



# Simon Says

atike dicle pekel

interface design for navigational

devices, April 25 2006, HFK



1- Tourist, language problem, wants to go to a historical place (wants to personalize the map like "show me only pubs!")

2- Navigation for disabled people, how to find their way in stations, airports and etc...

3- How to provide alternative routes in case of emergency (accident on the road, time limit and the person wants to continue his way)

4- Istanbul, taxi problems, user doesn't want to be cheated, need to find the shortest, cheapest and fastest way.

5-Map reading problems, adjustable map for several situations: eg. when i am walking I can't understand the distances like "go 500m" instead i prefer "walk till you see Mc donalds" but when i am driving i want to see the road names.

6- International Airports, short time to change the flights, lots of gates and i don't know the distances, how long does it take to go from gate A34 to G56??? Do i have time to go to duty free in between?

7- I don't want to look at my navigation device when i am trying to find my way esp while i am walking. Instead i want to be guided by a person (voice) or follow smtg? Because last time when i turned left a bike hit me...

first situations

(some of them)

Istanbul, taxi problems, user doesn't want to be cheated, need to find the shortest, cheapest and fastest way.

**solutions for case 1:**

. specially visualized map for users, not in detailed, no street/road names.( i assume that users don't want to check every street name that they are passing) eg: if you wanna go from Viertel to Uni, take the route going from Schwachhausen.

a- it can be integrated to a mobile phone or pda

b- it can be a map or catalog and can be found in the back pocket of the frontseat of the cab

c- a service from a mobile service provider. You can send the place you wanna go via sms and get the shortest way info via sms again.( but we need to consider time limitation of the user; when he is going to write the sms, it can be too late if the cab already in another direction, also costs extra money)

Map reading problems, adjustable map for several situations: eg. when i am walking I cant understand the distances like "go 500m" instead i prefer "walk till you see Mc donalds" but when i am driving i want to see the road names.

**solutions for case 1:**

- . an application which you can personalize the map like show me the map as landmarks, or distances or times ( this idea is not clear for me too yet, but i think i should work on that a little bit more)
  - a- mobile application
  - b- special navigation devices ( the ones in car)

**possible user:**

- . the user group depends on the solution who have new mobile phones and up to date with new applications for mobile phones also people who have enough income to pay the cost for the gsm service



age: 27  
occupation: account executive  
technology: high

# Arlin

**description:** Arlin works as an account executive for 5 years in an advertising company in Istanbul and most of the day she travels in the city from one company to another. She thinks being an account executive has many responsibilities. That is why she has to work a lot and save every moment in order to be successful in her job.

On top level the major aim of the department is to market and sell its products or services profitably. At work, Arlin is responsible for relations between her company and the other companies. She meets with other companies in order to learn their goals, requirements, and needs then she explains it to the designers in her company. Additionally, she also calculates the overall cost of the product and tries to get the job offered by the clients.

She is familiar with new technologies, uses computer in her work esp. windows. Besides work she is also eager to try new technological products like new mobile phones, pdas and applications as well.

She is stylish and keen on good design in her life too. Her cultural background is mixed with Europe and Asia - she grew up in Istanbul. So she is familiar with being in chaos and dealing with it.

One of her major complains about the work is the time she spends on the road. Although she has a car it takes much more time and money to drive the places she doesn't know especially finding free parking slots and paying for them as well. Besides, those problems she always complains about the work of amount and traffic jam. Because of these reasons she usually takes a cab for business purposes. By that way, she (the company) saves money and time. So, she can skim through the reports, make business calls or take a rest on her way. Unfortunately, the taxi drivers in Istanbul are not as trustable as they should be. She says "You are always facing the chance of being cheated by a taxi driver as soon as they realize that you don't know how to go to the place you want. If you don't know it is possible that you are making circles around the place you wanna be."

