

Augmenting the Social Space of an Academic Conference

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Outline

- Social Spaces at Academic Conferences
- Proactive Displays
- Experience UbiComp Project
- Evaluation
- Discussion & Future Work

Academic Conferences as Social Spaces

- Conference settings
 - Specific time, space & focus
 - Community of people w/ shared interests
- Different sub-contexts, different social interactions
 - Formal presentations (papers, panels)
 - Semi-formal presentations (demos, posters)
 - Informal events (breaks, receptions)



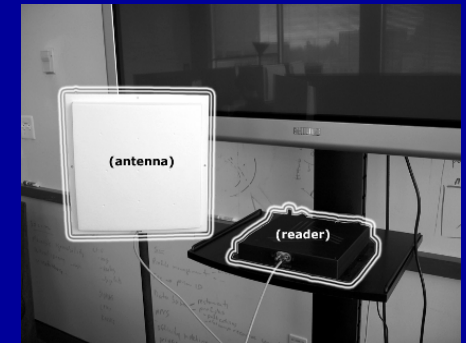
Academic Conferences as Social Spaces

- Sites for *mutual revelation*
 - Hear what others are doing
 - Talk about what I'm doing
 - Professional & personal
- Revelation opportunities are unevenly distributed
 - Presenters vs. non-presenters
 - Veterans vs. newcomers
- How can technology help?

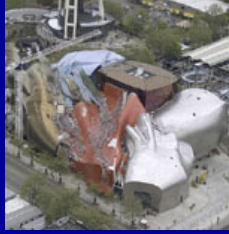


Proactive Displays

- Displays + sensors
(+ algorithms + policies + ...)
 - Large displays that can sense & respond appropriately to the people nearby
- Issues for proactive displays:
 - Context(s): Where should they go?
 - Content: What should they show?
 - Control: How will they know?



Experience UbiComp Project



- **Context(s)**
 - UbiComp 2003
 - Fifth International Conference on Ubiquitous Computing
 - Westin Seattle, 12-15 October
 - Paper / panel sessions (AutoSpeakerID)
 - Coffee breaks (Ticket2Talk)
- **Content**
 - Web-based profile database
 - Name, affiliation, photo(s), ...
- **Control**
 - Register, activate and wear RFID tags during the conference
 - Opt out at any time (delete profile, discard tag)

Proactive Displays at a Conference

- Design goals
 - Enhance the sense of *community* among attendees
 - Mesh with *existing practices* (calm technology)
 - Protect the *privacy* of participants ... & non-participants

Registration

E-mail Address:
(e.g., jane.doe@intel.com)

Full Name:
(e.g., Jane Doe)

Affiliation:
(e.g., University of Washington)

Photo:
Share a GIF/JPG photo of yourself.

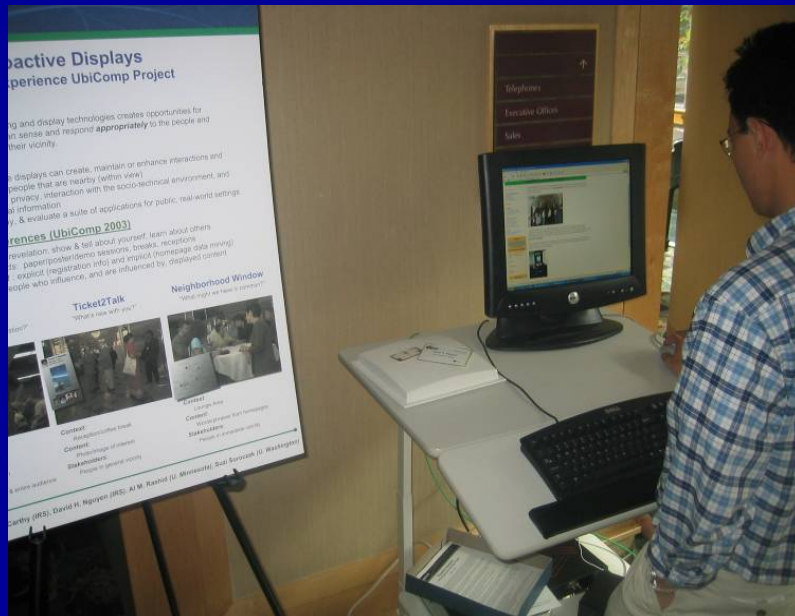
Ticket2Talk Image:
Share a GIF/JPG image of something you'd be happy to talk about with other UbiComp 2003 conference attendees.
Click [here](#) for more information on "tickets to talk").

Ticket2Talk Caption:

Homepage URL:

A few words about your interests:
Use a comma to delimit the concepts. [e.g. RFID, personal servers, kite boarding]

Activation



Experience!

