

ITTFASS

BEWERBUNGSUNTERLAGEN



**ANLAGEN ZUR BEWERBUNG VON
JEAN-CHRISTOPHE LITTFASS**

CV

Nachfolgend finden Sie diese Unterlagen:

- Tabellarischer Lebenslauf
- Berufserfahrungsliste
- Prüfungszeugnisse
- Arbeitszeugnis
- Arbeitsproben

PERSÖNLICHE DATEN

Name Jean-Christophe Littfass
Anschrift Galmeistr. 17
58636 Iserlohn
Telefon +49 (0) 2731-15 50 11 0 (Festnetz)
+49 (0) 160-97 61 97 72 (Mobil)
E-Mail tifi@littfass.com
Geboren am 06.09.1977
in Chalon-sur-Saône (F)
Familienstand ledig, keine Kinder
Führerschein B
Staatsangehörigkeit deutsche und französische



AUSBILDUNG

2003-2007 Studium der Geoinformatik am Insitut für Geoinformatik der Westfälischen Wilhelms-Universität Münster (9 Semester)
„Allgemeinbildung“ der Informatik,
Projekt Management, Software Engineering,
funktionale und objektorientierte Programmiersprachen,
Datenbankdesign, Geodatenbanken,
GIS, Kartographie

1999-2001 Studium am IUT für „Kommunikationsdienstleistungen und -netzwerke“ in St. Raphaël (F).
Kommunikationstheorie, Marktforschung,
Projektmanagement,
Schulung künstlerischer und graphischer Fähigkeiten (Bild-, Filmanalyse, DTP),
Design und Erstellung multimedialer Produkte (Print, Web, Film, Audio),
Einführung in Design und Implementierung multimedialer Anwendungen (Softwaredesign, Datenbanken, Webapplikationen)

1996 Abitur an der Europaschule Karlsruhe (ESK)
Abschluß: 3,5

Seit Mai 2004	Institut für Geoinformatik Universität Münster im Print- & Webteam Gestaltung von Printmedien (Poster, Flyer, Graphiken, Logos) und Corporate Identities, Webdesign, -entwicklung, -administration und -wartung Softwareentwicklung, Datenbankdesign, IT-Beratung und Schulung, Einarbeiten neuer Teammitglieder in PHP, Javascript und Photoshop, Abwickeln der Print-Aufträge mit Druckereien, Selbständige, kreative Arbeit im Expertenteam
2004	Barkeeper im Pierhouse und Rio d'Oro in Münster
2003	Mitarbeiter im Internet-Café „Surf-In“ im Kaufhof Münster Kundenbetreuung, Netzwerk-Administration, kleinere multimedia Projekte
2002	IT-Tätigkeiten für Rüsenschmidt & Tüllmann GmbH & Co. KG und Takko Modemarkt GmbH & Co. KG
Mai - Aug. 2002	RAAD Consult GmbH, Münster Telefonist im Callcenter, SAP-Marktforschung
Jun. - Sep. 2001	Praktikum in der DTP-Agentur „Crys Infographie“ in Marseille (F) Webdesign und -entwicklung, Graphikdesign
Jun. - Sep. 2000	Praktikum in der Praxis für Ergotherapie und Feldenkrais Ute Knolle, Karlsruhe EDV-Schulung des Personals, Gestaltung der CI
Feb. 1998 - März 1999	Zivildienst an der Jugendherberge Karlsruhe Kassen-, Küchen-, Zimmer- und Hausmeisterdienste, Kunden Betreuung

Außerdem arbeite ich nebenbei seit 9 Jahren autodidakt und selbstständig an einer Vielfalt von Aufträgen, oft projektbezogen als Freelancer.

- Jan. 2007 Gestaltung und Umsetzung einer Website (Front- & Backend) für „Forum Cultura“ in Münster
- Dez. 2006 Entwicklung eines Nutzerverwaltungstool für die „Ubbo-Kruse“ - Website, bei Syntecs, Oldenburg
www.ubbo-kruse.de
- Okt. 2005 Gestaltung und Umsetzung einer Website (Front- & Backend) für Olymp, die „Freie Laborschule der Künste“ in Münster,
www.littfass.com/archive/olymp/
- Sep. 2005 Mitgestaltung an einer E-Learning Plattform im Intranet für den Ethikkurs der Universität Augsburg
- Jul. 2005 Gestaltung und Umsetzung eines CMS für die „Breuer Duschkabinen“ - Website, bei Syntecs, Oldenburg
www.duschkabine.com
- Apr. 2005 Gestaltung und Umsetzung einer Website (Frontend) für das „Cafe & Weinbar Kolk“ in Münster
www.littfass.com/archive/kolk/
- Apr. 2005 Gestaltung und Umsetzung einer Website (Front- & Backend) für „Chalwa Sound“ in Münster
www.chalwa.de
- Nov. 2004 Umsetzung einer Website (Front- & Backend) für die Klasse von Prof. Maik und Prof. Dirk Löbbert an der Kunstakademie Münster
www.klasseloebbert.de
- Dez. 2001 Gestaltung und Umsetzung einer Website (Front- & Backend) für die Stadt Mancey in Frankreich.
www.mancey.fr

Französisch und Deutsch:	Muttersprache
Englisch:	Sehr gute Kenntnisse
Spanisch:	Grundkenntnisse

DESIGN

- in Print & Web, Vektor & Raster
- Adobe (Photoshop, Illustrator, InDesign, Acrobat Pro, Macromedia)
- Acrylmalerei

ENTWICKLUNG / PROG.

- Ajax, Web II (PHP, XML, Javascript, HTML, CSS)
- Java
- SQL (MySQL, Oracle)
- Objektorientiertes-, Crossbrowser-Programmieren
- Flash / Actionscript

WEITERE QUALIFIKATIONEN

- Geoinformatik
- Software-Engeneering
- CMS, Administration
- Java, Flash / Actionscript
- Musik (Schlagzeug, Klavier, E-Music)
- Audiotbearbeitung (FLStudio, etc.)
- Videobearbeitung/ Schnitt (Premiere)
- Fotografie, Film
- Office, Win XP

HOBBIES

Musik, Kunst, Sprachen, Reisen

ZEUGNISSE

ANHANG ZEUGNISSE

ARBEITSPROBEN

ANHANG ARBEITSPROBEN

WEB

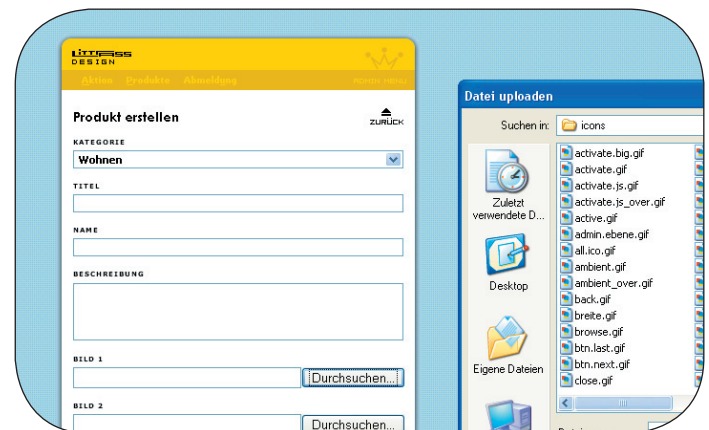
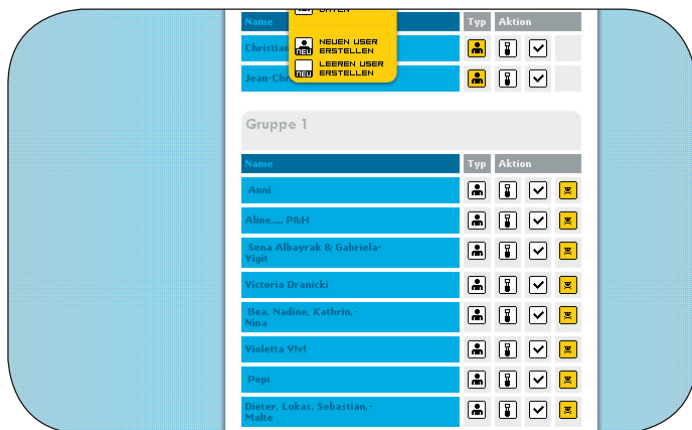
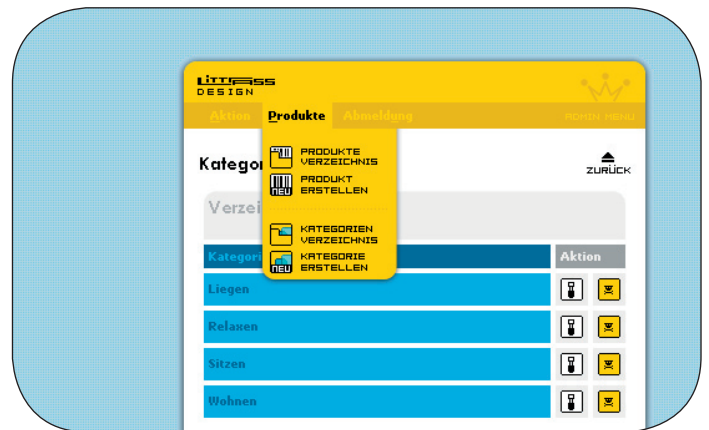
MINIMÖBEL DESIGN

PRODUKTGALERIE

mit Nutzer- und Produktverwaltungstool,
http://www.littfass.com, Dezember 2006

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop
Objektorientiert, Crossbrowser

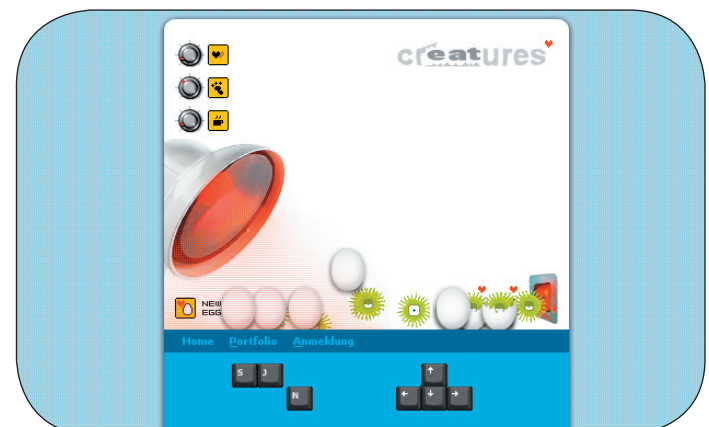
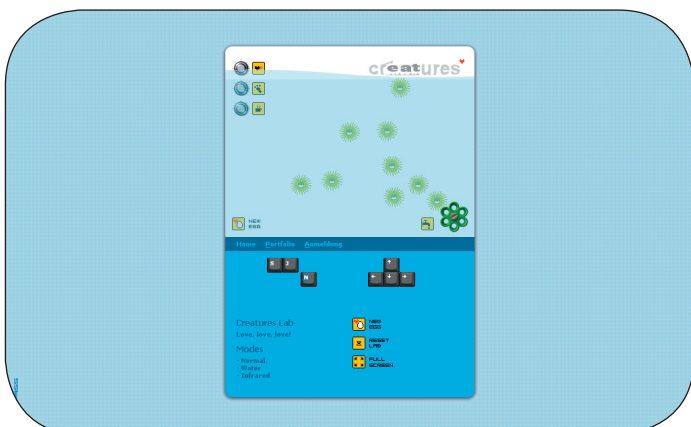
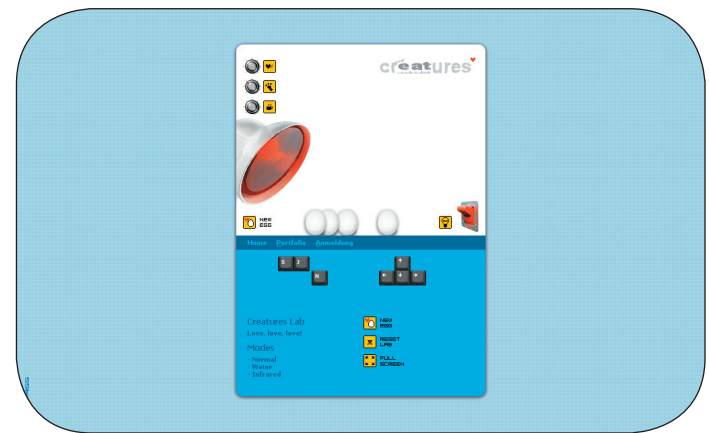
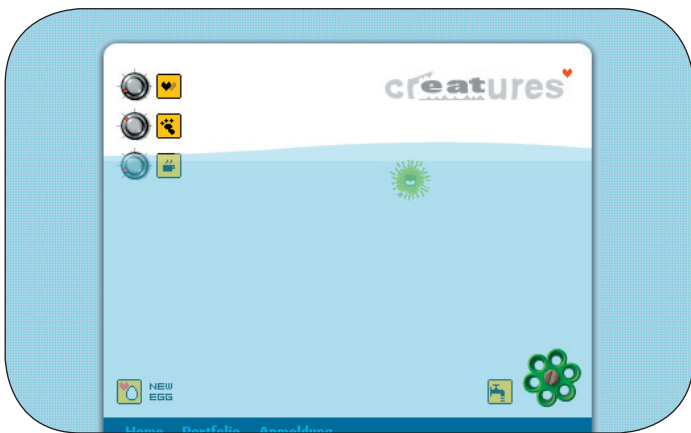
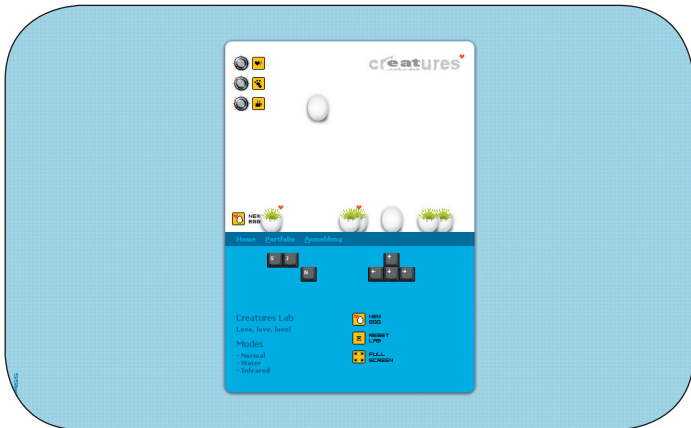
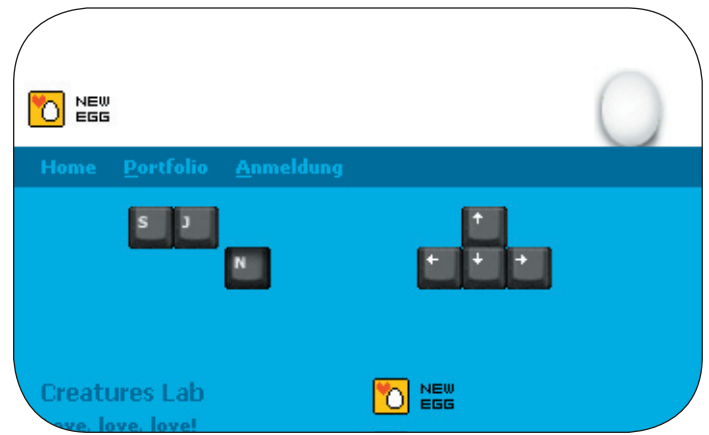


