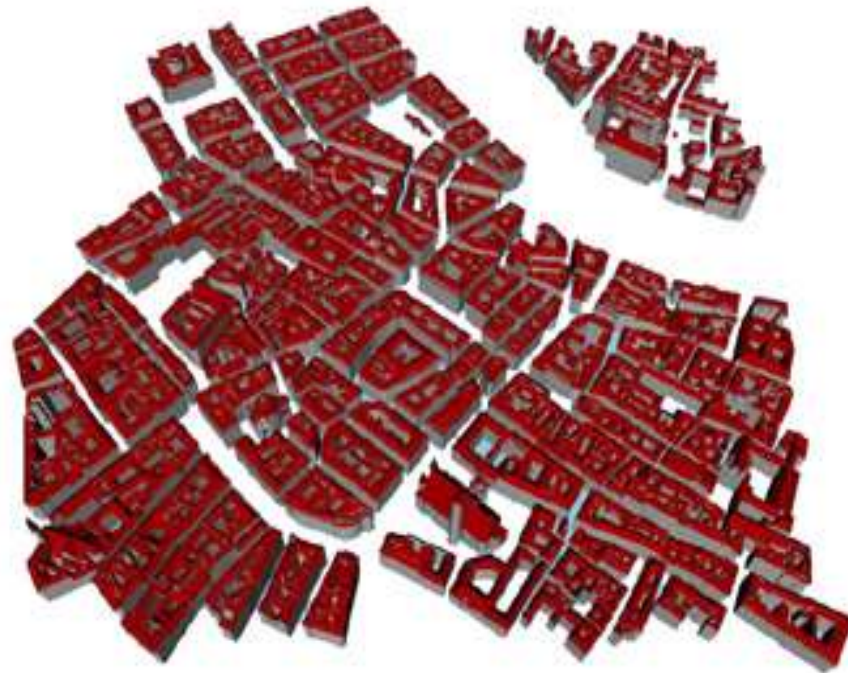


Art and Cartography

Zagreb, 2013, Georg Gartner

The Wayfinding Scenario



The Wayfinding Scenario

mapping is..

way of communication

rule based

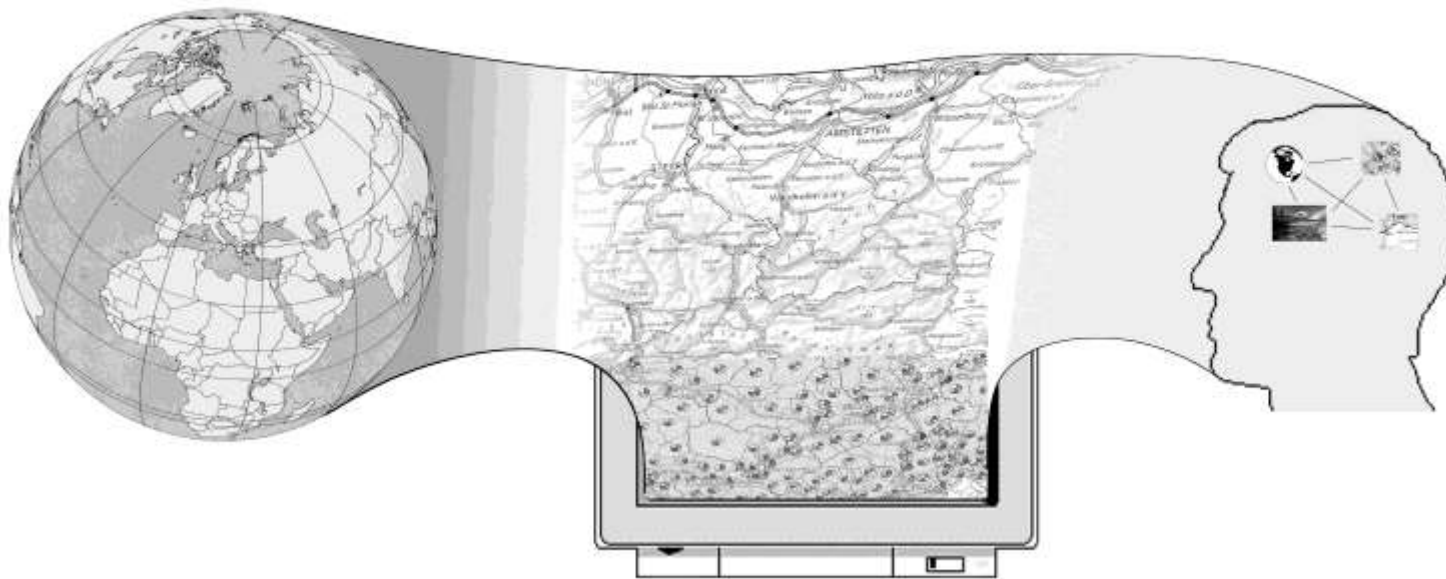
Aim for objectiveness

process oriented

Agenda

- Cartography and Art?
- Lost Emotions
- Artefacts and Processes
- The Impact of Technology

About modern cartography

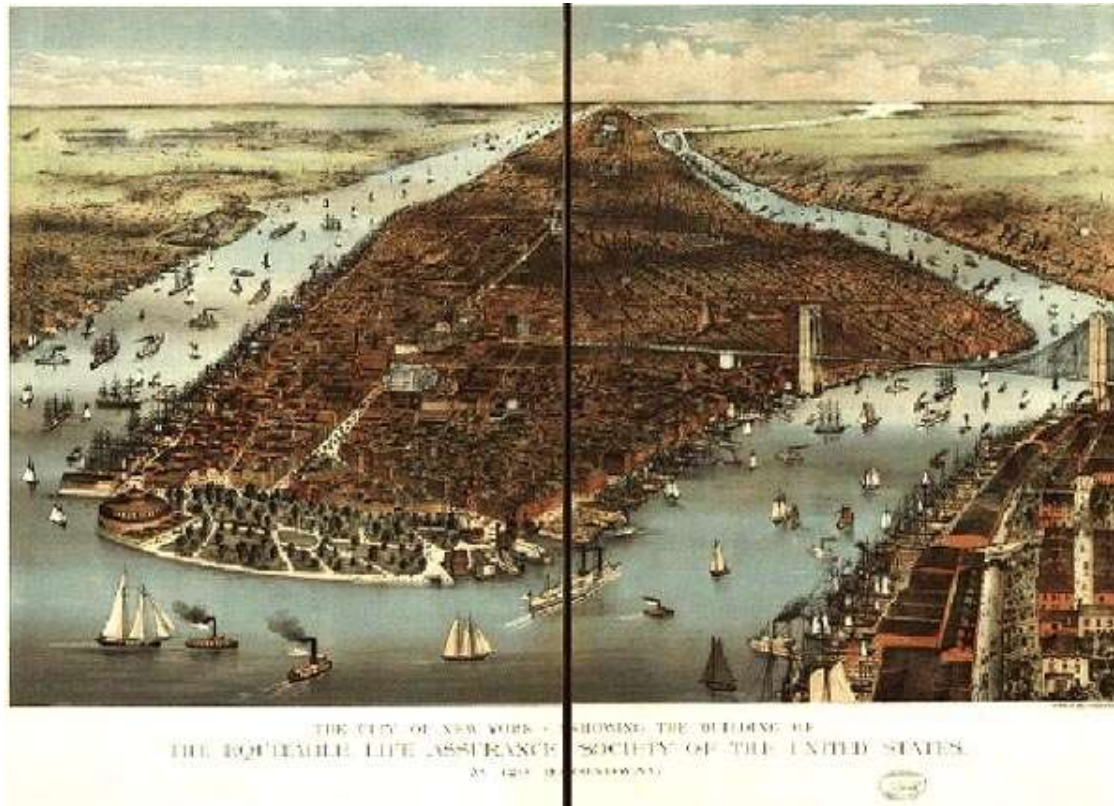


Goal of cartography =
Efficient transmission of spatial information

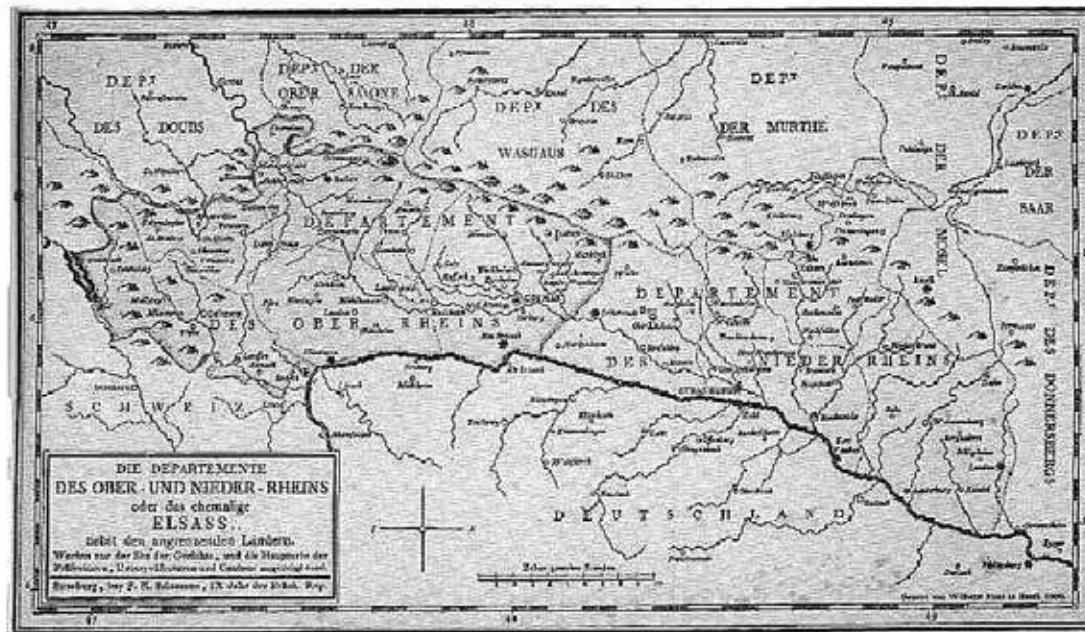


Dualism: accuracy vs. aesthetics











```

          ///
        //      ///+
      /  ///+
L//  ///+
//    ///+
    ///+
    ///+
    ///+

```

$$F_{\frac{1}{2}}^{\frac{1}{2}}$$

```

////////:#####+++++
/////:#####+++++
/////:#####+++++
/////:#####+++++
////////.:#####+++++
/////////:#####+++++
/////////:#####FINLAND#####+++++
///NORWAY//:#####+(Russia)+
/////////:#####+++++
/////////O:#####+++++
////////:SWEDEN:##A###H+++++
/////:S:+++++
:++
%:.:++++++(Estonia)+++++
%%:G+++++

```

Islands:

B = Bornholm

F = Faroe Isl.

