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# **Modern Cartography**

## **Role and Contributions**

Georg Gartner, New York 2013

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How to enable the society spatially?

If SDIs are in place, whats next?

If more and more sensors are producing more and more data, what to do with Big Data?

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efficient communication of spatial information  
to

answer space-related questions

support spatial behaviour

enable spatial problem solving

support spatial awareness

by

**creation and use of maps anytime, anywhere**

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## **Modern Cartography?**

Three Assumptions:

1. Cartography is relevant
2. Cartography is attractive
3. Cartography is modern

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## **General Trends**

Cartography is relevant

**United Nations**

**Global Geospatial Information Management**

(UN-GGIM)

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## General Trends

Cartography is relevant

UN-GGIM Inventory of Issues

**Promote Geospatial Advocacy and Awareness**

from data-centric 'provider' focus to a **spatially enabled 'user' focus** by government and civil society

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## **General Trends**

Cartography is relevant

UN-GGIM Inventory of Issues

**Embracing trends in Information Technology**

open source, crowd sourcing, SOA, cloud, data as a service



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## General Trends

Cartography is relevant

UN-GGIM Inventory of Issues

**Promoting data sharing, accessibility and dissemination**

base set of reference and thematic data, harmonized and free of charge

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## General Trends

Cartography is relevant

UN-GGIM Inventory of Issues

**Assuring the **quality** of geospatial information**

articulate specific role Governments have in providing  
**quality, current and authoritative national geospatial  
information**

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## General Trends

Cartography is relevant

UN-GGIM Inventory of Issues

**Assuring the **quality** of geospatial information**

Recognize the value and the limitations, of the **recent emergence of crowd sourcing, open street map, and volunteer geographic information**

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## General Trends

Cartography is relevant

UN-GGIM Inventory of Issues

**Assuring the **quality** of geospatial information**

Consider the **emerging use of modern mobile applications and visualization techniques** to communicate issues and solutions

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## Cartography is attractive

API	Popularity
Google Maps	47%
Flickr	11%
YouTube	9%
Amazon	7%
VirtualEarth	4%
Ebay	4%
411Sync	3%
YahooMaps	3%
Del.icio.us	3%
Yahoo	3%

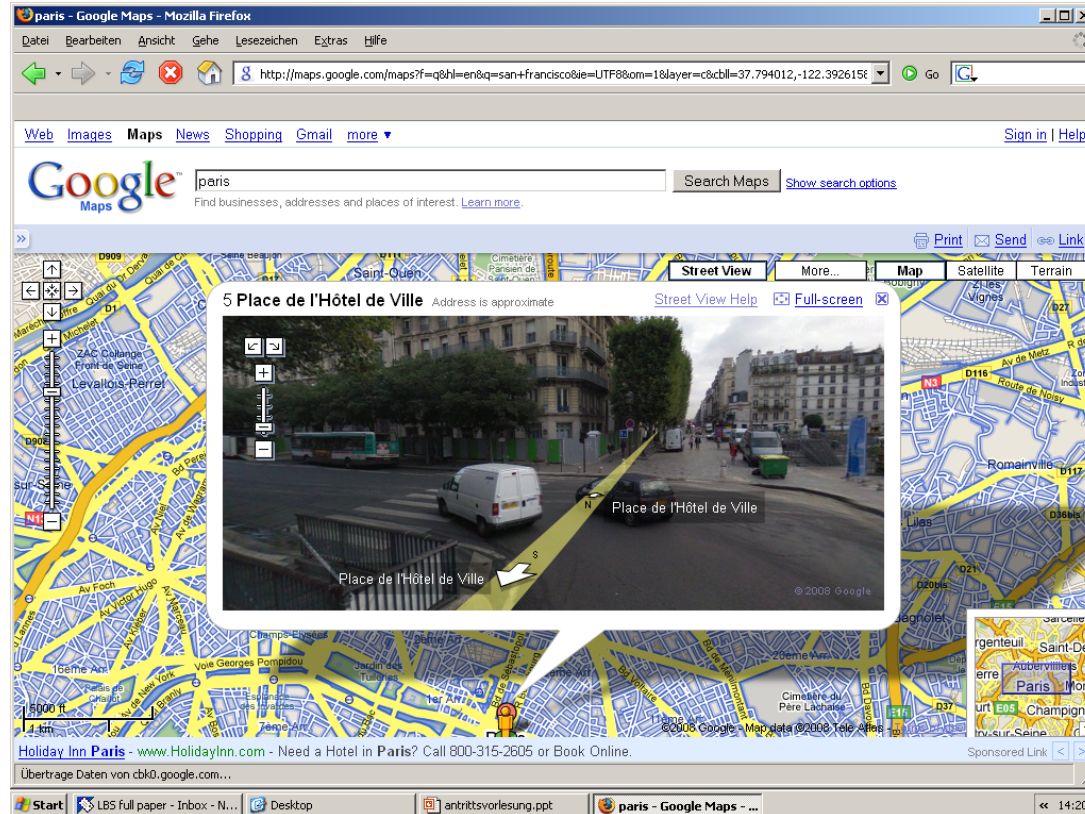
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## Cartography is attractive



