
Re-thinking Fashion Trade Shows: creating conversation through real-time mobile tagging

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Abstract

In this paper we discuss our explorations encouraging discussion and information exchange in high-bandwidth, real-time settings such as trade shows, fairs and conferences. We detail the iterative construction and planned testing of the “PittiMobi” system, a mobile phone system designed to augment face to face communication between buyers, sellers and the press at a series of fashion trade shows. A platform for the creation of viral digital conversations that link people at physical gatherings is envisioned and discussed as a tool for further study.

Keywords

Trade shows, mobile computing, computer supported collaborative work, backchannel, event space

ACM Classification Keywords

H5.2. User Interfaces. C2.1. Network Architecture and Design: Wireless Communication.

Introduction

As we become increasingly reliant upon computers to allow us to build off the wisdom of others as we work, the true potential of some crowds nevertheless remains

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out of reach. One area that remains elusive is real-time social gatherings of people who share common interests, e.g. sports games, academic and professional conferences, and fashion trade shows.

We observe that such social gatherings display multiple channels of conversation. In traditional backchannel research, the primary mode of communication in a physical space has been identified as the *frontchannel*, while a simultaneous and invisible secondary means of communication is identified as the *backchannel* [5]. However, we believe that this definition may be too limited— while this use suffices for large presentations and lectures [2,3,4,5], people’s operational contexts in more fluid social gatherings can change so quickly that multiple focuses of attention can exist simultaneously. For example, at a fashion trade show, let’s say a buyer for a large department store is at a booth. While discussing a particular dress with the exhibitor, the buyer bumps into a colleague, who recommends to the buyer a shirt to look at elsewhere. We thus extend our definition of backchannel to include systems that allow users to consider multiple focuses of attention at the same time. Such a redefinition allows for a reduction of synchronicity in communication, a feature we felt essential for the expansion and application of mobile communication to more diverse social gatherings.

In this paper we present the design and implementation of a custom mobile tagging system built for the needs of a particular class of large social gathering—in this case, a fashion trade show. We leverage recent backchannel theory to tailor the system to address the needs of the show’s multiple user groups, and we experiment with both RFID and barcode tagging technologies to form the basis of our platform.

We close with a brief exploration of a future platform for the creation of viral backchannels in real time, which poses a universal hypothesis of digital conversations in physically social spaces.

Related Work

What draws people to social gatherings today is the chance to have face-to-face encounters, be they organized (workshops, speeches, etc.) or serendipitous (“networking”). As a result, conference schedules, spaces and software infrastructure are often designed solely to encourage physical communication. Digital support for attendees today is largely limited to websites for preparation, logistics and organization.

There is a growing sentiment in computer supported collaborative work (CSCW) that digital communication can serve to enhance face-to-face communication, instead of simply replacing it with a “virtual” approximation as digital meeting spaces do today. Rothenberg showed the prevalence and significance of digital backchannels in classrooms even as those same students attended physical classes [5]. This effect can also be seen anecdotally as laptops are beginning to be used at conferences for note taking and backchannel discussion via chat and instant message— however, these are merely hacks on existing conference structure. Indeed, they are most common at technical conferences where such hacks are more common.

We build upon this work to explore design opportunities for digital conversation that can be incorporated directly throughout the physical conference experience. Early efforts to “take the ‘back’ out of backchannel” (as Griswold called for in 2004) through formal integration with collocated gatherings have met with success, some

examples being providing students with mobile software like ActiveCampus [1] and establishing chat rooms for academic conferences [3]. Users thought that backchannel communications enhanced and did not distract from their normal experience; however, notable complaints came from speakers at the conference who felt left out of the backchannel communications. Rekimoto et. al. addressed this problem by displaying the backchannel on a screen visible to the conference speaker [4]. Further blurring of the line between the backchannel and the primary channel will be a crucial component to making digital conversation spaces coexist within the social norms of large gatherings.

Design Considerations

In this project we collaborated with Pitti Immagine, a leading organizer of trade shows for the international fashion industry. Our design intent was to help join the trade show's digital and physical worlds. At the same time, our particular challenge was to do so without disrupting the delicate event "ecosystem" that is each fashion trade show. Thus, while our work shares the aspirations of ubiquitous computing, we chose more traditionally straightforward and centralized interactions to control our impact. Furthermore, we expect that the desired experience of social gatherings will vary significantly, and are not developing a universal solution. Still, we hope to help address overarching themes with design patterns that are applicable to other types of social gatherings.

Design Process

In the following sections we describe the first three iterations we have taken in developing a system for large social events: preliminary user studies; design,

implementation, and evaluation of a canned prototype; and design, implementation and planned evaluation of a live prototype.

