Town Surfing

„Not objects, but the way objects are organized determines the quality of life.“

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Town Surfing

abstract

People still tend to use their private car even in areas with a tight public transportation network due to a significant delta in comfort. This project focussed on developing software applications that manage personal mobility needs elegantly by integrating available information of public transportation service and other sources into the personal calendars of the users.

The four students that developed concepts were: Christina Ebert, Anouk Hoffmeister, Rebekka Lauer and Anika Schultz

What we found out/ the status quo

In a densely populated urban area people tend to mix their means of transportation. They seem to make pretty spontaneous choices depending on the weather, the distance, the purpose of the trip and the mood they switch between bicycle, bus, metro, car sharing or ride sharing. Still too many people own a car and prefer to drive their own car even if they know that finding a parking spot is very difficult and might take up a significant percentage of the actual travel time.

the problem

All means of transportation follow different rules and schedules. So the user needs to research the schedule and the payment system for each type of transport separately. This is not conducive to combining many different means of transport, since it also needs to be checked against the users own agenda/schedule.

the idea

In this project we switched the basic principle of organization. The user is planning theirs days by defining time and location for their appointments and the software then is pulling all available means of transportation from the various sources in order to offer viable alternatives to bridge the distance between two different appointments at two different locations.

surfing through town

Depending on the preferences of the user and other factors like weather or distance the software proposes its travel recommendations. The user can compare different offers and decide which route and mix of transportation means he or she prefers to pick for that particular trip.
Like in a car the navigation works in real time thus allowing to stop, switch or change the route at any time. The real time information on all the transportation options helps to support the surfing mode

flow

or a state of flow: the user can effortlessly move through the city knowing where, when and how to pick the next opportunity for transportation.

my town

The fact that the information is filtered for the individual user and focusses on necessary facts for his or her present route, helps to reduce the amount of information that is presented to the user. In this scenario the users are not burdened with filtering complex information on their small mobile screens on route.

feeling the pulse

By representing the frequency of the public transport system that was picked the user feels in control can can decide e.g. whether to run or to wait for the next bus.

synergy

With this travel manager is becomes very easy to connect to friends or to benefit from serendipitous encounters in the same neighborhood, but also organize and deliberately share rides with each other.

routines

Various means were developed to avoid repeated entries of standard routes. Icons were used to represent typical occupations and locations to speed up input on route as well.

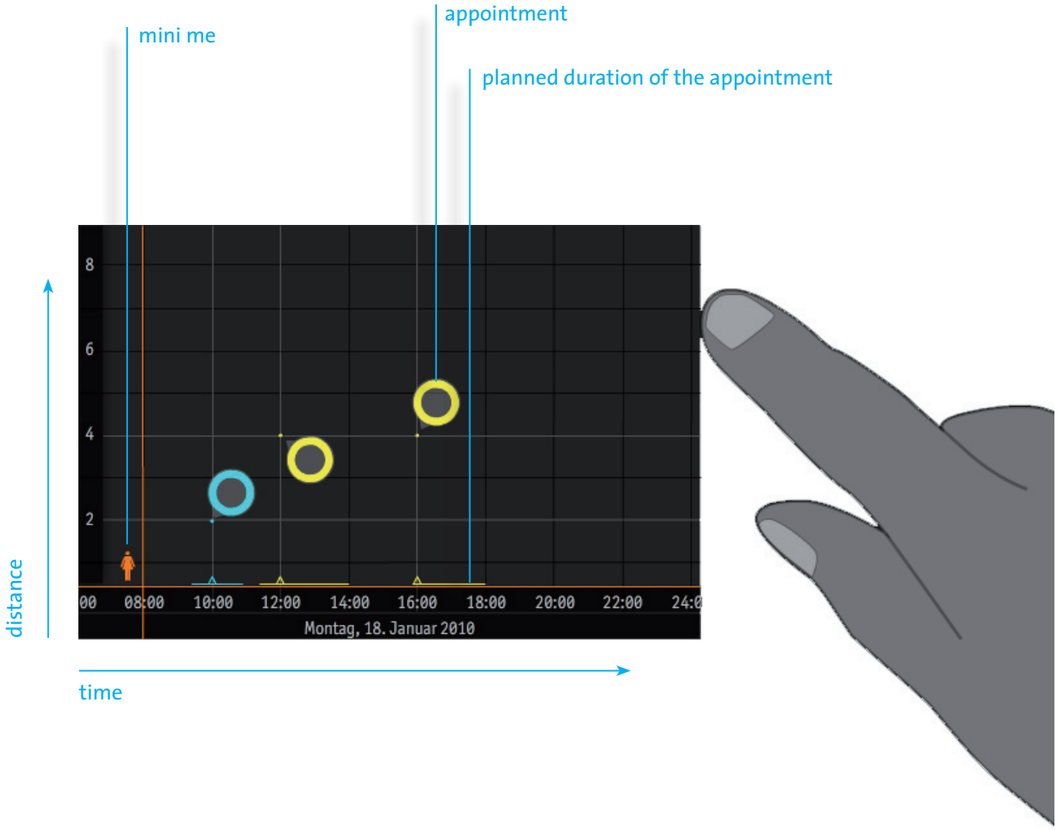
the design challenge: Organizing the information

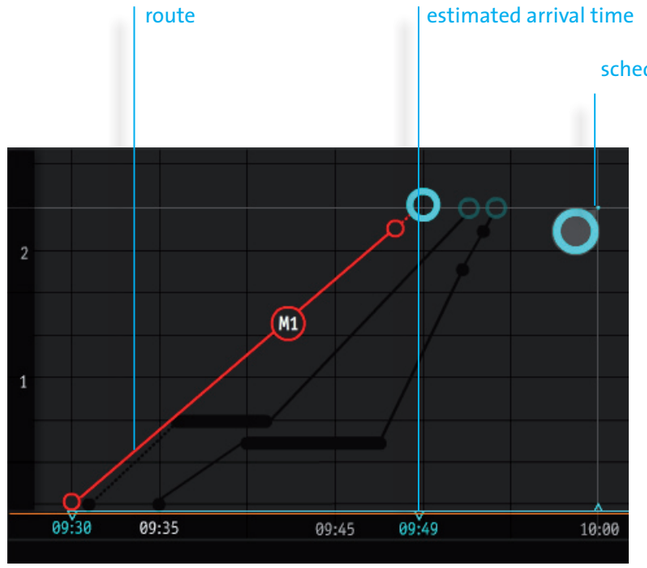
In order to offer the user overview and control the challenge was to develop concepts that combine the information about time and location in a meaningful and effective way.

