



Walking in the 21st century

Exploring the future of
digital outdoor navigation

3 May 2006
13:00 – 18:30
Arenberg Castle
Leuven, Belgium



Free seminar

Please register via www.walkonweb.org



Introduction

Outdoor recreation is gaining popularity. Walking is again trendy as a leisure activity. Recent phenomena such as "Nordic walking" and "geocaching" illustrate this.

GPS navigation is no longer the sole domain of *die hard* outdoor enthusiasts and long distance hikers, for whom GPS has become an indispensable navigation tool. Also many recreational walkers have found their way to portable yet robust GPS devices, not only using it for localization but also as a *high-tech toy* for geocaching or treasure hunts.

This evolution does not end there. GPS receivers are more and more integrated in other mobile devices like *smart phones* and *pocket PC's*. But what about the *content* displayed on these devices? While detailed maps are becoming available for mobile devices, available information about attractive routes remains rudimentary, often not linked to a map and of uncertain quality. Moreover, we are still waiting for a GPS device that offers *turn-by-turn navigation* on topographic maps and displays context-aware and semantically rich information created by a human author.

On 3 May 2006 the WalkOnWeb project is organizing a **free afternoon seminar** focusing on new developments, innovations and trends in the world of hiking and outdoor navigation. Several R&D projects and companies are developing innovative applications for outdoor activities. This seminar offers a unique occasion to bring them together in order to exchange ideas.

Katholieke Universiteit Leuven welcomes you in the **Arenberg Castle**, a beautiful 16th-Century castle situated in an impressively green scenery in Heverlee near the city of **Leuven** (Belgium). The seminar is targeted at professionals working in the domains of outdoor navigation, mapping and mobile applications, publishers and content providers of tourist information, tourism offices, scholars and hiking enthusiasts.

You are kindly invited to participate to this event. Registration is FREE but necessary. Please register via www.walkonweb.org.



Seminar programme

13:00	Registration and coffee
13:15	Welcome and introduction <i>Jan Engelen (Katholieke Universiteit Leuven)</i>
13:30	Walking in the 21st century: different paths to a new publishing model <i>Bert Paepen (Katholieke Universiteit Leuven)</i> <i>Maarten Vansteenbergen (Uitgeverij Lannoo)</i>
14:30	Market Development for Outdoor GPS Navigation <i>Christian Nève (Garmin)</i>
15:00	Coffee break
15:30	CityInMyPocket: Digital Walking Guides <i>Steven Depuydt (Katholieke Universiteit Leuven)</i> <i>Marc Rubben (MeMoRi)</i>
16:00	Tele Atlas enhanced maps supporting Pedestrian navigation applications <i>Linde Vande Velde (Tele Atlas)</i>
16:30	A critical walk through the future of navigation <i>Peter Hinssen (Porthus)</i>
17:00	Question and answer session
17:30	Reception
18:30	End

WalkOnWeb is supported by the IST programme of the European Commission (6th Framework Programme)





Welcome and introduction

13:15-13:30

Jan Engelen (Katholieke Universiteit Leuven)

WalkOnWeb: different paths to a new publishing model

13:30-14:30

Bert Paepen (Katholieke Universiteit Leuven)

Maarten Vansteenbergen (Uitgeverij Lannoo)

WalkOnWeb explores the possibilities of defining an innovative model for modelling, selling and marketing digital walking, route and tourist information. Apart from several technological innovations, a digital publication model also requires completely rethinking the commercial framework for marketing and selling content. As consumers are accustomed to accessing and sharing huge amounts of digital information freely on the internet, new models and scenarios for digital publishing need to be determined which are economically viable and sustainable. Also new marketing methods will have to be developed to get this information to the customer.

At the technological level innovations include the use of SVG (Scalable Vector Graphics) for rich map interfaces on the Internet and mobile devices, and the use of ontologies for building rich, language independent data structures. WalkOnWeb divides a route in small sections and adds as much information as possible in a language independent form. For authors and publishers this is of key importance as it strongly simplifies the creation and maintenance of multi-language content.

The first part of this presentation will explain the technological innovations and developments of the WalkOnWeb project. The second part will focus on the experiences of WalkOnWeb with commercialising digital content and the first conclusions which can be drawn from this. It will also touch upon the legal challenges which this project poses with respect to intellectual property rights and digital rights management.



