

GIS/2 + 10: Has new GIS emerged?

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Outline

- GIS/2 / GIS Too
- Philosophy of technology framework
- Levels of hacking: Deep technical, shallow technical, use, meaning
- Geographical information examples
- Evaluating GIS/2 + 10

GIS 2 / GIS, Too

GIS/2: A set of methods and instruments which emphasize process, and which are oriented toward communication about representations as much as toward the representations themselves.

1. A GIS/2 would increase emphasis on the role of participants in creation and evaluation of data.
2. GIS/2 would accommodate an equitable representation of diverse views, preserving contradiction, inconsistencies and disputes.
3. Outputs would reflect the standards and goals of the participants, rather than closeness of fit to standards of measurable accuracy.
4. A GIS/2 would be capable of managing and integrating all data components and participant contributions from one interface.
5. The GIS/2 would preserve and represent the history of its own development, and be more capable of handling time components than existing GIS.

'Rewiring' GIS

| GIS/2 Approach | Material Aspects | Discursive Aspect |
|---|--|--|
| Integrating local and traditional knowledge | File formats, contextual info., counter-maps | Intermediaries, public outputs, GIS as part of collaborative decision making |
| Infiltrating cyborg | Greater integration, visualisation, software for low-end computing | Activists in GIS companies, vendors and NGOs engagement, change textbooks |
| Rewrite code | New features, different analytic methods | Participate in software design, share info with other activists |
| Rebuilding GIS | New data models, alternate metadata schemas | Collective discussion of data models, assumptions, processes |

Problems with GIS

- Desktop GIS continues to rely on concepts from computer science, statistics, cartography, geography, CAD
- Rewiring GIS requires ability to programme, understanding UML, Java, VB, Perl, XML etc.
- Inherently, this is a tension between a technological domain and society

Main positions in Philosophy of Technology

| | | |
|--|--|---|
| Technology is: | Autonomous | Humanly Controlled |
| Neutral (complete separation of means and ends) | <i>Determinism</i> (e.g. traditional Marxism) | <i>Instrumentalism</i> (liberal faith in progress) |
| Value-laden (means form a way of life that includes ends) | <i>Substantivism</i> (means and ends linked in a system) | <i>Critical Theory</i> (choice of alternative means-ends systems) |

Applying views to GIS

- Deterministic views: ‘GIS use is unstoppable and will advance no matter what the critics say, the technology itself is positive and enables us to extend our abilities’
- Substantive view: ‘GIS cannot be reformed or used for expressing the human experience. This is an inherent flow which cannot be changed and therefore we need to ensure that other collaborative spaces remain open’ (Curry ‘Digital Places’ 1998?)
- Instrumentalist view ‘GIS can be used for guiding missiles as well as improving water provision to remote rural communities, the technology is neutral and it is the applications that matter - so we just need to teach people how to use it ethically’ (Longley et al 2005?)
- Critical theory views: within Critical GIS (such as

Critical Theory view: technology is Humanly controlled and value-laden

- Developed since in the 1970s
- Technology is political, and there is a need to reform technology and the way we deal with it
- Theorists: A. Feenberg, H. Marcuse and not directly in the writings of Foucault, Latour, Habermas.
- *Technology as ideology has definitive political implications, and it is possible to reform it and to force technological elites to be more responsive to a democratically informed public will*

Feenberg's Deep Democratisation

- ‘Technical representation is not primarily about the selection of a trusted personnel, but involves the embodiment of social and political demands in technical codes.’
- Technology can be also change from within, through an intervention by the users