AutoSpeakerID



Ticket2Talk



Neighborhood Window

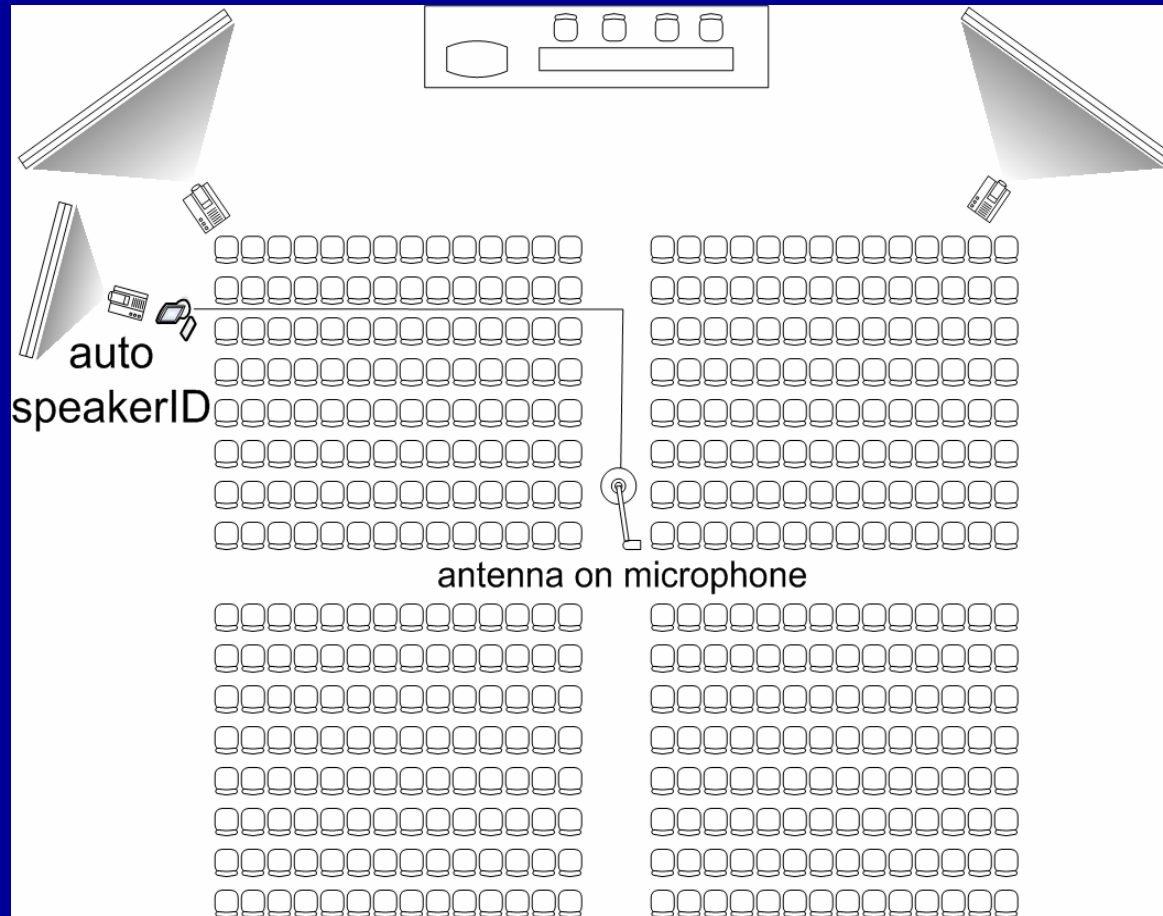


AutoSpeakerID

- Keynote/Paper/Panel Q&A “augmentation”
 - RFID: antenna (microphone), tag (badge)
 - Display photo, name, affiliation
 - Visual augmentation of common [oral] practice



AutoSpeakerID

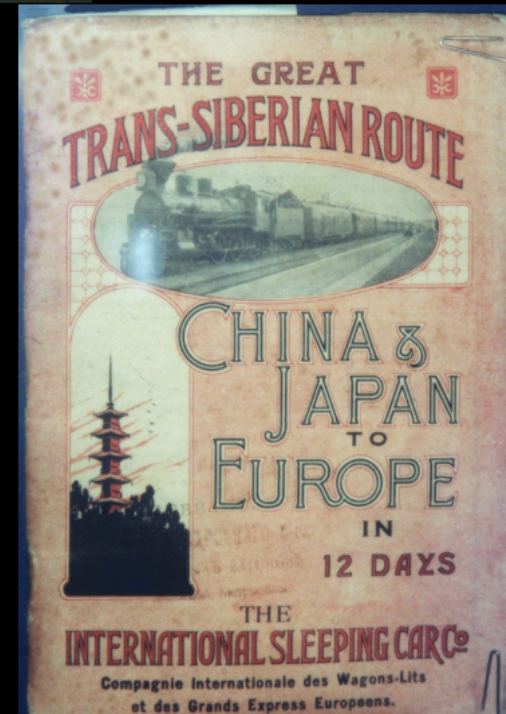


Ticket2Talk

- Coffee Break
 - *Explicitly* provided content
 - *Single* person (at a time)



Suzi Soroczak
University of Washington



Suzi Soroczak



Al R.