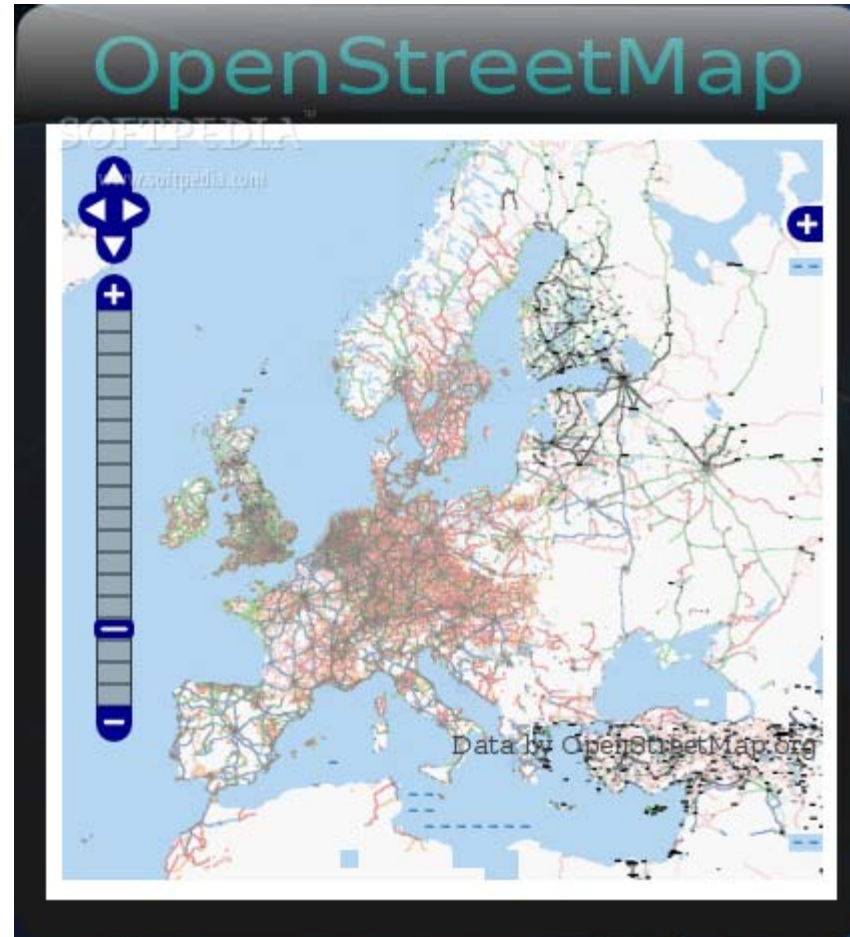
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## Interactive maps



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Collaborative maps



# 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 interface. The browser address bar shows the URL: <http://research.geodan.nl/earthwatchers/?username=eduardodia:>. The application features a satellite map of a forested region with a river. A legend at the top indicates status categories: Unchecked (white), Ok (green), Alert (red), and My Land (blue). A yellow warning triangle icon is placed on a blue 'My Land' hexagon, which is linked to a user profile popup for Eduardo Dias from Indonesia, with a 'Landstatus: Alert' and a 'set' button. The left sidebar contains user information for 'eduardodias' (1767 points), map settings for 'Bing Hybrid', and overlay controls for 'Hexagon' and 'Alerted Land'. A 'DEFORESTATION EARTHWATCHERS' banner is visible in the top right, and a 'bing' logo is in the bottom right. The footer includes 'TakiniTGlobal' and 'Microsoft' logos.



