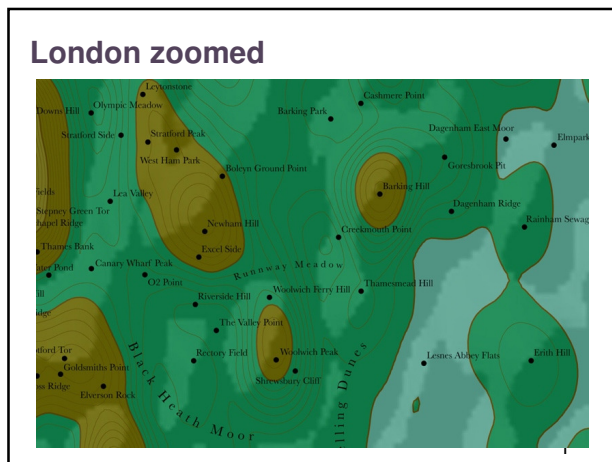
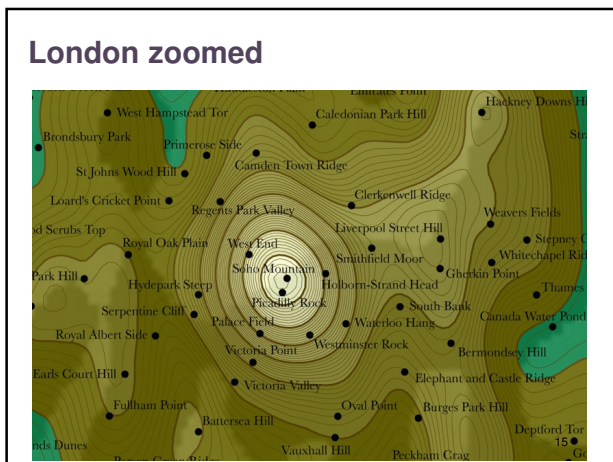
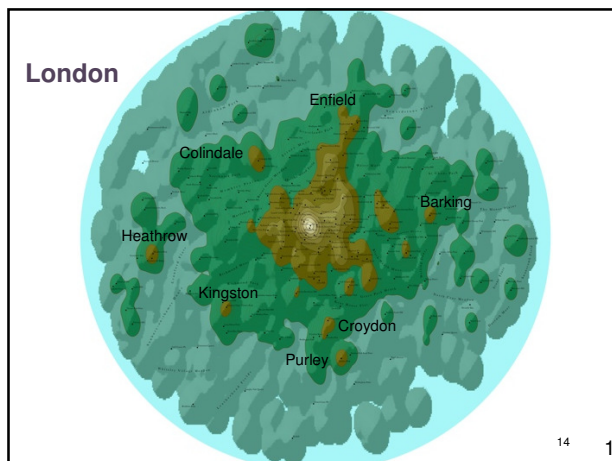
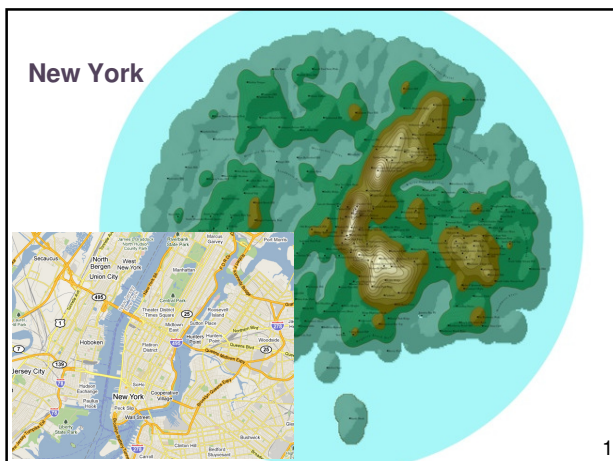
Location Based Twitter Data

New City Landscapes compared

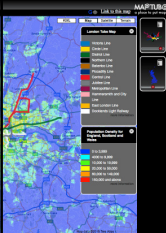
Tweets collected using Tweet-o-Meter over a week in an urban area. We build Interactive City Landscapes showing density of geo-located 'Tweeters' that provide their actual location and message through the Twitter API




New York London Paris Moscow



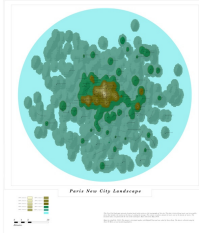
Data Mining / Crowd sourcing For the crowd



MapTube



SurveyMapper



Tweetography

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Thank You

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>