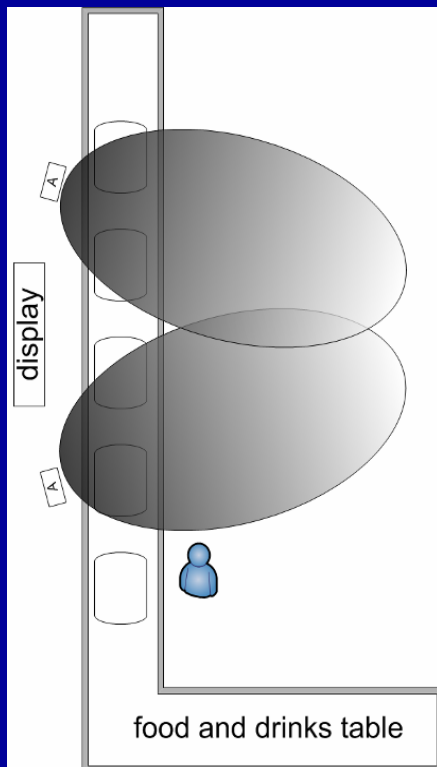


Joe McCarthy



David Nguyen

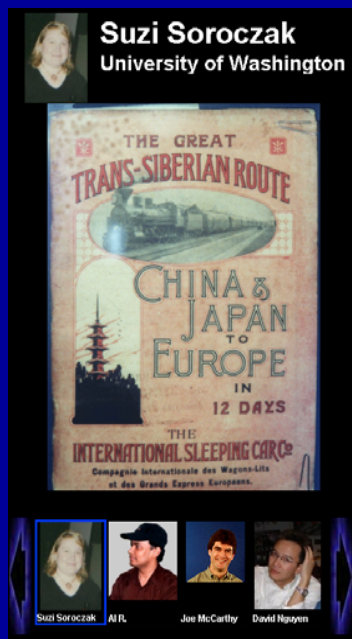
Ticket2Talk



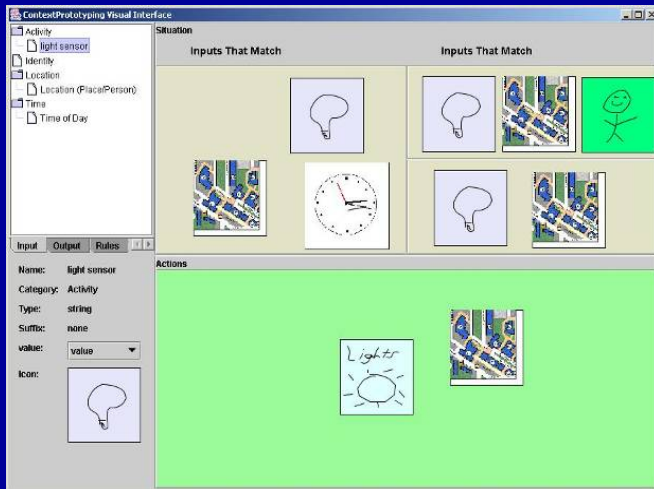
Ticket2Talk

- Queue Management: balancing freshness & fairness
 - Tag recency: +
 - Ticket recency: -
 - Minimize thrashing
 - “5 seconds of fame”

$$P_i = w_1 \cdot \frac{(\text{TimeOutPeriod} - \text{TimeSinceTagSeen}_i)}{\text{TimeOutPeriod}} \\ \times w_2 \cdot \frac{\min(\text{NumTickets}, \text{TicketCounter}_i)}{\text{NumTickets}}$$



Sample Tickets



Sample Tickets



Evaluation

Caveats

- Existing communities at conferences
 - Variations in stature, approachability
 - Newcomers vs. veterans
- Technological interventions
 - Complete invisibility is undesirable
 - Augmentation vs. interference
- Privacy
 - Human subjects issues