‘Hacking’ technology

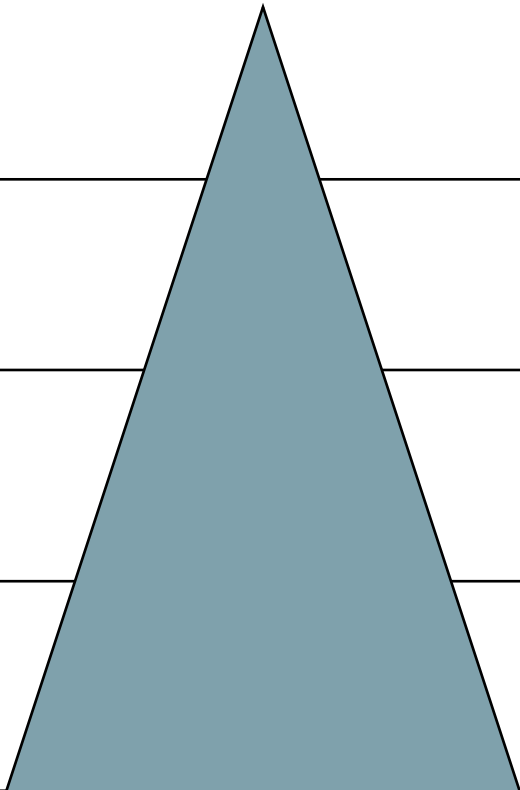
- Minitel - from phone directory to online chat / meeting
‘the computer was politicized ... Users "hacked" the network in which they were inserted and altered its functioning, introducing human communication on a vast scale where only the centralized distribution of information had been planned.’
- AIDS therapy and the pharmaceutical test protocol
- Amyotrophic Lateral Sclerosis patients and their use of online discussion boards

- Possible democratic and participatory transformation of technological projects and domains

Different levels of 'Hacking'

- Deep technical hacking (system programming) - changing the actual code of GIS, writing new analytical tools
- Shallow technical hacking (end-user programming) - changing the interface through basic customisation, writing macros
- Use hacking - applying existing tools differently
- Meaning hacking - using information in new ways, beyond its original 'design'

Typology of hacking

| Type | No. of participants | Issue for PPGIS |
|-------------------|---|--|
| Deep technical |  | Significant skills, negotiation & translation of knowledge |
| Shallow technical | | Skills, user / programmer, control over the application |
| Use | | Knowledge of GIS, legitimacy of outputs, access to data and software |
| Meaning | | Outputs, legitimacy of interpretation, overcoming 'technophobia' |



7 organizations mapped

Organization [Aims](#) [About us](#)

Construction Industry Environmental Forum

Main Category: Green Suppliers/Shops
 Subcategory 1: National Organisation
 Subcategory 2: Community Group
 Newsletter: YES
 Volunteering details: NON SPECIFIED AT PRESENT / NOT APPLICABLE
 Email: enquiries@ciria.org
 More info [here](#)

[Directions to/from here](#) [Discuss in the forum](#)