WEB TAMAGOTCHI

Online-Spiel, Prototyp, 2007

SKILLS

Javascript, PHP/MySQL, CSS, Photoshop
Objektorientiert, Crossbrowser



GESELLSCHAFT FÜR GEOINFORMATIK

GFGI HOMEPAGE

pflegeleichter statischer Inhalt,
http://www.gfgi.de, 2006

SKILLS

PHP, Javascript, CSS, Photoshop
Crossbrowser

Bonner Erklärung zur Geoinformatik

Am 27. September 2005 trafen sich in Bonn 12 Hochschulrechner zu einem Expertenrat, der die Rolle der Geoinformatik in der Informationsgesellschaft und die Möglichkeiten der geographischen Informationssysteme, Anlass zu dem Gespräch gab die Analyse, dass in Bereichen der raumbezogenen Informationsverarbeitung ein neues Paradigma zu entwickeln ist, das breite Entwicklungen aus Wirtschaft, Politik und Gesellschaft aufnimmt und reflektiert. Das resultierende „Bonner Erklärung“ fasst die Ergebnisse des Gesprächs und die entwickelten Perspektiven zusammen.

Motivation und Analyse

„Geoinformationen und insbesondere digitale Geoinformationen stellen ein Wirtschaftsgut von herausragender Bedeutung dar, weil sie als Produktionsfaktoren am Markt gehandelt werden und rund die Hälfte aller Wirtschaftszweige Geoinformationen direkt oder indirekt für ihre Aufgaben nutzt.“

Für den Wirtschaftsstandort Deutschland entstehen aus dem Markt für Geoinformationen sowie bei der Entwicklung von Geoinformationssystemen Arbeitsplätze mit hohem Qualitätsniveau, gerade im mittelständischen Bereich.

Politik, Wirtschaft und Gesellschaft setzen hohe Erwartungen in Wirtschaft und Nutzen aus der Verarbeitung raumbezogener Informationen. Festzustellen ist eine zunehmende breite Nutzung dieser Informationsressourcen. Die Technologie von Geographischen Informationssystemen diffundiert von den Wissenssinneln der Spezialisten in die breite alltäglicher Anwendungen:

- ✓ Einfache internetbasierte Kartenservices produzieren pro Tag mehr Karten, als zuvor in der Menschheitsgeschichte gezeichnet oder gedruckt wurden.

Giscience 2006

Fourth International Conference on Geographic Information Science

Registration fees

For registration and payment until July 31, 2006 a reduced fee is granted.

	Early registration		Late registration	
	Student	Regular	Student	Regular
Conference fees	€95	€285	€120	€355
Workshop 1	€25	€50	€35	€70
Workshop 2	€25	€50	€35	€70
Workshop 3	€25	€50	€35	€70

*) Including: registration, proceedings, champagne reception, gala dinner, 3-days Münster bus ticket. A value added tax is neither contained in the fees nor can be proven.

Giscience 2006

Fourth International Conference on Geographic Information Science

Call for Workshop Proposals

Important Dates:

- Submission of workshop proposals: Dec 17, 2005
- Notification of acceptance: Jan 17, 2006
- Workshop web page online: Feb 1st, 2006
- Workshop paper submission deadline: May 15, 2006
- Workshop paper notification: July 1st, 2006
- Workshop day at Giscience: Sep 20, 2006

Call for Workshop Proposals

Folgerungen

Es bedarf einer wissenschaftlichen Neuorientierung und eines Forschungsfokus, der die Strukturierung, Nutzung und Inwertsetzung von raumbezogenen Informationen für Informationsbedarfe in Politik, Gesellschaft und Wirtschaft in den Mittelpunkt der Analyse stellt. So entsteht eine spezielle Formal- und Methodenwissenschaft mit deutlichem Anwendungsbezug, die im Englischen zutreffend mit Geographical Information Science, im Deutschen mit Geoinformatik bezeichnet wird.

Zu den ersten Aufgaben bei der Entwicklung des Forschungsschwerpunkts gehört die Definition des gemeinsamen Kerns von Forschungsansätzen, die sich bislang heterogenen Feldern wie der Unterstützung der Klimafolgenforschung bis zur Entwicklung von bildschirmbaren zur Navigation mittels Mobiltelefonen zuordnen lassen. Gemeinsam ist diesen Ansätzen die Auseinandersetzung mit der Modellierung räumlicher Prozesse und Strukturen mit formalen und computergestützten Methoden. Nutzen erbringen sie vor allem in der Strukturierung und Reflexion von Planungs- und Orientierungsprozessen im Raum in unterschiedlichen Maßstabstufen und Verwendungszusammenhängen.

Erste organisatorische Ansätze zur Umsetzung einer solchen Neuorientierung in Forschung und Lehre finden wir:

- ✓ an der Universität Bonn, die ein Technologiezentrum GIS und einen Masterstudiengang GIS begründet hat, um disziplin- und fakultätenübergreifend die wissenschaftliche Auseinandersetzung mit raumbezogenen Informationen zu befördern.
- ✓ an der Universität Osnabrück, die mit der Gründung des „Instituts für Geoinformatik und Fernerkundung“ neue Wege in der Ausbildung (Bachelor/Masterprogramm in Geoinformatik) und Forschung beschreitet und die Fernerkundung als integralen Bestandteil der Disziplin Geoinformatik betrachtet.
- ✓ an der Universität Salzburg, wo die Umbenennung und Neuaufrichtung einer Arbeitsgruppe am ehemaligen Institut für Geographie und angewandte Geoinformatik als „Zentrum für Geoinformatik“ der Einrichtung eines Masterstudiums „Angewandte Geoinformatik“ und eines MS-Fachstudiums „Geographic Information Science and Systems“ folgte.
- ✓ an der Universität Münster, an der bereits vor über 10 Jahren das „Institut für Geoinformatik“ gegründet wurde und seit 1999 einen Diplomstudiengang Geoinformatik anbietet.
- ✓ in den USA, wo durch das bereits 1988 gegründete NCGIA - National Center for

Giscience 2006

Fourth International Conference on Geographic Information Science

Dates & Locations

Conference date
Wednesday, September 20th - Saturday, September 23rd

Workshop dates
Workshops 1-4 : Wednesday, September 20th 2006
Workshop 5 : Tuesday, September 19th - Wednesday, September 20th 2006

Conference location
Schloss Münster
Wirtschaftliche Wilhelmstr. Münster

Teilnehmer

Teilnehmer des Expertengesprächs am 27. September 2005 in Bonn und Gründungsmitglieder der Kommission für Geoinformatik:

Dr. Thomas Blaschke,	Universität Salzburg
Prof. Dr. Manfred Ehlers,	Universität Osnabrück
Prof. Dr. Klaus Greve,	Universität Bonn
Prof. Dr. Carsten Jürgens,	Universität Bochum
Prof. Dr. Martin Kappas,	Universität Göttingen
Prof. Dr. Andreas Koch,	LMU München
Prof. Dr. Antonio Krüger,	Universität Münster
Prof. Dr. Otti Margraf,	HU Berlin
Prof. Dr. Gerd Penke,	Universität Augsburg
Prof. Dr. Jürgen Raub,	Universität Würzburg
Dr. Jochen Schiewie,	Universität Osnabrück
Prof. Dr. Josef Strobl	Universität Salzburg

GISCIENCE 2006 HOMEPAGE
pflegeleichter statischer Inhalt,
http://www.giscience.org, 2006

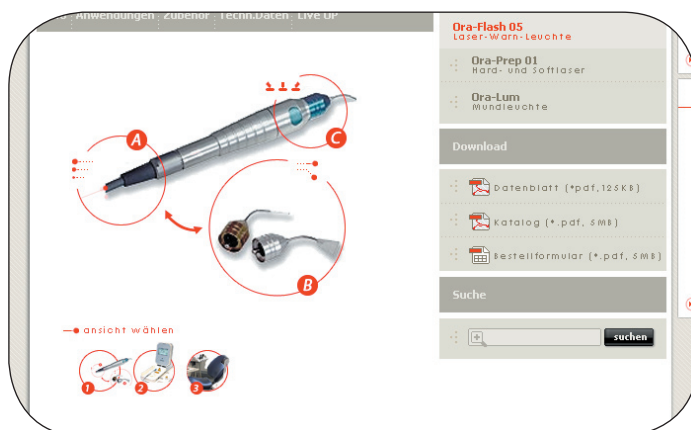
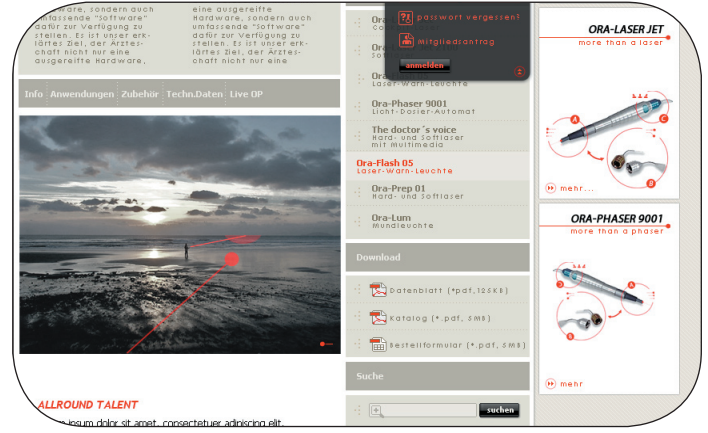
SKILLS

PHP, Javascript, CSS, Photoshop
Crossbrowser

GISCIENCE 2006

DENTAL LASER Prototyp, 2007

SKILLS
CSS, Photoshop



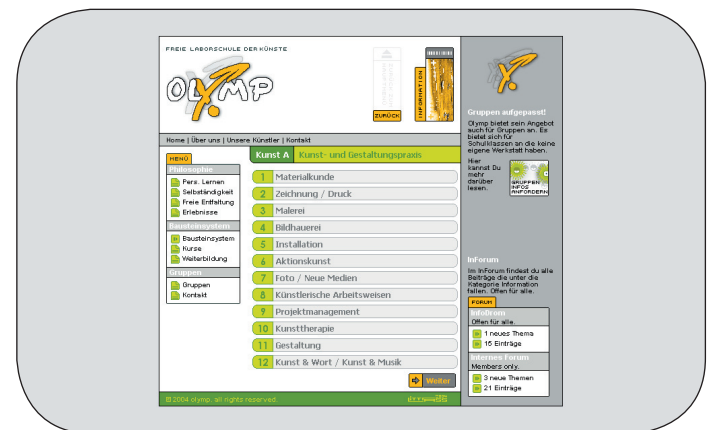
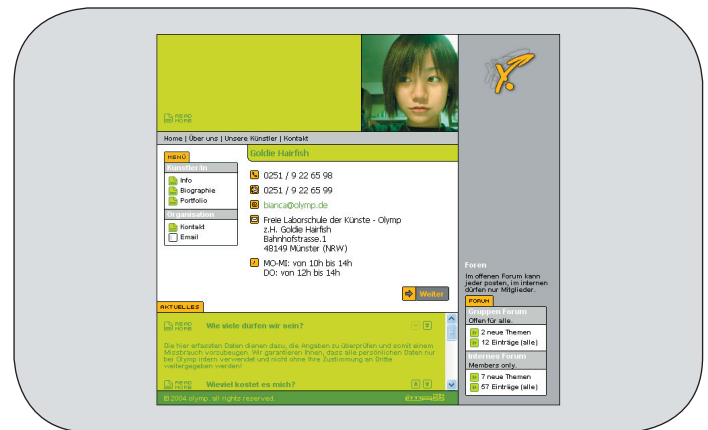
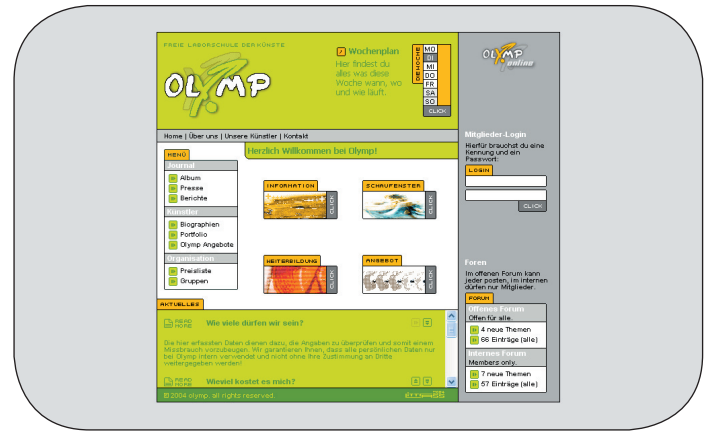
GI-DAYS 2007