G = Gotland

A = Aland

```

      ***  ***C  BAL TIC  ++++++
      ***  B%  SEA  +++++(Latvia)+++++
Isl.  ++++++  ++++++
n      ++++++  ++++++  +++++(Lithuania)+++++
sl.  ++++++  ++++++
      ++++++  ++++++  +++++(Poland)+++++
      ++++++  ++++++  +++++(Germany)+++++
      ++++++  ++++++  +++++

```



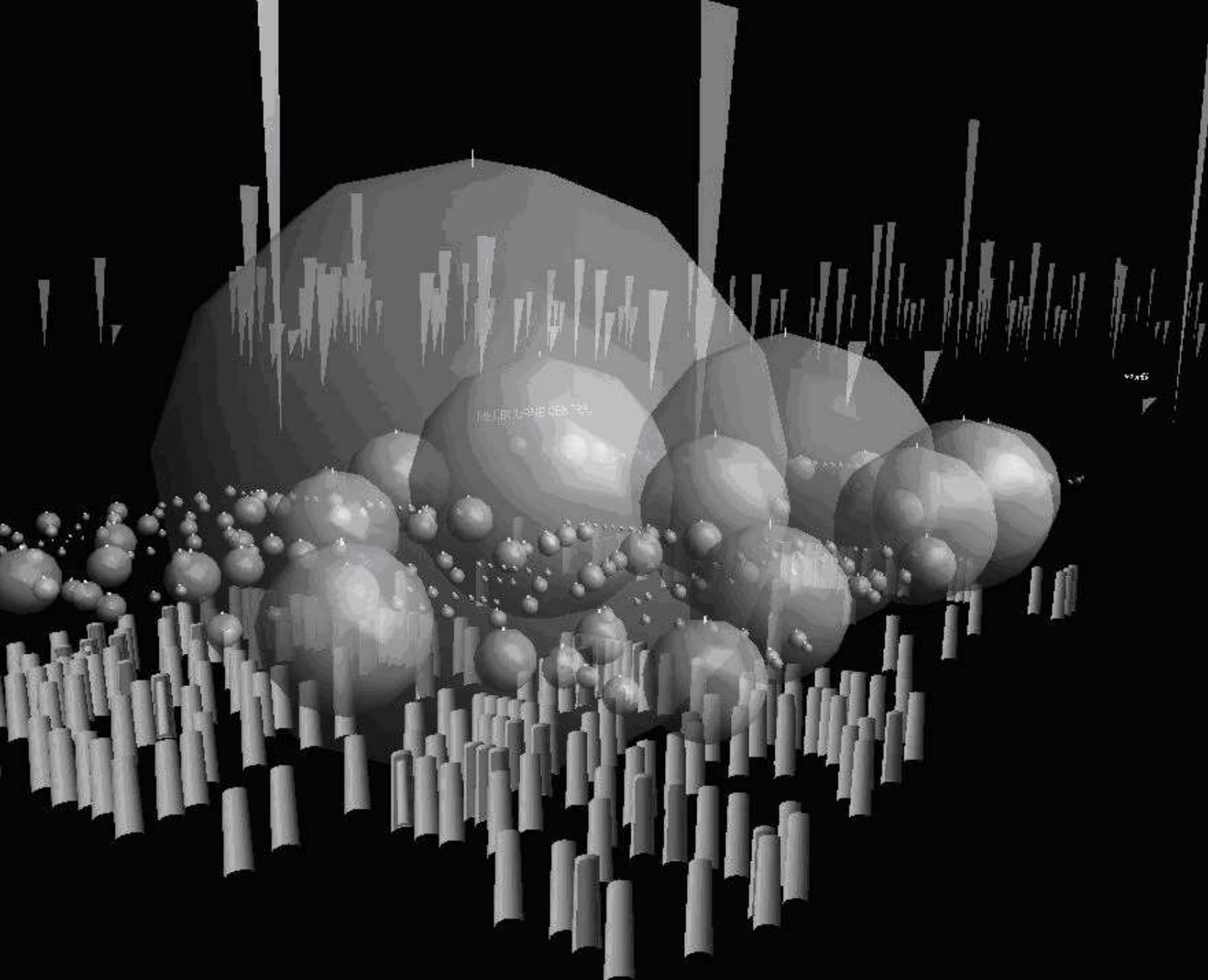












AUDIO CONFIG

- ☐ Atmos 1
- ☐ On/Off
- ☐ Loop

DATA STREAMS

- ☐ Railstations
 - ☐ Inner City
 - ☐ Greater Region
- ☐ Population
 - ☐ Inner City
 - ☐ Greater Region
- ☐ Tram Stops
 - ☐ Nodes
 - ☐ Routes
- ☐ City Block
 - ☐ Nodes
 - ☐ Label
 - ☐ Area
 - ☐ Perimeter
 - ☐ Use
 - ☐ Variation 1
 - ☐ Variation 2
 - ☐ Variation 3