**corporate goals:** efficient and productive, high quality work performance

**personal goals:** products supports her. the ones which help her to gain time esp. when she is on the move.

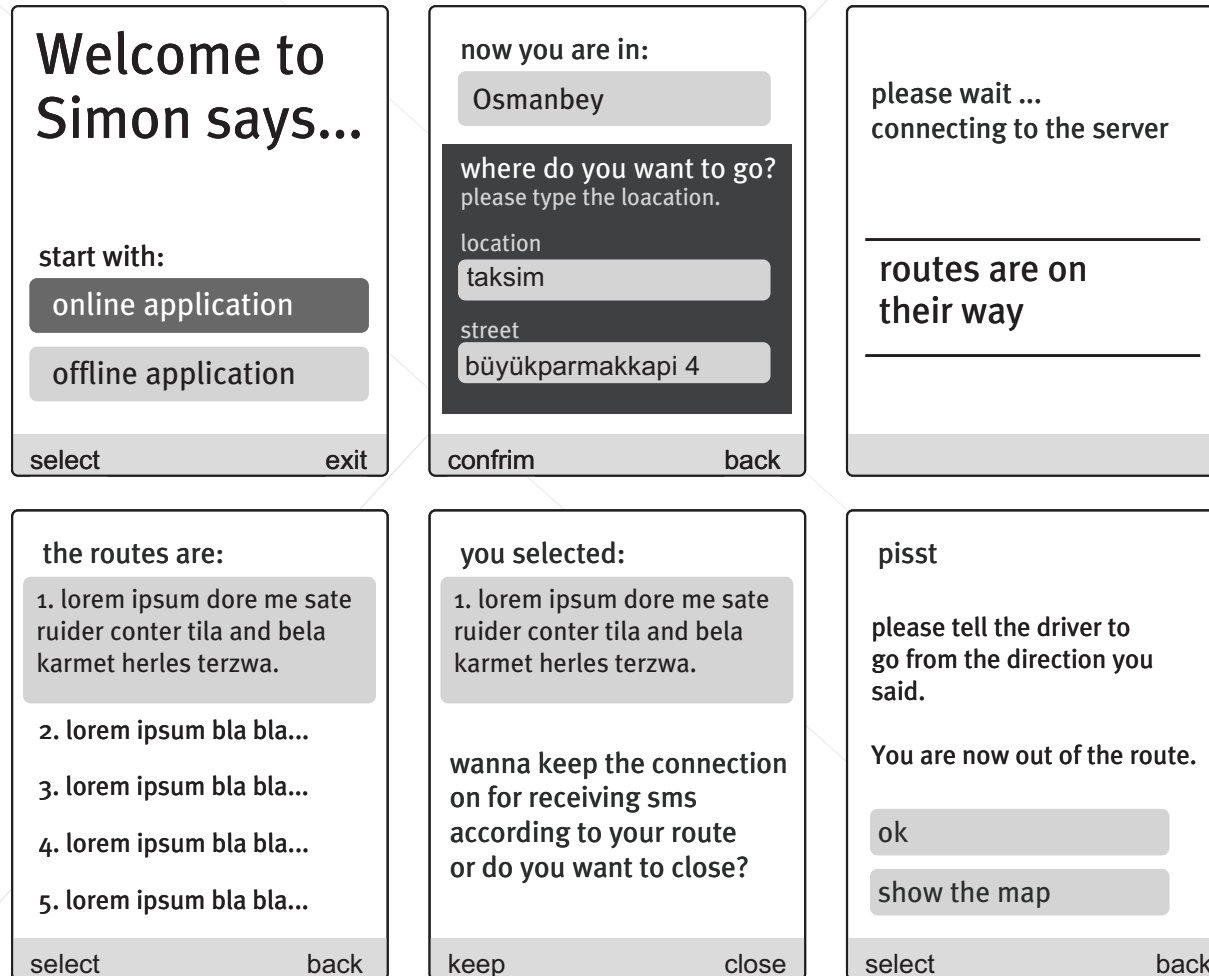
## taxi case: personas

Arilin is an account executive in an advertising company in Istanbul. She travels a lot in the city from one company to another and uses taxis to save time and money. Today, it is raining heavily which means the worst case for traffic if you are living in Istanbul. Arlin has a meeting with a new and important client in a district which she doesn't know. She takes a cab and says where she wants to go. But, from her experiences she knows the chance of being cheated by the taxi driver. She turns on her mobile and launches the application called "Simon says..." . Immediately, she connects to the server and sees her actual location and she wants to go. As a result she gets some alternative routes which show the fastest and cheapest routes according to her pre- settings. She picks the first one and says the taxi driver from which route to go.

As she is on her way while reading the some reports about the client, she receives a sudden indication from her mobile saying that she is getting far away from the suggested route. She checks the route again and warns the driver. After a while another message comes from the server saying that they are on the right route and close to the location she wants to be. She is on time for her meeting and pay less then she expected.

After the meeting she again takes a cab to go to another client. This time counting on her memory, she checks the application without connecting to the server. She types where she is and where to go and receives suggestions stored on her mobile.

It is a mobile application, which shows the fastest and cheapest routes in the city esp. for taxis. It has 2 features, online (you are connected to a server and your route is being followed, it also calculates the traffic jam according to hours and road infos then suggests routes), offline (the data is stored on the mobile)



simon says concept

# alternative navigational solutions for pedestrians in the city

**for whom:** this application is for pedestrians traveling in a city for finding their way who are in a rush or who don't want to look to a big map or small screen whereas they can look around and want to explore the city at the same time.

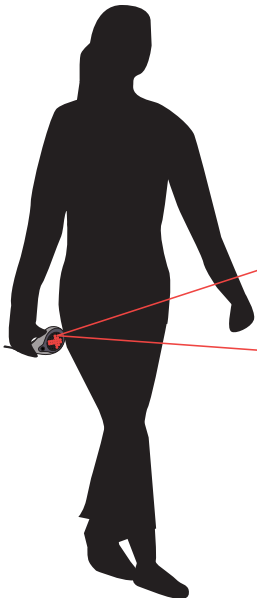
it is a device helps pedestrians to find their way in the city by projecting a sign indicates their next direction by using laser light which can be implemented in to a device.



headphone



laser pointer



## on the move

maps for the cities are very big. The smaller ones are not in detailed. It is hard to look the whole map when you trying to find a place: Many connected pages almost as big as human height and wider then human body if you open it. So they are not functional when you are standing, walking or when you are in hurry. Pages can easily deform, you can get lost in those pages and spend too much time.

navigational devices are so small and leads you to miss the chance of seeing the actual places, and stops you remembering the routes you have been before. They can also cause accidents while you are walking like falling or hitting by a car!!!!