GI-DAYS 2007

statischer Content.
http://www.gi-days.de/, Dezember 2006

SKILLS

PHP, CSS, Photoshop
Crossbrowser



OLYMP LAB HOMEPAGE

mit Content- und Nutzerverwaltung,
interaktivem Portfolio, Terminkalender und
weiteren Tools.
http://www.olymplab.de/ (RIP), 2004

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop

OLYMP LAB

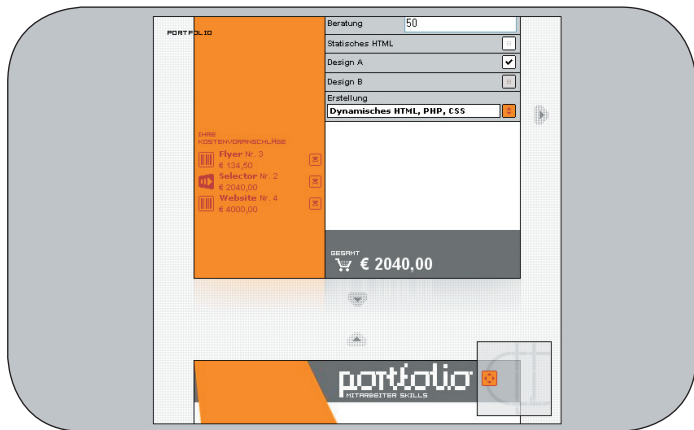
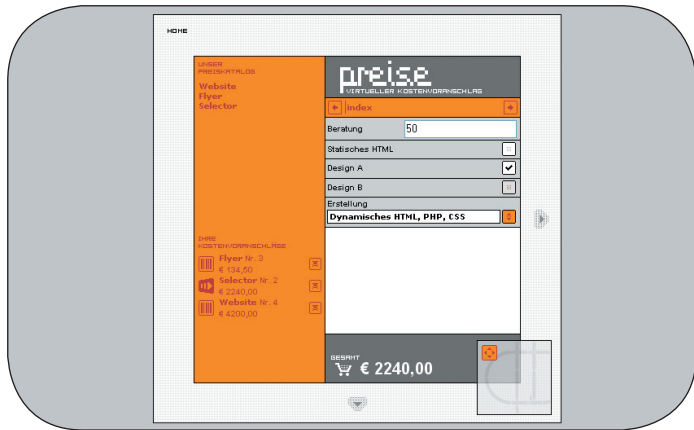
LITTFASS PROTOTYP

KOSTENVORANSCHLAGS-RECHNER

mit interessanter Navigation,
Prototyp, 2006

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop
Crossbrowser



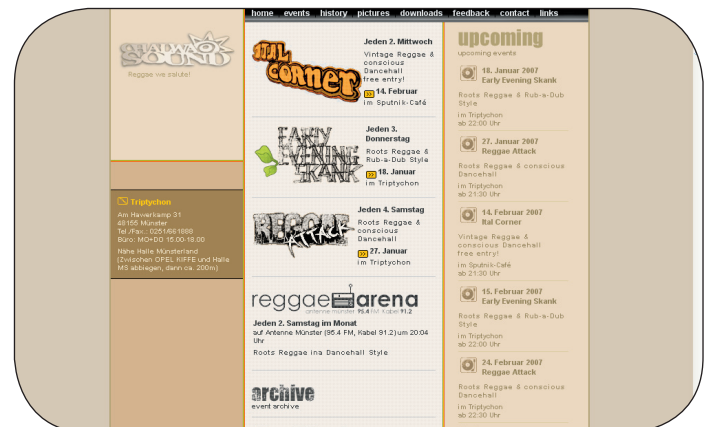
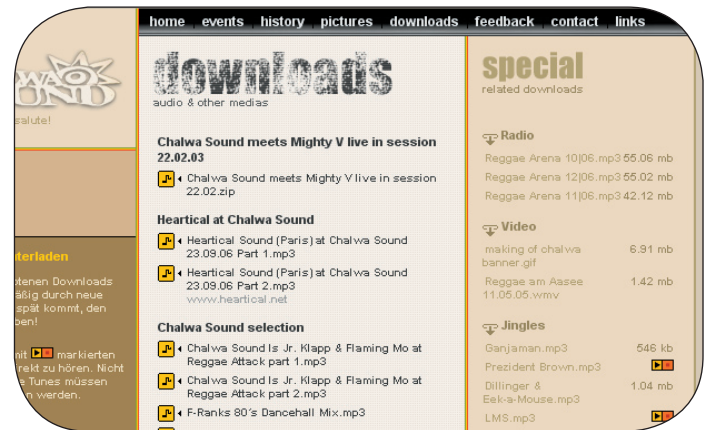
CHALWA SOUND

CHALWASOUND-WEBSITE

mit Contentverwaltung, Bildergalerie, Newsboard,
Veranstaltungskalender und weiteren Tools.
http://www.chalwa.de/, Mai 2005

SKILLS

PHP/MySQL, CSS, Photoshop
Crossbrowser



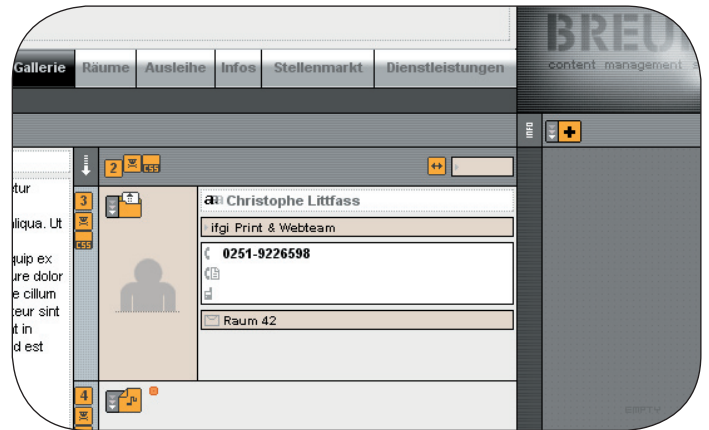
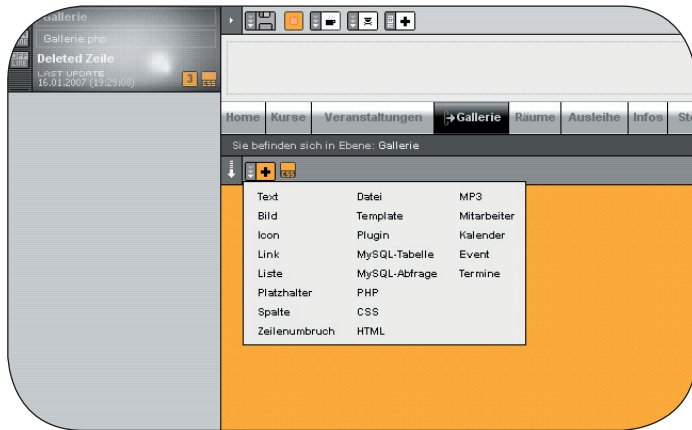
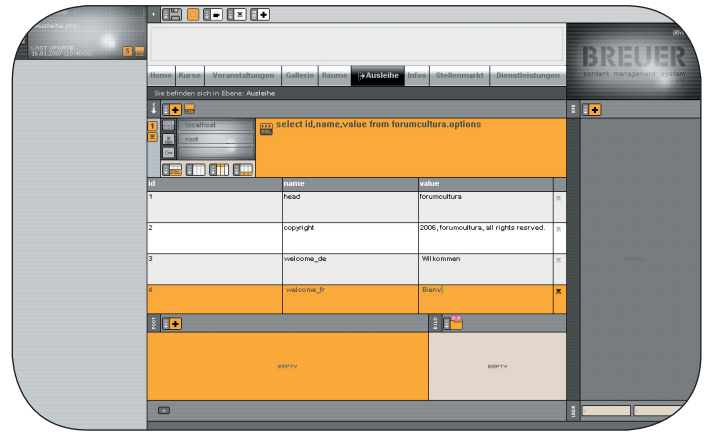
CONTENT MANAGEMENT SYSTEME

BREUER-WEBSITE-CMS FÜR SYNTAX

Content- und Produktverwaltung, Veranstaltungskalender und weitere Tools.
<http://www.duschkabine.com/>, 2005

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop
 Crossbrowser



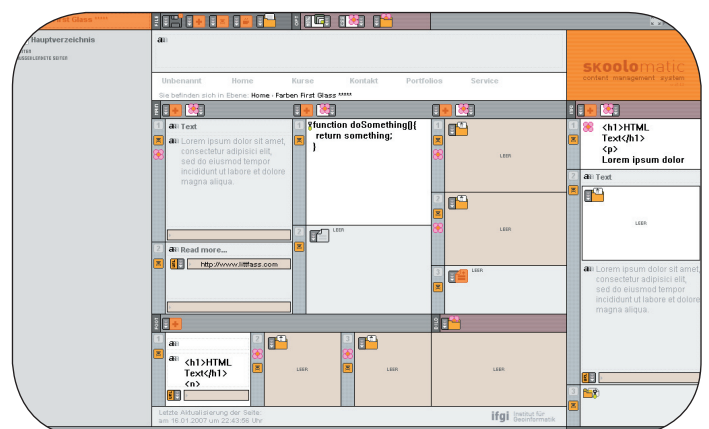
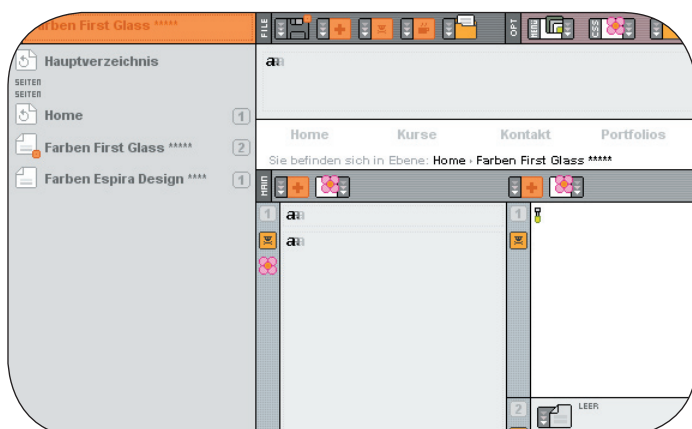
E-LEARNING