Market Development for Outdoor GPS Navigation

14:30-15:00

Christian Nève (Garmin)

The lecturer will first give his personal views on the evolution of the GPS market for outdoor navigation and the factors which support this evolution.

To respond to market demand, and conversely creating this demand, the GPS manufacturers have extended their product ranges and incorporated advanced technologies in their units. This will be illustrated with Garmin products.

Simultaneously there is a boom in available electronic maps. Initially electronic maps were developed for automotive navigation, which is, by far, the biggest market. Later on, organizations such as the National Geographical Institute of Belgium, have introduced electronic topographical maps as a replacement for paper maps with the ability to transfer data from maps to GPS units. Garmin now offers to a restricted number of licensees a programming tool allowing producing any map, routable or not routable, on the basis of any vectorial data. Using a proprietary Garmin structure, these maps are easy to install on the Garmin unit and there is very easy communication between GPS unit and computer to transfer maps, waypoints, routes and tracks.

In conclusion: available hardware and software can now support most projects to promote GPS use for pedestrians in so far as this project is economically viable.

CityInMyPocket: Digital Walking Guides

15:30-16:00

Steven Depuydt (Katholieke Universiteit Leuven)
Marc Rubben (MeMoRi)

By the end of this year visitors to the Flemish town of Mechelen can discover the city with the help of the new CityInMyPocket walking guide. Instead of following a person or a book, people can pick up a CityInMyPocket digital walking guide and go sightseeing at their own speed. So, leave your heavy



guide books and many flyers at home. CityInMyPocket will tell you just as much, and even more. CityInMyPocket is like having a friend who lives in the neighbourhood showing you around.

The goals are formulated, but how did we manage? In order to succeed, we started investigating how people usually visit a city. Are people just strolling around the city or do they strictly follow the walk mentioned in their walking guide? What are the information needs during their stay? In parallel with the user analysis, we looked at similar projects and applications to see how they approached the problem. Based on the results of the user needs and the tests of existing applications, we defined the concepts of the CityInMyPocket walking guide. Here, we can distinguish three main building blocks: the map application, the search engine and the route planner. When the overall concept was ready and the information needs were specified, we started building the information model based on the Topic Map standard. For the map information we explored the power of the SVG standard. The moment the first data set was prepared we implemented the map application. The remaining concepts were built around the central map application. This talk explains in more detail how we managed to build the CityInMyPocket walking guide.

Tele Atlas enhanced maps supporting Pedestrian navigation applications

16:00-16:30

Linde Vande Velde (Tele Atlas)

Car navigation technology and in car navigation applications have proven their success. Nevertheless dedicated mobile navigation devices, PDA's and smart phones are today already able to offer various types of navigation applications for new user groups. Pedestrians, commuters, travellers, but also hikers and tourists have different guide, navigation and find needs. In order to allow Tele Atlas partners to build customised navigation applications, Tele Atlas is extending its standard digital maps with enhanced features. In the presentation Tele Atlas will highlight concepts on how and where its maps need to be enhanced in



order to support its partners to develop those kinds of future navigation applications.

A critical walk through the future of navigation

16:30-17:00

Peter Hinssen (Porthus)

In this wrap-up talk Peter Hinssen will fulfil the role of "trend watcher" to show in what direction the world of mobile navigation is going.

Travel information

Note: do not travel to Louvain-La-Neuve, this is a different city than Leuven (Louvain in French).

Address

Arenberg Kasteel
Auditorium (room 01.07)
Kasteelpark Arenberg 1
B-3001 Leuven-Heverlee (Belgium)

From Brussels airport to Leuven

You can reach Leuven by train or by taxi. 2 trains per hour leave towards Leuven. This direct trip will take only 15 minutes.

Train time tables: <http://www.nmbs.be>
(From: BRUSSEL NAT LUCHTHAVEN, To: Leuven).

By taxi it will take you about 20 minutes to Leuven. Ask the taxi driver to go to Kantineplein or to Arenberg Castle, Heverlee.



From Leuven to the conference location

The Arenberg castle is not situated in the centre of Leuven but in the suburb of Heverlee (South of Leuven). Walking from Leuven centre to the castle will take you about 30-40 minutes.

By bus: take bus number 2, direction Heverlee Campus (not Boskant!). About 4 buses per hour leave at the Leuven train station. There are several stops on this route. You have to get off at Kantineplein (a small square in front of the castle). The castle is within a few minutes walking distance from the Kantineplein.