Map Satellite Hybrid

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Resources
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 Directory & Links
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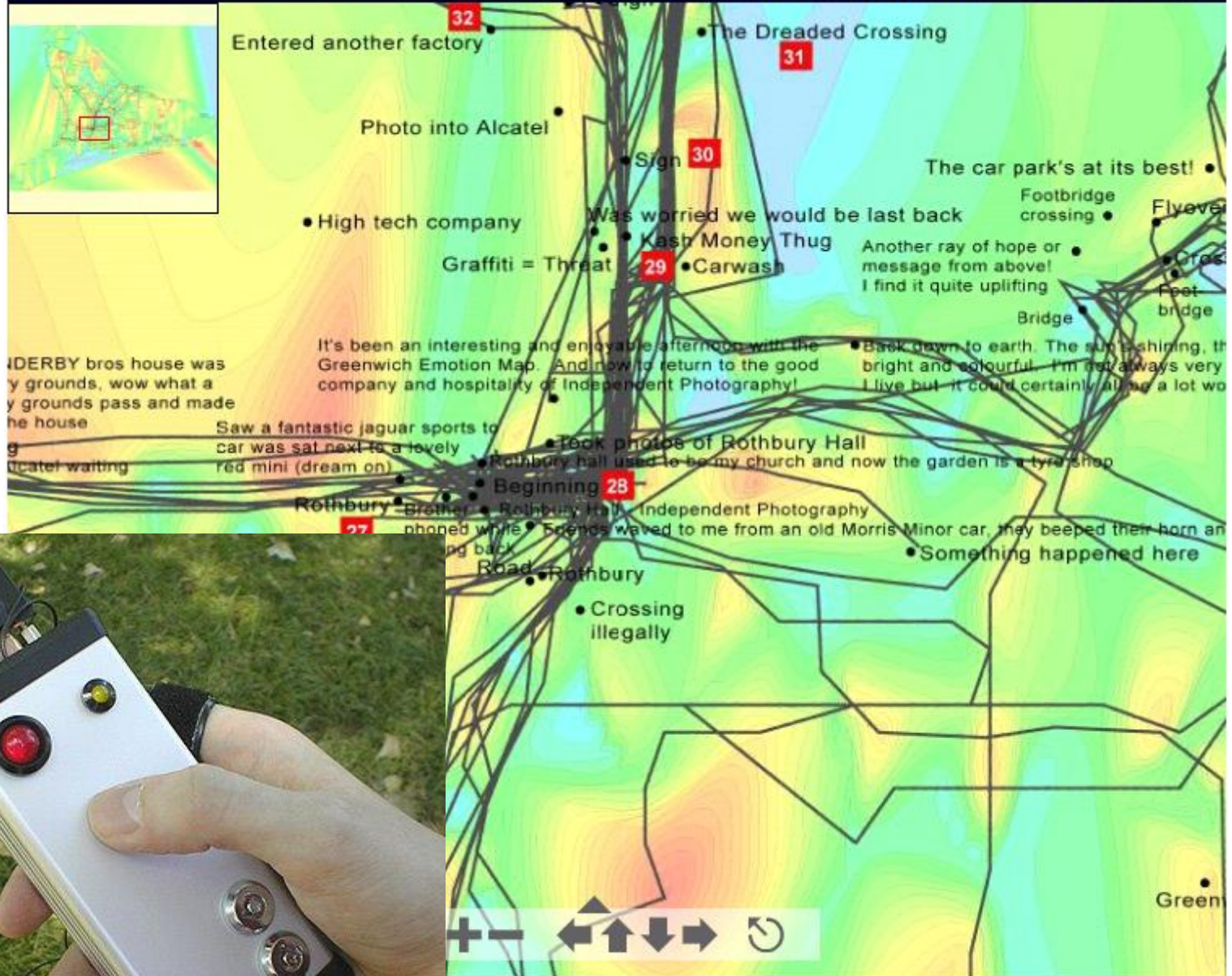
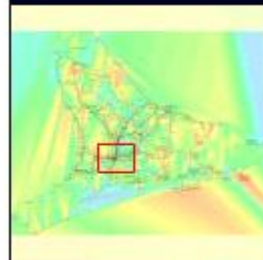
Make London 21 your home page

