

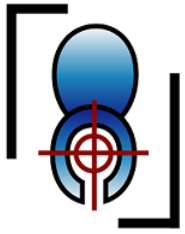
Application Development for Mobile and Ubiquitous Computing



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Group 8

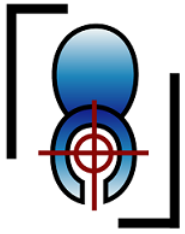
Lukas Siedel, Kevin Seppelt



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Application Scenario

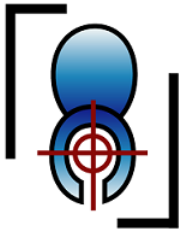
- Someone is on a trip to the city and needs a toilet
- He can immediately look up all toilets nearby
- Optionally he can be routed directly to the nearest Toilet



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Application Detail

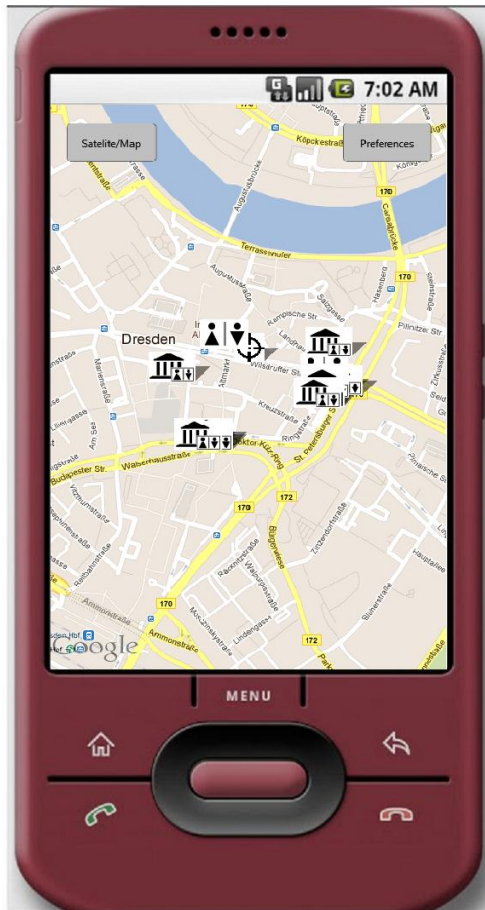
- App finds public toilets and toilets inside public buildings or shopping malls nearby your location and shows them on a map.
- Gives additional Information about:
 - inside building or stand alone
 - name
 - wheelchair accessibility
 - fees
 - supervisors
 - opening hours
- in planning: compass that points to nearest toilet

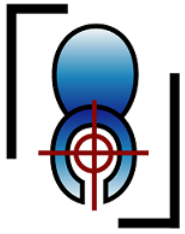


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Mockup

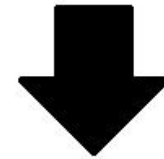


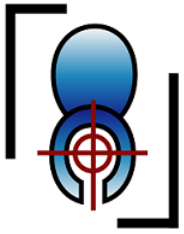


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Technologies

- Standalone Android app
- Android 2.1 or higher
- GPS necessary
- Toilet locations fetched from openstreetmap.org
- Drawn map based on Google Maps



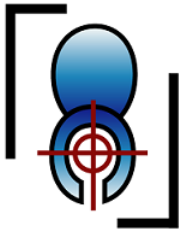


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Challenge 1

Wireless access issues

- Low traffic: Toilets are stored on the device only new ones are loaded
- Async loading, fast display of known locations: Toilets from device database are loaded immediately on the opened map and new fetched loos are added on the map when loaded.
- If no connection is available use only data from the device database (current question: map? compass?)

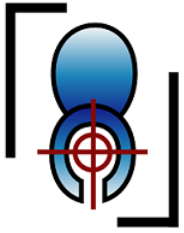


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Challenge 2

Form factor of mobile device

- Screen size doesn't matter
- Google Maps is freely scalable
- Relative layouts ensure right placement of menu components

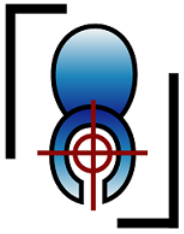


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Challenge 3

Varying Locations

- Toilets are updated when app is active and location is changed more than x meters in relation to the location where the last update was done



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Challenge 4

Usability

- very simple usage
- easy to use when you are in "hurry":
Map can be shown instantly on app start.

"just tap the app and you get the map"