STRATA

- ☐ Strata 1
- ☐ Strata 2
- ☐ RESET

ARRANGE IMAGES

- ☐ IMAGES ON/OFF
 - ☐ EUREKA
 - ☐ DATA
 - ☐ DATA2

VIEWPORT

- ☐ Maximum
- ☐ Medium
- ☐ Minimum

VIEW 1

VIEW 2

VIEW 3

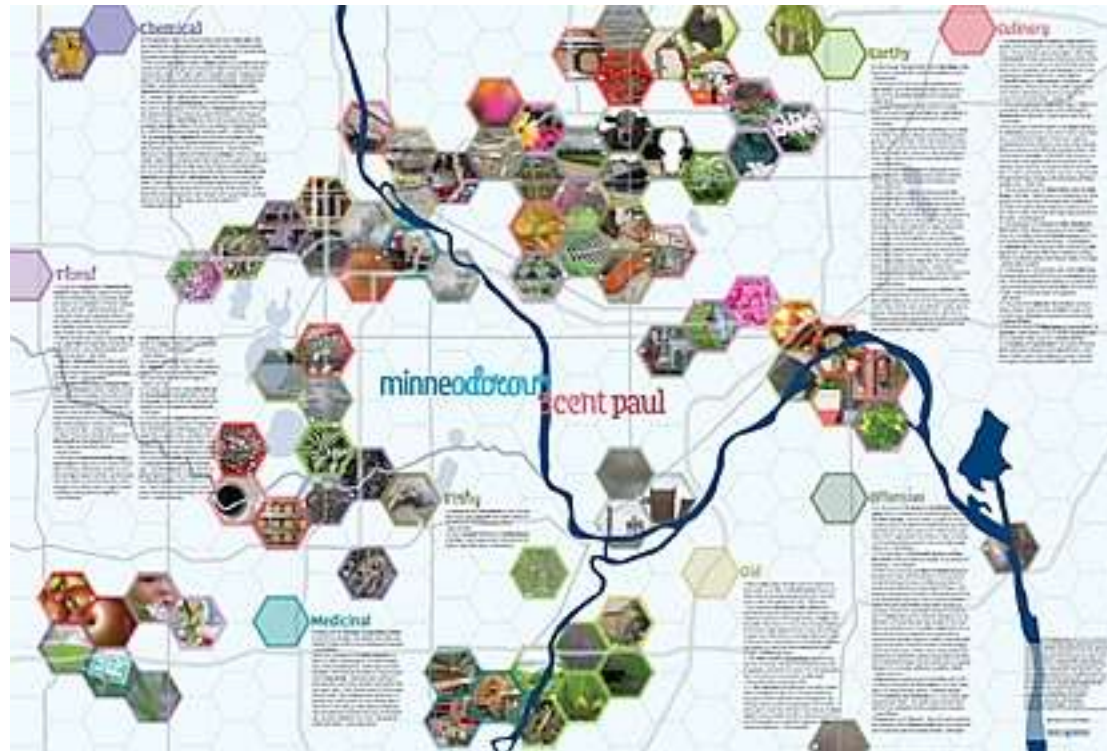
OVERVIEW

CLOSER

AERIAL

FRONT

CLOSER

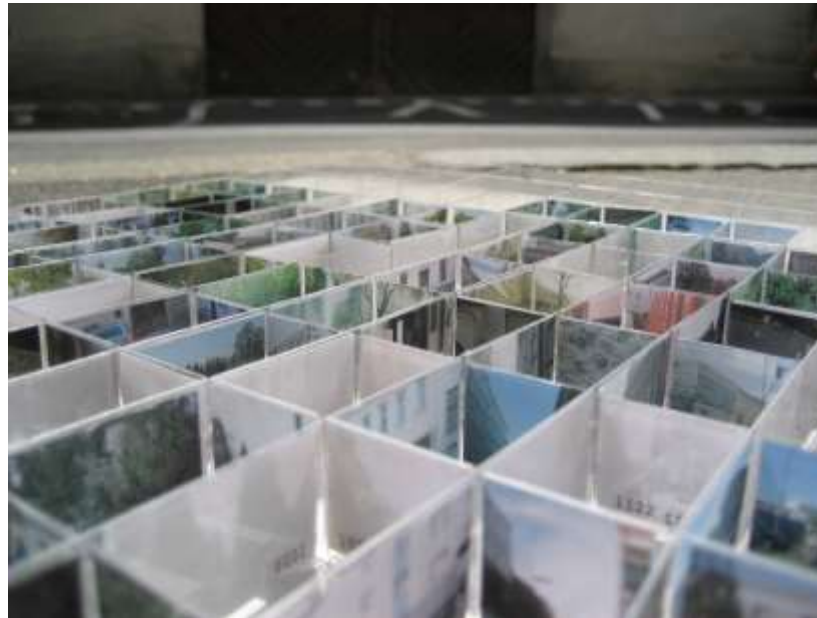


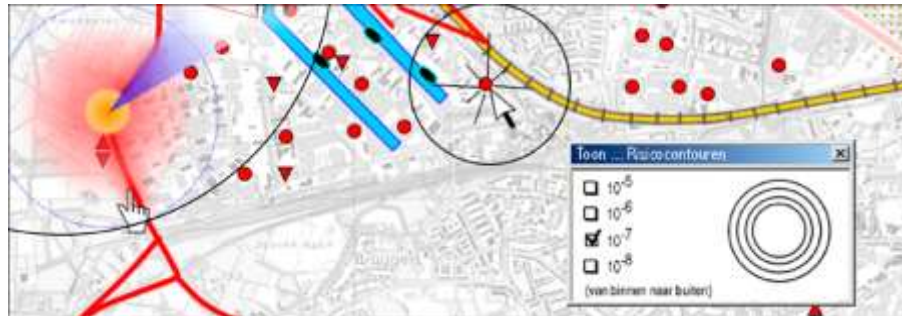




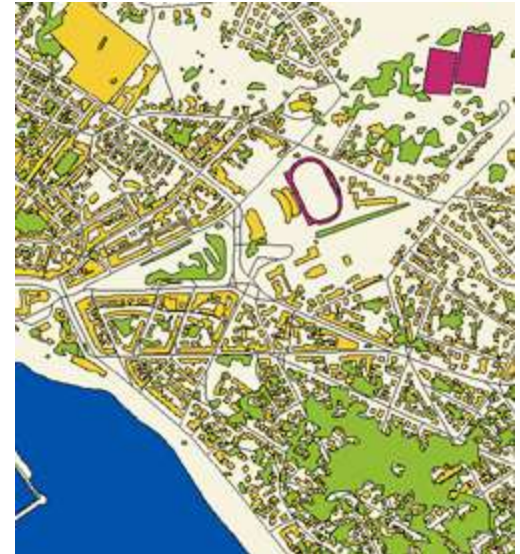




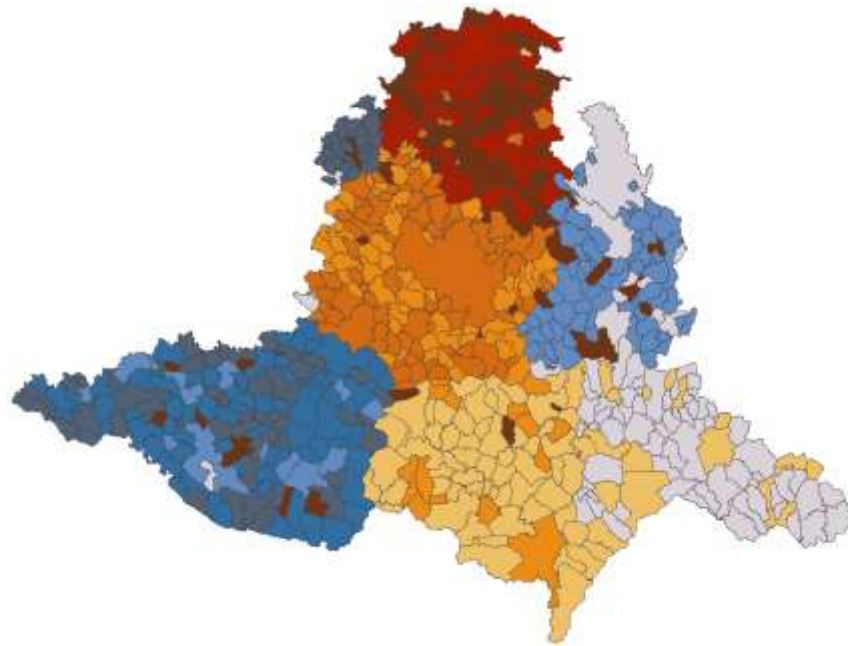












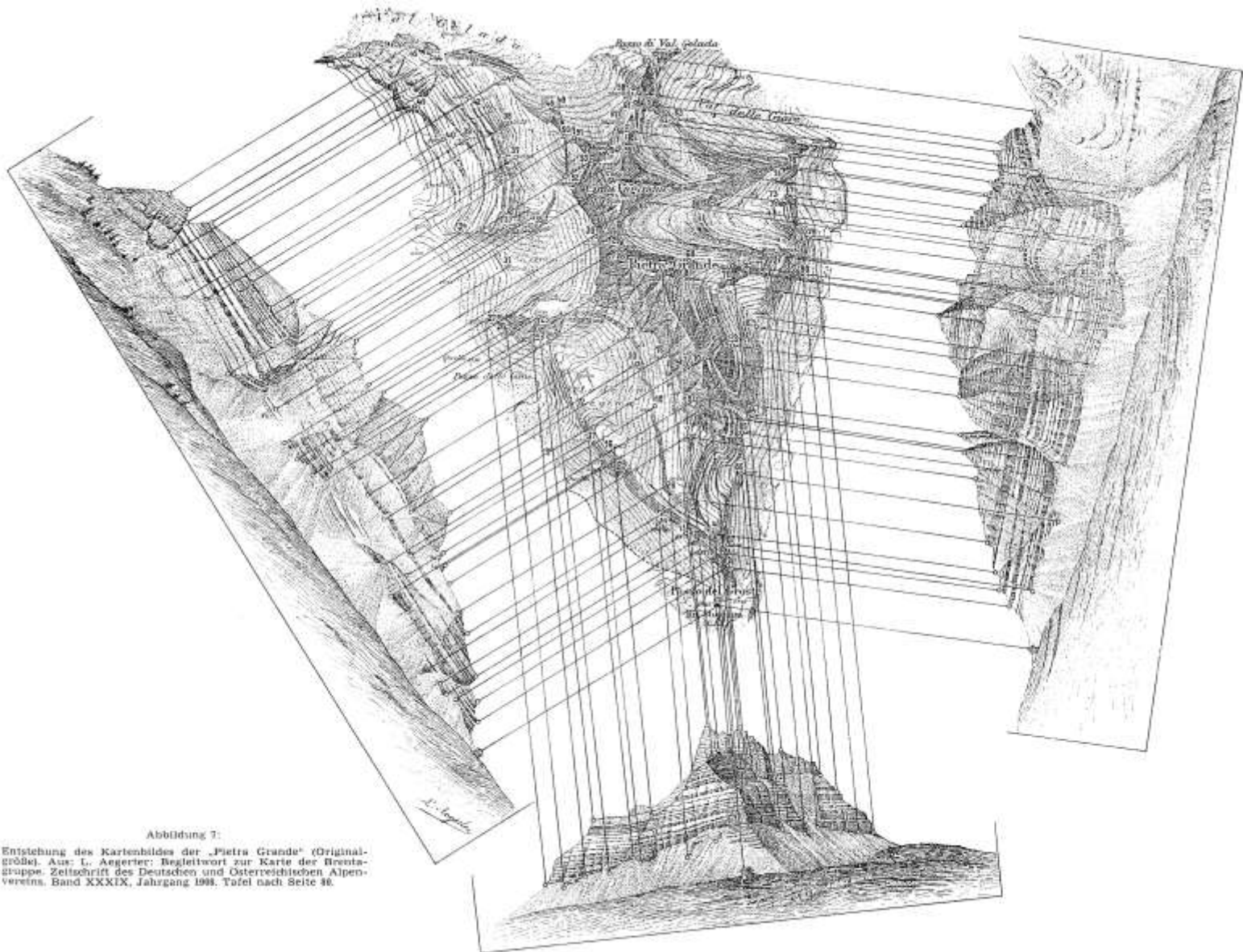


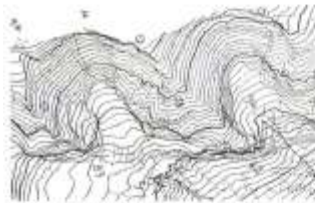
Abbildung 7:

Entstehung des Kartenbildes der „Pieta Grande“ (Originalgröße). Aus: L. Aegerter: Begleitwort zur Karte der Brenta-Gruppe. Zeitschrift des Deutschen und Österreichischen Alpenvereins. Band XXXIX, Jahrgang 1998. Tafel nach Seite 46.





Photographische Ansicht (terrestrische Aufnahme)



1:25 000, Höhenkurven mit 20 m Äquidistanz



1:25 000, Felschraffur mit 20 m-Kurven



1:25 000, Felschraffur mit 100 m-Kurven



1:25 000, Gerippelinen und Schattenton



1:50 000, Felszeichnung ohne Höhenkurven



1:100 000, Felszeichnung



Abb. 171: Durchschluchtung bei steiler und annähernd parallel zur Gesamtwandfläche stehender Stellung der Schicht- oder Schieferungsplatten