# 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 60

Leichtigkeit 0

Gamma 1

Invert Lightness

**Element**

Alle

Geometrie

Labels

**Sichtbarkeit**

Auf

Vereinfachte

Ab

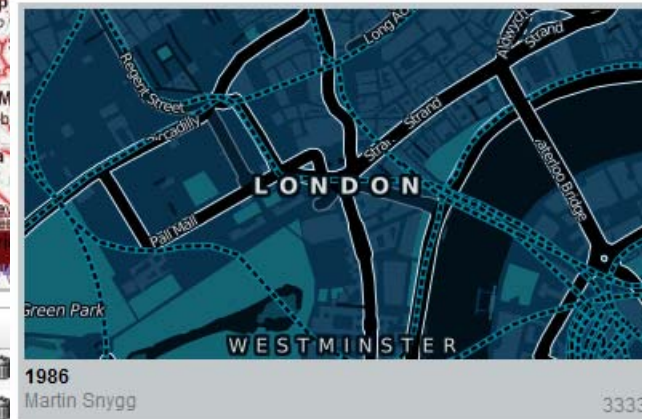
Add Style

**Styles**

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

Add To Karte

**Style Vorschau**



# Real-Time Cartography (Live Trains)

Vaguely live map of trains in the United Kingdom - Mozilla Firefox

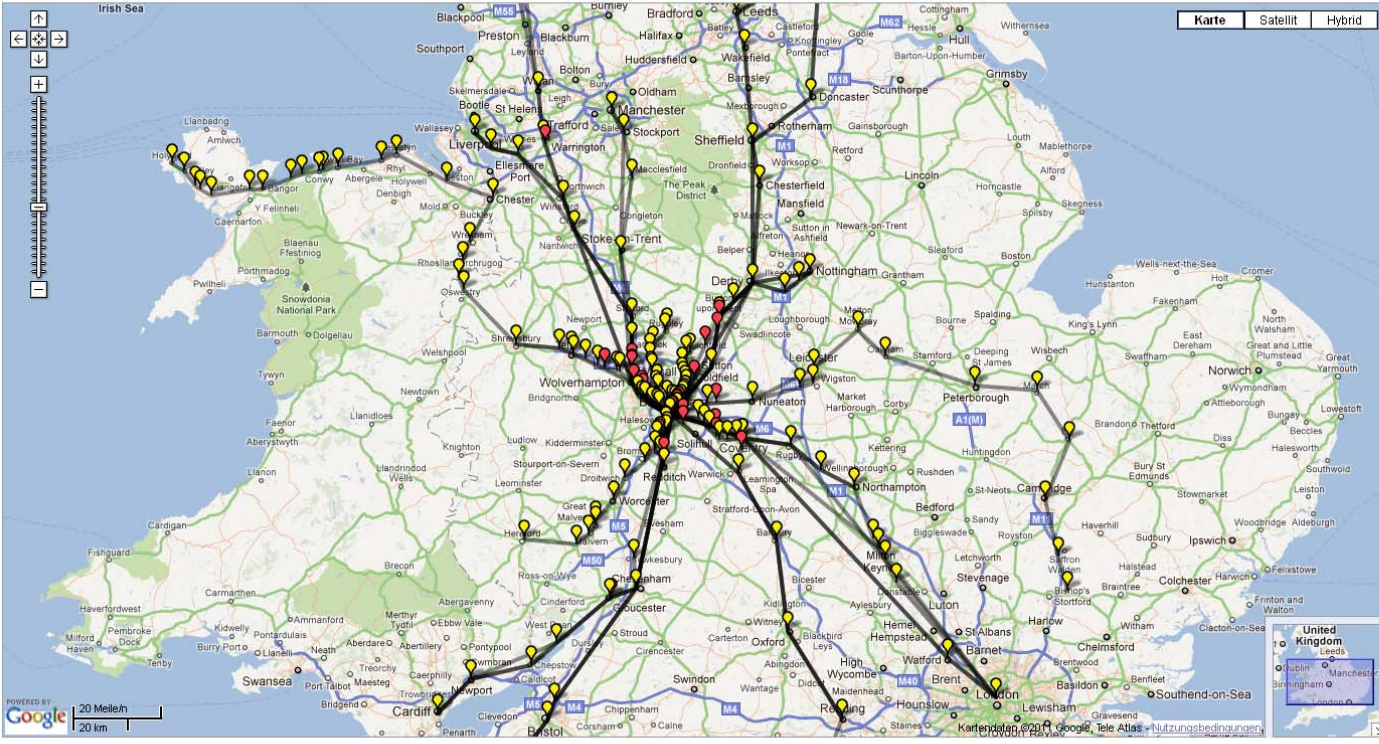
Axis Maps LLC - Cartography, Visualizatio... | Seiten-Ladefehler