E-LEARNING-CMS

mit Content- und Aufgabenverwaltungstool, im Intranet, 2005

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop
 Crossbrowser

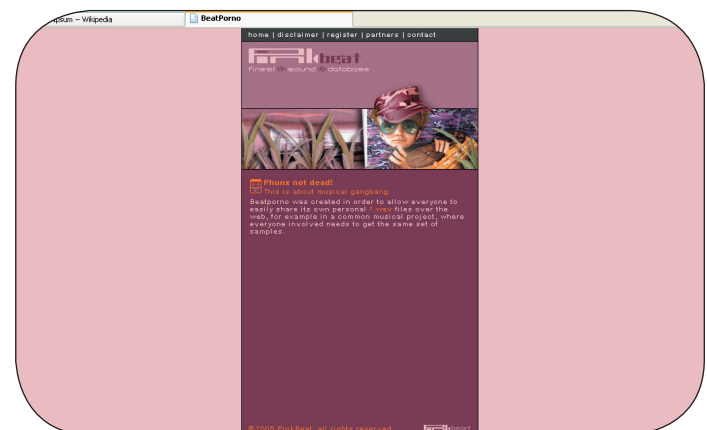
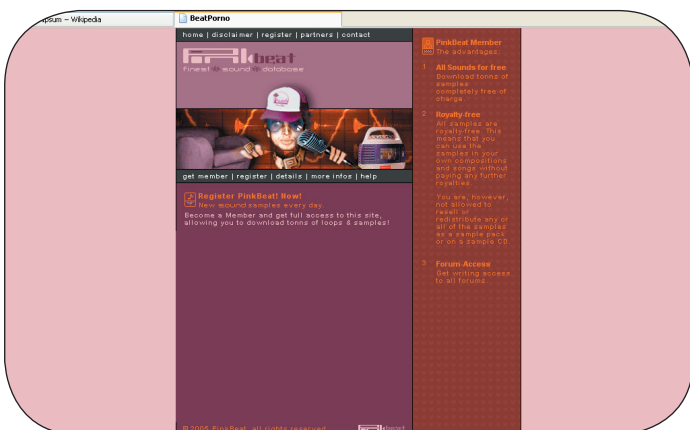
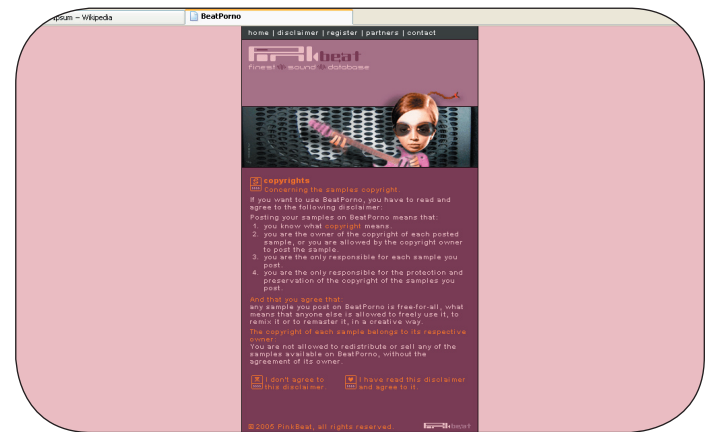
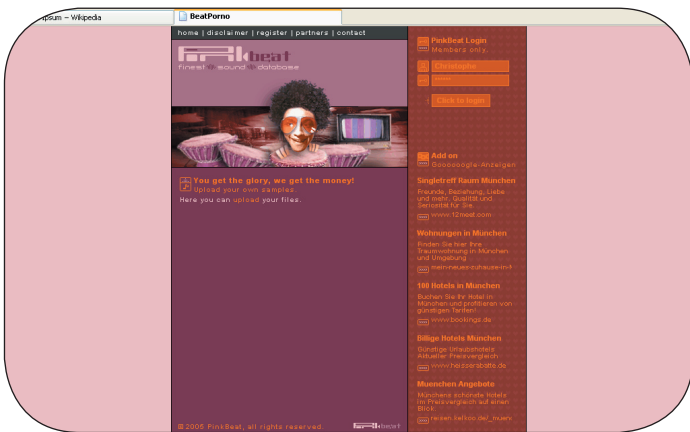
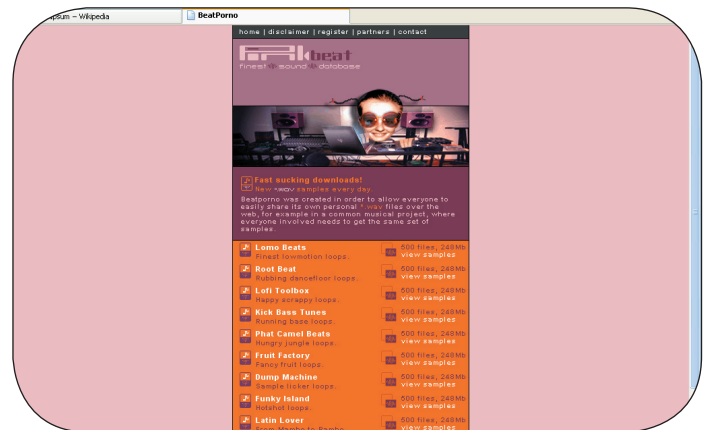
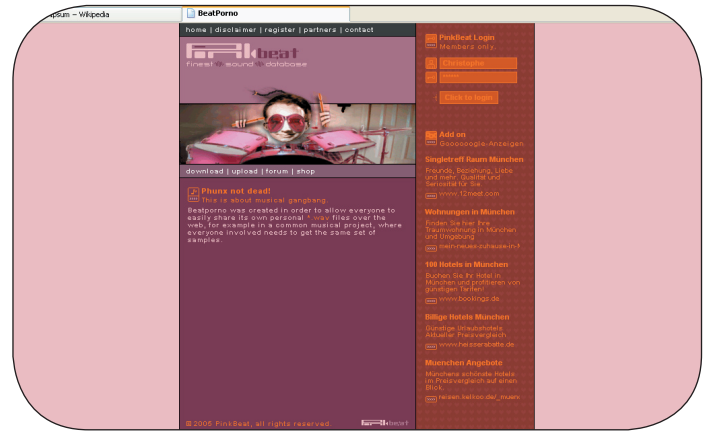


AUDIOLOOP BÖRSE

Onlinebörse für Audioloops, Prototyp, 2004

SKILLS

PHP/MySQL, Flash/Actionscript, CSS, Photoshop
Objektorientiert, Crossbrowser



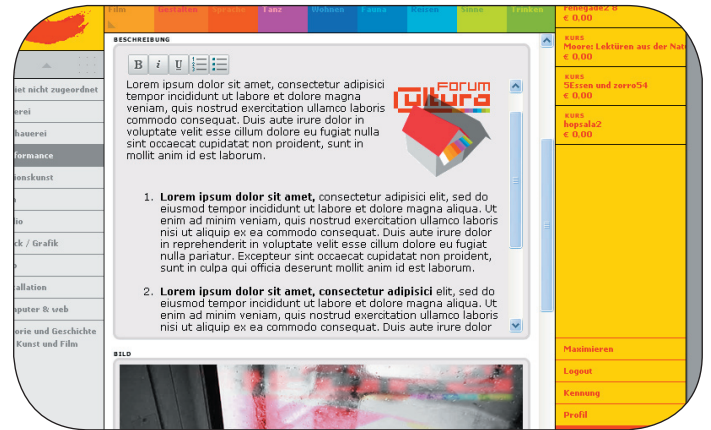
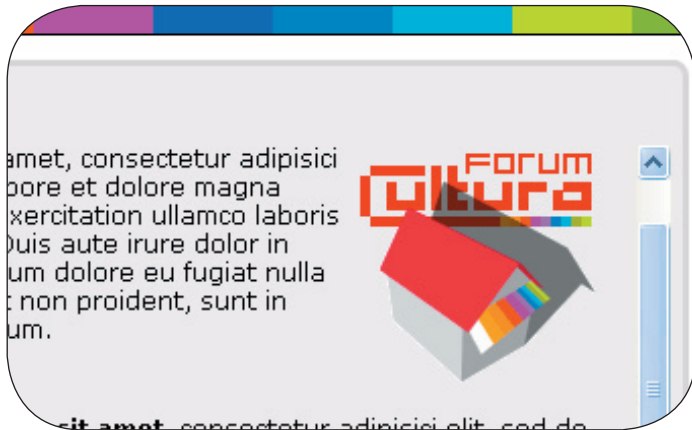
FORUM CULTURA

FORUM CULTURA-WEBSITE

Content-, Nutzer-, und Dateiverwaltung, Portfolio, Veranstaltungskalender und weitere Tools.
Prototyp, 2006

SKILLS

PHP/MySQL, Javascript, CSS, Photoshop
Crossbrowser



A0

The Marauders Lens

Interaction of mobile devices with maps

Johannes Schöning
j.schoening@uni-muenster.de

Jan Torben Heuer
jan.heuer@uni-muenster.de

Hans Jörg Müller
joerg.mueller@uni-muenster.de

Antonio Krüger
kruegera@uni-muenster.de

interactive mapregion

Traditional paper-based maps are still superior to their digital counterparts used on mobile devices in several ways. They provide high-resolution, large-scale information with zero power consumption. On the other hand digital maps provide personalized and dynamic information on request, but suffer from small outer scales and low resolutions. In this work we combine the advantages of both by using mobile camera devices (such as smartphones or PDA) as a map-referenced magic lens that displays geo-referenced information on top of the physical map. We mainly focus on the interaction schemes that arise from using mobile camera devices with physical maps and discover how device tracking over existing physical maps can be realized.

If you want a demonstration just ask anybody from the Institute for Geoinformatics Münster for Johannes Schöning.



Institute for Geoinformatics
University of Münster
Robert-Koch-Str. 24-28
D-48149 Münster



utopian

user-oriented pedestrian-navigation

Going what I want!

The User-Oriented Pedestrian Navigation Service (utopian), developed by students of the Institute for Geoinformatics at the University of Münster, is a location based service (LBS) for recreation facilities and gastronomy offers combined with a navigation system for pedestrians. LBS assist users performing tasks in space and time and provide location dependent information (e.g. location based advertising, public displays). With growing availability of highly capable mobile devices, LBS are currently getting into the focus of location based information providers.

Combining the idea of LBS with a pedestrian navigation system, utopian provides a pedestrian navigation service incorporating the users' interest in the "what" and not only in the "where" & "when". Instead of finding the nearest restaurant or coffeehouse utopian can help to find the offers matching their specified wishes and temporal constraints the best. ("Where can I get a good value caramel flavoured latte macchiato without missing my train?" The application scenario covers typical kinds of offers for planning an evening at the lively harbour of Münster with its diverse kinds of gastronomy and recreation facilities.

Additionally, utopian includes an indoor navigation system for the largest cinema in town (Cineplex) guiding the user directly to the movie of interest.

ifgi.uni-muenster.de/utopian
utopian@uni-muenster.de



CLIENT

Visualization

The interface of the user with Utopian is predominantly map-based. A city map is loaded from the web mapping service of Münster and is displayed on the PDA. Here the user has the options of panning and zooming. To access the different modules of the system, the user interacts with the loaded map. He can define a simple route from a start point to an end point by clicking onto the map. The resulting route will then be displayed as a new layer onto the map. For the navigation the visualization of the route provides only an overview of the route on a map for the user. Another important part of the system is the visualization of the stops the user has defined. Furthermore, the user has the option of clicking on these stops to get further information about the location. A further option for the visualization is the display of friends locations in the map (buddy list function) with whom users can exchange messages.

SERVER

Indoor

For indoor positioning infrared beacons are used. A stand-alone version of the indoor navigation component is developed in cooperation with the Cineplex movie theatre and is fully tested for the duration of half a year. The system supports navigation for people in a wheelchair considering their challenges while moving within a building with multiple levels. The concept of "tour" of outdoor navigation is used analogously for the indoor navigation. A tour including buying tickets, buying popcorn and drinks or getting to the correct theatre.

Ontology & Data Model

UTOPIAN enables the user to intuitively specify wishes concerning gastronomy offers and recreation facilities. These wishes are the base for computations of routes (one destination) and tours (one destination, several stops) matching the user's interest not only in the "where" but also in the "what". The backbone for this functionality is an ontology capturing diverse gastronomy or recreation domains (e.g. coffee, cocktail and cinema).

UTOPIAN makes use of current semantic web technologies:

- OWL-DL (web ontology language at description logic level)
- Protégé editor for ontology engineering
- OWL-API for ontology processing in Java
- Fact ++ reasoner for
- checking ontological consistency during the ontology engineering
- ontology exploration via Java

Ontology based data:

- One ontology capturing concept knowledge of gastronomy and recreation facilities (base-ontology)
- One ontology providing prototypical offer specifications ("what is the common understanding of latte macchiato?") that can be adopted or modified by the user via the utopian-Client (prototype-ontology)
- Information providers (locations) can easily create own datasets (owl-files) simply importing the concept knowledge defined in the base-ontology
- Unique namespaces for each location aligning the thematic data to a spatial database covering the relevant geo-data for the city of Münster

Benefits of the use of ontologies in UTOPIAN:

- Automatic consistency checking during data input based on rules
- Query specification based on intuitive concept definitions not only on labels
- Comfortable data input per Protégé using a taxonomic data structure

Similarity Measurement

UTOPIAN provides similarity measurement algorithms for finding the most suited offers available in the user's surrounding.

- The user's wish is compared to all potentially similar offers in his current surrounding
- Every similarity measure results in a value between 0.0 (totally different) to 1.0 (totally identical)
- The computation of the best suited offers depends on
 - How detailed the user specifies her/his wish using the concept knowledge captured in the base-ontology
 - The temporal constraints the user defines for her/his route/tour planning.

Benefits of similarity measurement in UTOPIAN:

- Scalability of user input (wish specification & weights).
- Precise matching of the users wishes without requirement of knowledge about her/his environment.

Utopian enables the user not only to compute routes (one destination) and tours (one destination, several stops) but also to add specify wishes instead of a destination and stops. Besides the user input that concerns the thematic information, the route and tour computation depends on temporal constraints set by the user and the temporal availability of the offers.

Time Geography

User specifies max time2go and time4stay for each activity HE wants to perform. By these properties a spatial pre-selection of locations that are accessible is defined, as some cannot be reached within the entered time2go and time4stay. For the complete tour a maximum duration time is entered that defines the boundaries of the combined activities. As a final step of the tour calculation, the system determines if the tour can be performed within the time constraints of the individual activities.

Landmark Based Navigation

The system guides the user through the calculated tour by landmarks that are displayed for points, where decisions regarding the navigation are necessary. For these decision points the most recognizable facades are determined by a simplified landmark finding algorithm that includes values like color of the facade and shape and assigns values for their recognition. Usually, positioning is achieved via GPS. However, when no GPS signal is available, self-positioning can be done manually. Navigation Components consist of landmarks, textual descriptions of navigation hints and voice output and images indicating directions.