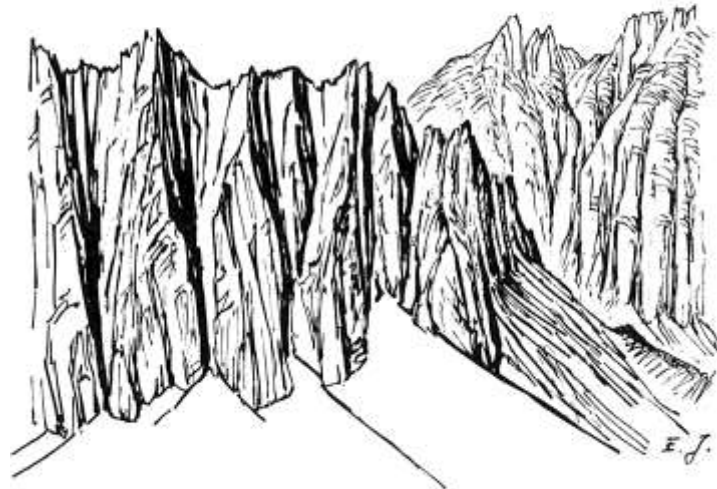
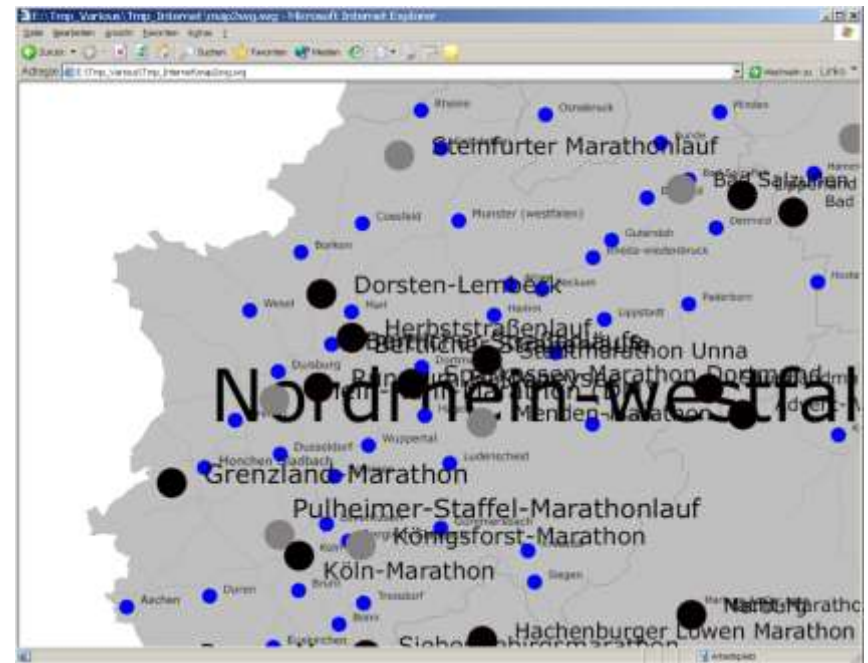
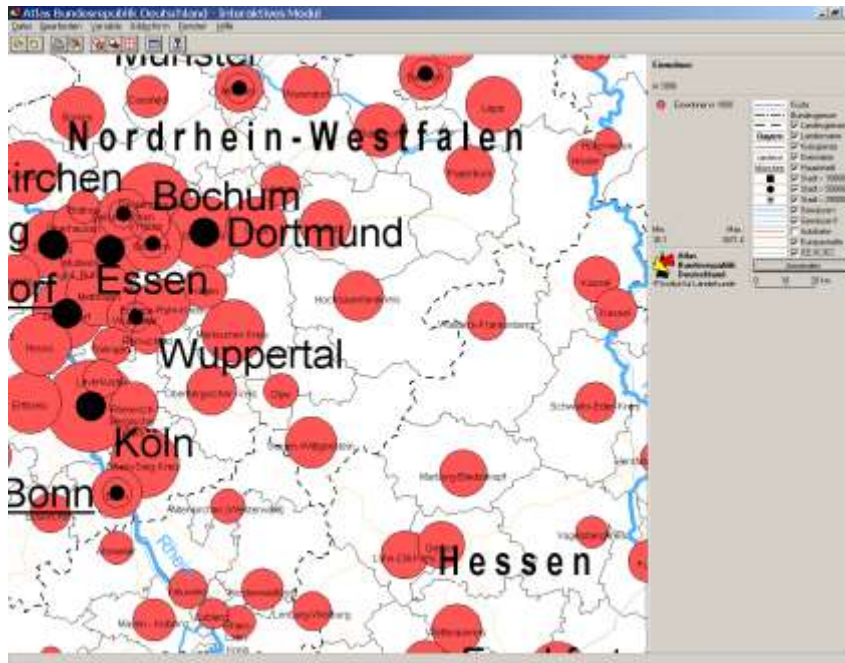
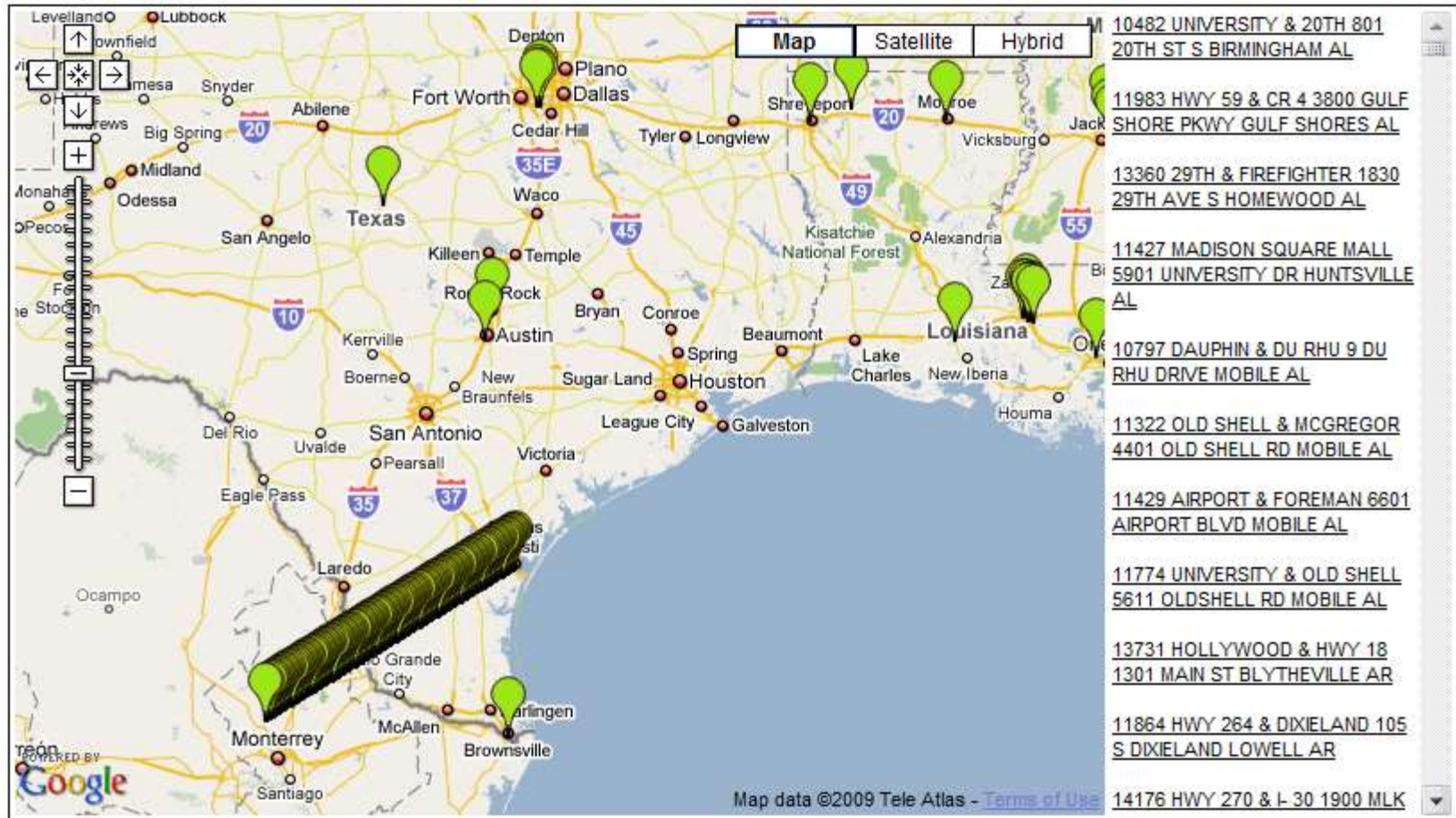


Abb. 172: Durchschluchtung bei lotrechter Schichtung oder Schieferung quer zur Wandfläche