## inspirations

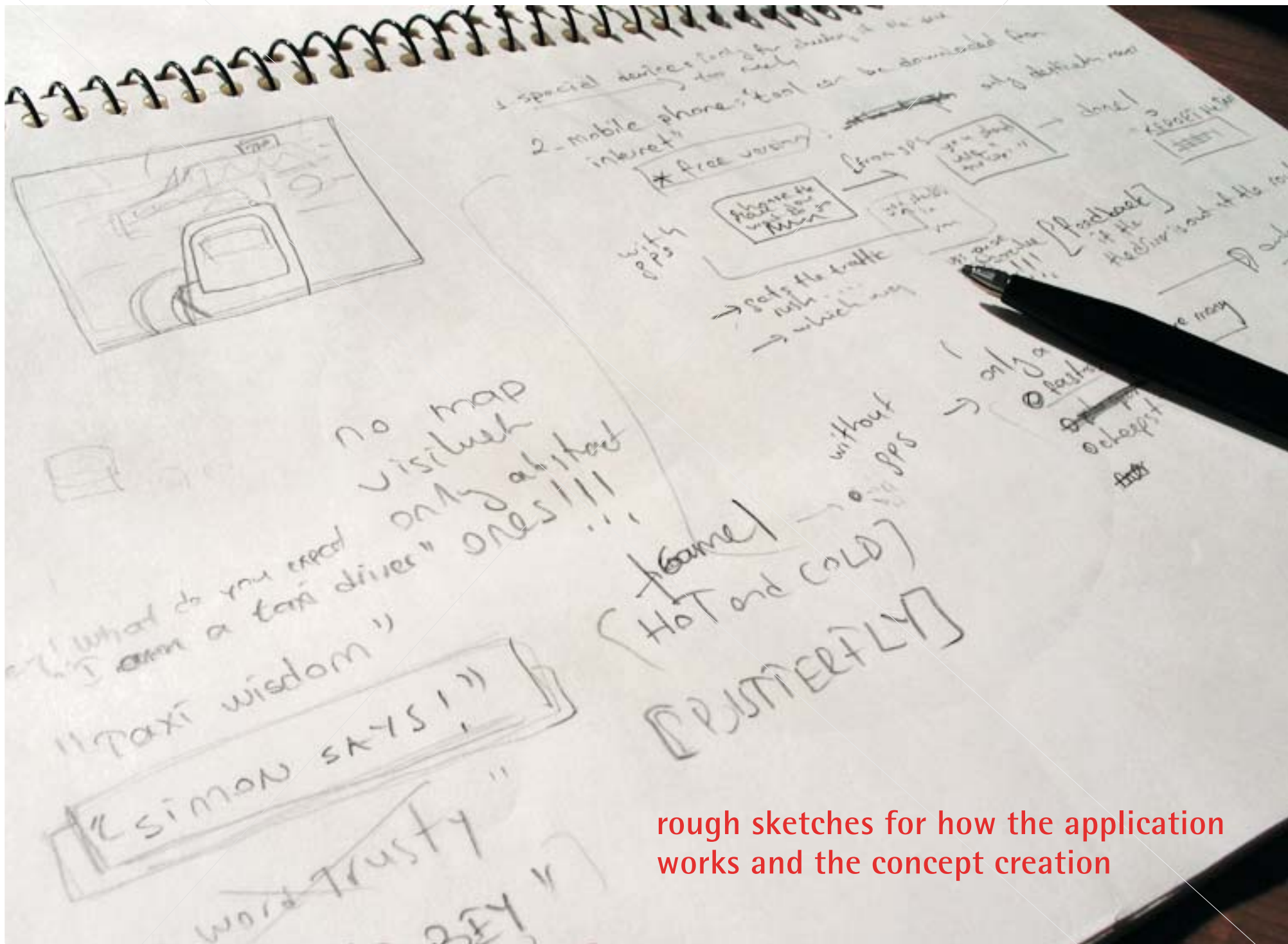
following something / someone - accompany: if you are in the forest and want to get lost (!) you follow butterflies. I take this concept in an opposite way. E.g. the safest option is always following a friend who knows the way.

traces: to remember a route you can recall the traces you saw. In my case they are landmarks; visual clues. This application also marks those places.