By taxi: taxis are always waiting in front of the Leuven train station. Ask the taxi driver to go to Kantineplein or to Arenberg Castle, Heverlee.

By car

Coming from Leuven

- Go to the cross-roads 'Naamse Poort' on the ring around Leuven. Turn southwards (at the Total service station) = away from the centre.
- The road immediately splits in two, follow the right one. That is 'Kardinaal Mercierlaan', keep following this lane lined with chestnut trees for about one kilometre until the 'Kantineplein', a cross-roads square.
- Enter the park immediately to the right (watch out for bikers and pedestrians). Drive in the direction of the castle until the river and turn right onto the "centrale parking Arenberg".

Coming from Brussels or Luik/Liège

- Take the highway E40 (Brussels - Luik/Liège).
- Take the exit E314 direction Leuven / Hasselt.
- On the E314 take the first exit (no. 15). Keep to the right and follow the sign "Leuven".
- Turn right at the second traffic lights (direction Campus Arenberg, this is the Celestijnenlaan).



- Drive on for about 500 m, until the bridge over the river Dijle. Just before the bridge turn left to parking "Oude Molen". From that parking you can reach the castle on foot.
- Alternatively you can use the central Arenberg parking. In that case on Celestijnenlaan drive over the bridge and turn left into the Arenberg Park. Drive alongside the river until you pass by the Arenberg Castle. Immediately after the castle there is a parking area on your right.

Coming from Hasselt / Eindhoven / Aachen

- Take the highway E314 (Aachen - Leuven).
- Take the exit "Leuven" (no. 15). This is the last exit before the E40.
- Turn right at the second traffic lights (direction Campus Arenberg, this is the Celestijnenlaan).
- Drive on for about 500 m, until the bridge over the river Dijle. Just before the bridge turn left to parking "Oude Molen". From that parking you can reach the castle on foot.
- Alternatively you can use the central Arenberg parking. In that case on Celestijnenlaan drive over the bridge and turn left into the Arenberg Park. Drive alongside the river until you pass by the Arenberg Castle. Immediately after the castle there is a parking area on your right.



About the WalkOnWeb project

Consortium

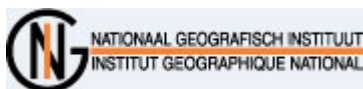
The WalkOnWeb consortium consists of the following organisations:

- **Katholieke Universiteit Leuven (Leuven, Belgium)**
<http://www.kuleuven.be>
 - Department ESAT – SCD - DocArch (Research Group on Document Architectures)
<http://www.docarch.be>
 - SADL (Spatial Applications Division Leuven)
<http://www.sadl.kuleuven.ac.be/sadl/>
 - ICRI (Interdisciplinary Centre for Law & Information Technology)
<http://www.law.kuleuven.ac.be/icri/>
 - Division Physical and Regional Geography
<http://www.kuleuven.ac.be/geografie/frg/>
- **CURE - Center for Usability Research and Engineering**
(Vienna, Austria)
<http://www.cure.at/>
- **Luciad NV (Leuven, Belgium)**
<http://www.luciad.com/>
- **APIF MOVIQUITY SA (Madrid, Spain)**
<http://www.moviquity.com>
- **Institut Géographique National (Paris, France)**
<http://www.ign.fr/>
- **Fédération Française de la Randonnée Pédestre (Paris, France)**
<http://www.ffrandonnee.fr/>
- **Uitgeverij Lannoo (Tielt, Belgium)**
<http://www.lannoo.be>
- **Vakantiegoegens vzw (Brussel, Belgium)**
<http://www.vakantiegoegens.be>



Privileged partners

For the WalkOnWeb consortium collaboration with other projects and organisations is crucial. The consortium closely works together with the following organisations or projects to make WalkOnWeb possible:



Nationaal Geografisch Instituut -
Institut Géographique Nationale

www.ngi.be



European Ramblers Association

<http://www.era-ewv-ferp.org/>



Grote Routepaden

<http://www.groteroutepaden.be/>

Project Interest Group

The WalkOnWeb Project Interest Group is a group of people and organisations who closely follow up the project. Members of this group have their own login at the private WalkOnWeb site, allowing them to have access to non-public documents and to give feedback to the consortium. Mostly these are people that are interested in walking and in electronic tools for walkers.

You can become a member of the WalkOnWeb Project Interest Group by simply sending an e-mail to info@walkonweb.org. Please mention your name, e-mail address and (if applicable) website address.