All You Need Is Content

Create Sophisticated Mobile Location-Based Service Applications Without Programming

Martin Krammer, Thomas Bernoulli, Ulrich Walder

Graz University of Technology / AIONAV Systems AG



What is it all about? Agenda

- LBS Applications: Capabilities, Benefits, Challenges
- Problem: Professional LBS Apps are useful but rare
- New approach to LBS App generation: Easy, Fast, Feature-rich, Customizable
- Conclusion

Benefits of LBS Systems

People want: At the right time and location...

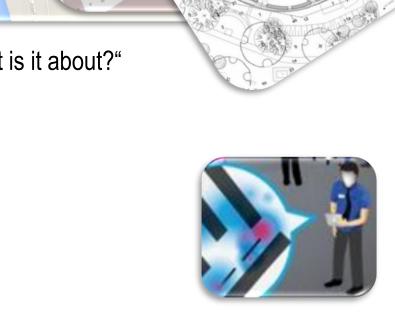
Mobility, Indoor, Outdoor

... the right information...

- Data Points of Information (POI) "What is it about?"
- POI Search "What / Where is it?"
- Routing "How do I get there?"

... and overview / orientation.

- categorized POI "Show all van Goghs"
 - → Different views und category-filter
- Positioning Indoors and Outdoors!



Look around: People want to use their smartphone (for that)!

Professional LBS Applications...

... often very useful

- There is big interest for LBS applications
 - **Museums** and leisure parks
 - **Tourism/Events** and hotels
 - **Industry**
 - Schools and universities
 - Government institutions
 - Where mobile information demand is high

but rarely used! Why?

- Too expensive for smaller organisations
- **Too time consuming** for smaller events
- Not enough specialists able to handle all specific aspects





LBS Apps are Sophisticated Applications **Expert Knowledge for Functionality and Data Needed**

- Knowledge in different fields of expertise is necessary for LBS functionality
 - Navigation indoor and outdoor
 - Georeferenced maps and floor plans
 - Algorithms for routing, information search, filtering
 - Multimedia
 - Autonomous and networked
 - Database (synchronize)
 - Programming of mobile devices
 - Different hardware systems / sensors
- Data is very specific per LBS use-case

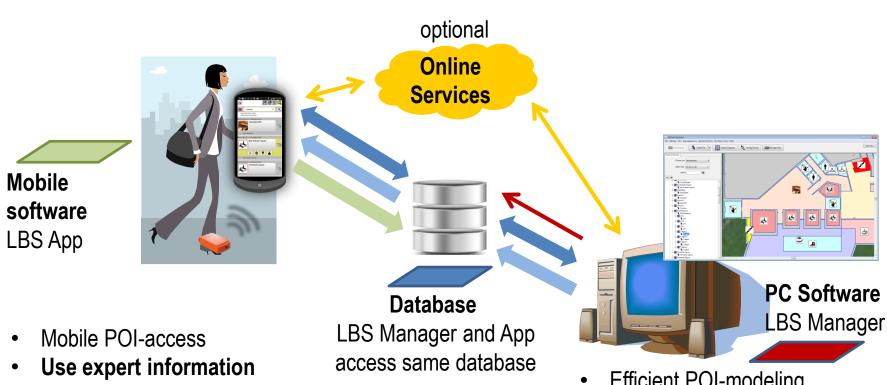


"Decouple Responsibility for LBS Functionality and Use-Case Data" The aionav App Technology



- PC-based content management system to model data for LBS application
- Bundle data-model with already programmed LBS functionality = new LBS App
- App/content creators are the use-case data experts, but PC-Laymen
 - So app creation tools are "foolproof"
 - Productive usage after 1 hour
- Technology emerged from research projects around "positioning" to LBS

"Individual App Creation by Providing Content" Concept of the aionav LBS System



- "note" on-site information
- Live positioning
- Save all to database

- Efficient POI-modeling
- **Provide expert information**
- POI-management/backup
- Save all to database
- Pack into your own LBS App

aionav LBS System

LBS Manager: Generating an App

- Drag & Drop your expert info
- Freely structured POI with multimedia
- 3D Routing Graph, Guided-Tours



Allgemeine Infos
Der Botanische Garten
Der Botanische Garten
Aktuelle Veranstaltung
Der Botanische Garten

Forschung und Lehre
Forschung und Lehre
Forschung und Lehre
Team
Geschichte

Gesellschaft der Freunde
Parkpilätze
Parkpilätze
Öffentlicher Verkehr
Neundgänge
Rundgänge
Rundgang
Mediterrane Pflanzenwelt
Mittelmeer

Acanthus mollis Garigue Garigue

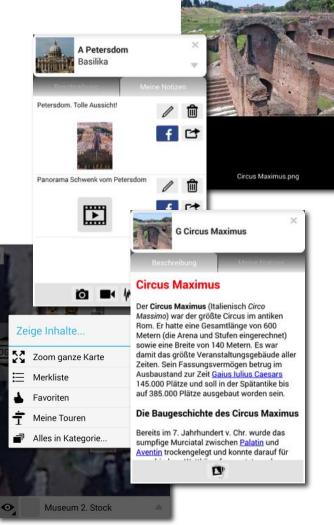
Liquidambar orientalis
Liquidambar orientalis
Quercus ilex
Ouercus ilex

aionav LBS System **Key features of the App** (1|2)

- Multimedia pinned to location = POI
- POI maps and lists
- POI notes and sharing
- POI browsing by category or location







G Circus Maximus

aionav LBS System

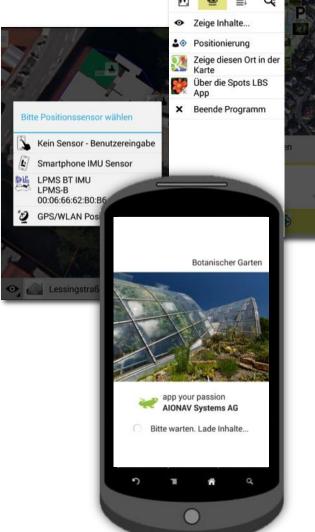
Key features of the App (2|2)

- POI search
- Positioning: GPS, WLAN, (Pro: IMU, VCA)
- Multi-storey building, 3D-routing
- POI-Tour guides
- and more...









Botanischer Garten

Conclusion

We do the expert software, you do the expert content

- Idea: Like Website Generators in 90s Now App Generators
- Get own LBS app easy, fast, customizable
- By entering own content of interest Without programming!



- Share your passion with map, content and interactivity with YOUR own app
- No usual software development risks, cost, time schedule
- Different LBS Apps already created and published see App Stores, search "AIONAV"
- App creators amazed about the simple process

...so make an app out of your expert information / passion and spread it!

All You Need Is Content



Questions?

Martin Krammer

martin.krammer@tugraz.at

Check out the Apps



Google Playstore



Apple Appstore

You want to find out about aionav in detail?

See paper, talk to me later or contact

info@aionav.com