

A context-aware advice system for active living

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design &
decision
support
systems

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Where innovation starts

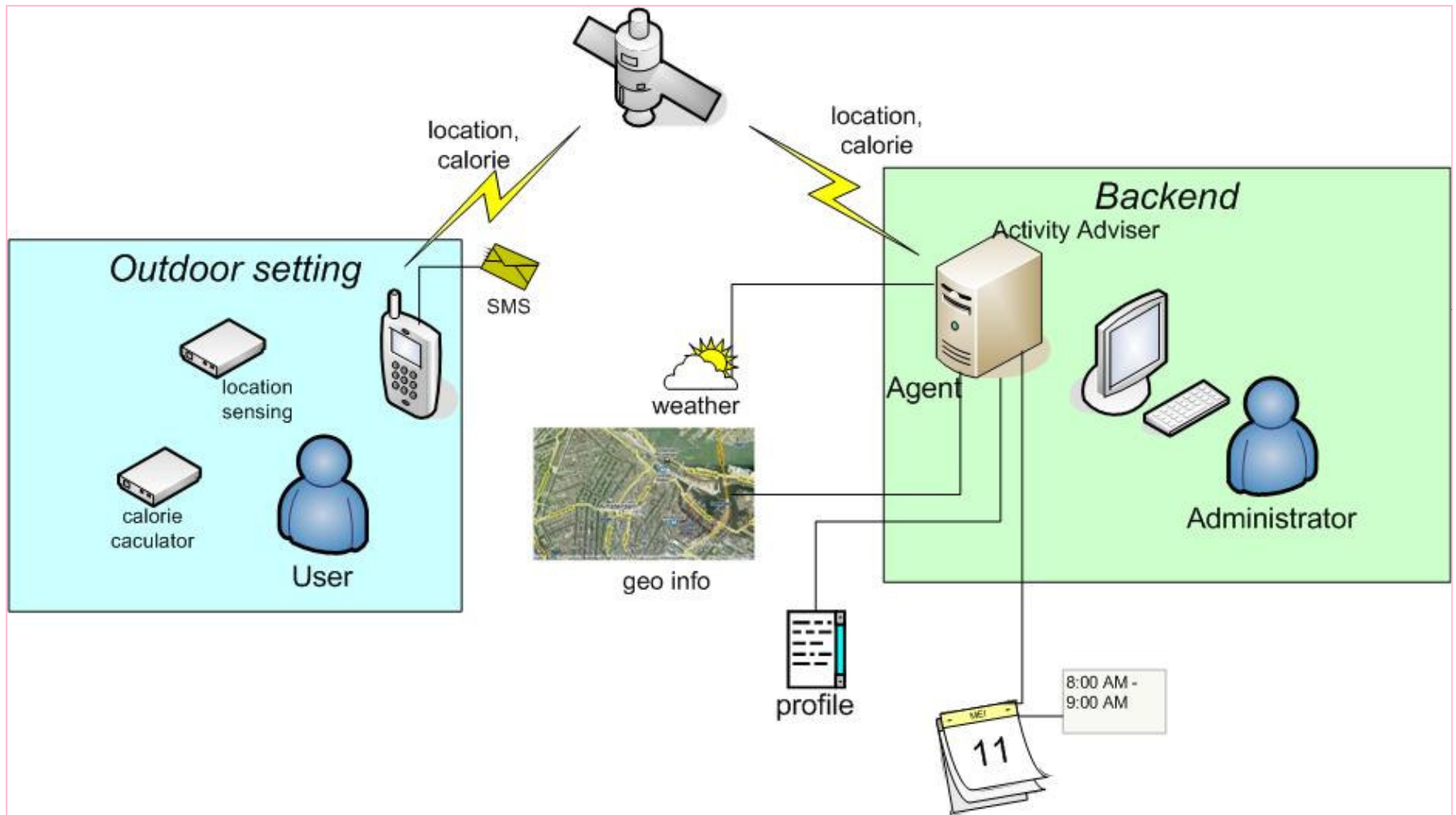
Motivation



Focus

- Health living in Urban Environment
- Design Behavior Change Support System
- Mobile Persuasion
- Context Aware “just-in-time” information
 - Right time
 - Right location