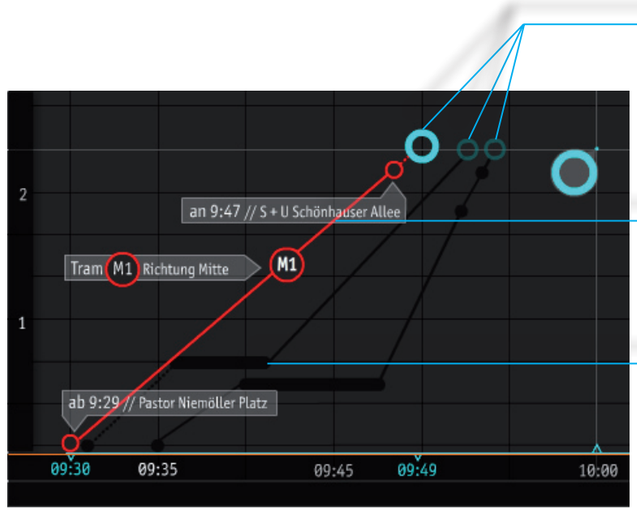
concept **Rasterize**
Christina Ebert

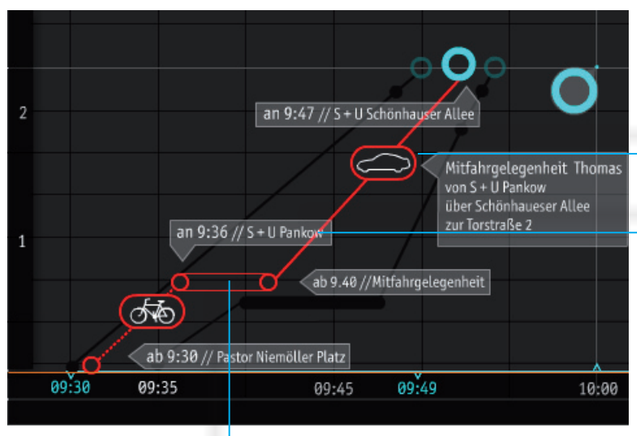
http://vimeo.com/10974862

Christina Ebert developed a **matrix** that allows for a combined view of time (x axis) and distance (Y axis). So each appointment is placed on this matrix according to its time and its distance to the previous appointment. All means of transportation map themselves between two locations indicating by the slope how fast they are: the steeper the slope the faster.
The users can also see immediately what alternative routes are available and how many transfers on each route are necessary.
The time passing by and the current location of the user is indicated by an **animated „mini-me“**. This view can be morphed into a time table / calendar view by tilting the screen to portrait. By tilting the screen to the horizontal a geographic map view becomes visible.

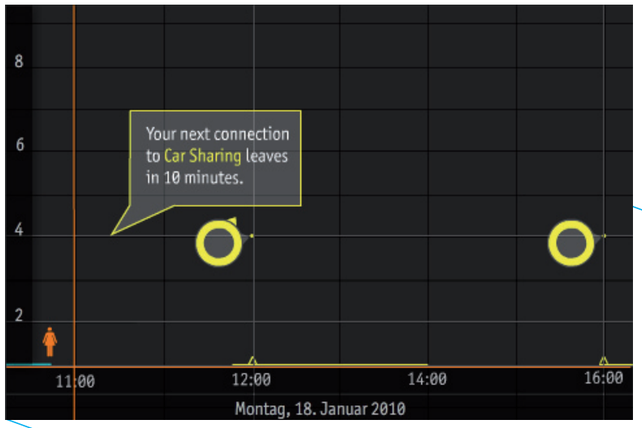




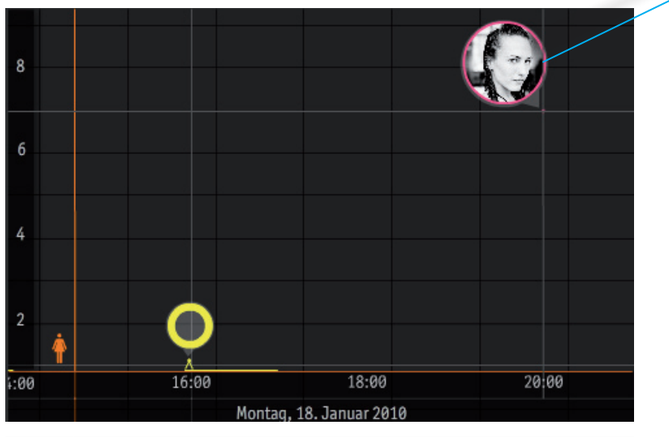




the software gives hints when to start in order to make it in time to the next appointment.

