Grassroots Mapping: a toolkit for participatory and politically engaged cartography

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Chapter 1

Introduction

1.1 Overview

1.2 Defining Grassroots Mapping: Toolkit, Practices, or Community?

Exactly what makes up the Grassroots Mapping project? Is it a body of code, available under an MIT license at http://github.com/jywarren/cartagen? Is it a set of mapping practices, or tools, which have been employed in Lima, Peru, or Rio de Janiero? Or is it a community of practitioners and the web site, wiki, and mailing list which tie them together?

1.2.1 Software

Interfaces for participatory cartography

The Cartagen framework

Rendering architecture

1.2.2 Practice, Community, Support structure

GrassrootsMapping.org

The Grassroots Mapping Wiki

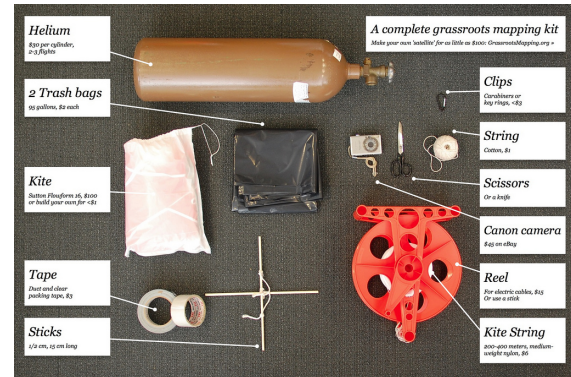Documentation, case studies, Grassroots Map Collection

The Grassroots Mapping community and mailing list

1.3 Novel Contributions

1.3.1 Novel application of low-cost tools to well-established need for raster imagery

1.3.2 Novel approaches to map rendering

1.3.3 Central merit: technology or culture?

A complete grassroots mapping kit
Make your own 'satellite' for as little as $100: GrassrootsMapping.org »

Helium
$20 per cylinder, 2-3 flights

2 Trash bags
55 gallons, $2 each

Clips
Carabiners or key rings, <$5

String
Cotton, $1

Kite
Sutton Flowform 16, $100 or build your own for <$1

Scissors
Or a knife

Canon camera
$45 on eBay

Tape
Duct and clear packing tape, $3

Reel
For electric cables, $15 Or use a stick

Sticks
1/2 cm, 15 cm long

Kite String
200-400 meters, medium-weight nylon, $6

Chapter 2

Subjectivity in Mapping

Chapter 3

The Need for Geospatial Data

3.1   Two worlds of mapping

3.1.1   Urban slums, informal settlements

3.1.2   Tenure mapping

The invasion of Lima, Peru

3.2   Environmental assessment

3.2.1   Carbon cowboys

3.3   Open geodata and crisis mapping

3.3.1   Crisis mapping and Ushahidi

Chapter 4

State of the Art

4.1 PGIS: Participatory Geographic Information Systems

Traditional GIS technology has been used since the XX's to support communities in developing contexts for purposes such as making tenure claims, environmental defense against petroleum and other extraction industries, as well as for planning purposes. This has become known as PGIS, or Participatory GIS, and typically...

4.1.1 Participatory GIS for Development

4.1.2 Shortcomings of traditional PGIS practice

4.2 OpenStreetMap

4.2.1 Humanitarian OSM Team

Free Map Gaza

Followup projects

Challenges

Emphasis on local infrastructure

Chapter 5

Grassroots Mapping as an alternative means of participatory cartography

5.1 Cartagen: an alternative architecture

Chapter 6

Related works

6.1 Beyond symbolic mapping: Data-driven approaches to participatory mapping

Chapter 7

Evaluation criteria

7.1 Participants vs. collaborators

Chapter 8

The Grassroots Mapping tool chain

8.1 Balloon/kite Aerial Mapping (BAM/KAM)

8.2 Digital maps: reconceptualizing mapping interaction

8.2.1 Beyond raster mapping/Tile politics

8.2.2 Cartagen dynamic rendering

8.2.3 An iterative toolchain development process

Figure 8.1: The Toucan

Chapter 9

ReadingList

Related readings

A collection of readings on kids, playful exploration, and grassroots mapping

Jeff:

New information technologies in the old political economy : an exploration of community-based GIS for improving basic services for the poor in New Delhi, India - 2005 MIT DUSP dissertation by Claudia Canepa

PARTICIPATORY SPATIAL INFORMATION MANAGEMENT AND COMMUNICATION IN DEVELOPING COUNTRIES - Giacomo Rambaldi, Peter A Kwaku Kyem, Mike \McCall, Daniel Weiner, EJISDC, 2006

The child's creation of a pictorial world, Claire Golomb

Curriculum on "Children as Community Researchers" - UNICEF, authored by Children's Environment Research Group

Participatory GIS - A Paradigm Shift in Development? - Jen Osha and Daniel Weiner, 2006

Mapping for Change - 2005 International Conference on Participatory Spatial Information Management and Communication

Weiner, D. and T. Harris, 2003. "Community-Integrated GIS for Land Reform in South Africa." URISA Journal. 15(2): 61-73.

PPGIS on MapTogether.net

Bilingualism and identity: Spanish at the crossroads with other languages - Geographic dispute in Canta Gallo, in Lima, Chapter 7

Intervention: Mapping is critical! - This intervention targets the much heralded demise of the map in geography and the recently proposed rethinking of maps. It comprises contributions from two political geographers, a military geographer, a political scientist, and two activist cartographers and argues that there is not so much a need to rethink maps, but to re-engage with the material practices of mapping, and above all to re-make maps.

Mapping in a Shoebox - A Grassroots Approach for Developing the Geospatial Literacy of Elementary Children - 24th International Cartographic Conference - Jaqueline M. Anderson, Sally Hermansen, Lorraine Innes, 2009

Lots of work by Proboscis: Social Tapestries/Urban Tapestries, 2002-7 - Urban Tapestries investigated how, by combining mobile and internet technologies with geographic information systems, people could 'author' the environment around them; a kind of Mass Observation for the 21st Century. Like the founders of Mass Observation in the 1930s, we were interested creating opportunities

for an "anthropology of ourselves" adopting and adapting new and emerging technologies for creating and sharing everyday knowledge and experience; building up organic, collective memories that trace and embellish different kinds of relationships across places, time and communities.

[BEST PRACTICES FOR SHARING SENSITIVE ENVIRONMENTAL GEOSPATIAL DATA](#)
- for GeoConnections by AMEC Earth & Environmental, 2010

Kate:

[BBC article](#) - train station hires a Director of Fun!

[Place-Logging](#) - MIT thesis

[Tube iphone app](#) - augmented reality