System architecture



Simulator System Input

Input	Source	Data
Environment	City Map	Geo information of green places, shops, home/work
Location	GPS	Latitude, longitude
Activity agenda	Google agenda	Scheduled activity , availability
Weather	Weather web service	Temperature, condition
Profile	Questionnaire	Age, gender, height, weight, ownership of car/bike, transportation hobby

Simulator System Input Environment data example

Edit Data - PostgreSQL 8.4 (127.0.0.1:5432) - motivate - locations

e Edit View Tools Help

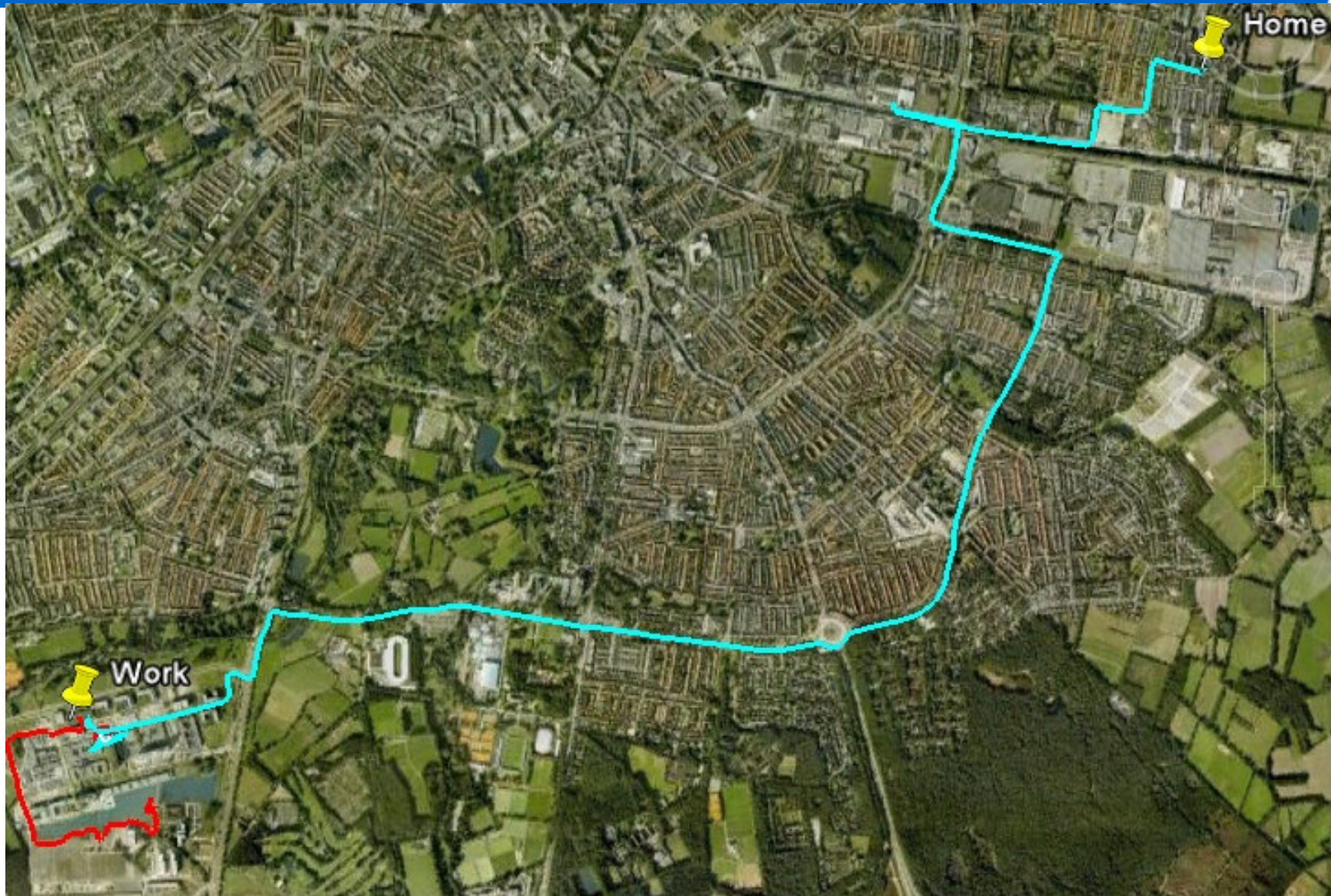
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3	7	kerstroosplein	park				01060000204071000001000000010300000001000000050000003581933F3AD20:
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6	10	Poot Van Metz	park				0106000020407100000100000001030000000100000015000000E90F3823EB4703:
7	11	Ton Smitspark	park				01060000204071000001000000010300000001000000033000000D1C79E130CA20:
8	12	Frater Simon Deltour He	park				010600002040710000010000000103000000010000001F0000007040B1BF69AD0:
9	13	Kasteelpark	park				0106000020407100000100000001030000000100000021000000FFDDCAD3915D0:
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*							