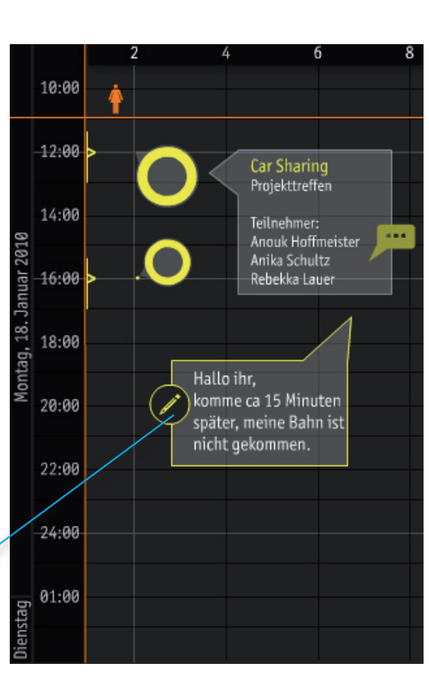


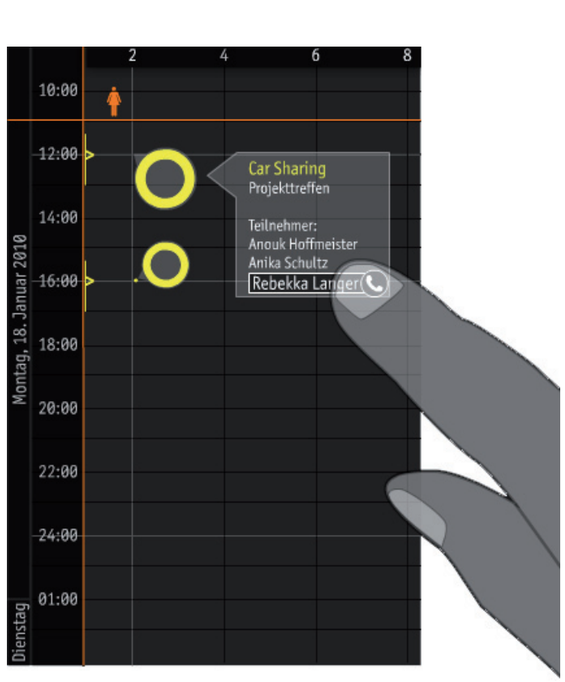
by turning the device to portrait format the matrix turns into a calendar view.

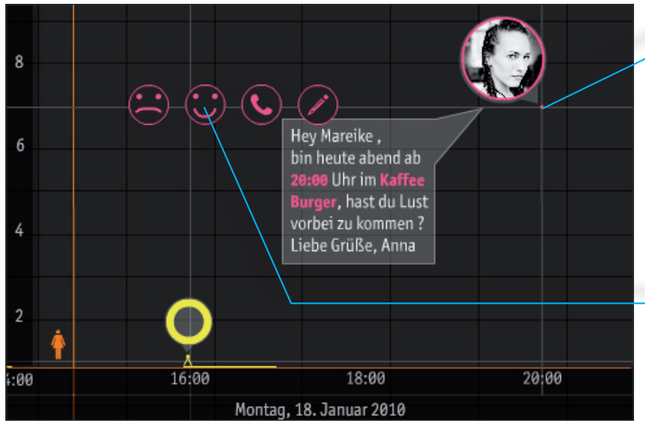


Friends can contact the user. They show up on the grid as well.

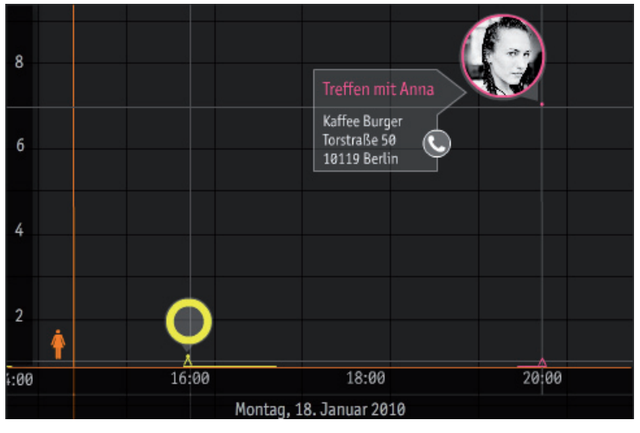
If they propose to meet somewhere the distance of that proposed location is is calculated against the current location of the user and mapped immediately (if the system knows the place).







the user has several quick options to deal with that offer



Up to the minute informations e.g. infos on travel delays, can be exchanged quickly with other participants of the scheduled meetings, either by text messaging or phone calls.

concept **Cube**
Anouk Hoffmeister

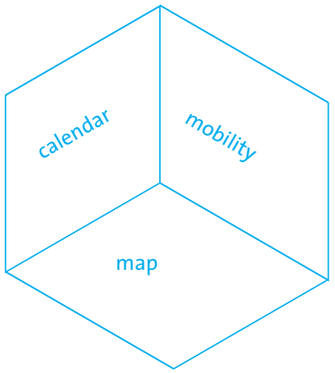
http://vimeo.com/12347213
http://vimeo.com/12356968

Anouk Hoffmeister developed a **three-dimensional model** to describe the relationship between location and time. The third plane is used to highlight all information concerning the users mobility and schedule, like notifications about the schedule, routes, etc...

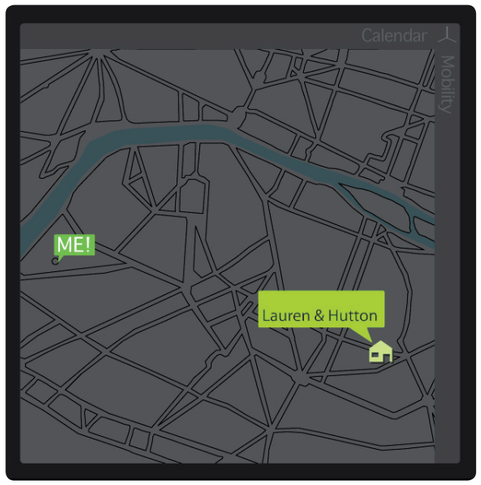
In this concept the **time axis is running downwards**, disappearing towards the horizon of the plane of the map. This direction allows to visualize appointments as bubbles above the location they are planned to take place.

