



Research Group
Cartography

International Cartographic Association
Association Cartographique Internationale



Crowdsource Mapping and the ICA

Georg Gartner

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Cartography and Crowdsourcing

cartography is about **efficient communication** of
spatial information

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Cartography



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Cartography and Crowdsourcing

efficient communication of spatial information
to
answer space-related questions

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Cartography and Crowdsourcing

efficient communication of spatial information
to

answer space-related questions

support spatial behaviour



Cartography and Crowdsourcing

efficient communication of spatial information
to
answer space-related questions
support spatial behaviour
enable spatial problem solving (reasoning,
planning)



Cartography and Crowdsourcing

efficient communication of spatial information
to

- answer space-related questions

- support spatial behaviour

- enable spatial problem solving (reasoning,
planning)

- support spatial awareness**



Cartography and Crowdsourcing

efficient communication of spatial information
to

- answer space-related questions

- support spatial behaviour

- enable spatial problem solving (reasoning,
planning)

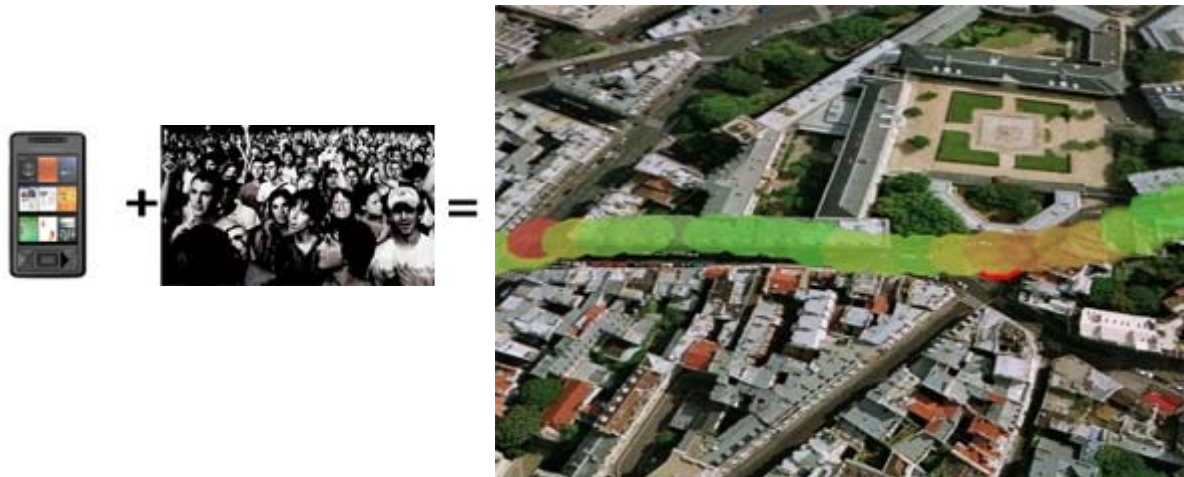
- support spatial awareness

by

- creation and use of maps anytime, anywhere**

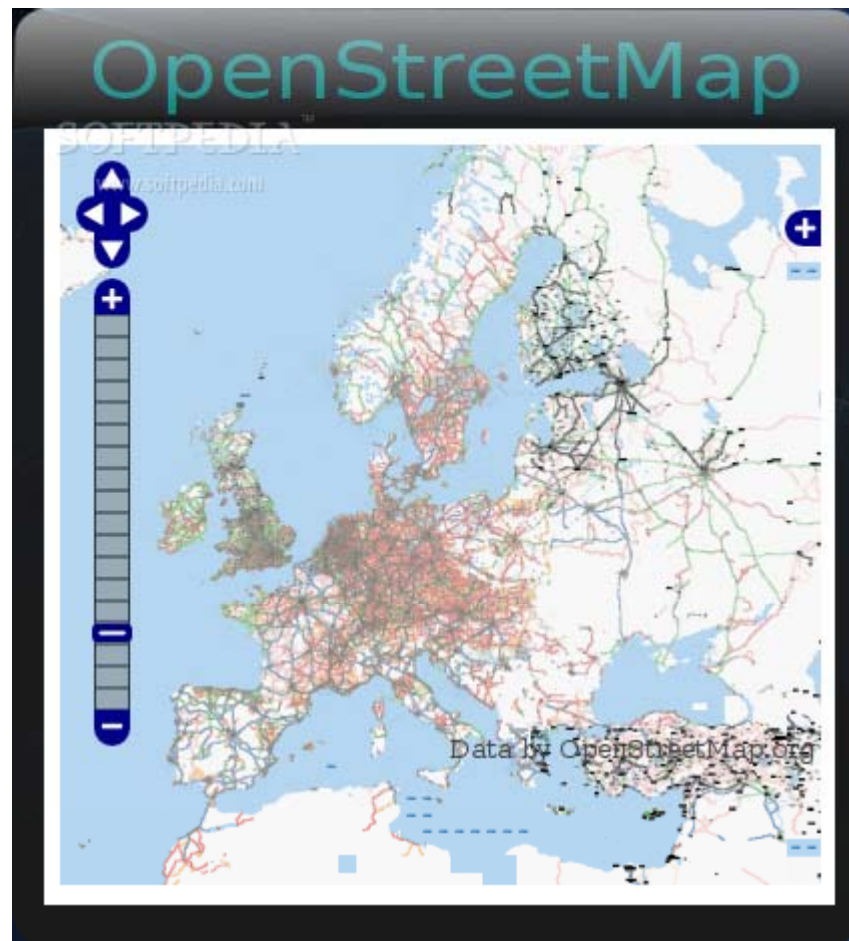
Data acquisition and Sensors

Crowd Sourcing



Data acquisition and Sensors

Crowd Sourcing





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Crowd Sourcing

A horizontal banner with a yellow background featuring a faint map of Vienna. On the left, the text 'Das Projekt zur Erfassung emotionaler Raumwahrnehmung' is written in white. Below it is the 'EMOMAP' logo, where 'EMO' is in yellow and 'MAP' is in white, with a yellow smiley face emoji between them. In the center, a yellow speech bubble with a black outline contains the text 'Ich bin hier!'. On the right, a white box contains the text 'Forschungsprojekt gefördert von' above the logos for 'bm vti' and 'FFG'.

Das Projekt zur Erfassung
emotionaler Raumwahrnehmung

EMOMAP

Ich
bin hier!

Forschungsprojekt
gefördert von

bm vti

FFG

Collaborative Cartography

Archäologie im Crowdsourcing-Ansatz, <http://exploration.nationalgeographic.com/mongolia/> (via <http://irevolution.net>)