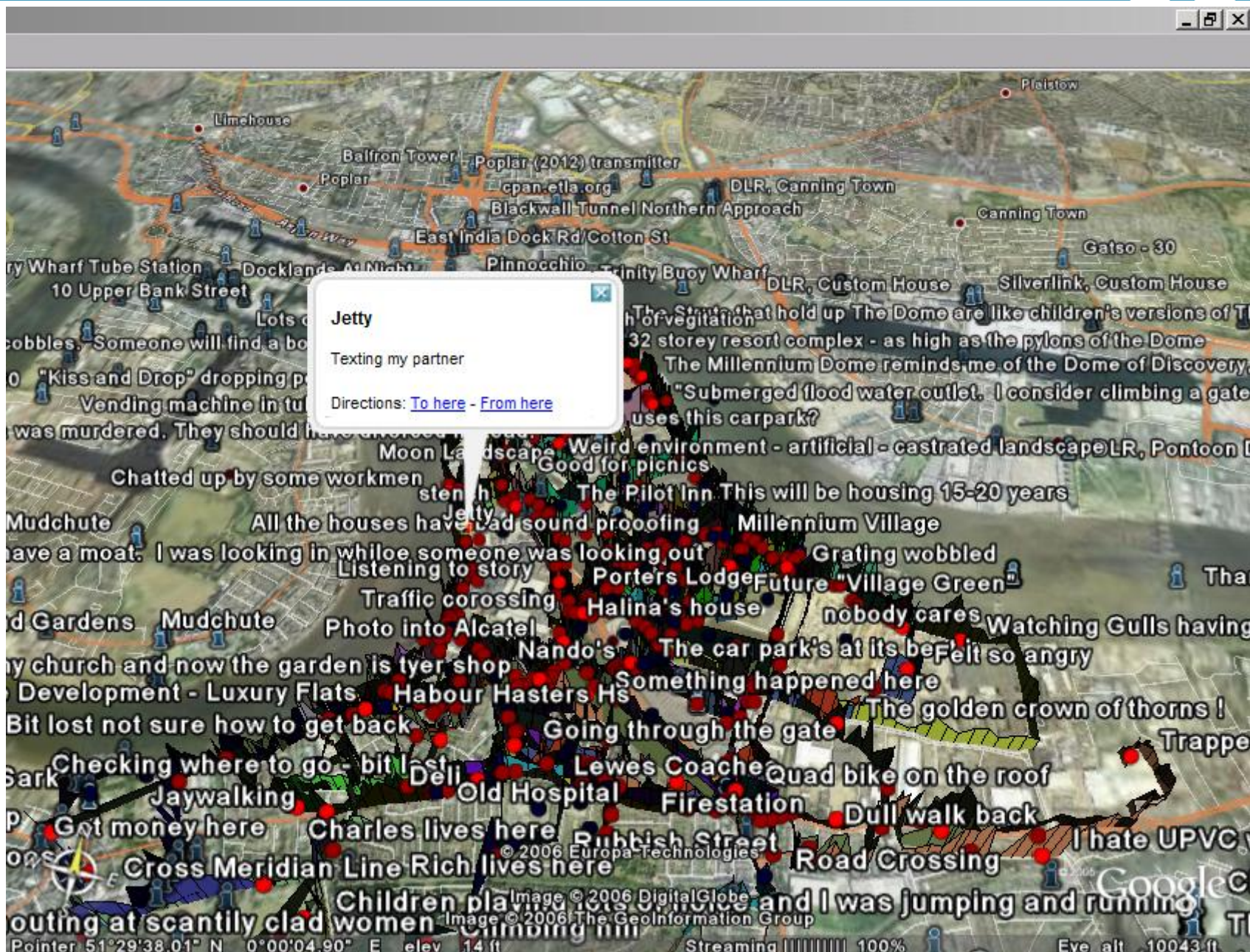
Search
Legend
List
Help

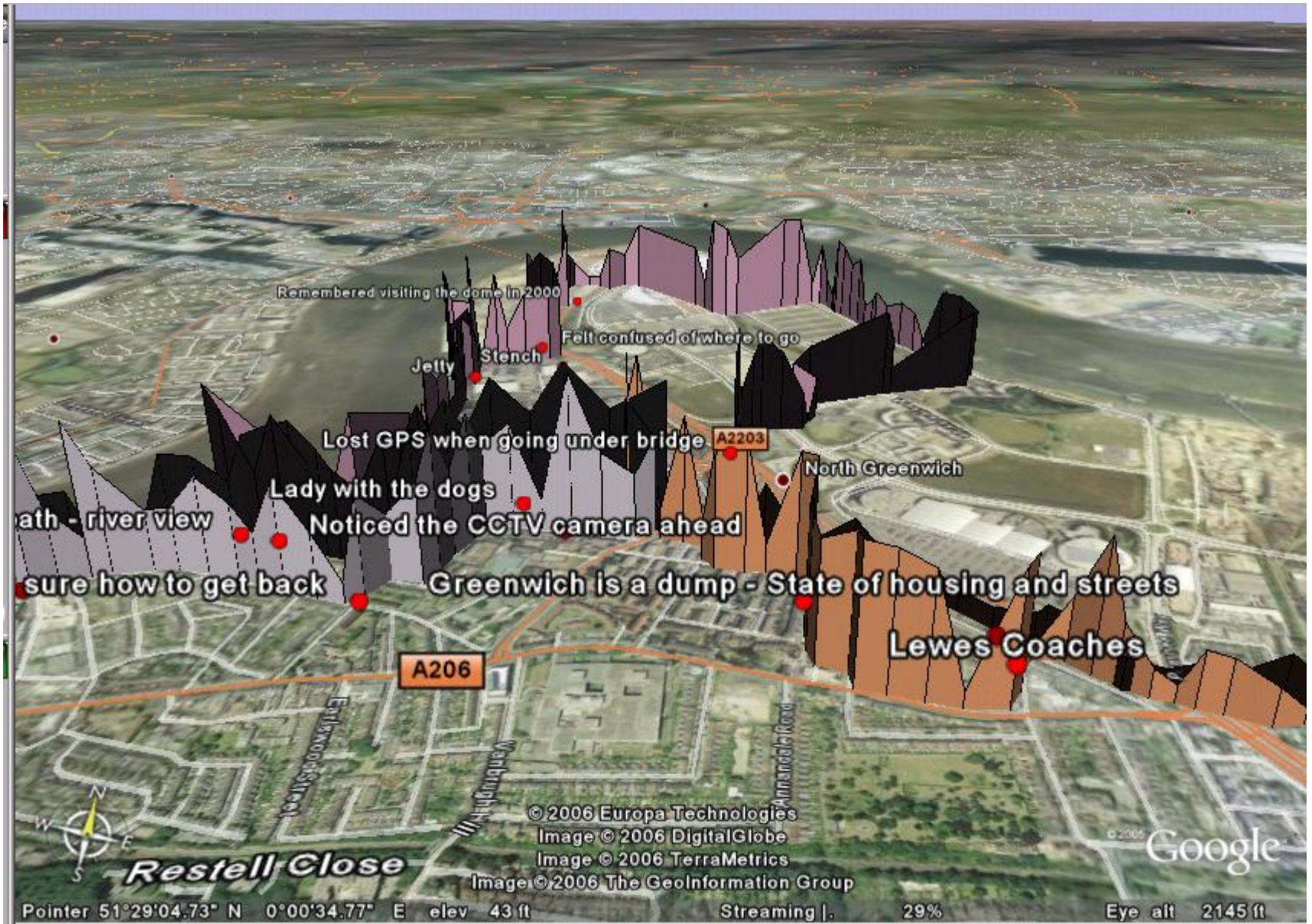
- Local Trading Project / Ethical Local Business
- Local Campaign
- Voluntary Action / Resident's Action
- Composting Project
- Green Space / Conservation
- Sustainability / Ecology Centre
- Event / Art Project
- Food Project
- Community Garden / Allotment
- Health Project
- Information / Directory
- Sustainability / Environment Forum or Network
- Heritage / Eco-Building Project
- Energy Project
- Reuse/Recycle Project
- Green / Ethical Shops
- Transport Project
- Waterway Project
- Youth / Children / School Project
- Not Classified / Undefined

Hide all

GREENWICH EMOTION MAP - CHRISTIAN NOLD







Memory Map of Mulbarton, Norfolk, UK

ALL SIZES



Old folks housing - I remember us school children went to see it opened by Princess Alexandra.

Uploaded on July 4, 2006 by [donovanh24](#)

+ donovanh24's photostream

Memory Maps (Pool)

607 photos
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Tags

- memorymap
- mulbarton
- norfolk

Additional Information

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- Taken on July 4, 2006
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“Cinecrap started as a blog, but no one came. As a Social App on Ning, my wife and I are sharing our mutual love for bad movies with our friends and people all over the world!”

Kyle Ford, Cinecrap

“I wish you guys at Ning wild success, because I can't do what the [Bead Stores Reviews App](#) does on my own website. Keep it up!”

Caravan, Bead Store Reviews

“Ning is like a smarter slicker, more user-friendly version of MySpace that's actually nothing like MySpace. Finally!”

GIS 2 + 10

- Core GIS technology is still complex technically, making ‘deep technical hacking’ difficult
- Desktop GIS has improved, but remains unfriendly and difficult to negotiate, thus preventing ‘shallow’ and ‘use’ hacking
- New internet technologies provide new spaces for ‘shallow’ and surely ‘use’ hacking but are limited in scope and sophistication
- It is important to find ways to enhance ‘use’ and ‘meaning’ hacking, and facilitate the gap between the technical and the social