

RGI233 Use case ANWB

functional requirements

CONCEPT

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● internet

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1 Introduction

One of the most grateful users of maps are tourists. Maps help tourists with questions such as: Where am I? What is this building/object I am facing? and How do I get to the railway station?

Tourists are probably also the most critical users because in most cases they do not know the infrastructure. They therefore very much depend on maps for finding their way. A clear and well detailed map with a good overview is essential to them.

In use case 2 - Mobile tourist information - we are facing the challenge to fulfil the needs of this demanding tourist with a device with one of the smallest screens possible: the mobile phone. There are some other disadvantages that make the device virtually unsuitable for this purpose: limited bandwidth, limited processor power, limited controlling possibilities and so on. Why would the tourist use his mobile to view a map? Because it is readily available, it is small and it is interactive.

The challenge will be to overcome all the disadvantages of the mobile device and offer a map solution that resembles the experience of using a print map: promptly available, clear and distinctive information, seamless panning and zooming and providing a good overview to name a few.

The final objective of Use case 2 is the development of a combined street finder and route planner. This document describes the functional requirements of the street finder. The route planner will be defined and developed in a later stadium of the project.

2 Requirements

2.1 General description

With the street finder maps can be presented on base of address input by the user. The address is pinpointed on the map. The map can be zoomed, panned, rotated and tilted (3D). On certain map scales icons that represent tourist attractions and other points of interest (POI) are shown on the map. By selecting these icons more information can be obtained.

2.2 Address input

Address entry files available are

Street
Number
Postal code
City

Not all fields have to be filled out. The following entry combinations (minimum) are accepted by the system

Postal code
City
Street-Postal code
Street-City

In case the input concerns a larger area, a map with the geographical centre of this area is shown.

The system should accept partial entries (E.g. Amsterd). In case the input matches more than 1 candidate (based on all entered data available), it should present the candidates to the user in order for him to select the required candidate.

2.3 Map coverage

Netherlands

2.4 Hardware

tbd

2.5 Browser

The application should be browser based

2.6 Minimal screen size

Available for screens with at least a resolution of 128 x 128 pixels
4.096 colors

2.7 Performance

After the entered address has been validated, the map should be fully visible within 5 seconds, based on the bandwidth specification provided by the telecom operator.

2.8 Map orientation

2.8.1 Zooming

Zooming should be possible in the direction left, right, up, down
Zooming should be fluent and seamless, map should stay visible during zooming

Mimimum zoom level shows a scale of 1:2500 (screensize 4 * 4 cm).
Maximum zoomlevel shows the Netherlands

2.8.2 Panning

Panning should be possible in the direction left, right, up, down
Panning should be fluent and seamless, map should stay visible during panning

2.8.3 Rotation

It should be possible to rotate the map clockwise and counter clockwise.
Rotating should be fluent and seamless, map should stay visible during rotating

2.8.4 Tilting

It should be possible to get a 3D map view comparable to the 3D view provided by most current navigation systems. Zooming, panning and rotating functionality should also be available in 3d -mode

2.9 Presentation of streetnames/roadnumbers

Text should never be up-side-down.

2.10 Mapcontrols

The map is controlled by using the cursor buttons and the central button on the keyboard of the mobile device. By default the cursor buttons control the panning of the map. With the central button the function of the cursor button can be changed. When clicking the button an overlapping (transparent) screen appears through which the desired button functionality can be selected:

- panning
- zooming (left and right button are idle)
- tilting (up and down button) and rotating (left and right button)
- cursor

2.11 Tourist information in the map

On a zoomlevel of 1:10.000 or lower, icons are visible that represent points of interest. Different icons represent different types of points of interest. In the "cursor-mode", when the cursor is on top of an icon, a popup shows more information on the POI.