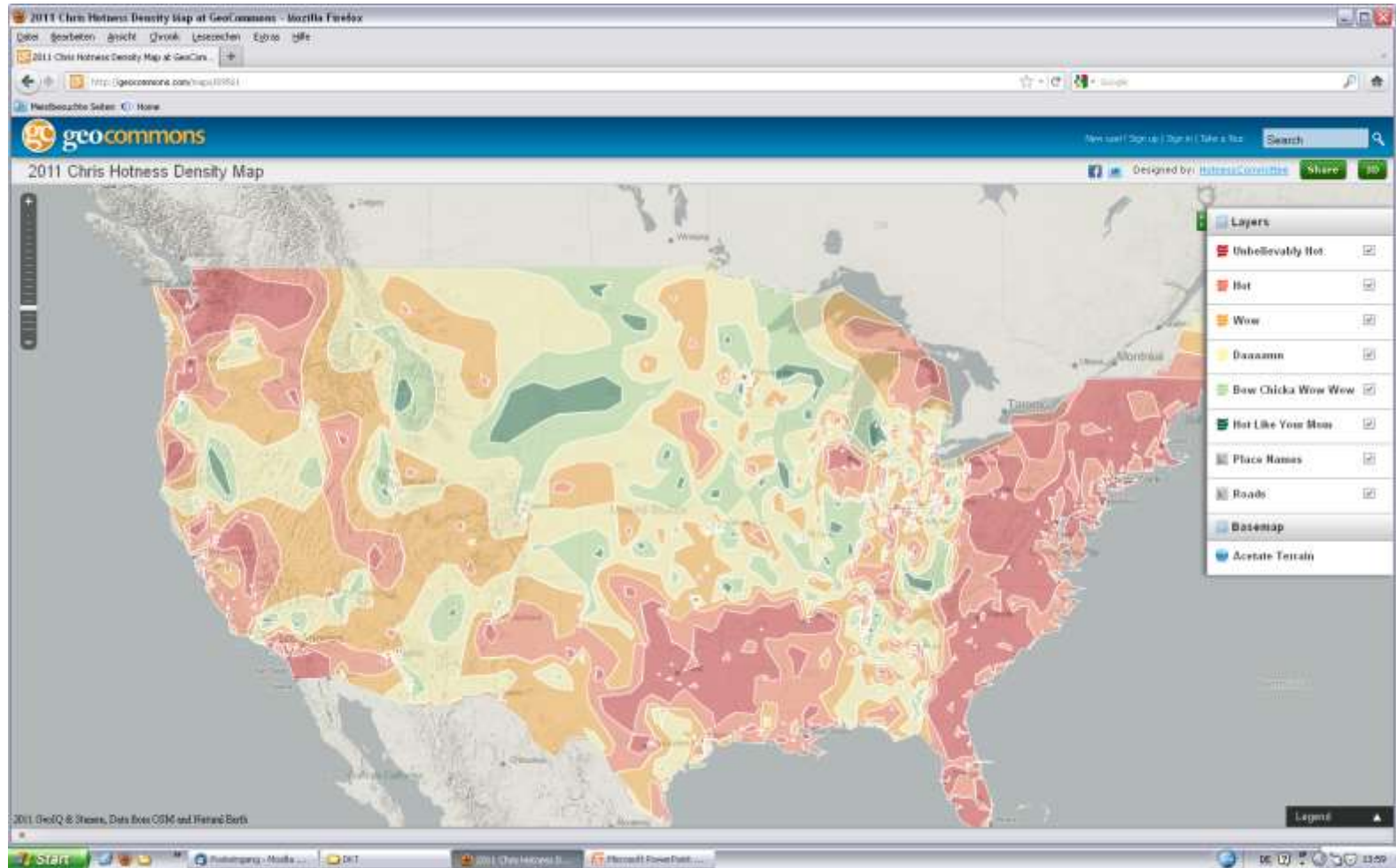


Engineered Cartography

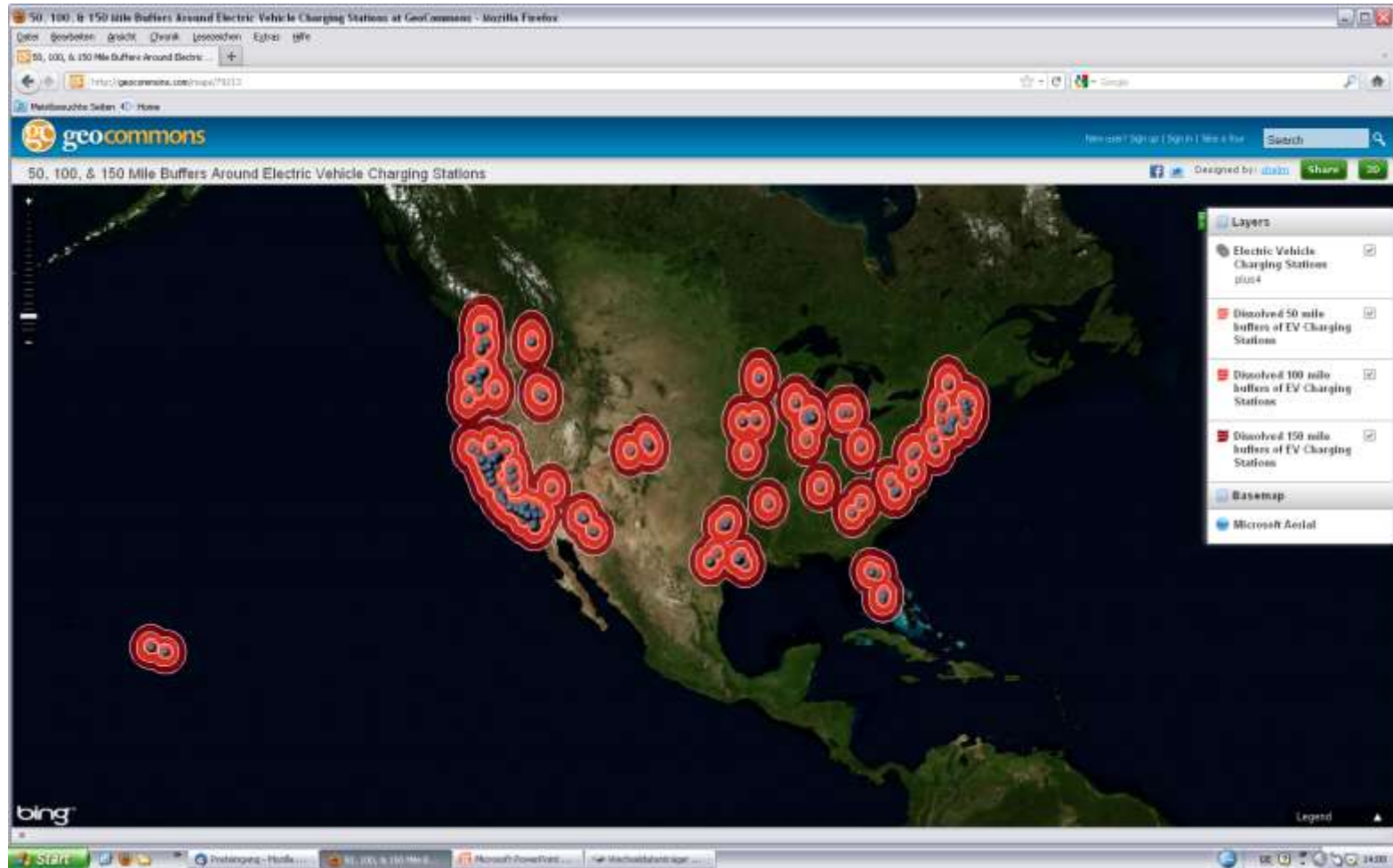




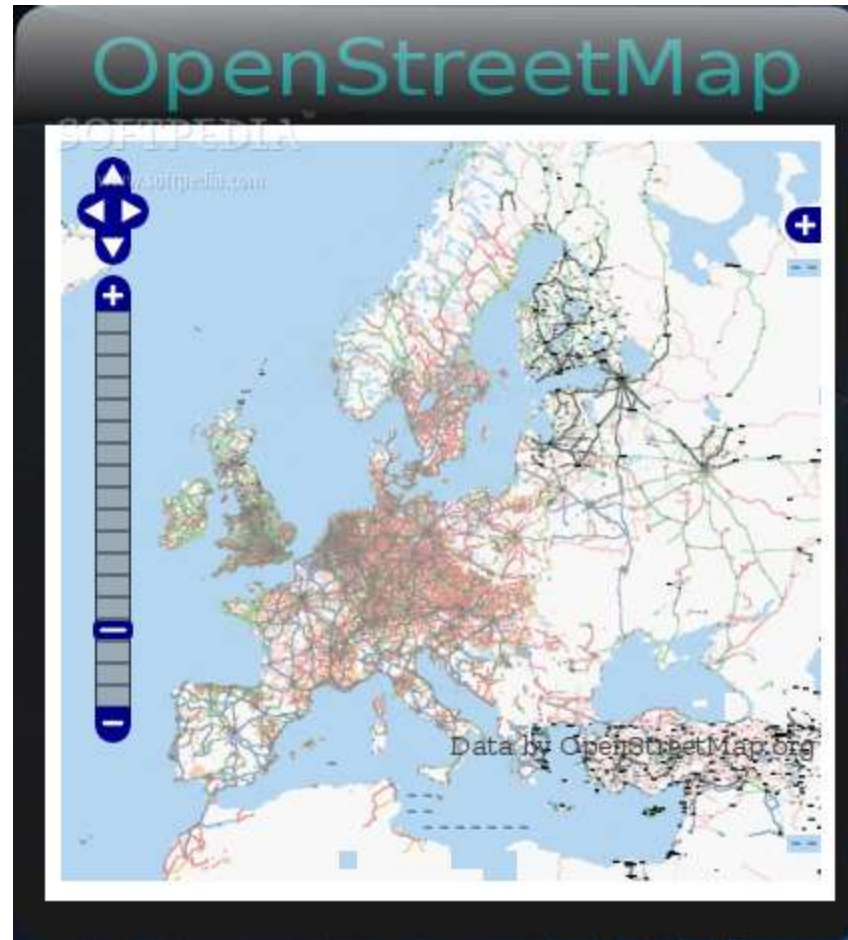
User-defined thematic maps



User-defined thematic maps



Collaborative Mapping



Collaborative Mapping

Report sexual harassment in Egypt, <http://harassmap.org/> (möglich über SMS, Mail, Twitter, Online-Formular)
Based on tools by Ushahidi, <http://www.ushahidi.com/>



English (US)



SUBMIT A REPORT

HOME

REPORTS

SUBMIT A REPORT

GET ALERTS

CONTACT US

HOW TO HELP

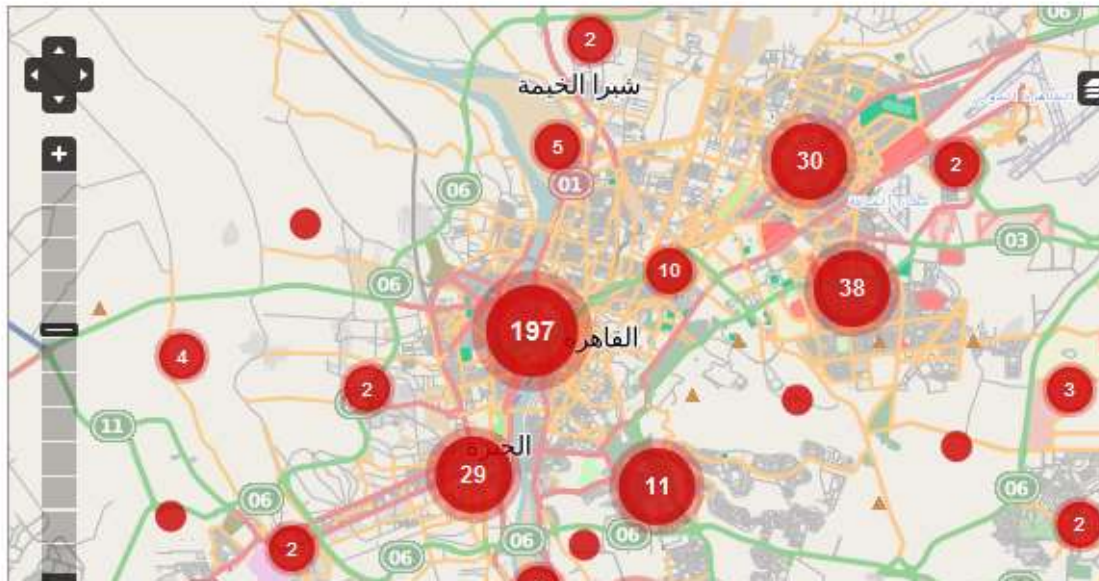
ABOUT

VOLUNTEER

FILTERS → **REPORTS** NEWS PICTURES VIDEO ALL

FULL SCREEN MAP

↓ CATEGORY FILTER [HIDE]



ALL CATEGORIES

- TOUCHING
- CATCALLS
- OGLING
- COMMENTS
- STALKING OR FOLLOWING
- PHONE CALLS
- INDECENT EXPOSURE

Collaborative Mapping

Überwachung aktueller Satellitenbilder aus Regenwäldern um illegaler Abholzung Einhalt zu gebieten, <http://deforestation.codeplex.com/>
(via <http://irevolution.net>)

The screenshot displays the EarthWatchers.SL web application in a browser window. The address bar shows the URL <http://research.geodan.nl/earthwatchers/?username=eduardodias>. The application interface includes a left sidebar with user information for 'eduardodias' (1767 points), navigation links for 'My Comments' and 'My Land', and settings for 'Background' (Bing Hybrid) and 'Overlays' (Hexagon and Alerted Land, both checked). The main map area shows a satellite view of a tropical region with a river. A legend at the top indicates status: Unchecked (white), Ok (green), Alert (red), and My Land (blue). A yellow warning sign in the top right corner reads 'DEFORESTATION EARTHWATCHERS'. A pop-up window for 'Indonesia Eduardo Dias' shows a 'Landstatus: Alert' and a 'set' button. The map features several hexagonal markers: two green 'Ok' markers and one blue 'My Land' marker with a yellow warning icon. The Bing logo is visible in the bottom right corner of the map area.

