
CLASS Notes (March 4, 2008) from Eddy

Presentation

David Tennenhouse : Proactive computing

Do you want to live in a smart home (as shown in the video)?

No, why not? Because the smart home may not guess your need correctly; hence annoying.

What are examples for two quadrants in the Figure 1 of Tennenhouse's paper?

- On field and manual: MRT vending machine.
- In office and autonomous: air conditioner, automatic light emitting keyboard, and automatic doors.

Proactive technology need human to supervise it. So, the problem is how to supervise it. Why this paper doesn't mention about AI? They are two groups of ubicomp researcher one that don't use AI to solve the problem and the another who use AI.

Gregory Abowd, Elizabeth Mynatt : Changing past present and future research in Ubicomp.

What is the context aware computing? Computers that can sense the context and adapt themselves to the sensed context.

Some research directions in everyday computing

- Continually present interface.
- Move information between foreground and background.
- Connection between physical and virtual world.

Group discussion (after the Abowd and Tennenhouse paper)

Group#1

Novel applications in a restaurant

- Language detection -> food menu that can change its language based on the customers' languages
- Exploration on dish arrival (or on menu)
- Wine and drink recommendation for the food
- Compute menu ordering (time of day dependent)
- Create an environment based lighting and music (display some romantic photo and play romantic song in valentine day)

- Customer information (allergies, previous orders, ETC.)

Problems :

- storage of the personal info (who accesses these info)
- no control over info, computer trust

Evaluation

- surveying
- money saving (in case of replace waiter with the computers)
- how frequent people come to the restaurant

Group#2

Problems

- late coming food
- table reservation
- recommended food
- automatically filling up water

How to solve

- recommend food by

- > customer weight, temperature of customer,
- > time for food preparing by amount of food that will be prepared in the same time
- While customers are waiting for food, show some videos about the food preparation.

Group#3

other "proactive" technologies

- seat belt that can notice you when you don't belt it
- automatic car locking system
- escalator which can stop itself when no people use it
- turn on and off the light in the room by motion sensors

some novel applications

- face make-up system that give you some professional make-up tips or real-time make up when you are on the video conference

Group#4

other "proactive" technologies

- automatic door system
- light in the refrigerator
- dish washer, hand drier
- auto pilot system
- iRobot cleaner

some novel applications

- automatic scheduling system by extract upcoming events from e-mails
- automatic recording machine that can record amount of money that user spent
- automatic water filler like the one in dental clinic

Group discussion (after Rogers paper)

What is Ubicomp approach?

smart machine or smart people?

Rather than do everything for user, It engages people instead.

automate or mediate?

automate : everything is automatic

mediate : make something fun, engaging people

Dish washer

automate : dishes are washed by the machine

mediate : washing plates with more fun

Children Room Cleaning

automate : buy iRobot for them

mediate : let children clean their room by themselves with more fun

car navigation system

automate : Car Navigation System that we use nowadays

mediate : the system that allows user to learn about the road. Rather than tell user where to turn, give some information about the road

(test driver with some questions about the road, tell the direction by using hint (for example, turn left when you see "XXX" hospital))

In the end of the class, we discussed about drier and vacuum cleaner when it was first introduced.

drier affects our social life. Without drier, you may go to the yard to dry your cloths. In the same time, you talk to your neighbors.

vacuum cleaner gives less sense of accomplishment compare with cleaning floor by yourself.