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Field Expedition:
Mongolia

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EXPLORE

HELP US SOLVE AN 800-YEAR-OLD MYSTERY.

Explorer Albert Lin and his team are conducting a noninvasive survey in the region of the lost tomb of ruler Genghis Khan. You can help—by tagging clues and artifacts on satellite images of the area.

[GET STARTED](#)

10334 online explorers

665855 images/tiles processed

Grassroot Mapping

Initiative zum Erzeugen eigenen Kartenmaterials, z.B. bei Demonstrationen, Umweltverschmutzungen, etc, <http://grassrootsmapping.org/> (via <http://oe1.orf.at/programm/281248>). U.a. auch http://wiki.openstreetmap.org/wiki/User:Balrog/Aerial_Imagery





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Location Based Services / Mobile Apps



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United Nations Global Geospatial Information Management (UN-GGIM)

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General Trends

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

Embracing Trends in Information Technology

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

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General Trends

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

Uses of geospatial data

ubiquitous use might lead to **better decision-making**,
require appropriate ethical standards

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Efficient communication is key



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By applying contemporary technologies



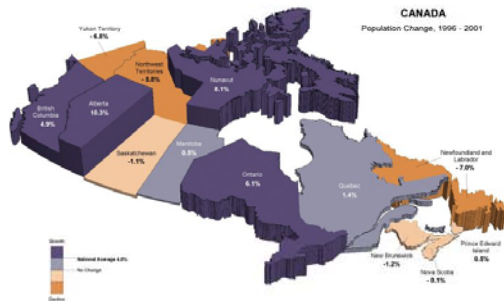


Strategies

- Education
- Research
- Cooperations



Augmented reality



thematic mapping



Visual Analytics



LBS



map and art



map perception



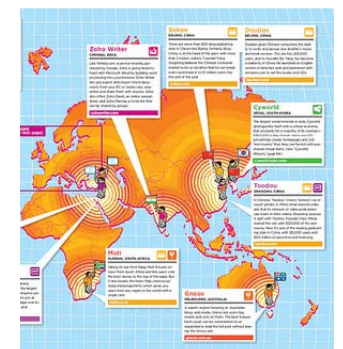
data matching



MODERN CARTOGRAPHY



3D, data analysis



maps in web 2.0

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International Cartographic Association mission

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

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International Cartographic Association mission

world authority means
national and affiliate members
represented at UN bodies and other
international organisations



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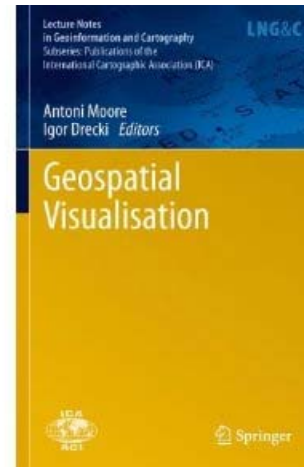
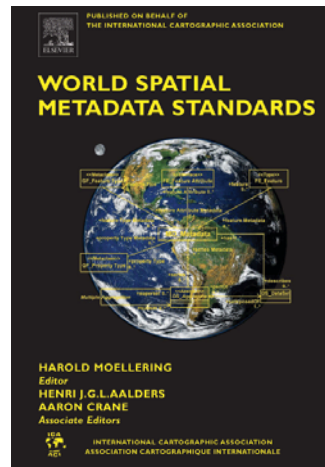
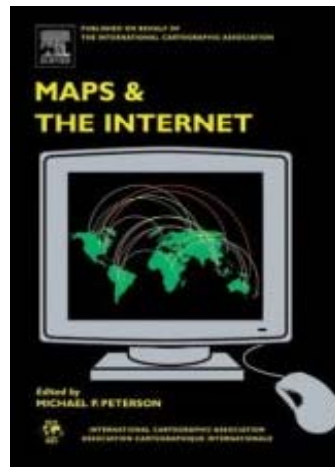
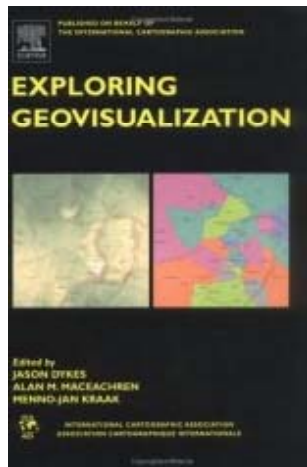
Aims