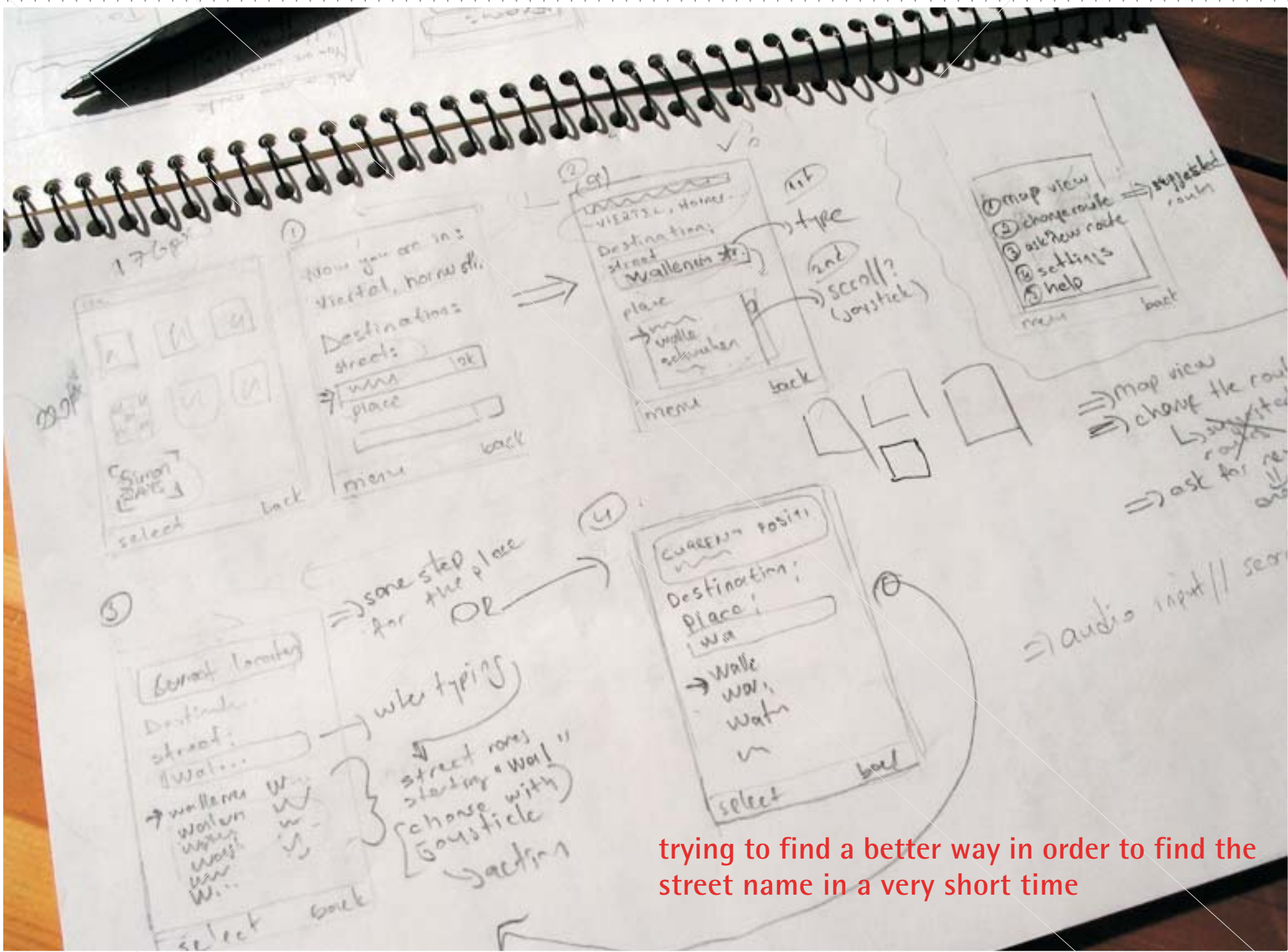
nokia 3220 mobile phone feature: Writing in the air - Wave Messaging with the "Xpress-on™ Fun Shell" functional cover enhancement.

simon says NO

(for case 2)