An RFID- based Tracking System for Laboratory Mice in a Semi Natural Environment

Institute for Geoinformatics
University of Münster
Robert-Koch-Str. 26-28
D-48149 Münster

Mareike Kritzler
kritzler@uni-muenster.de

Background

Cooperation with the Department of Behavioural Biology

Detect potential distinctions in movement and behaviour between:

- Transgenic mice
- Wild-type conspecifics

RFID / SNE

- Semi natural environment (SNE)
- Contactless data transfer / identification via radio:
 - RFID-reader
 - RFID-ring antennas
 - RFID-glass transponder

JerryTS

- Getting the data of the RFID-reader
- Providing the data for further analysis
- Configuration of the RFID-reader
- Time stamps with a precision of milliseconds

Tom

- Visualisation and analysis of movement data
- Statistics per day and per level
- Warning system
- Export function

Motivation

Improvement of suboptimal observation methods:

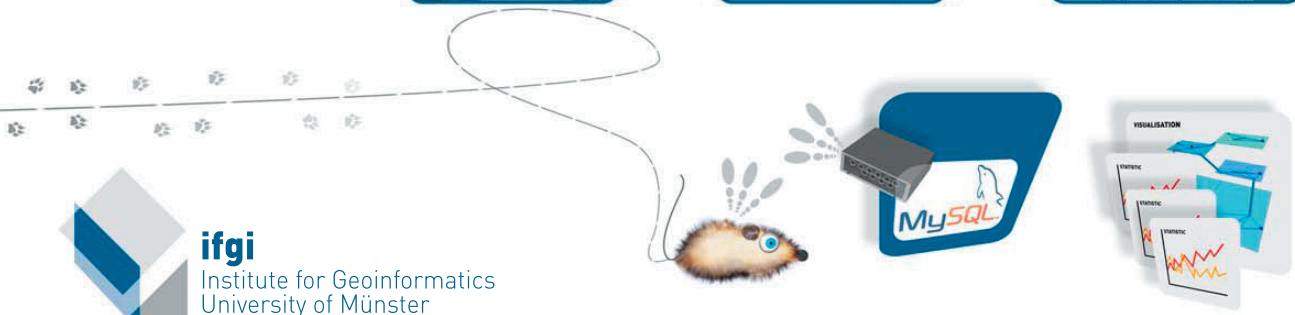
- Continuous data collection of the nocturnal animal
- Lower error rate: unique & fast identification

Acquire factors of behavioural biology by space-time analysis with GIS

Aims

Establishment of a tracking-solution for mice with the present RFID-toolkit

Development of a GIS-module for visualisation and analysis of collected movement data



ifgi
Institute for Geoinformatics
University of Münster

RFID/SNE >> Jerry Tracking System >> Visualisation/Analysis

<http://musil.uni-muenster.de>

musil

muenster semantic interoperability lab

Strategies to enable Semantic Interoperability in Geospatial Applications

INTRODUCTION

The geographic information (GI) community needs strategies that enable the assessment of semantic interoperability within the information flow of geospatial applications. Our focus is on automated information processing; information has to be discovered, retrieved, evaluated and translated in distributed environments. We present different strategies for semantic interoperability assessment that are subject to research at the Muenster Semantic Interoperability Lab. The employed strategies include subsumption reasoning, instance checking, similarity based reasoning and alignment to foundational ontologies.

Werner Kuhn

kuhn@uni-muenster.de

Martin Raubal

Eva Klien
Florian Probst

Sven Schade

Krzysztof Janowicz
Mohamed Bishr

Patrick Maué

Eike Hinderk Jürrens

Martin Espeter

Daniel Ingo Fitzner

Oliver Beckmann

SCENARIO

Alice and her family plan to spend a summer vacation in a cottage near the sea or a lake. She would also like to get information on the average water temperature of the waterbody the cottage is located at.

MISSION STATEMENT

To improve the usability of geospatial information by advancing semantic interoperability through research on semantic reference systems and ontologies.

RESEARCH QUESTIONS

- ❓ What is the ontological nature of geospatial entities and their qualities?
- ❓ How to generate semantic annotations of geospatial information sources?
- ❓ How to design and encode ontologies for varying application purposes?
- ❓ How to use similarity measures to assess the semantic interoperability of geospatial information sources?
- ❓ How to perform semantic translation between ontologies in order to improve schema mapping?
- ❓ How to model the role of space and time for trust inference?

RESULTS

- ✅ Ontology-based annotation and discovery of geospatial features
- ✅ Ontological modelling of geoprocessing service functionality
- ✅ Hybrid similarity measure combining geometric and network models
- ✅ Automated annotation of geospatial features
- ✅ Semantic similarity theory for description logics
- ✅ Image-schematic upper level ontology (2nd order)
- ✅ DOLCE extension by reference spaces for measurements
- ❌ The role of accuracy propagation in semantic interoperability
- ❌ The role of trust and reputation in maintenance by mashup

STRATEGY I: SEMANTIC SIMILARITY MEASUREMENT

To find relevant information for the query "cottage at the edge of river", we compare Alice's requirements with conceptualisations in our knowledge base using similarity measures. Similarity delivers ranked results for uncertain and vague queries by determining the degree of conceptual overlap.

In MUSIL we investigate two measurement approaches: one for a logic-based knowledge representation and the other one for geometric representations.

STRATEGY II: SUBSUMPTION REASONING

Alice's queries for "cottage at the edge of a waterbody" or "average water temperature" may lead to various semantic heterogeneity problems. For example, ambiguities in keyword-based search lead to low precision and recall in the result set and unintuitive attribute names impede filter formulation for retrieval. By explicating the meaning of spatial information objects in a logic-based knowledge representation (i.e. semantic annotation), automatic matchmaking can be employed for GI service discovery. Once an adequate service has been found by subsumption reasoning, the system can automatically generate the request for information retrieval. Furthermore, we investigate methods for automating the semantic annotation of spatial information objects.

STRATEGY III: ALIGNMENT TO A FOUNDATIONAL ONTOLOGY

Conceptual models in geospatial applications specify information objects, e.g. feature types. The information objects (symbols) in a conceptual model become meaningful only if they are connected to the real world "in the right way". We develop a theory of semantic reference systems that allow to compare the underlying conceptualizations of data providers that commit to the same semantic reference system. Central to the approach is the alignment of application concepts to a foundational ontology.

Alice will be able to distinguish information sources providing surface water temperature in proximity to the lake shore from sources providing water temperature in 10 m depth. Thus, based on a precise conceptual description, Alice can select information sources accounting for water temperature that are relevant for judging whether swimming in the water will be fun or not.

STRATEGY IV: RULES FOR DATA TRANSLATION

After differences in underlying conceptual models of information providers and users are sorted out (strategy III) data transformation may be required. In this context, the semantics of data types used within varying information encoding models need to be mapped to each other. We consider such mappings schema morphisms. Since GI highly depends on measurements, methods for data transformation especially have to account for measurement errors serving the propagation of positional, temporal and thematic accuracy descriptions.

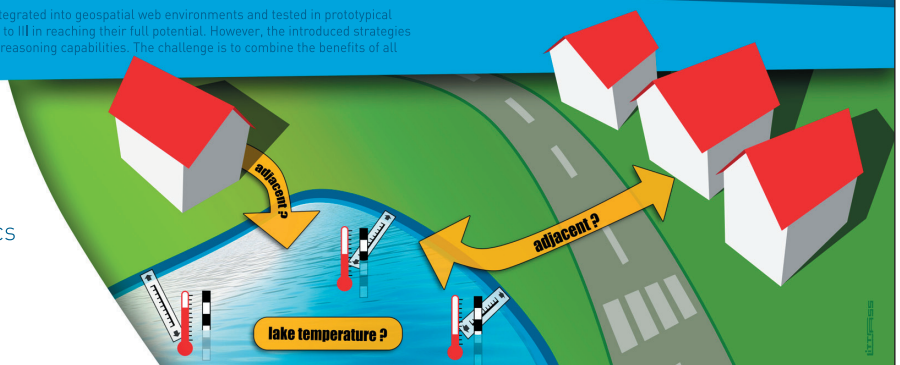
Alice gets support in using temperature measurements as input for calculating the average water temperature of the lake during the visit. Transformations, like unit conventions, are derived from heterogeneity information relating encoding models of available data to input models of processing components. Their execution includes propagation of associated accuracy descriptions.

CONCLUSION AND FUTURE WORK

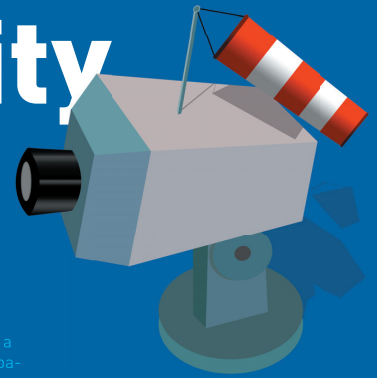
In past and ongoing research projects the proposed strategies have been integrated into geospatial web environments and tested in prototypical applications. Currently, we see strategy IV to eventually support strategies I to III in reaching their full potential. However, the introduced strategies are based on different representation languages and thus support different reasoning capabilities. The challenge is to combine the benefits of all strategies in distributed information environments.



ifgi
Institute for Geoinformatics
University of Münster



Augmented Reality Weather Cam



Motivation

- How far is a front carrying rain away and when will it approximately arrive at the camera position?
- How could a camera be programmed to point into weather direction and overlay the live-image with additional spatial and textual data?
- How can different kinds of sensor data be combined to make a local and short term rain probability forecast?

Aim

Create a framework to mash up a camera image with additional spatial and textual data.

ifgi.uni-muenster.de/~gliet

Jana Gliet
gliet@uni-muenster.de

Antonio Krüger
kruegera@uni-muenster.de

Otto Klemm
oklemm@uni-muenster.de

- ⌚ Radar data / weather data
24-10-2006 15:05 CEST
- 📷 Camera image
24-10-2006 15:36 CEST

Image Processing

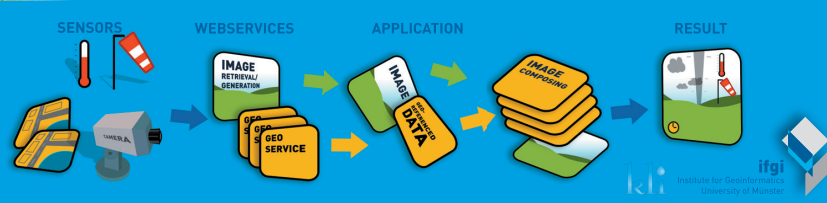
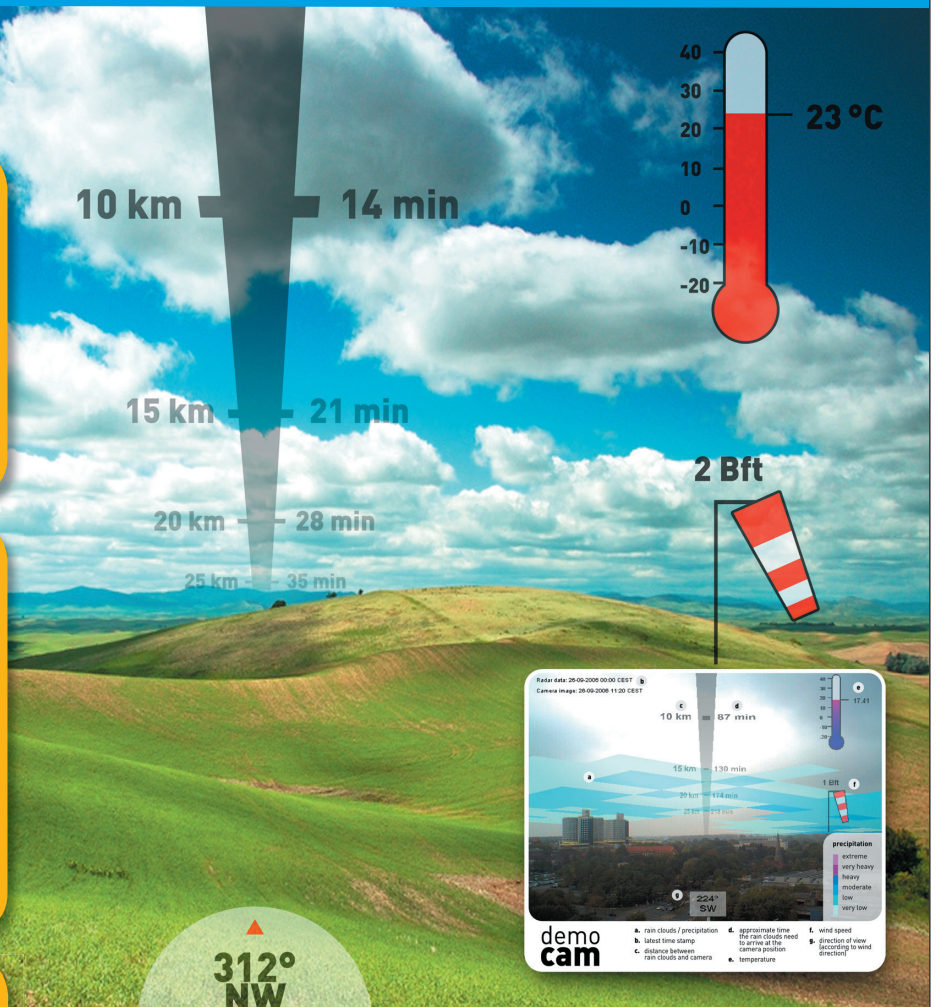
- Each layer represents certain sensor data or additional information and is combined with a transparency mask
- Transparency masks determine the visibility of a layer e.g. display weather radar data only in the sky part of the webcam image
- 2D geo-data is visualised by the means of a 3D sky model
- 1D geo-data is represented as an (dynamic) icon

Web Services

- Web Services are used to retrieve data and control/steer sensors
- Sensor data is encapsulated by standardized web services
- Three services specified by the Open Geospatial Consortium are used:
 1. Sensor Observation Service (SOS) to retrieve meteorological data (e.g. wind direction, wind speed, temperature)
 2. Web Coverage Service (WCS) to retrieve georeferenced weather radar data
 3. Sensor Planning Service (SPS) to steer the camera

Operating Mode

1. Retrieve Sensor data (meteorological data, weather radar data, webcam image) from web services
2. Steer the camera according to the wind direction
3. Create graphical layers to overlay the webcam image



No Vertical Limit

Conceptual LBS design for climbers

Johannes Schöning

j.schoening@uni-muenster.de

Ilija Panov

i.panov@uni-muenster.de

Carsten Kessler

carsten.kessler@uni-muenster.de

INTRODUCTION

On this poster we present a novel conceptual design for a location-based service (LBS) for climbers. We focus on ideas for LBS in the vertical domain, combining concepts from augmented reality, mobile social applications and multi-modal integration. We address problems such as merging paper maps and reality, hands-free interaction, communication in environments without infrastructures, and geosensor networks that provide information on weather and other relevant subjects.