User-defined base maps

z.B. mit CloudMade, Google Maps API v3 oder stepmap.de (Abb.: <http://scribblemaps.com>, <http://maps.cloudmade.com>)

Nachteil: Gestaltung lesbarer und für den Anwendungszweck sinnvoller Grundlagenkarten ist eine komplexe Aufgabe

all

administrative

administrative.country

administrative.province

administrative.locality

administrative.neighborhood

☒ Farbtön

☒ Sättigung

☐ Leichtigkeit

☒ Gamma

☒ Invert Lightness

Element

☐ Alle

☒ Geometrie

☐ Labels

Sichtbarkeit

☒ Auf

☐ Vereinfachte

☐ Ab

Style Vorschau

11K

Haico

299

Styles

Feature	Element	Visibility	Hue	Saturation	Lightness	Gamma	Invert Lig
administrative.locality	geometrie	auf		25			
water	geometrie	auf	ff0000	60		1	true

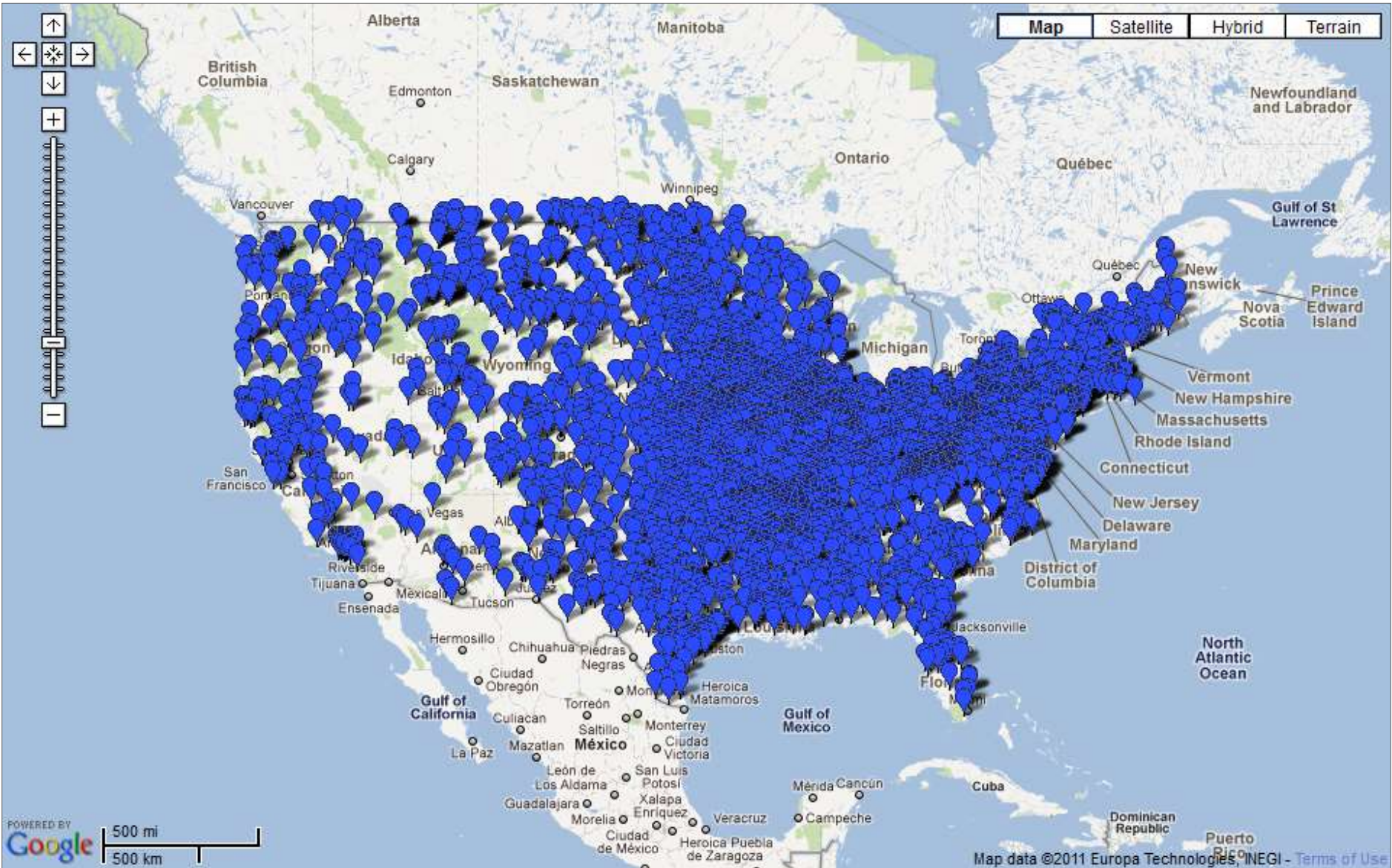
Add To Karte



Problematic Visualizations

Schlechte Lesbarkeit aufgrund fehlendem oder mangelhaftem Clustering, z.B. <http://www.savethepostoffice.com/raoi-closing-map>

Clustering-Tools sind mittlerweile vorhanden. Allerdings fehlen noch gute geographische Clustering-Lösungen (z.B. basierend auf Grenzen)