The user can easily switch between the three planes by tilting the device in the directions of the plane he or she wants to see next.

When planning an appointment the information is linked to the address book, the calendar and the map thus trying to reduce the input effort for the user to a minimum.

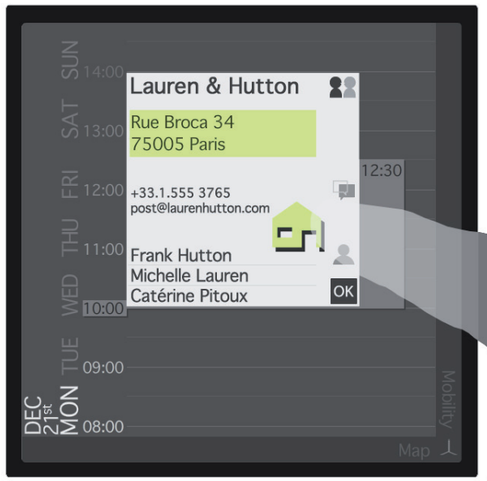


The threedimensional start screen layout allows direct access to the three main planes of the software: calendar, map and mobility planning.



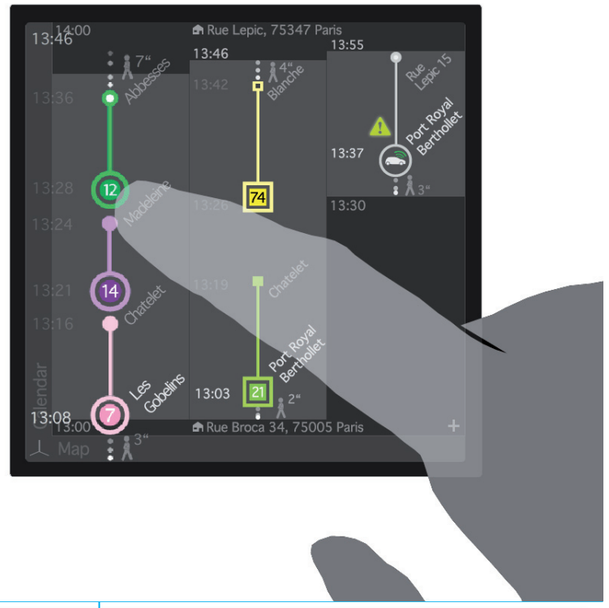
... and the view changes to map view and the address is shown on the map in relation to the current location of the user.

the time axis runs towards the user, thus top to bottom.



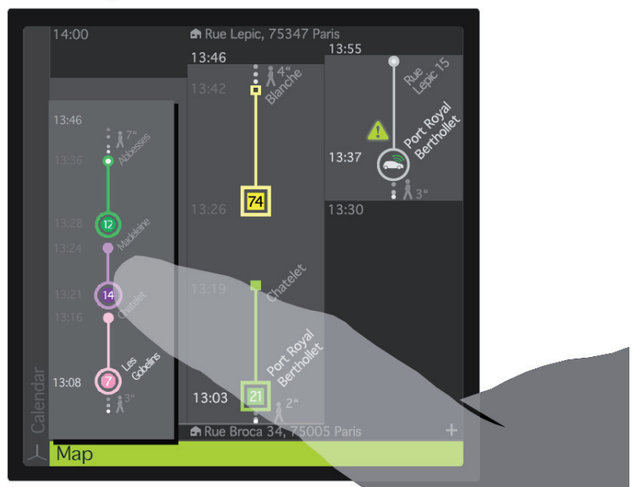
By dragging the address towards the map bar on the bottom of the screen it turns into a house icon...

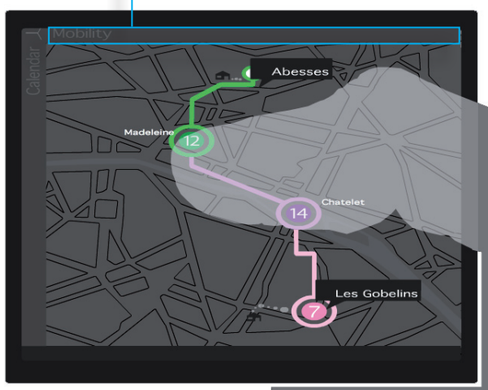
By clicking on the mobility bar on the richt side of the screen route options for the transfer between the two appointments are displayed.



When the connections are chosen the calendar view adds travel times to the appointments and also give hints on where to go and when to start.

By tilting the device towards the mobility bar on the top edge of the screen the user goes back to the screen that shows the metro connections.