ArcGis, PostGis

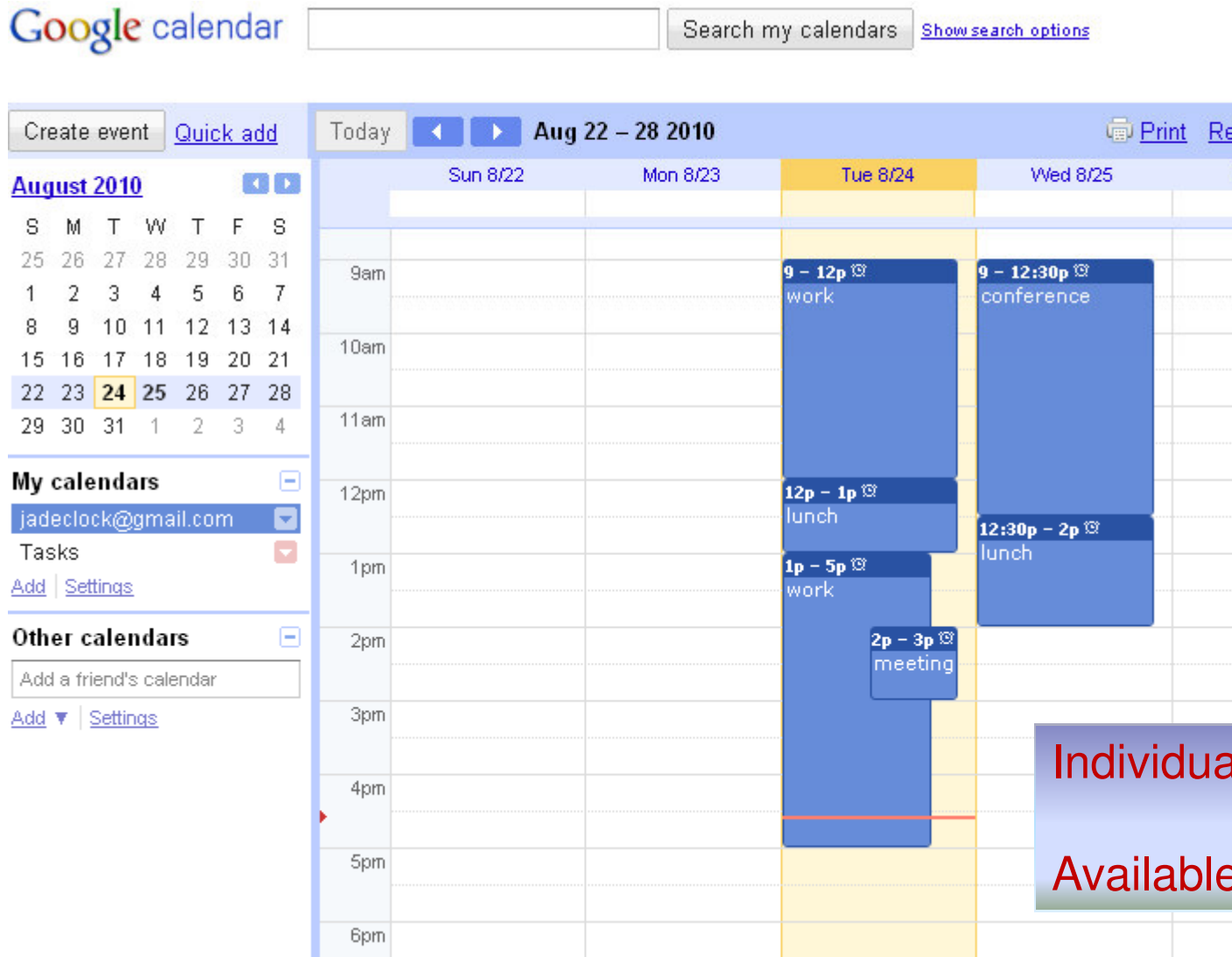
Simulator System Input

Location data example



Simulator System Input

Agenda data example



Data Process

Rule-based advice generator

- **If:**
- Day_of_week is weekday
- Agenda_now at lunch & available for 30 minutes
- Weather_score is good
- Location_nature is close
- **Then:**
 - *“It’s such nice weather outside. How about walking around < the name of the green place > during lunch break?”*

Experiment Design

- **Time: 5 weeks**
- **Participants : >20**
 - **Age 25-55 , At least 4 days at work**
 - **Preferably not active**
- **Daily procedures**
 - **Update agenda**
 - **Upload GPS data**
 - **Give feedback to advice**

Experiment Design Web application

Logged in successfully

Hey, Penny, Welcome back! Today is a nice day...

Common Actions

[Edit Google Agenda](#)

[Upload Trace](#)

[Edit Profile](#)

[Respond to messages](#)

[Log out](#)

Status

You have uploaded 1 traces.

0 uploaded files have been processed.