SMART NAVIGATION

Augmenting the reality with map information (with algorithm like SIFT)



SMART HOOKS

Geosensor-networks, that provide multiple information



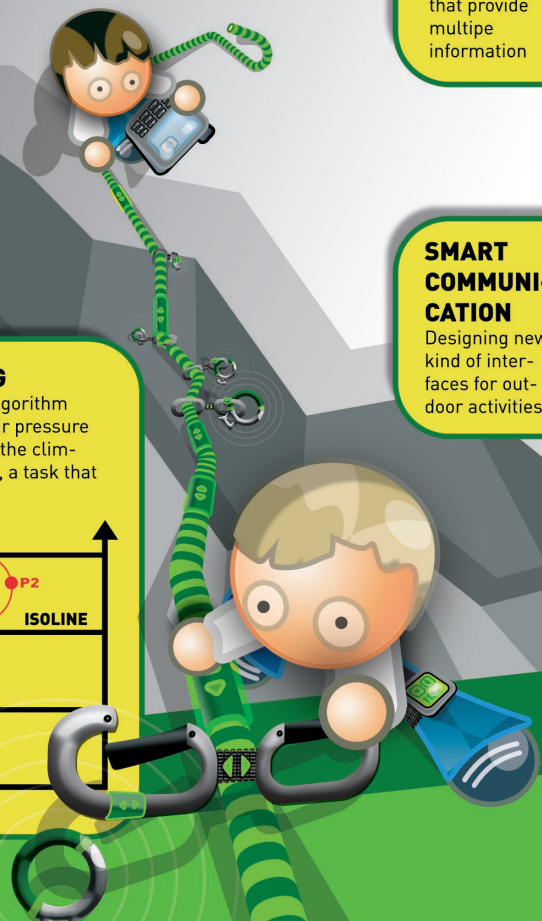
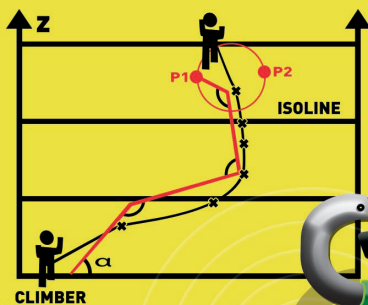
SMART COMMUNICATION

Designing new kind of interfaces for outdoor activities



SMART POSITIONING

First draft of a positioning algorithm that uses rope length and air pressure to determine the position of the climbers in the vertical direction, a task that GPS still performs poorly.



ifgi

Institute for Geoinformatics
University of Münster

Mobile Map Interaction for Local News

Krzysztof Janowicz

janowicz@uni-muenster.de

Johannes Schöning

j.schoening@uni-muenster.de

ABSTRACT

From the conceptual perspective, Web 2.0 is about user generated and user centered content. However emerging Web 2.0 news portals, such as Readers Edition (<http://www.readers-edition.com>), ask the users to report about global news and via pre-defined categories. Moreover these portals do not pay attention to the new kind of web-enabled devices (such as smart phones), their abilities and shortcomings. In contrast this Poster describes a prototypical news platform focusing on local, i.e. regional news and their ad hoc integration into gesture-based interaction paradigms such as Timmi (Timmi is mobile map interaction), which combines the advantages of large scale and high-resolution public city maps with mobile devices acting as adjustable information displays.

A WEB INTERFACE

C MOBILE MAP INTERACTION

B MMS & GPS



ifgi

Institute for Geoinformatics
University of Münster

Self-optimizing Digital Signage Advertising

Digital displays will soon be everywhere. Because there will be so many displays, it will become infeasible for advertisers to manually decide where and when their ads should be shown. We apply the approach of Google AdWords to digital signage. Advertisers simply submit their ad with a web form, and the optimal time and location for showing the ad is determined automatically.

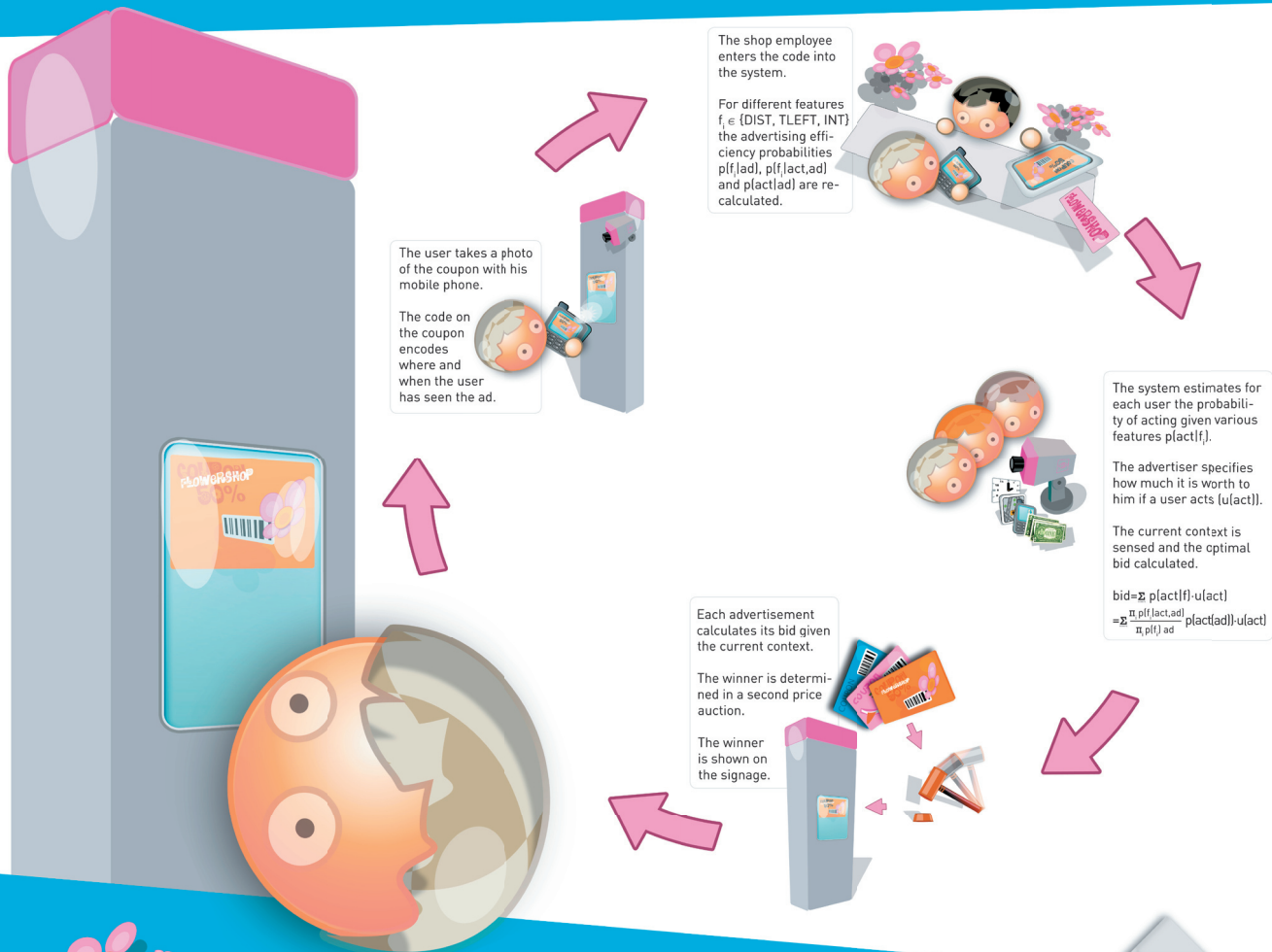


Jörg Müller

joerg.mueller@uni-muenster.de

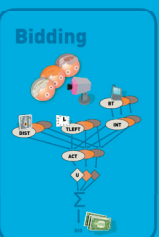
Antonio Krüger

antonio.krueger@uni-muenster.de



Old
frequency advertising
advertise in regular
intervals to make brand
known

New
actionable advertising
advertise at the right mo-
ment to trigger a specific
action in a certain space
time window



Team

Marc Jentsch,
Alex Schlottmann,
Julian Hagenschulte

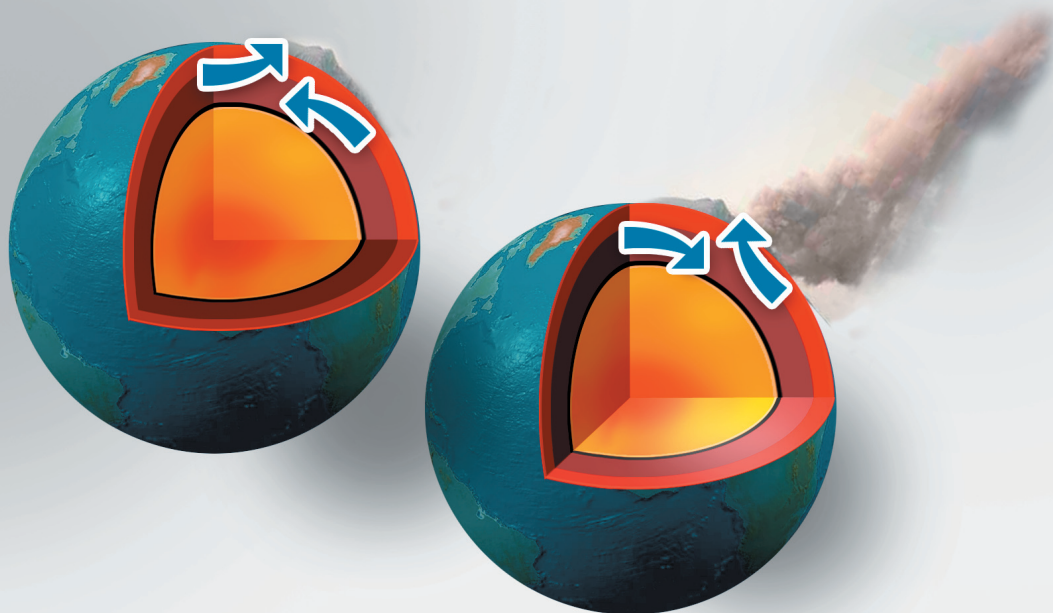


ifgi
Institute for Geoinformatics
University of Münster

A4

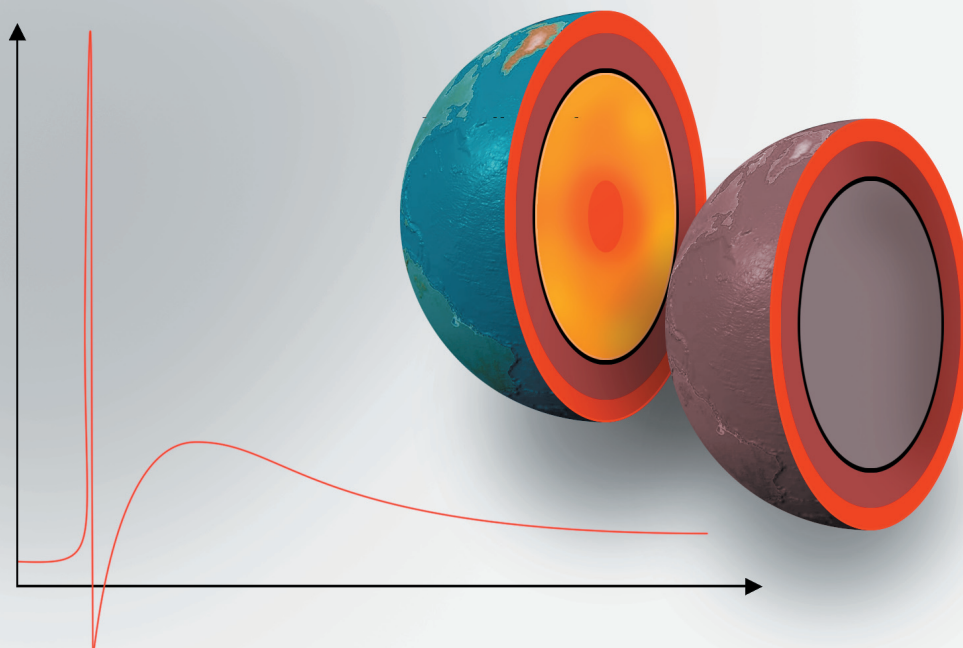
Ups & Downs: Rates of tectonic and metamorphic processes