http://traintimes.org.uk/map/

Meistbesuchte Seiten | Home

## Live train map for Birmingham New Street

Choose station:  [Link to this](#)  Move trains at 10x normal speed Data collected: Mon, 26 Sep 2011 13:01:00 +0100



**What is this?** [Hide >](#)

This map shows all trains currently on approach to a particular station. The yellow pins are stations (click for a local map of that station), the red pins trains. The trains move in approximately real time, or rather quicker if you check the speed-up box.

**How does it work?**

Live departure data is fetched from the National Rail website, much like my [timetable site](#), and then it does a bit of maths and magic.

**Who did this?**

[Matthew Somerville](#). Formerly a civil servant, I'm now normally to be found working for [mySociety](#) helping create and update various popular democracy and civic websites, like [TheyWorkForYou](#) and [FixMyStreet](#). But I'm always open to offers for other fun stuff. :) I can be emailed at [matthew@dracos.co.uk](mailto:matthew@dracos.co.uk).

This site is not affiliated, associated, endorsed, or in any other way connected officially with the National Rail site. The train pop-ups contain links to the relevant page on National Rail's site; this page is not responsible for them, nor the collection of the train time

Start | Posteingang - Mozilla... | Microsoft PowerPoint... | Wechseldatenträger... | Vaguely live map of tr... | 14:22