- Understanding and solve world-wide problems using cartography
- Informing about environmental, economical, social and spatial information through mapping
- Promote professional methods, techniques and solutions
- Global forum on cartography

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International Cartographic Association Instruments: Publications



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Instruments: Map Exhibitions



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Instruments: Children Map Competition



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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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Commissions

Commission on **Art and Cartography** Commission on **Atlases** Commission on **Cartography and Children** Commission on **Cartography in Early Warning and Crisis Management** Commission on **Cognitive Visualization** Commission on **Data Quality** Commission on **Digital Technologies in Cartographic Heritage** Commission on **Education and Training** Commission on **Generalisation and Multiple Representation** Commission on **Geoinformation Infrastructures and Standards** Commission on **Geospatial Analysis and Modeling** Commission on **Geovisualization** Commission on **GI for Sustainability** Commission on the **History of Cartography** Commission on **Map Design** Commission on **Map Production and Geo-Business** Commission on **Map Projections** Commission on **Mapping from Remote Sensor Imagery** Commission on **Maps and Graphics for Blind and Partially Sighted People** Commission on **Maps and Society** Commission on **Maps and the Internet** Commission on **Mountain Cartography** Commission on **Neocartography** Commission on **Open Source Geospatial Technologies** Commission on **Planetary Cartography** Commission on **Theoretical Cartography** Commission on **Ubiquitous Mapping** Commission on **Use and User Issues**

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NeoCartography

<http://youtu.be/fX6vil6gqAo>

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Early Warning and Crisis Management

Promote the cartographic use of remotely sensed and other geospatial data for early warning and crisis management

Promote the development of dynamic and real-time cartographic visualization concepts

Foster quality state-of-the art mapping

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Outreach and Capacity Building

Hands-on Workshops

most recent at Cuba, Iran, New Zealand, South Africa, Tunisia, Germany
Hands-on Workshop on OSGeo WebMapping for UN at Vienna

Seminars

most recent: Cartographic Generalisation Istanbul, Heritage Gent..

Symposia most recent: Service-oriented Mapping, Vienna

ICA - OSGeo MoU



Key aims

- Aim 1 – Establishing research and training opportunities in open source GIS
- Aim 2 -Provide worldwide learning platform
- Aim 3 – Build teaching and research infrastructure worldwide

Open Geo Labs

Africa

- # University of Pretoria ,South Africa
- # Regional Centre for Mapping of Resources for Development (RCMRD), Kenya [process of being established]
- # University of Ghana, Ghana [process of being established]

Europe

- # University of Nottingham, UK
- # University of Girona, Spain
- # University of Southampton, UK

South America

- # Federal University of Paraná, Brazil
- # São Paulo State University (UNESP), Brazil [process of being established]

North America

- # North Carolina State University, USA
- # University of Massachusetts Amherst, USA [process of being established]

Asia

- # UNMC, Malaysia
- # Universiti Teknologi Malaysia (UTM), Malaysia [process of being established]

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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



International Cartographic Association
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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 interface. At the top is the ICA/ACI logo and the full name of the association in English and French. A navigation bar includes links for News, Calendar, Publications, The Association, Members, Commissions, Research Agenda, ICC Conferences, and a help icon. The main banner features the 'ICA Map of the Month' for March 2012, which is a panoramic tourist map of Sunny Beach, Bulgaria. Below the banner, there are two main content areas. The left area contains a 'CfP: LBS 2012 in Munich' announcement, detailing the 9th International Symposium on Location-Based Services, its dates (October 16-18, 2012), location (Munich, Germany), and a call for papers with a deadline of April 15, 2012. It also lists publication options and provides a URL for more information. The right area contains 'Recent Posts' and 'Upcoming Events'. The 'Recent Posts' list includes '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', and 'Mountain Cartography Workshop in New Zealand in September'. The 'Upcoming Events' list includes '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', and 'Apr 24 Open Source GIS & WebMapping'. At the bottom right, there is a small graphic with the year '2013'.

ICA
ACI

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News Calendar Publications The Association Members Commissions Research Agenda ICC Conferences ?

ICA Map of the Month
03/2012

Map of the Month 3/2012: Panoramic tourist map of resort Sunny Beach, Bulgaria

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

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://lazarus.elte.hu/cet/workshop/overview.pdf>

Recent Posts

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2013