rough sketches for how the application works and the concept creation

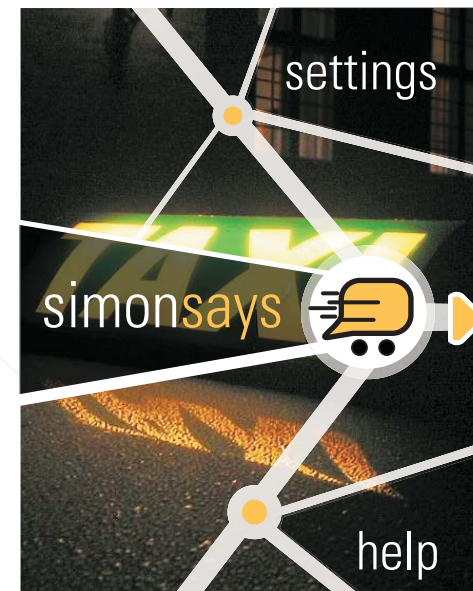
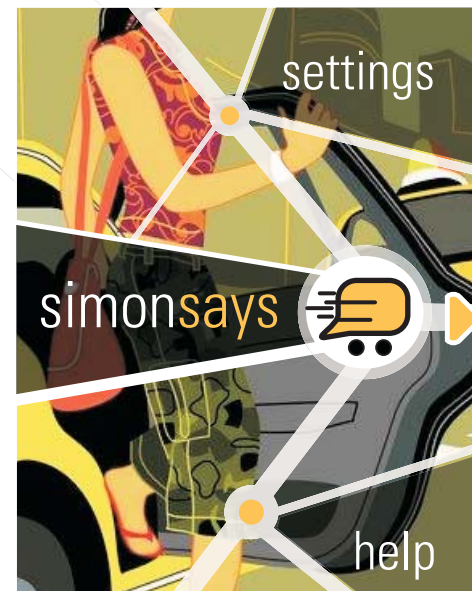
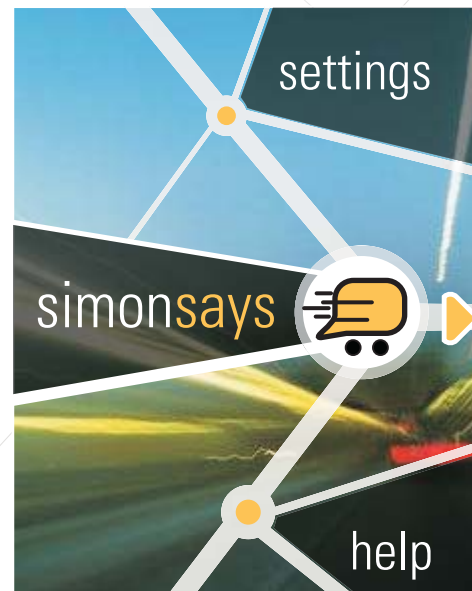
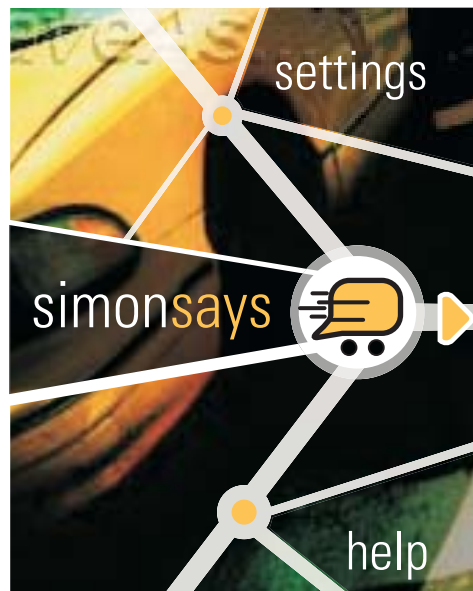
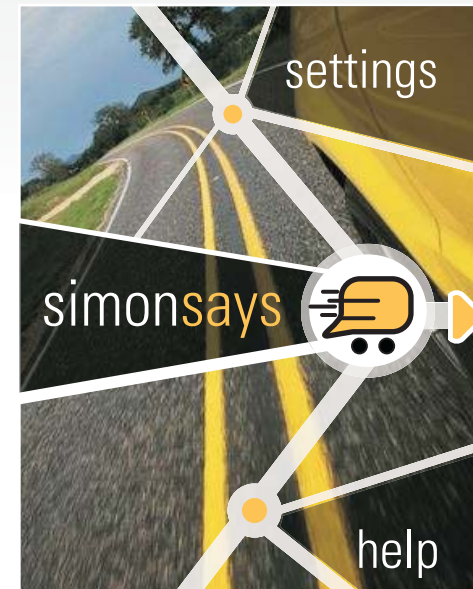
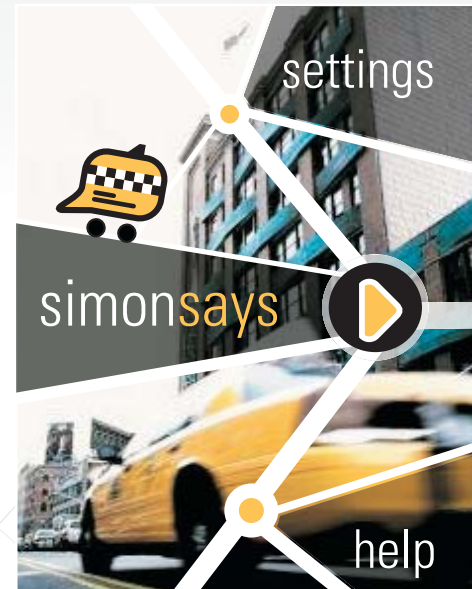


trying to find a better way in order to find the street name in a very short time