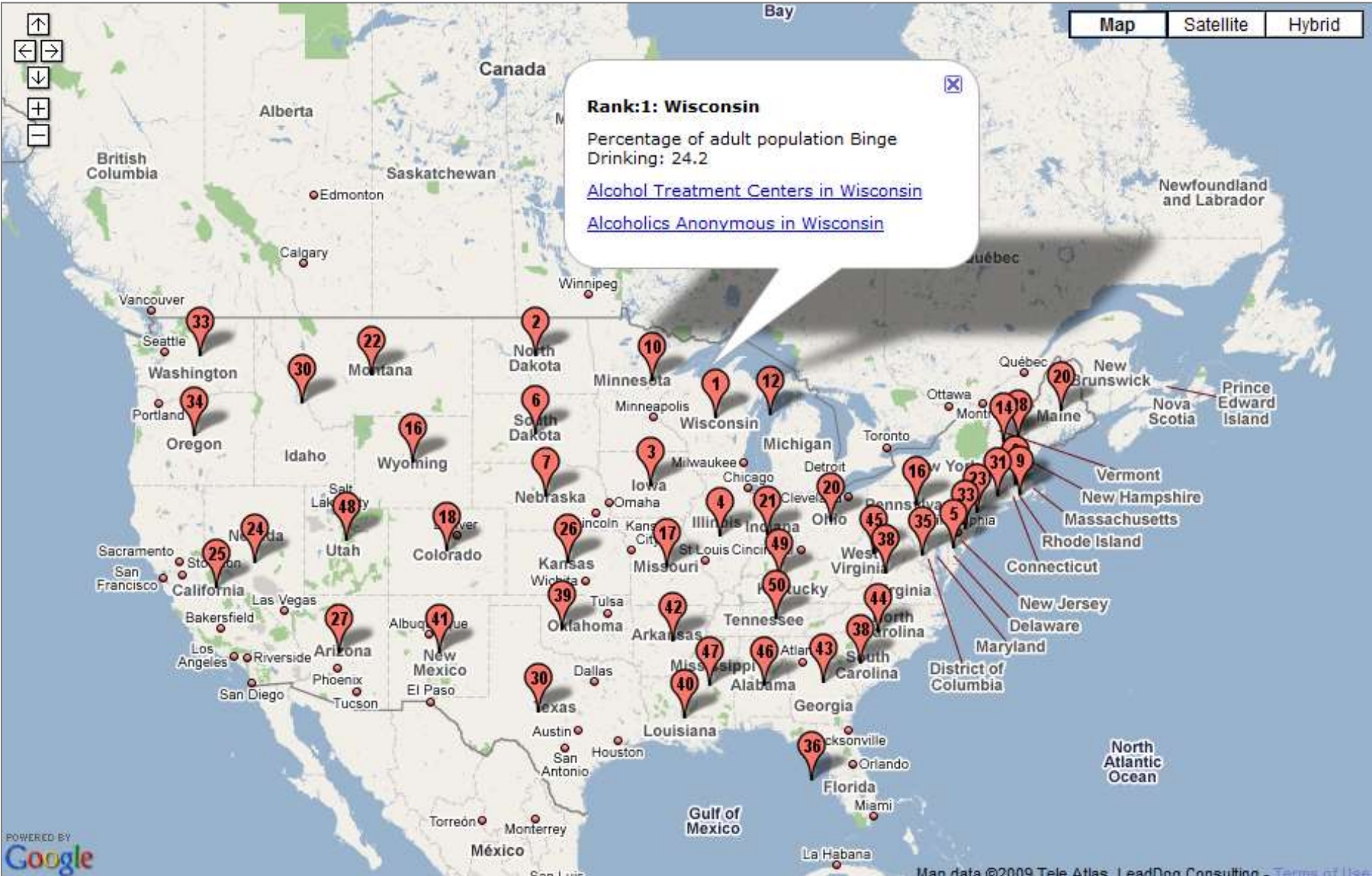
Problematic Visualizations

Schlechte Lesbarkeit von Overlays, z.B. <http://crisislanding.appspot.com/>

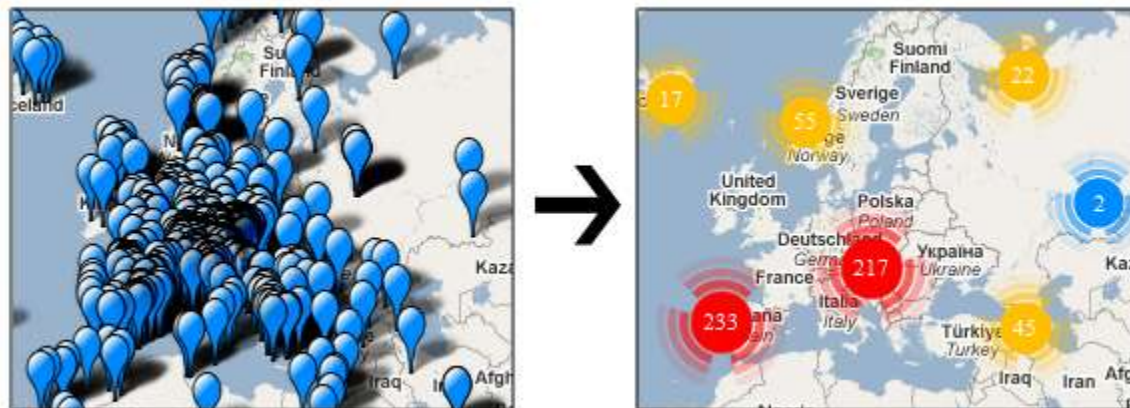


Problematic Visualizations

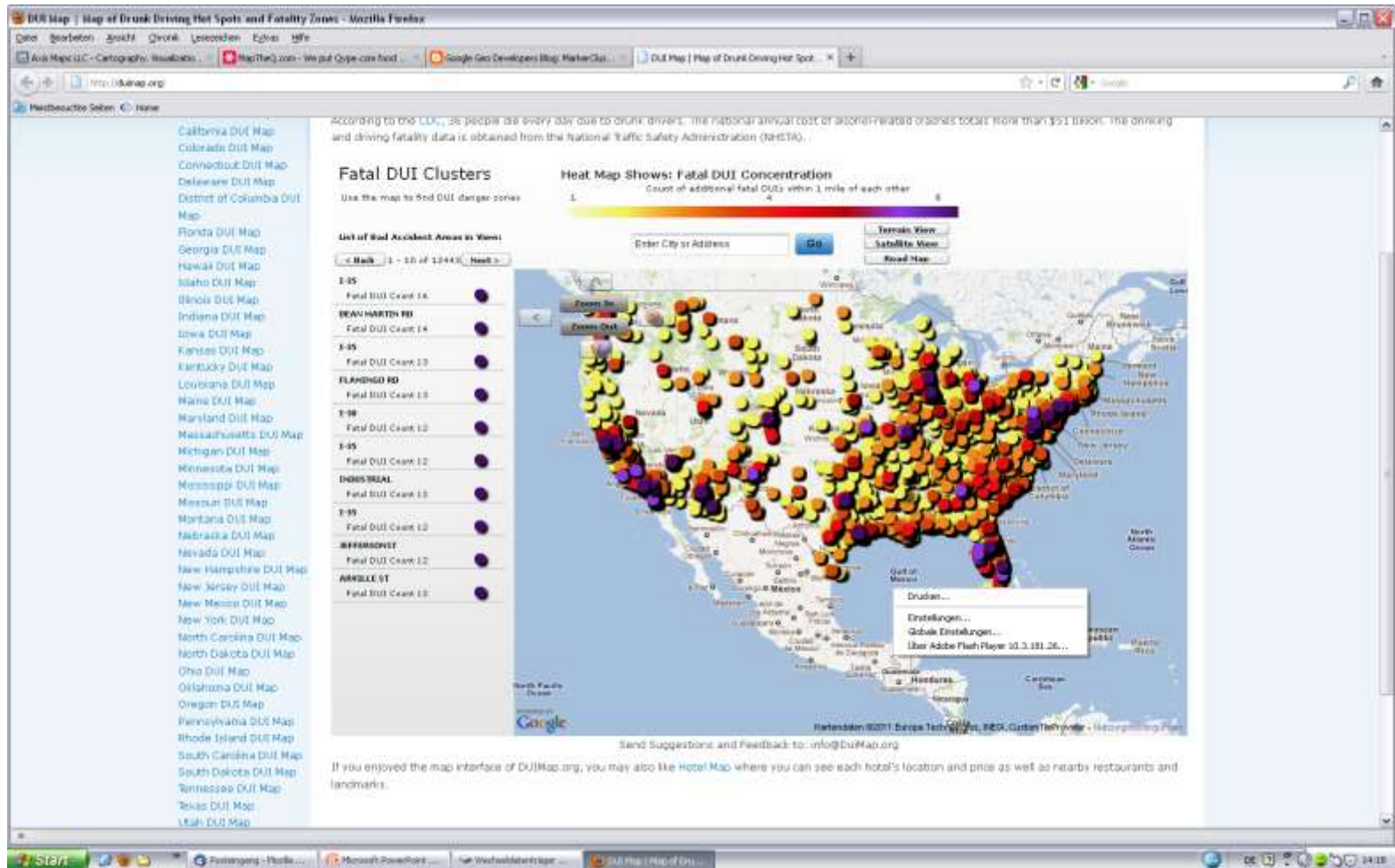
Eine thematische Umsetzung der Daten würde die Lesbarkeit erheblich vereinfachen, z.B. <http://www.mibazaar.com/healthcare/bingedrinkingstates.html>



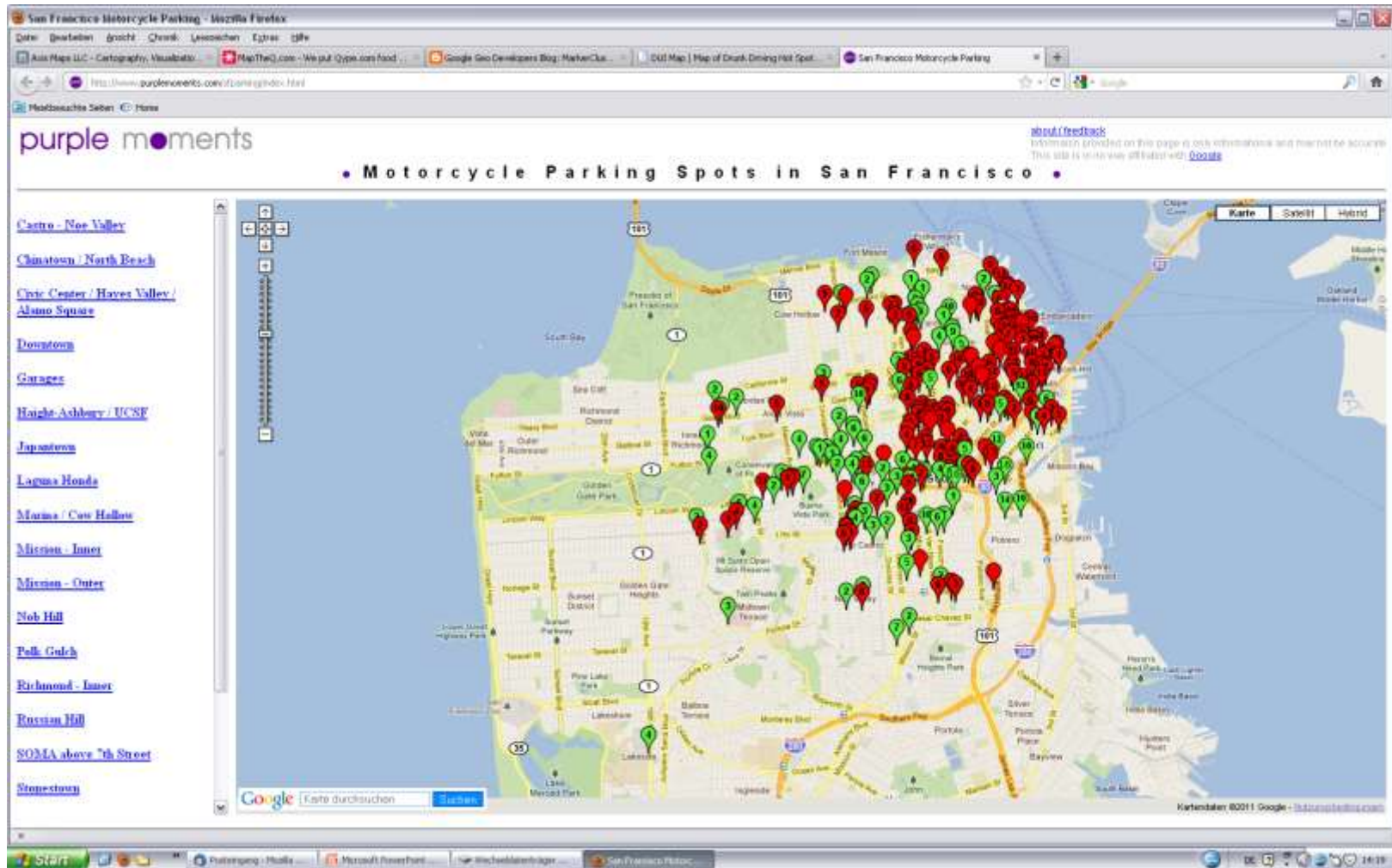
<http://googlegeodevelopers.blogspot.com/2009/04/markerclusterer-solution-to-too-many.html>