Project 4



Planetary Differentiation

Project 2

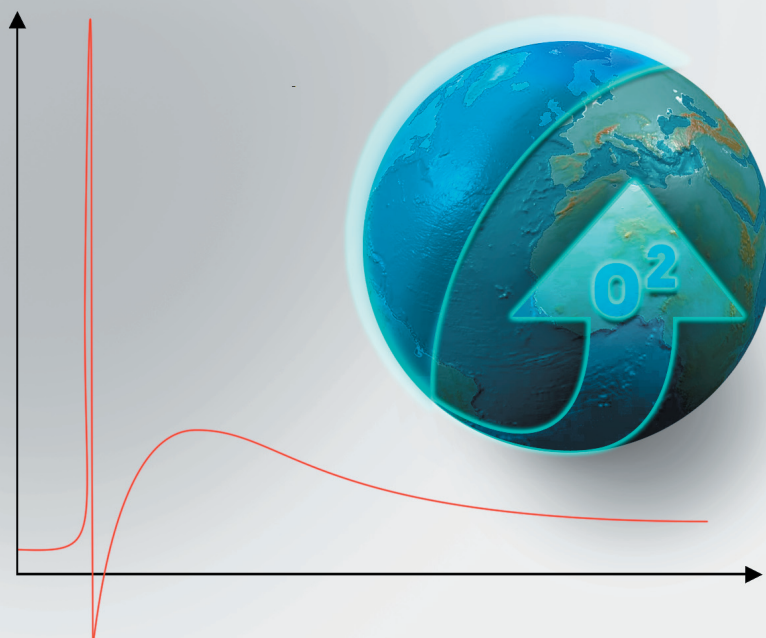


EXPLORING THE DELTA
6x Graphiken, 2006

SKILLS
Photoshop, CI

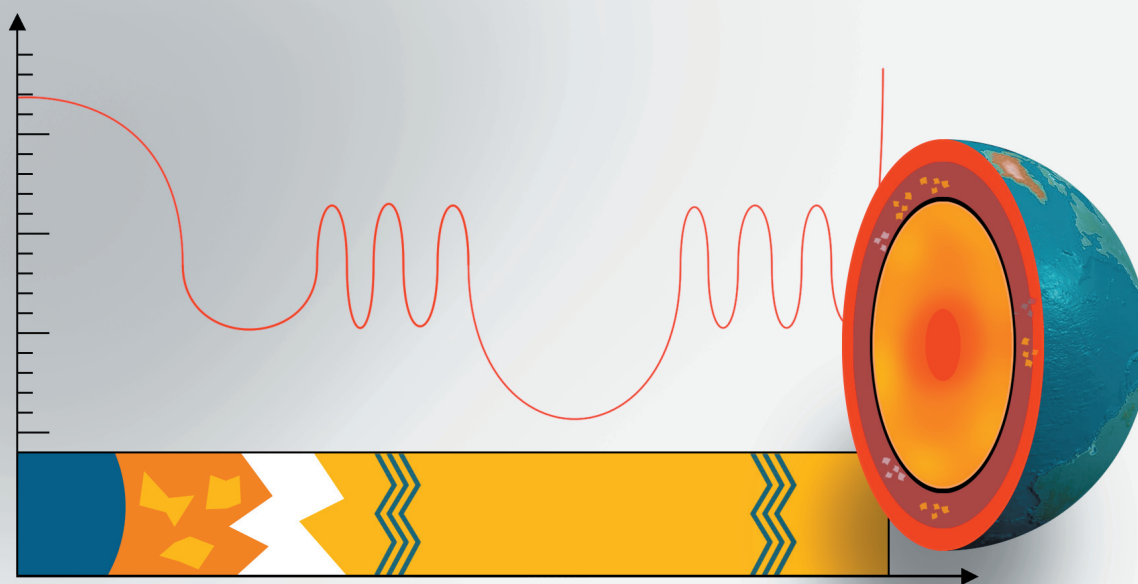
The Rise in Oxygen – Changing Chemistry and a true Challenge for Life

Project 3



Nanoscale mechanisms of mineral reactions

Project 6



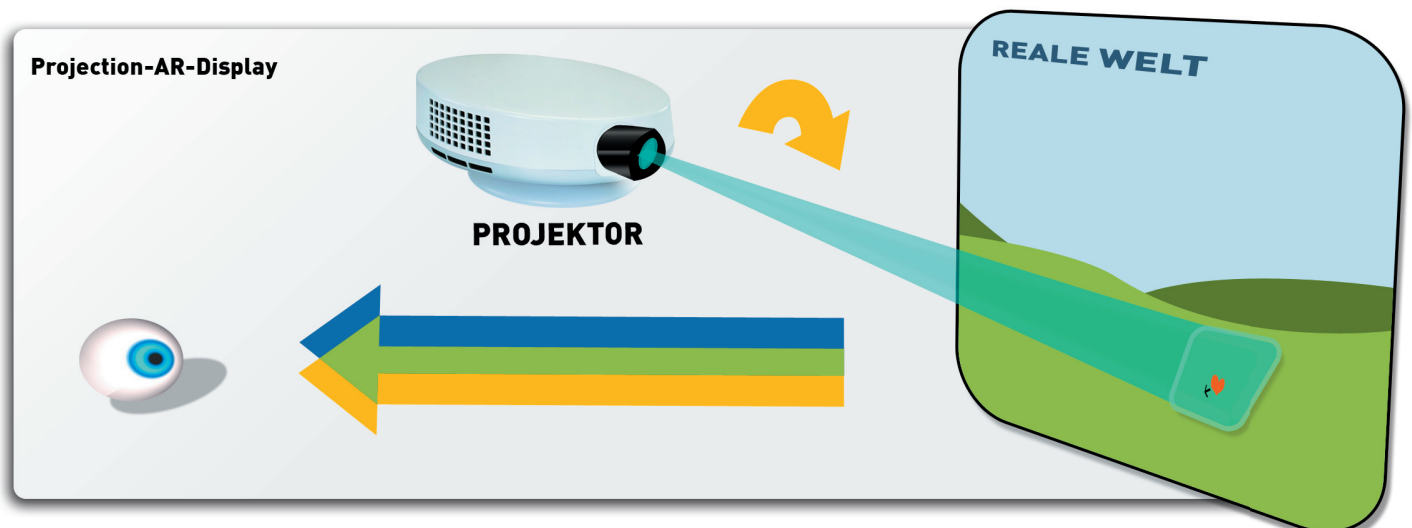
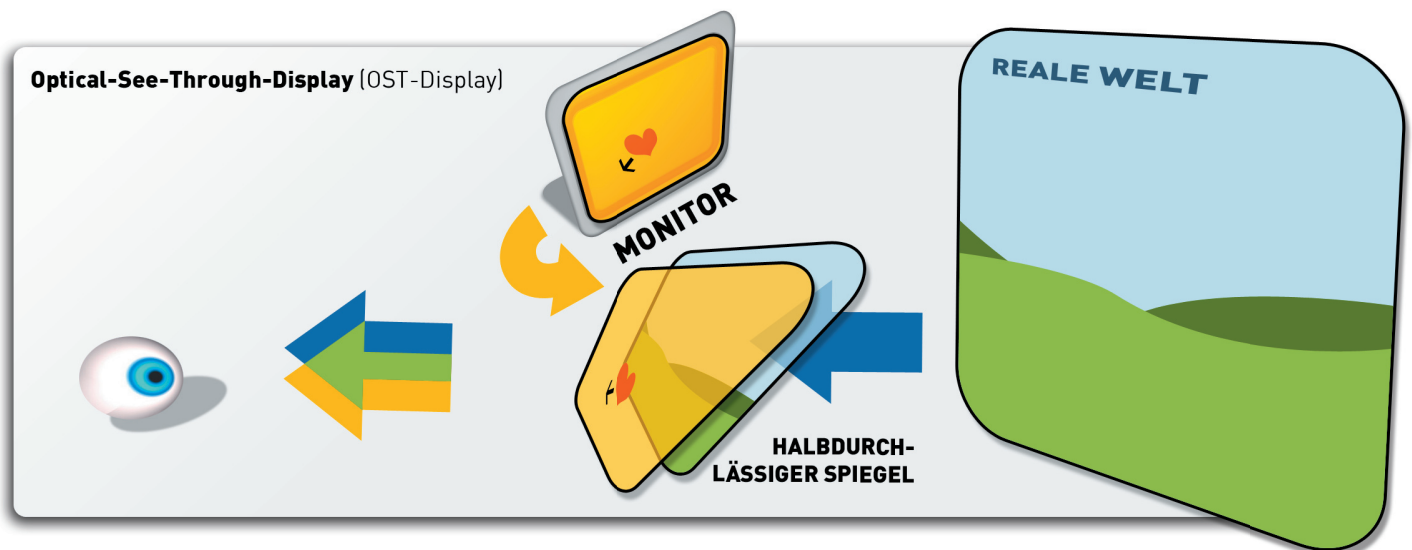
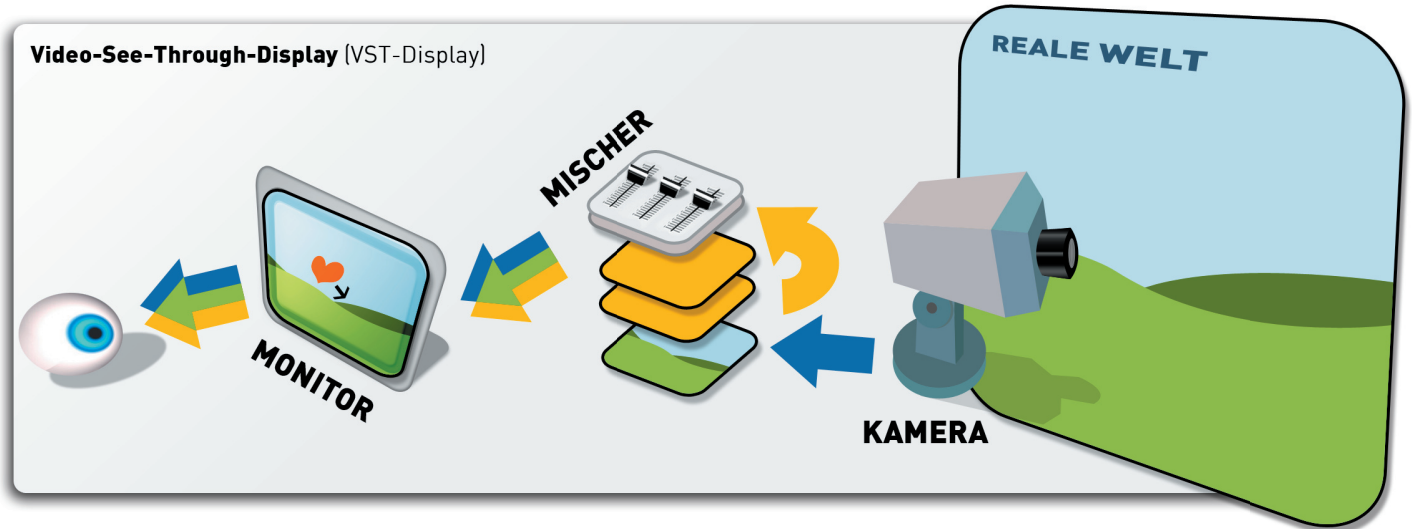
AUGMENTED REALITY

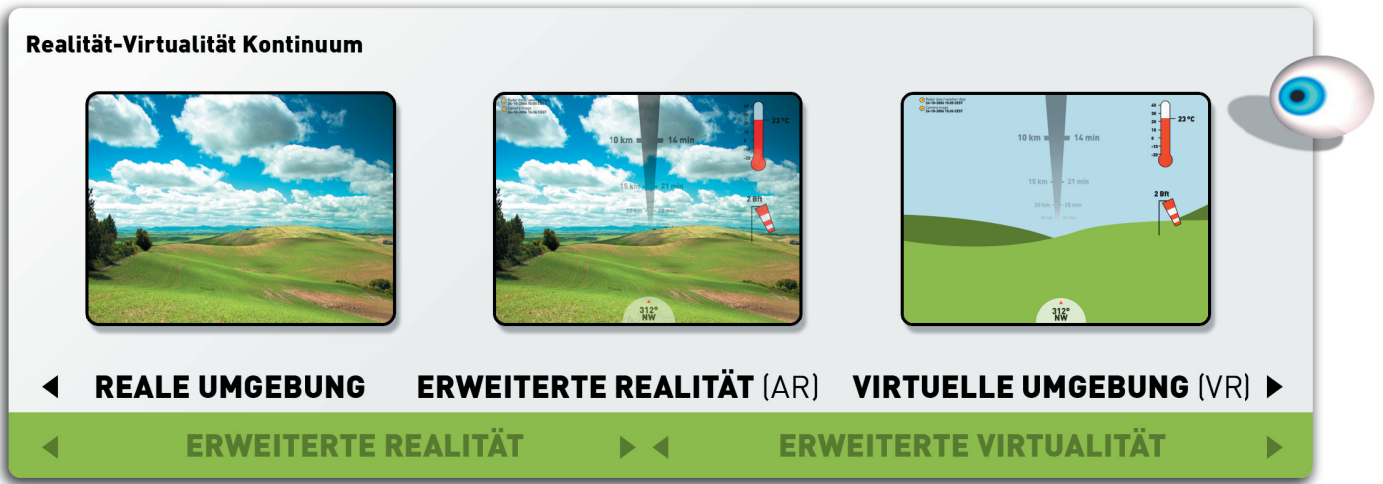
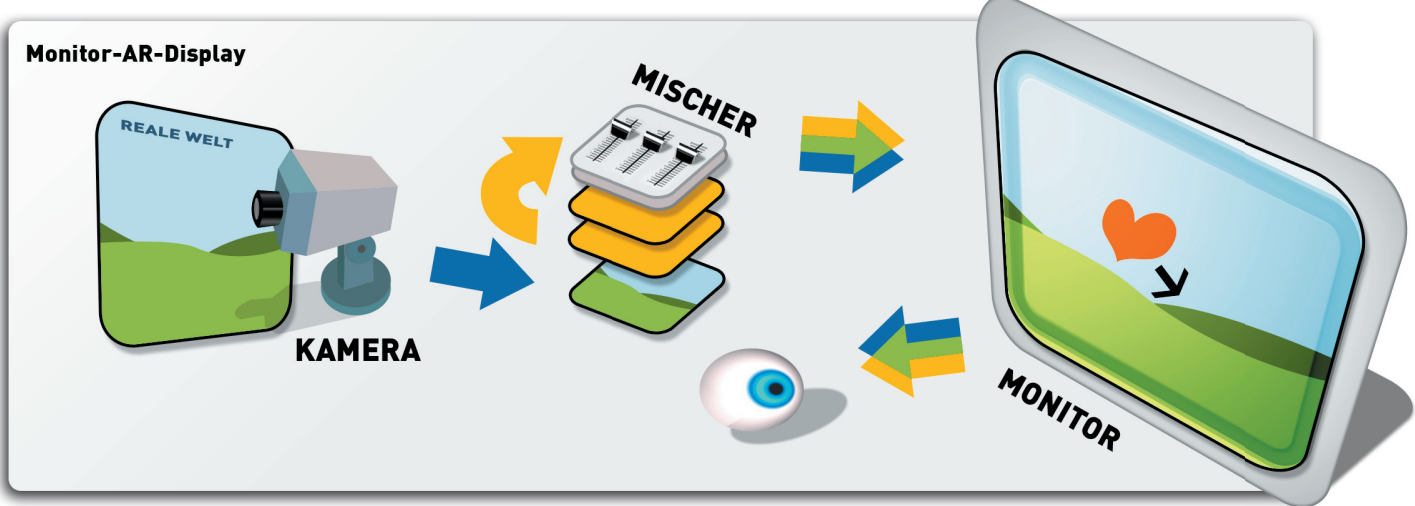
AUGMENTED REALITY