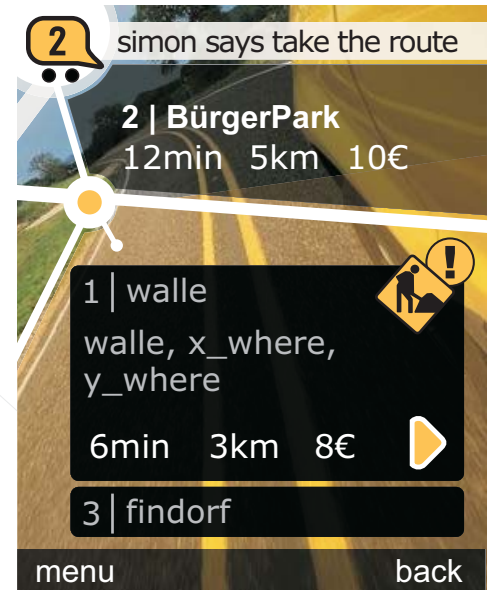
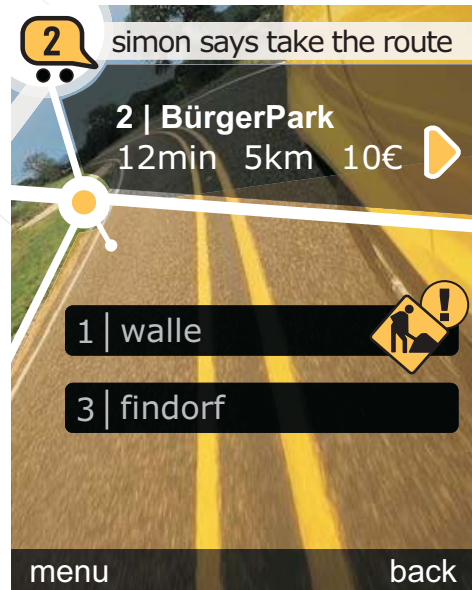
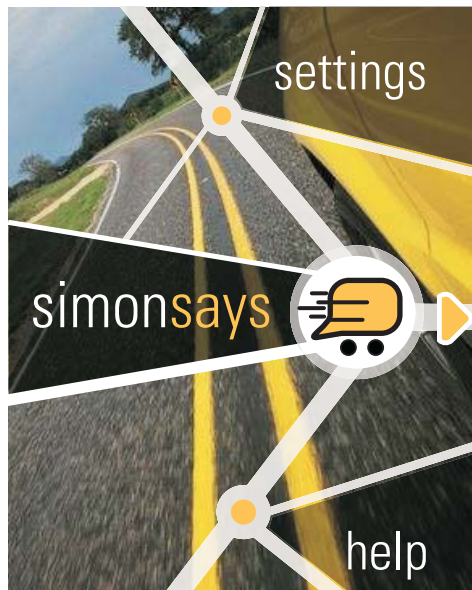
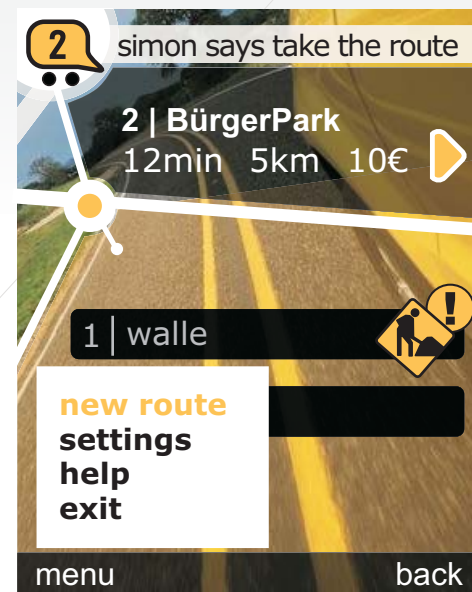
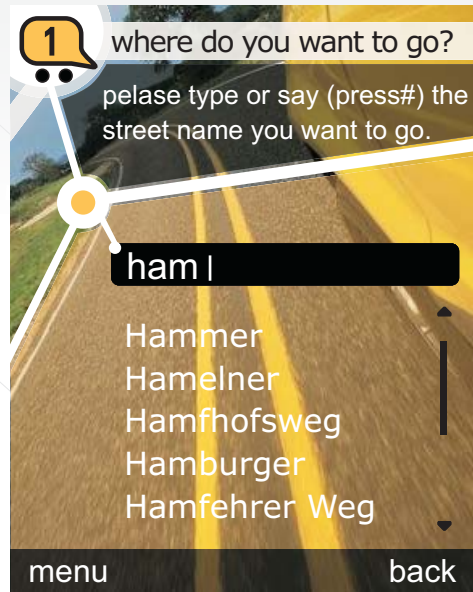




some examples from digitized version of early sketches



# design approach 1



implementation of the selected (simon1.swf)

where do you want to go?

ham

Hamburger Str.  
(Östliche Vorstadt)

Hamflehrer Weg.  
(Blumenthal)

Hamfhofsweg.  
(Borgfeld)

Hamelner Str.  
(Findorff)

where do you want to go?

ham

Hamburger Str.  
(Östliche Vorstadt)

Hamflehrer Weg.  
(Blumenthal)

Hamfhofsweg.  
(Borgfeld)

Hamelner Str.  
(Findorff)

Hamburger Str.  
Hamflehrer Weg.

ham|

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hanbger Str.  
Hanehrer Weg.

ham

Hanfweg.  
Hanulner Str.

Haocrger Str.  
Haod Weg.

no ok

ham

Haohsweg.