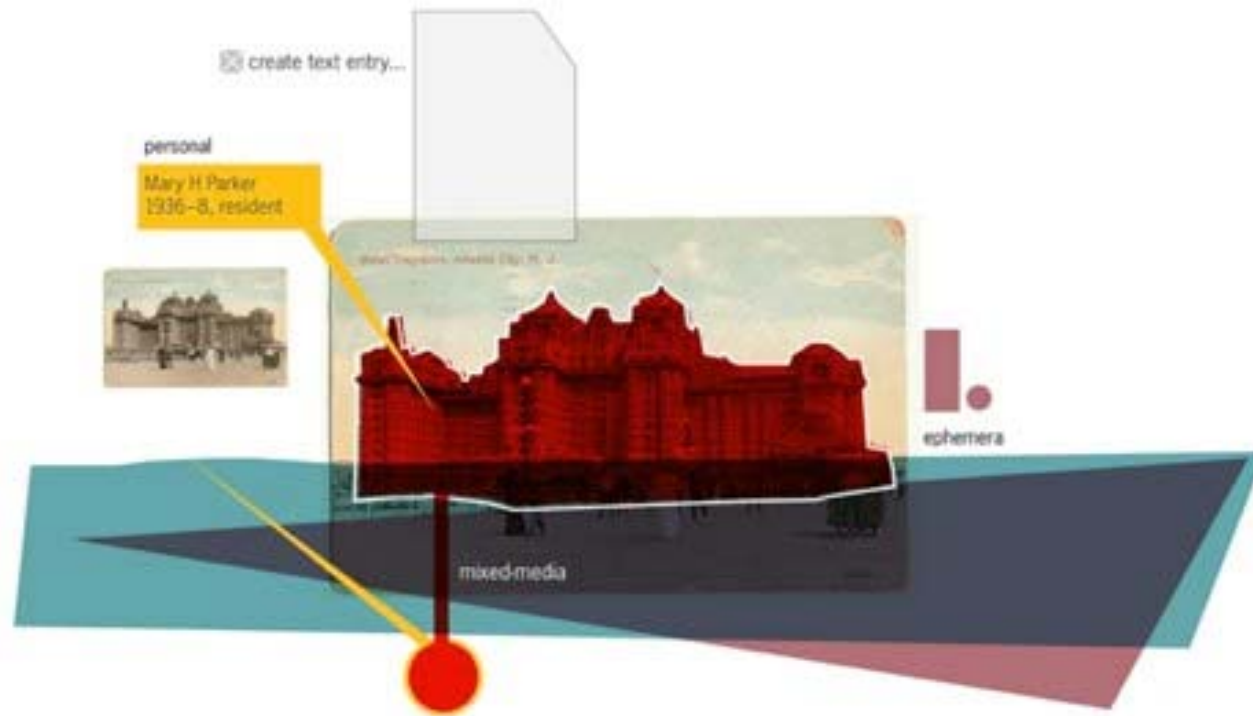
# LBS and Ubiquitous Cartography



# 3D and 4D Cartography



# Geo Media Techniques (AR, VR, CrossMedia, Social Media)



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# International Cartographic Association mission

the **world authoritative body** for cartography  
and geoinformation science

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# **International Cartographic Association**

## **Instruments: Research Agenda**

Geographic Information  
Metadata and SDI  
Geospatial Analysis and Modelling  
Usability  
Geovisualisation  
Map Production  
Cartographic Theory  
History of Cartography and GI Science  
Education  
Society



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# International Cartographic Association

## Instruments: Commissions



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# International Cartographic Association

## Instruments: Outreach Programmes

Outreach and Capacity Building Programmes

Commission of Education

Commission of Maps and the Internet

Commission on Map Production

Working Group on Outreach Programmes

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# **International Cartographic Association**

## **Instruments: Open Source**

Network on Open Source Geospatial  
Information Nodes

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# **International Cartographic Association**

## **UN endorsed International Year of the Map**

### **2015**

**ICA endorsed by UN-RCC**  
**Global Activities**

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# **International Cartographic Association**

## **Instruments: Conferences**

### **International Cartographic Conference**

August 2013, Dresden, Germany

[www.icc2013.org](http://www.icc2013.org)



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# **International Cartographic Association**

## **Instruments: Conferences**

**International Cartographic Conference**  
August 2015 Rio de Janeiro, Brasil

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# International Cartographic Association

www.icaci.org

The screenshot shows the ICA website homepage. At the top left is the ICA/ACI logo. To its right is the text "International Cartographic Association" and "Association Cartographique Internationale". Further right are social media icons for Twitter, LinkedIn, Facebook, YouTube, and RSS. Below this is a dark blue navigation bar with links: "News", "Calendar", "Publications", "The Association", "Members", "Commissions", "Research Agenda", "ICC Conferences", and "?".

The main content area features a large banner for "ICA Map of the Month 03/2012" showing a panoramic tourist map of resort Sunny Beach, Bulgaria. Below the banner is a news article titled "CfP: LBS 2012 in Munich".

**CfP: LBS 2012 in Munich**

We would like to inform you about the 9th International Symposium on Location-Based Services, which will take place in Munich, Germany, from October 16 to 18, 2012.

Given the fact, that a number of activities and industries in the domain of GNSS, LBS and geoinformation management are situated in and around Munich, this promises to be an excellent venue.

The call for paper is currently open, please consider the deadline of April 15, 2012.

Publication in either the *Journal on LBS* and/or a book within the series *Lecture Notes on Geoinformation and Cartography* is anticipated.

Detailed information can be found at <http://www.lbs2012.tum.de>.

**Category:** Commission News, Maps and the Internet, Open Source Geospatial Technologies  
**Tag:** cfp, Germany, LBS, symposium

5 March 2012 | Guest | No comments

Below the article is another news item titled "CET Workshop Opportunities".

**CET Workshop Opportunities**

GIS/Cartography workshops have been successfully organised and conducted in Iran (2009), Indonesia (2010) and Viet Nam (2010), by the *CET*, on behalf of the International Cartographic Association. An outline of the workshop conditions and format can be found at <http://fazarus.elte.hu/cet/workshop/overview.pdf>

On the right side of the page, there are two sections: "Recent Posts" and "Upcoming Events".

**Recent Posts**

- CfP: 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
- Mountain Cartography Workshop in New Zealand in September

**Upcoming Events**

- Mar 26–Mar 30 **GeoTunis 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**
- Apr 24 **Open Source GIS & WebMapping**

At the bottom right, there is a logo for "2013" with a stylized map of the world.