Setting & Data Collection

- Conference deployment: UbiComp 2003
 - Medium-sized, single-track, conference
 - 500 attendees (50% from USA)
 - Two proactive displays:
 - AutoSpeakerID (ASID)
 - Ticket2Talk (T2T)
- Systematic Observation
 - Observations + opportunistic interviews
- Post-conference Survey
 - Mix of multiple choice and open-ended response
 - 94 respondents (19% response rate)

Analysis

- Simple descriptive statistics

<i>Display Application</i>	<i>Positive Impact</i>	<i>Negative Impact</i>
AutoSpeakerID	71 (77%)	10 (11%)
Ticket2Talk	39 (41%)	3 (3%)

- Open-ended survey responses
 - Grounded approach
 - Open coding (multiple rounds)

Proactive Displays at a Conference

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Enhance Feeling of Community

- AutoSpeakerID

It was nice to be able to see who was speaking to put their question in context if I didn't hear or forgot the person's introduction.

- Ticket2Talk

I was chatting with someone I didn't know personally (small talk) about a recent presentation when I noticed his profile on the Ticket 2 Talk display and realized he was affiliated with an organization I really admire and would like to collaborate with ... Noticing this allowed me to redirect the conversation to that topic!

Mesh with Established Practices

- AutoSpeakerID

It seemed distracting - in the sessions I was in it seemed that virtually every person who approached the microphone began by commenting on the speaker ID (e.g. "oh it's working, yes that's me" or "it's not working for some reason").

- Ticket2Talk

People walk up with a big smile. Look at the person standing next to them and again at the display. Is that you?!? One is waving RFID tag in front of reader. Pick me up!

Manage Privacy Concerns

- Display agnostic (across both applications)

- Unconcerned

- ... it might had been nice that [the research] community directory information was downloaded automatically.

- Concerned

- I didn't want all this information to be available to everyone - would rather have more control over who gets to see what ... and might want to highlight interests differently to different people.

Discussion

- AutoSpeakerID
 - 50% of questioners' tags detected
 - Introductions: oral only, visual only, visual + oral
 - Spelling, intelligibility
 - “Gaming”
 - 3 people, 7 questions
 - 24 comments in survey (18+, 6-)



Gregory Abowd
University of Tigger



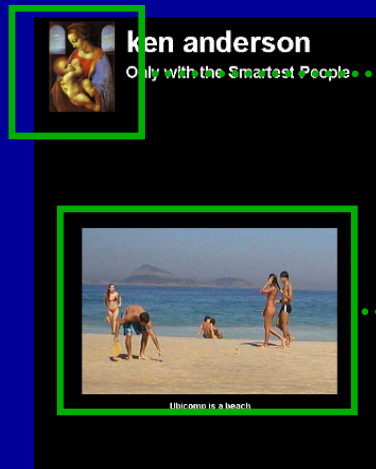
I'M THE REAL TREVOR
Intel Research



Bill Gates
Microsoft

Discussion

- Ticket2Talk
 - Conversations, awareness among old & new friends
 - Amarone, kitesurfing
 - Scuba diving
 - Provocative content

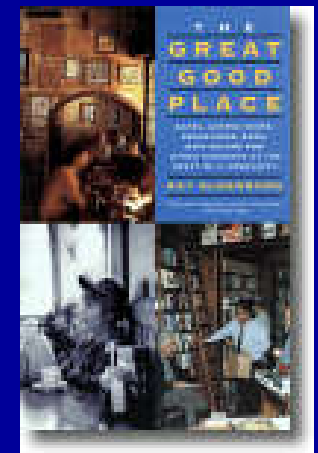


New Contexts

- Digital Homes
 - Implicit sharing of digital media
 - Family / visitors' photos
- Digital Workplaces
 - Knowledge management through serendipity
 - Nameless faces / faceless names
- Digital *Third Places*...



New Contexts



- The Great Good Place:
*Cafes, Coffee Shops, Bookstores, Bars, Hair Salons,
and Other Hangouts at the Heart of a Community*
– Ray Oldenburg



New Sources of Content

- Repositories



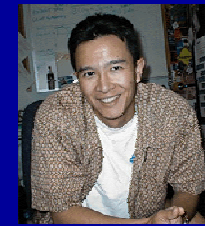
- Devices



Many thanks!

- Co-authors

- Suzi Soroczak (UW Information School)
- David Nguyen (Nokia Research)
- Al M. Rashid (Univ. Minnesota)



- On-site observers (& troubleshooters)

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- A cast of dozens in numerous supporting roles ...

- Ken Anderson, Gaetano Borriello, Waylon Brunette, Sunny Consolvo, Anind Dey, James Gurganus, Michael Ham, Sean Lanksbury, Eric Paulos, Trevor Pering, Pauline Powledge, Adam Rea, Bill Schilit, Ken Smith, ...

- ... and an attentive audience ... Questions?