Hamburger Str.  
Hamflehrer Weg.

ham

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hamburger Str.  
Hamflehrer Weg.

ham

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hamburger Str.  
Hamflehrer Weg.

ham

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

trying to find another solutions: how can i make it faster?

Hamburger Str.  
Hamfehrer Weg.

no ham n o ok

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hamburger Str.  
Hamfehrer Weg.

no Hamfhofsweg. (Blumenthal) ok

Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.

Hamburger Str.  
Hamfehrer Weg.

no ham ok

Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.

Hamfehrer Weg.  
Hamfhofsweg.

no Hamelner Str. (Findorf) ok

Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.  
Hampasbergen Str.

Hamburger Str.  
Hamfehrer Weg.

ha m n o ö

Hamfhofsweg.  
Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hamburger Str.  
Hamfehrer Weg.

no Hamfhofsweg. (Blumenthal) ok

Hamelner Str.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.

Hamfburger Str.  
Hamffehrer Weg.

ham d e f è é

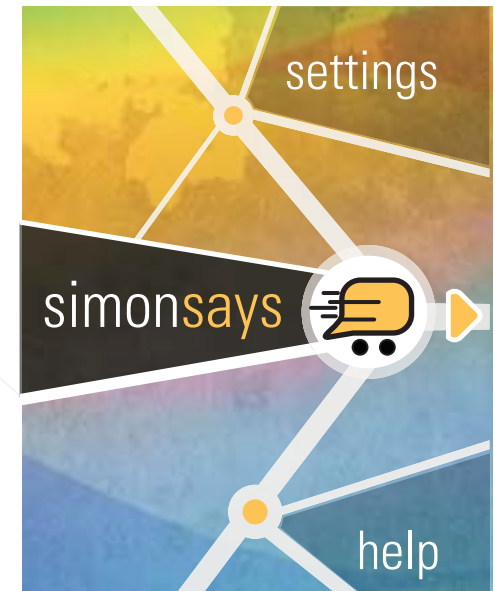
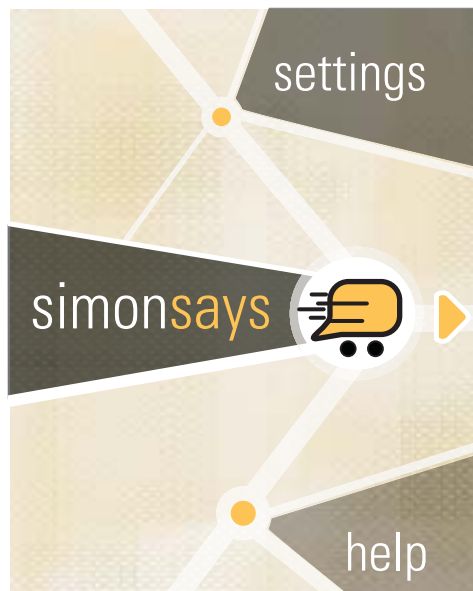
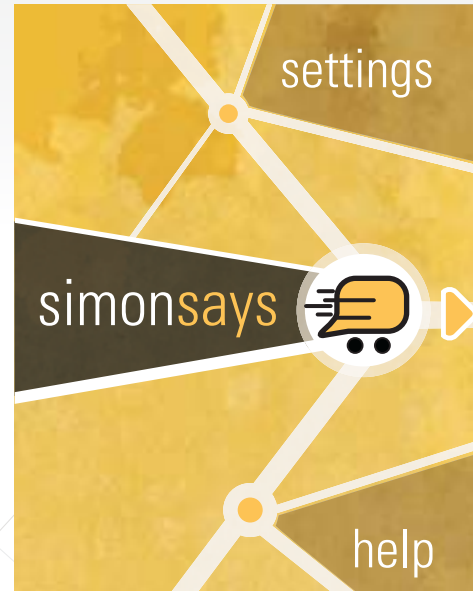
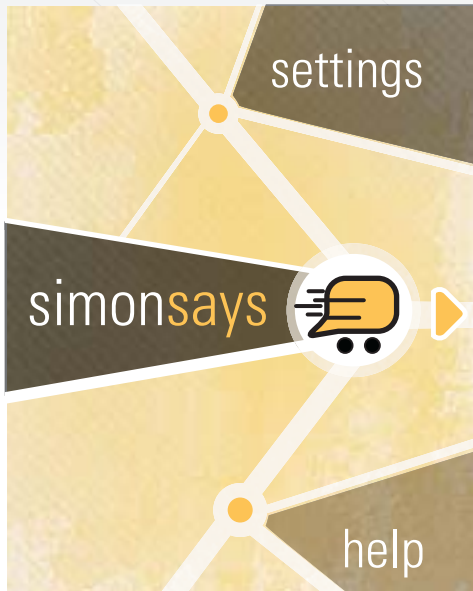
Hamfhofsweg.  
Hamflner Str.  
Hamfnelwarder Weg  
Hamfperfester Str.  
Hamfzarskjöldstr.