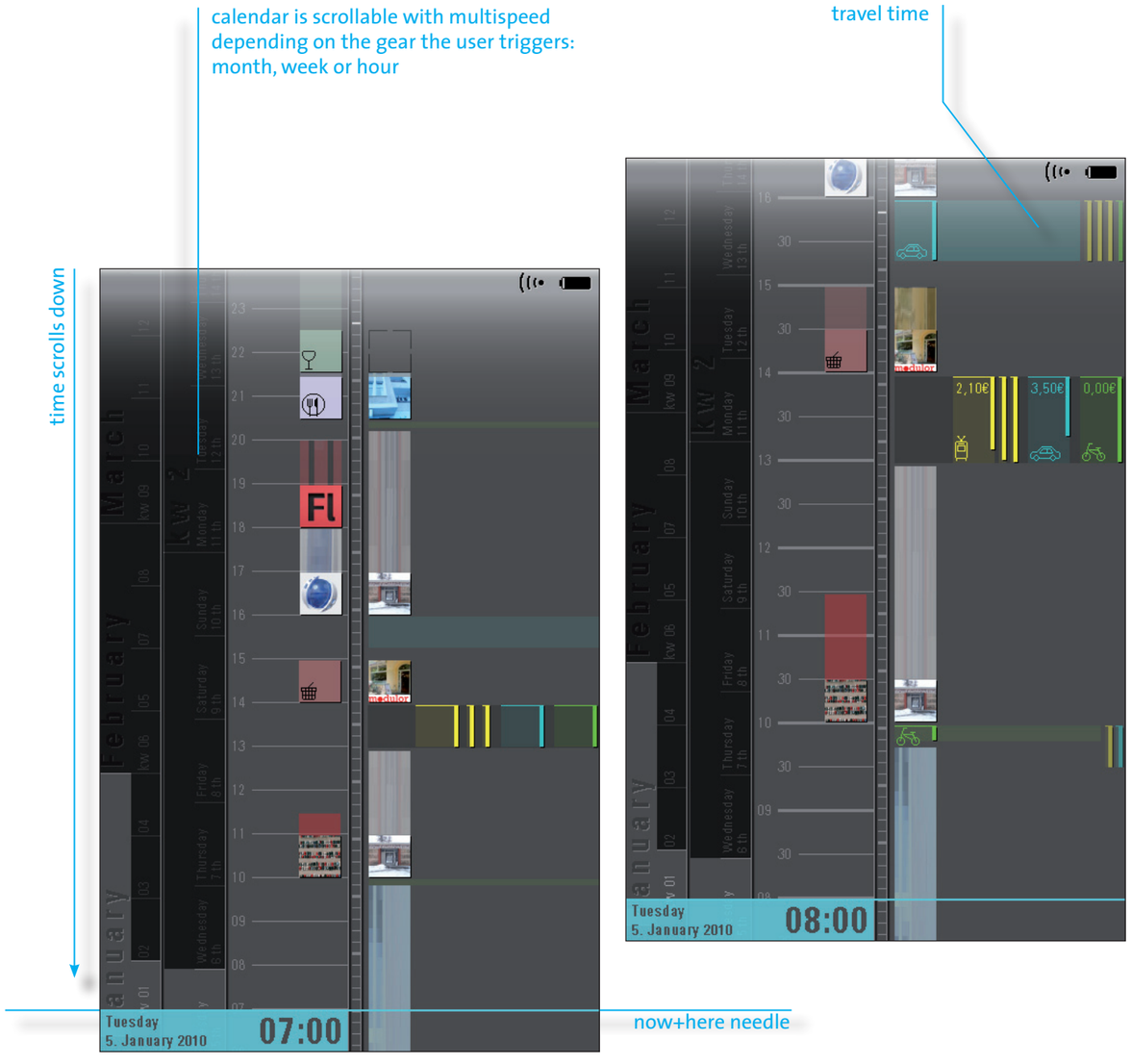


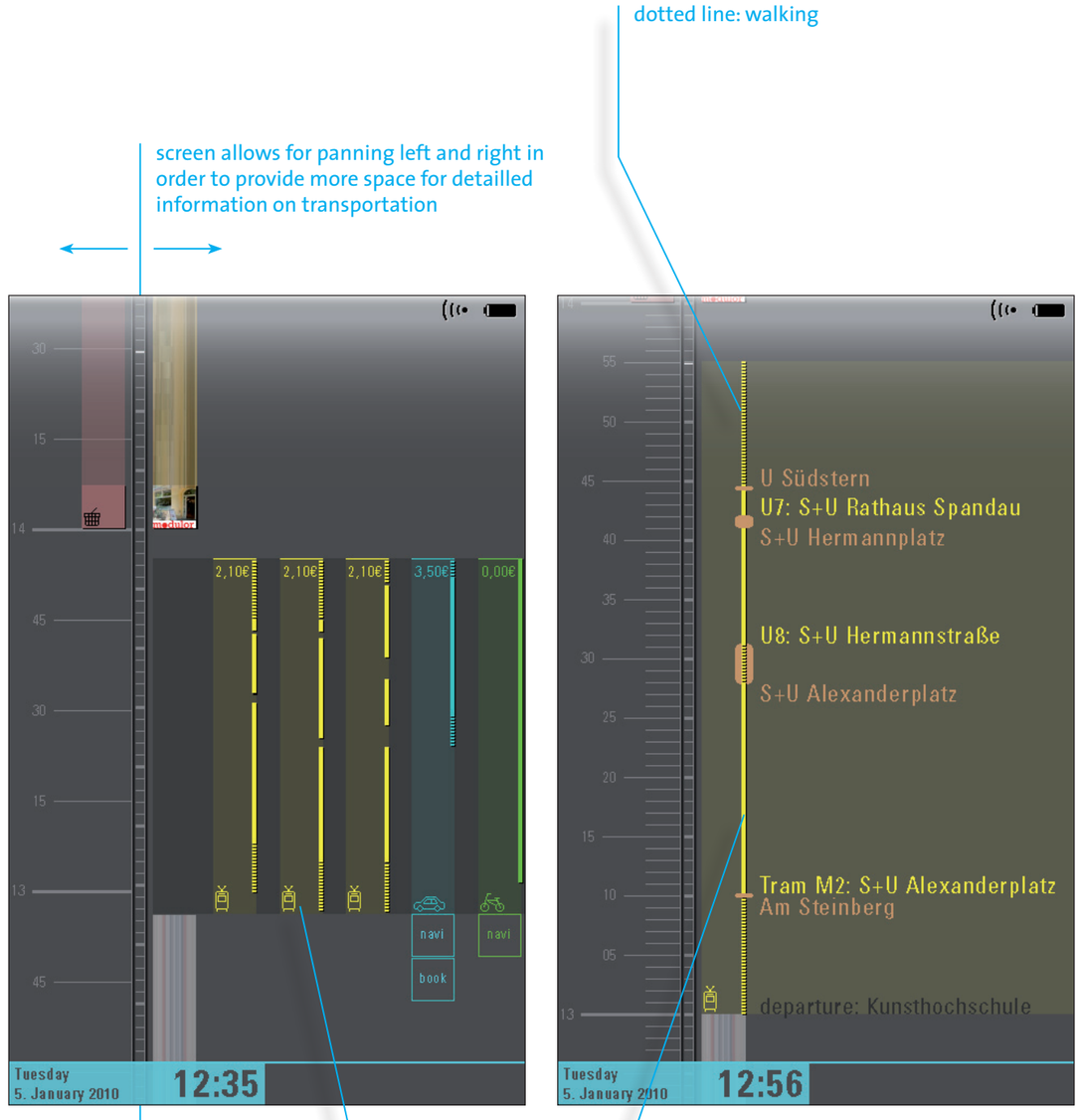
concept MoNa
Rebekka Lauer

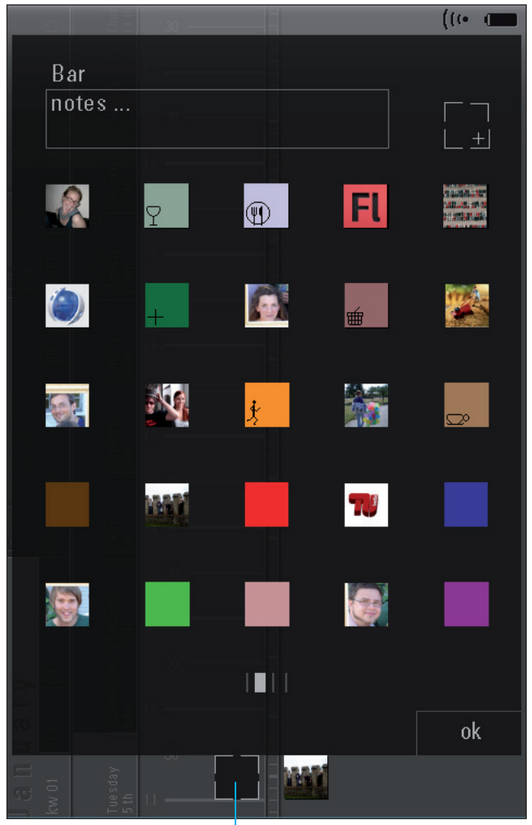
http://vimeo.com/12594008

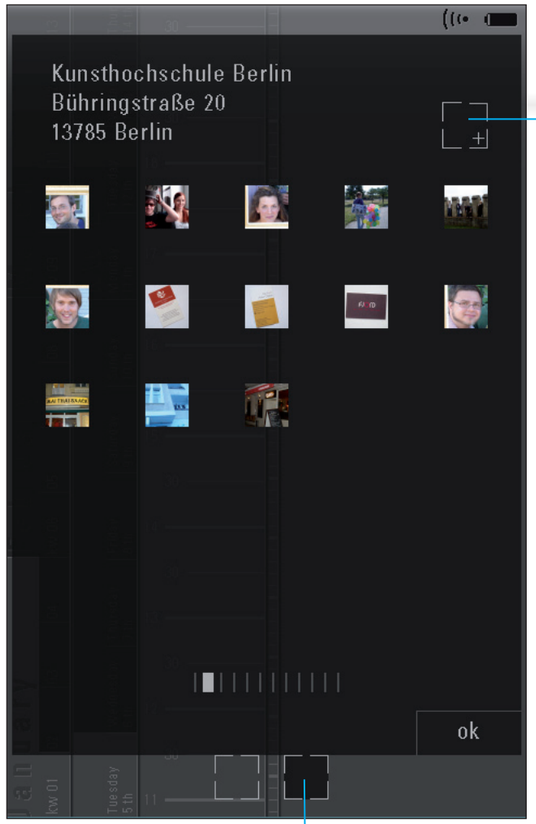
Rebekka Lauer developed a concept that is radically based on time. Like on a **linear clock** were years, months, weeks, hours and minutes are linked in a **virtual transmission** all appointments, routes and means of transportation are heading against a **here+now needle** thus indicating the time left for e.g. taking or switching the bus.

Beside the appointments that are represented by two icons („what“ and „where“) also travel times are showing up on this linear clock helping to plan the commute between two locations. The length of the travel time stripe is defined by the means of transportation that can be chosen and modified at any time.
The effective screen size can be enlarged by sliding the linear clock to the left thus creating more space for the route planning details.