5x Graphiken, 2006

SKILLS

Photoshop, CI





KLETTER VISIONEN

**DAS KLETTER-EQUIP-
MENT DER ZUKUNFT**
3x Collagen, 2006

SKILLS
Photoshop



SEAMLESS MAPS

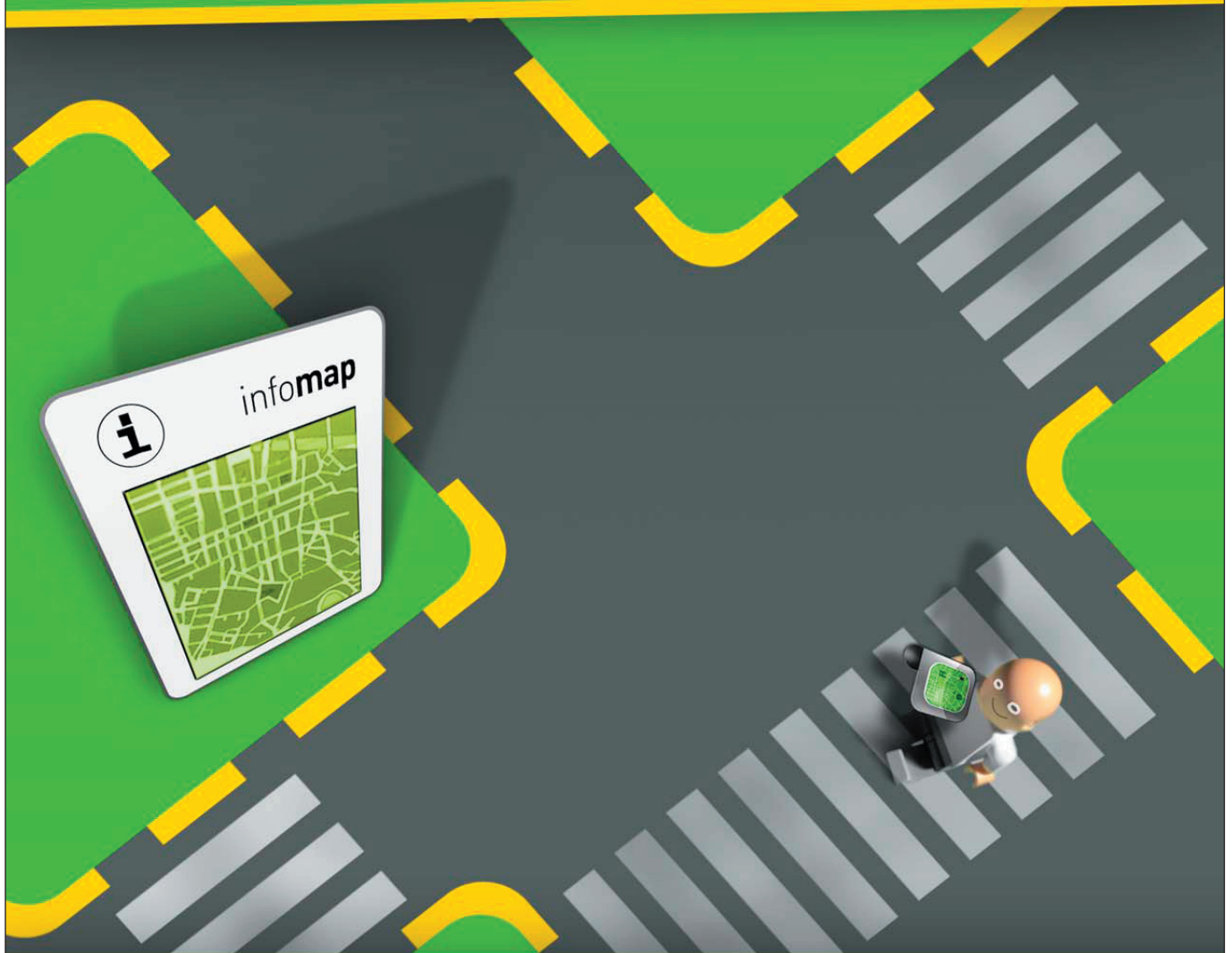
ANHANG A4

LEGO STYLE

Comicstrip 16x Bilder, 2006

Seamless Maps

Mit dem Multimedia Handy spielend Karten erkunden.



Jan Torben **Heuer**
jan.heuer@uni-muenster.de

Johannes **Schöning**
j.schoening@uni-muenster.de



Die Pa nahtlos

Wer kenn
schnell ei
etwas zu
eine Stad
Informatio
mir nicht.

Schnell da
Das Ergeb
unleserlich
Stadtplan

Auch scho
schaffen!



Einführ

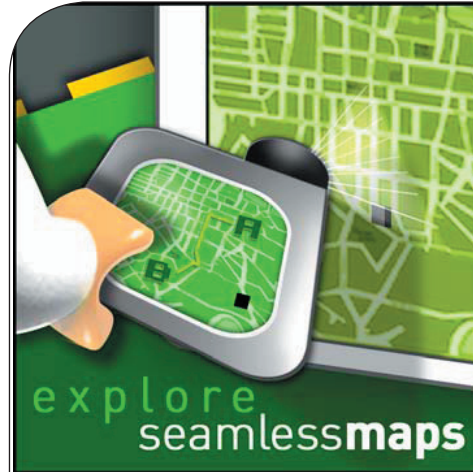
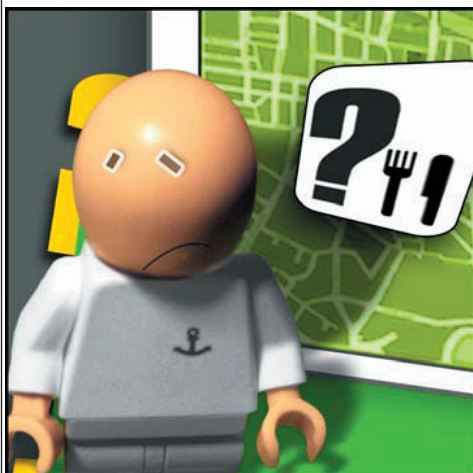
Wir möcht
statischen
skizzieren

Wir verbind
einem per
zusammen

Analoge K
hohe Auflö
heutigen
Hilfe mobi
sie mit der

Mobile Ge
Display, d
können a
Verbindet
verbinden.

Die Inter
über die K
des Hand
Marker, B
als eine
zusätzliche
Das Displ



(Dynamik
anderen
Karteninh
kann man
Benutzer z

Im Folgen
denen wir
wollen un
erreichen.



Stichar

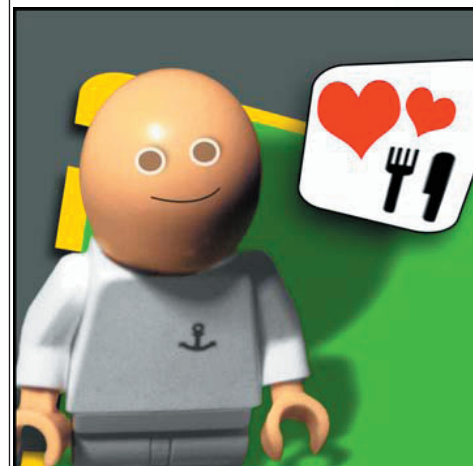
Rückstic

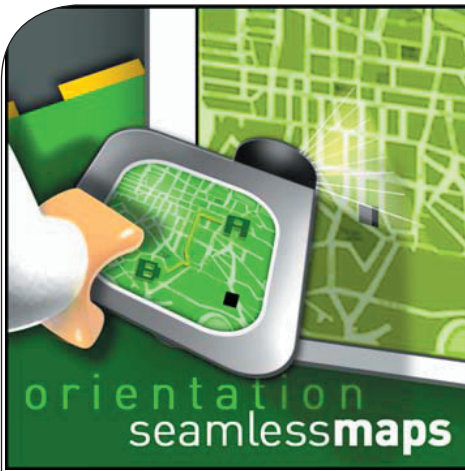
Eine sehr

Wo sind ne
Museen s
Papierkart
lassen sic
anzeigen.
zusammen
so einem k

Hier kom
das Gerä
zusätzliche
Museen. E
möchte m
Sind gerac
mich ein P
Ziel. Einfac

Aber nicht
Orientieru
Londoner
Glocken lä
wenn mög

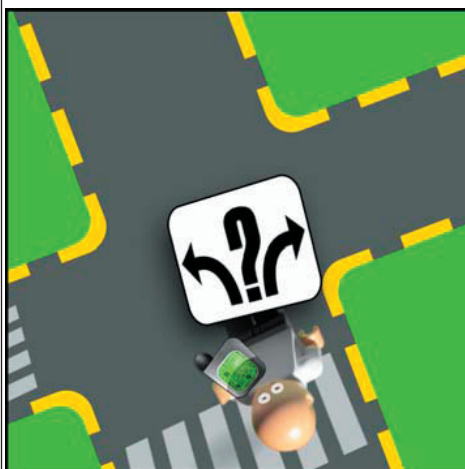
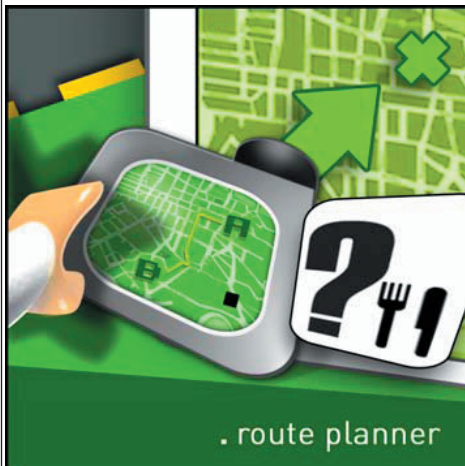




Steppt
eigentlich
Eine beso

Ich bin in
Ich sehe d
Schnell no
Warum nic

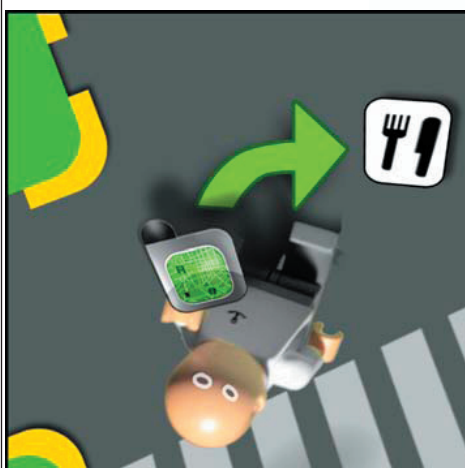
Ich halte d
hin möcht
wurde erfa
Standort d
Schon noc
Bildern au
Zielort. Die
eingebaute
Richtunge
Weganwei
durchgehe
navigieren
ich mein K
den Weg a



Hexenst
Kann zum

Wer kenn
„Marauder
Zwillingen
Flichs Bür
aussehend
Umgebung
weilenden
Namen ver
Wer hat ni
ist nun kei

Ich halte
Freunde ü
über die
lokalisiert
können. W
starten?



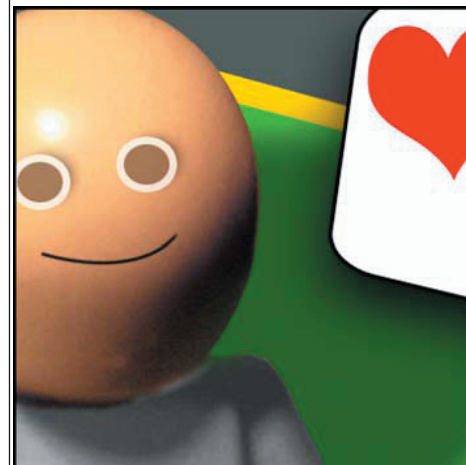
Schlinge
Ähnlich v
Nadel du
entsteht s

Wiederum
Gerät dari
Kamera di
in meinem
aus Googl
Höhenmod
allen 3 Din
durch mei



Heftsticl
Mit der N
Stoffunter

Ich komm
Interaktion
der Karte
Sprache,
Diese we
sondern, a
auch in G
Annotation
Karte wird
Bald wird
nicht mel
nächste St



Fazit

SEAMLESS
spannende
Vorteile be
Medium ve
Statische,
Medium, v
multimedi
Gerät.

SEAMLESS

VIELEN DANK!

Um Ihnen gegebenenfalls das Rücksenden meiner Unterlagen zu erleichtern habe ich dem Schreiben einen frankierten Umschlag beigelegt.