Hamfburger Str.  
Hamffehrer Weg.

ham

Hamfhofsweg.  
Hamflner Str.  
Hamfnelwarder Weg  
Hamfperfester Str.  
Hamfzarskjöldstr.

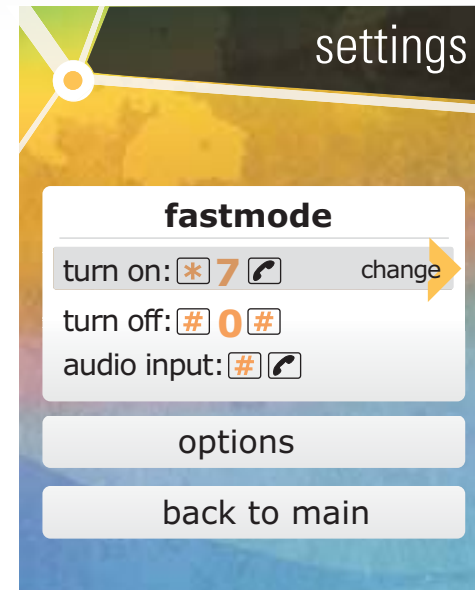
# text input problems



simplifying the previous desing



the program starts with this screen for the first time in order to explain how application works



if you use fast mode during the application, you cant use the menu

## settings for providing a fast application

**type below or say the street name you want to go by pressing "#"**

no |

Hamburger Str.  
Hamelner Str.  
Hamfehrer Weg.

no Ham ok

Hamfhofsweg.  
Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.

Hamburger Str.  
Hamelner Str.  
Hamfehrer Weg.

no Hamfhofsweg. (Blumenthal) ok

Hammelwarder Weg  
Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.

[01]

Hamelner Str.  
Hamfehrer Weg.  
Hamfhofsweg.

no Hammelwarder Weg (Viertel) ok

Hammerfester Str.  
Hammarskjöldstr.  
Hammersbecker Str.  
Hammocker Str.

[15]

simon says  
take this route !

no **bürgerpark** ok

am stern >. > sielwall >. >  
horner str.

🕒 12min | 10€

🚧 findorf 1

⚠️ walle 3

the current route

**bürgerpark**

am stern > am dobben >  
sielwall > brunnen str >  
hammelwarder Weg

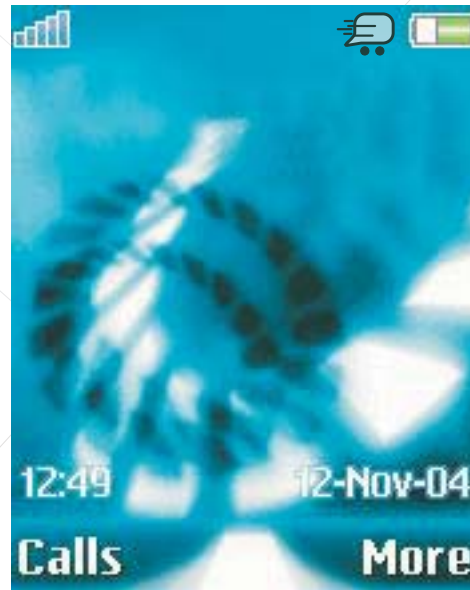
🕒 12min | 10€

no do you want to be informed if you are out of the route? ok

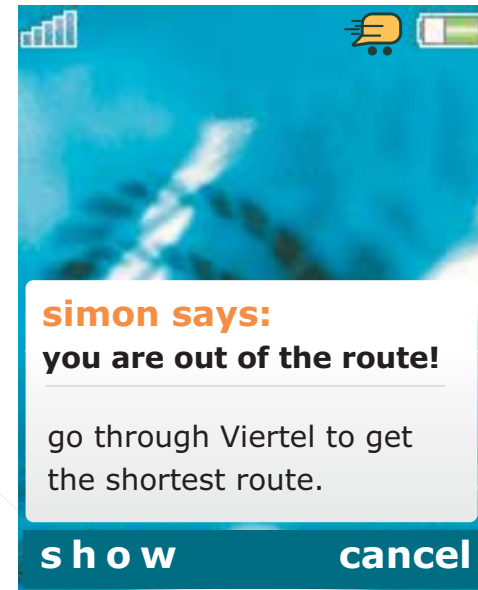
back to conventions ???



application is ruuning



upps! out of the route



mobile interface and interaction

the global positioning system and tactile interaction examples  
(frank jesgarz, katrin warda, atike dicle pekel)

navigation techniques:

VirHKey: a VIRtual Hyperbolic KEYboard with gesture interaction and visual feedback for mobile devices Benoît Martin (University of Metz)

Walk 'n Scroll: A Comparison of Software-based Navigation Techniques for Different Levels of Mobility Bonnie MacKay, David Dearman, Kori Inkpen, Carolyn Watters (Dalhousie University)

Mobile Text Entry: Relationship between Walking Speed and Text Input Task Difficulty Sachi Mizobuchi (Nokia Japan Co., Ltd.), Mark H. Chignell, David Newton (University of Toronto)

researches