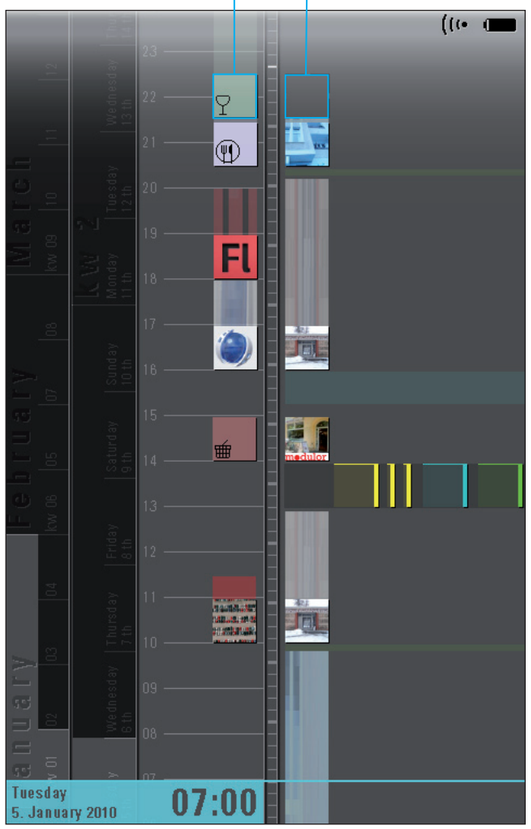


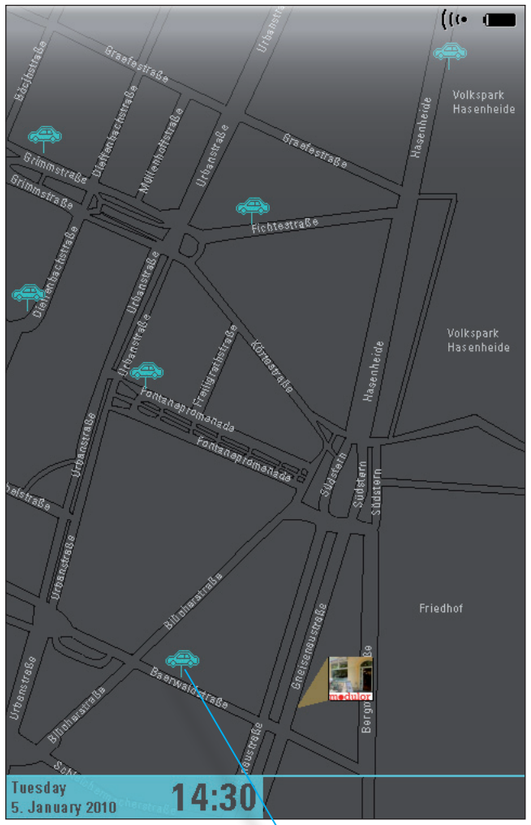


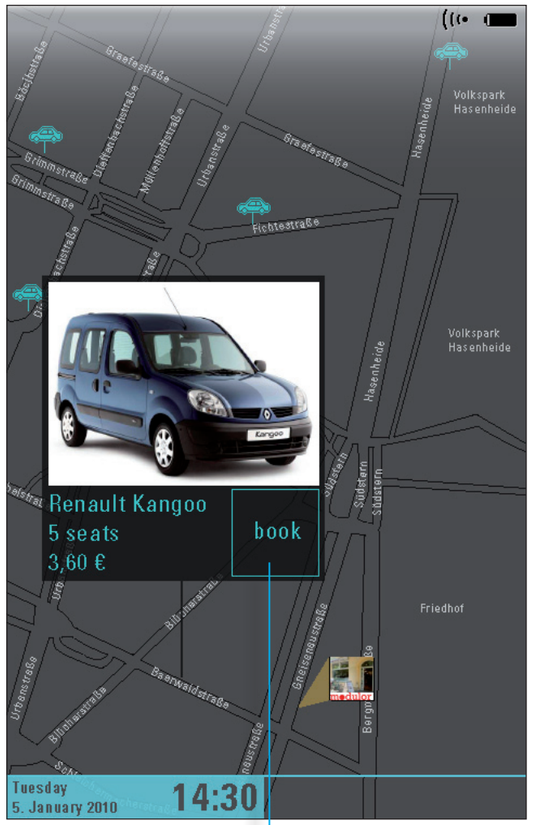


places can be added by taking a snapshot with the camera: this creates a thumbnail and at the same time saves the location.

input effort for events and locations is minimized by using icons for the favorite locations and events.







available car can be booked ad hoc

spontanous decisions are supported: if the user wants to switch to a car, the system shows all available cars in the vicinity.

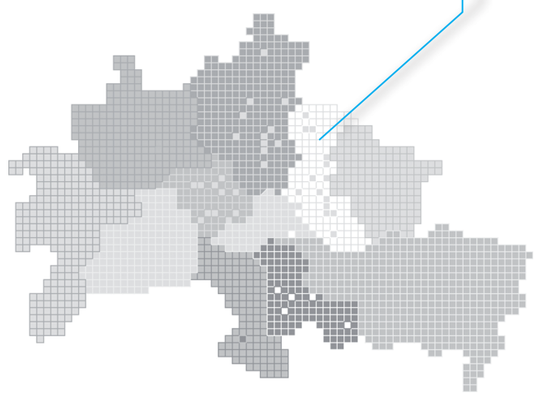
concept **memo pix**
Anika Schultz

http://www.vimeo.com/12397013

Anika Schultz developed a new way to represent and map locations, rather than using real proportions and distances she proposes a mental map to store and add locations only to the areas of town that the user lives in or travels to. This **distorted representation** helps to add details to areas of interest and clipping parts of the city that are neglected by the user.

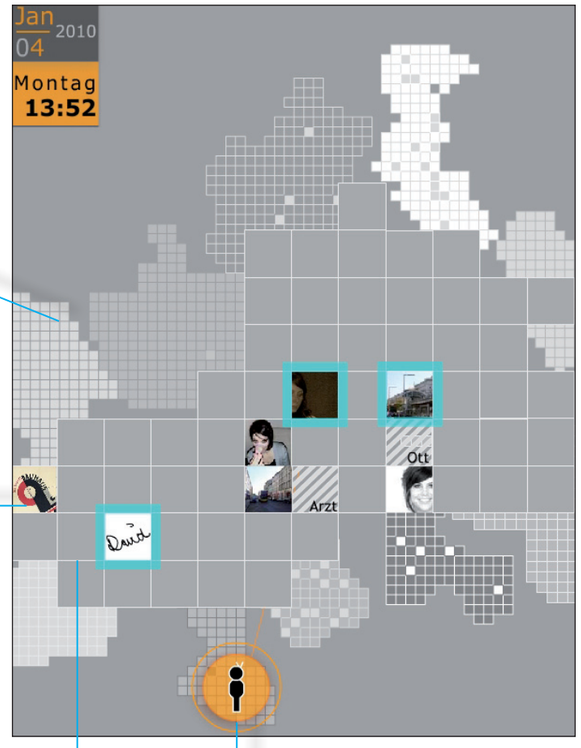
A similar approach is used for the representation of the routes: here only the starting point and the area around the target location are represented with more details, the areas of the travel route that are passed with higher speed are compressed.
The **concept of a distorted view** is also used in the calendar bar to show a complete day and at the same time enable the user to zoom into every appointment

only areas that the user visited are mapped, parts of the city that he or she never goes go are left out.



distorted zoom of the neighborhood

the geography is transfered into a abstract grid serving as a mental map to store locations.