Feedback given for 7 messages.

Still 23 messages waiting for feedback.

Help

Upload your traces and after the system has processed them respond to the generated messages.

You can always return to this page by clicking on the logo at the top of the page.

For questions email to Y.Lin1@tue.nl.

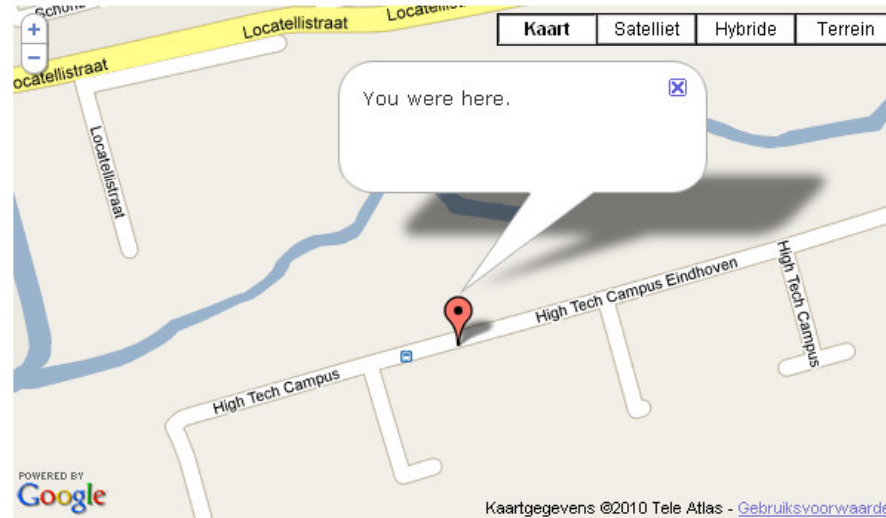
Experiment Design

Web application

Assume you would have received the following message on Monday, March 23th at 12:59



At that time you were at the following location:



Would you follow that advice?

- Yes, I would have followed the advice
- Yes, but I would have followed the advice some other time
- No, I would not have followed the advice
- No, I would never have followed the advice

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Experiment Design questions to answer

- **GPS & Agenda & Context => Right time & location ?**
- **Profile => personalized ?**
- **Behavior change ?**
- **Influence of urban environment?**

Future work

- **RUN !**