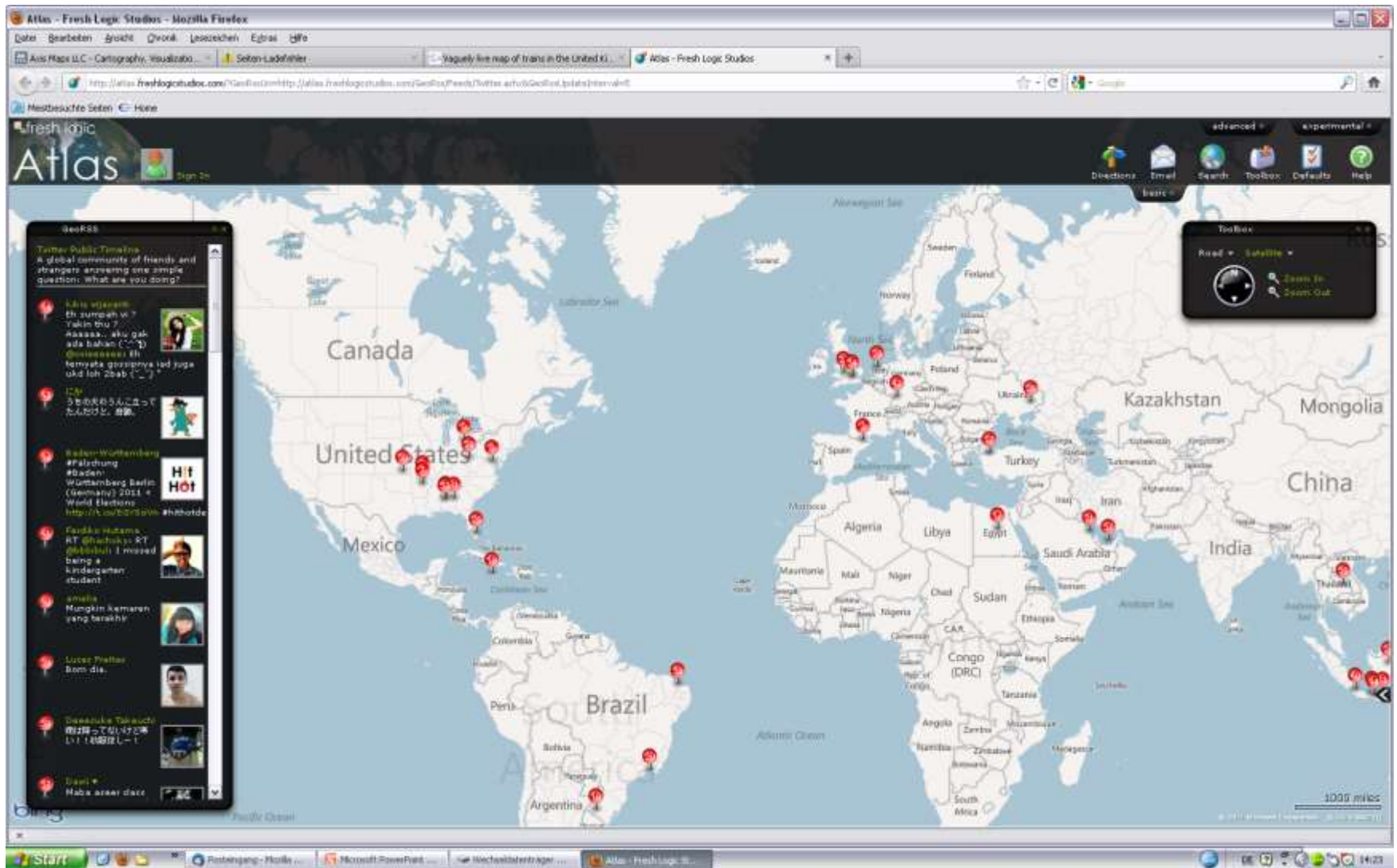
Clustering problem at DUIMaps



Clustering problem at purple moments



Real-time Twitter



Augmented Reality



mapping is..

way of communication

process oriented

multimedia

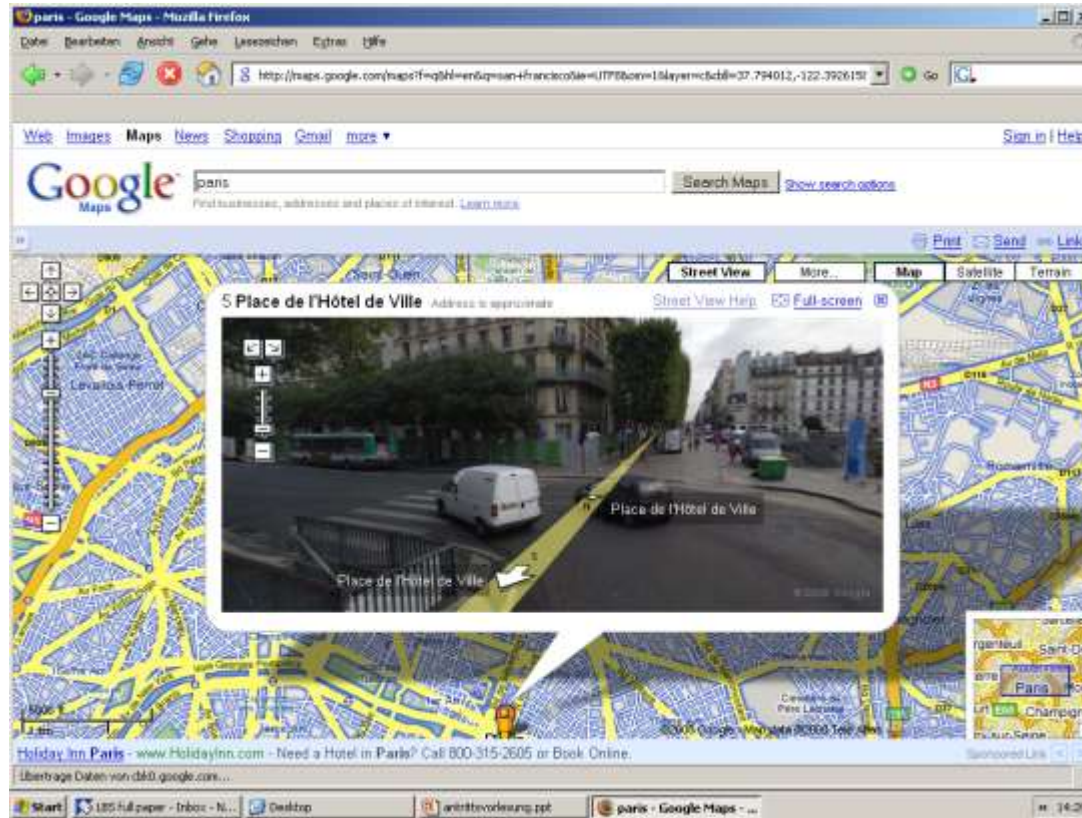
interactive

emotional

adaptive



Dualism: accuracy vs. aesthetics



Dualism: accuracy vs. aesthetics

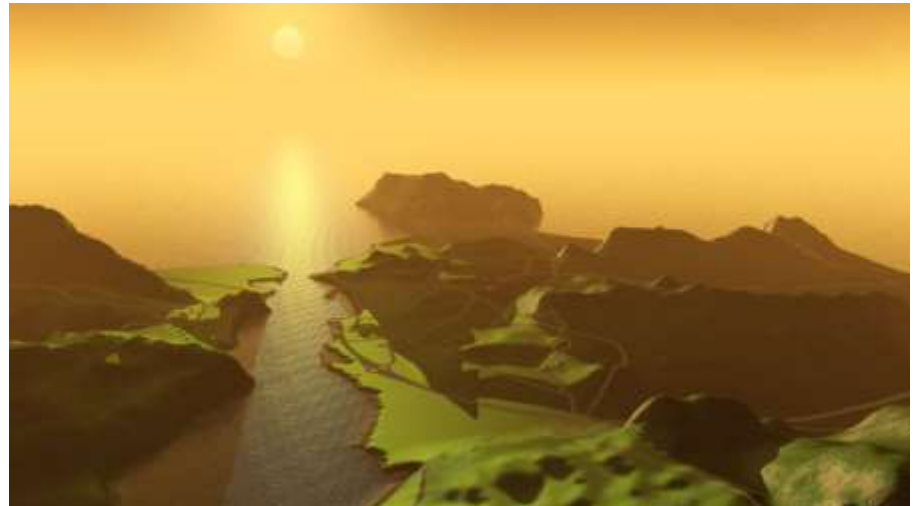
..Lost Emotions

maps are standardised, using a common set of fixed symbolization

emotional aspects have been lost

- in terms of syntax as in former historical maps
- in terms of semantics and pragmatics as in cartographic ways of communicating

..engineering the syntactical dimension



..engineering the pragmatic dimension

The strength of an emotional attachment for a particular place in space embedded in memory, by an individual, influences our structuring of space, esp. wayfinding

International Cartographic Association
Association Cartographique Internationale



International Cartographic Association Commissions



International Cartographic Association
Association Cartographique Internationale



International Cartographic Association

International Cartographic Conference

August 2013, Dresden, Germany

www.icc2013.org



International Cartographic Association
Association Cartographique Internationale



International Cartographic Association

www.icaci.org

The screenshot shows the ICA website homepage. At the top is the ICA/ACI logo and the text 'International Cartographic Association' and 'Association Cartographique Internationale'. Below this is a navigation bar with links: News, Calendar, Publications, The Association, Members, Commissions, Research Agenda, ICC Conferences, and a search icon. The main banner features a 3D map of Sunny Beach, Bulgaria, with the text 'ICA Map of the Month 03/2012' and 'Map of the Month 2012: Panoramic tourist map of resort Sunny Beach, Bulgaria'. Below the banner is a news article titled 'CIP: LBS 2012 in Munich' with a date of 5 March 2012. To the right of the article is a 'Recent Posts' sidebar with links to 'CIP: LBS 2012 in Munich', 'CET Workshop Opportunities', 'Education and Training Modules', 'March's Map of the Month is a panoramic tourist map of Sunny Beach, Bulgaria', and 'Mountain Cartography Workshop in New Zealand in September'. Below the news article is a 'CET Workshop Opportunities' section with a date of 5 March 2012. At the bottom right is an 'Upcoming Events' sidebar with links to 'Mar 28-Mar 30 GeoTrends 2012', 'Apr 17-Apr 19 Geo Siberia 2012', 'Apr 19-Apr 20 7th ICA Workshop on Digital Approaches to Cartographic Heritage', 'Apr 23-Apr 27 Geospatial World Forum', and 'Apr 24 Open Source GIS & WebMapping'. The footer of the website shows the year '2013'.

International Cartographic Association
Association Cartographique Internationale



Strategies Education



International **Master of Science „Cartography“**

TU Munich, TU Vienna, TU Dresden

<http://cartographymaster.eu>

→ call for applications open now