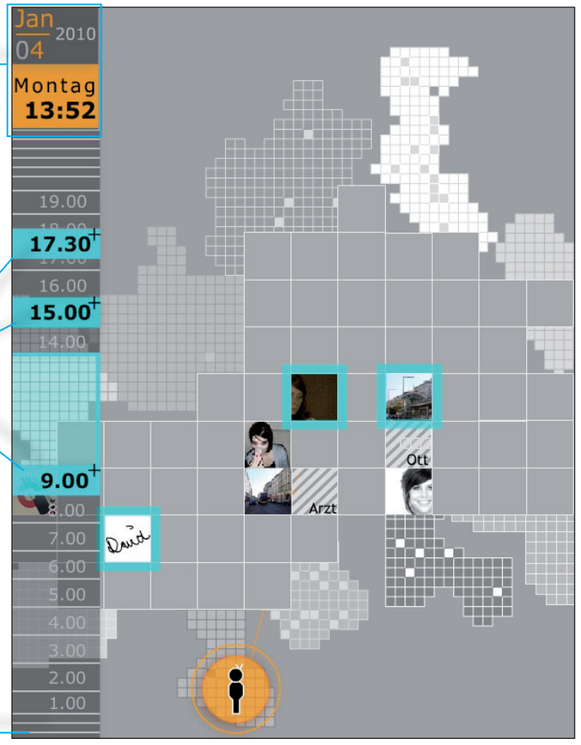
places of interest

current location

distorted zoom of current vicinity

current date and time:
serves also as a button to switch to others dates.

appointments

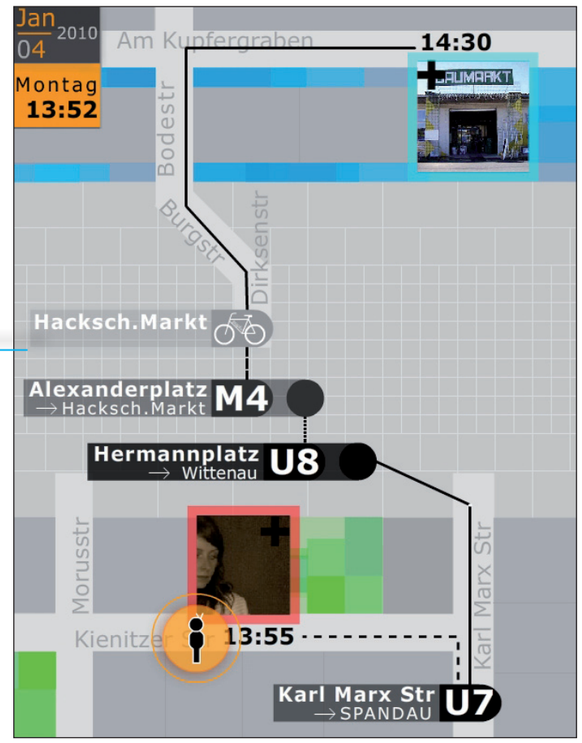


the calendar has as well a distorted zoom view: in the schedule column a full day is represented, hours without appointments are squeezed.

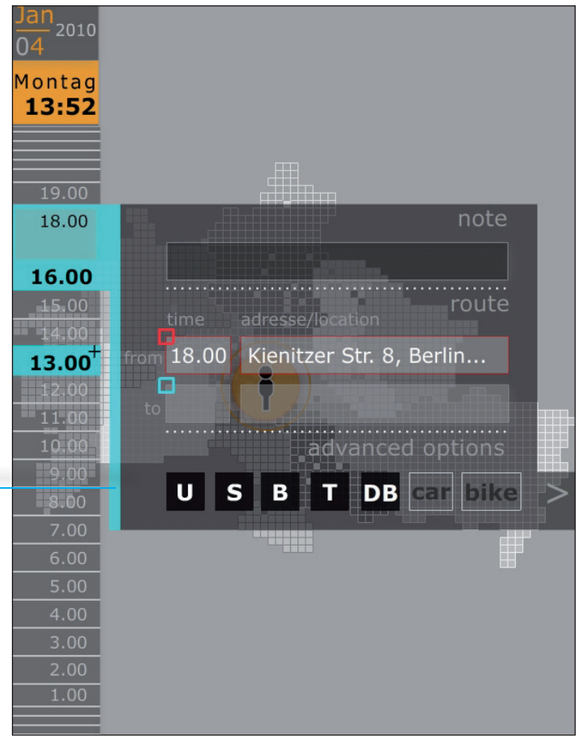
in the default view the scheduled appointments with a quick comment are visible on the time line...

...and also on the mental map.

By condensing the grid of space inbetween two locations both ends of the trip can be displayed simultaneously. So this distorted zoom allows to show the whole route, but at the same time all relevant details at the starting and the end point, thus the effort of zooming and panning is reduced.



routes are planned around and between appointments, this helps to reduce the input effort for users.



thumbnails help to recall places, people and activities

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