Preliminary Studies and Ethnography

We began our design process by immersing ourselves in a trade show to understand the experience and identify points for natural intervention. In Spring of 2007, a five-month student design workshop with employees of Pitti Immagine produced five conceptual contact points – registration, badges, entrance/exit points, extended attendee contact, and an online/onsite system. While the system described here focuses primarily on badges and an online/onsite system, all five points have stayed under the project's consideration (some through separate experiments).

After the workshop, we conducted ethnographic studies at the targeted event, the fashion show Pitti Uomo, held semiannually in Florence. With over 30,000 attendees, observation of Pitti Uomo revealed the fashion show experience to be characterized by highly stylized imagery, a reverence to aesthetic detail, and a focus on creating and fostering sociopolitical connections. We also conducted 20-30 scripted interviews with a cross-section of typical trade show attendees. These included fashion consumers—buyers and labels in search of new brands; fashion producers—brand owners and employees representing their goods; and observers—including members of the press. The interviews revealed a need from all parties for a better and faster understanding of a conference's social and physical ecosystem during their short stay. Many parties pointed to the conference handbook, hundreds of pages long, as their only guidance. Our lab viewed this pamphlet as representative of the isolating and

bewildering nature of today's large events that we aimed to replace.

First Prototype: PittiFolio

Our first prototype, "PittiFolio," was a conference badge and kiosk system that supplemented the event guidebook. The badge itself was simple and stylish, consisting of a simple RFID chip encased in laser-cut leather. Users tapped their badge at an exhibitor to "tag" it for later, and if two users tapped their badges simultaneously in a "virtual handshake", each would be sent the other's business card information. Later, users could visit a touch-screen kiosk [Fig. 1] to access information about people and places they had tagged.

We deployed PittiFolio in a subspace of Pitti Uomo in July 2007, with four fake exhibitors isolated from the main show. Thirty volunteer attendees, primarily fashion consumers and members of the press, used the prototype and were interviewed about the experience.



Figure 1. An attendee using PittiFolio to log into a kiosk

Feedback showed that users thought the RFID system was too "invisible"—even after tagging a location, many still needed pen and paper to jot down why they had tagged it. "Virtual handshakes" were also disliked as people enjoyed writing information about the person they met on the back of their business card—a subtlety that RFID failed to emulate. Most importantly, we discovered that kiosks were not ubiquitous enough. For attendees it was insufficient to have only occasional access to tagged information, as these notes were needed to help decide what to visit next before having time to check back with a kiosk. These discoveries led us to explore a purely digital system, where users could not only create and access notes, but also asynchronously understand the conference in real time.

Going Live: PittiMobi

The need for more versatile note-taking prompted us to build our next prototype, "PittiMobi", around mobile phones. We viewed phones as an unobtrusive computing platform that most users would bring with them regardless of the conference's type or size. In addition, phone cameras eliminated our reliance on custom RFID hardware: each brand or event could instead be labeled with a two-dimensional barcode in the QR code format which phone cameras could decode [Fig. 2]. QR code in particular was chosen for its quick decoding speed and its ability to encode full URLs.

With PittiMobi, once a brand's QR code is captured, the user can now use the phone's built-in microphone to record a voice note about that brand (e.g., "I like their jacket"). Users can save notes along with the brand and business card information to their phone and retrieve it on the phone at any time. Additionally, users can use their phone at any time to find tagged locations

on a map of the conference center. Later, when the user enters an area of wireless connectivity, all of the tags and voice notes the user has recorded about his day are uploaded from the phone to a central web site. This ensures that notes are not “trapped” on the cell phone and can be used elsewhere. This web site runs a modified version of the CMS software Drupal, which automatically creates website pages for places and notes that users can log in and access from home.

To promote widespread adoption, we designed the client software with compatibility in mind. Any cellular phone with J2ME and a camera can run the PittiMobi system. Core J2ME UI classes were rewritten to ensure aesthetics would not be sacrificed for compatibility.

At the time of this authoring, PittiMobi is scheduled for large-scale deployment at Pitti Uomo January 2008. The planned user test will involve barcodes for about 40 different brands in a main pavilion. A few thousand attendees are expected to visit this pavilion, and all will have the opportunity to install PittiMobi software on their cellular phones. (PittiMobi will be installed on request by researchers at the pavilion; in the future a download site will install it for users.) In addition, a VIP list of around 200 visitors will have the option to borrow one of twenty Nokia E65 “loaner phones” equipped with PittiMobi for the duration of their visit.

Future Work

We hope to scale the principles of PittiMobi up to entire trade shows. This would provide us with a platform for large-scale experimentation with digital augmentations of the conference experience. We believe PittiMobi can also do more to encourage direct collaboration between conference attendees.



Figure 2. An early prototype of tagging a booth with PittiMobi.

For instance, each conference attendee will be able to display a barcode on their phone representing their personal social profile within the PittiMobi online system and conduct a virtual handshake to link their profiles. Such handshakes can bootstrap mobile ad-hoc social networks that users can rely on for information both digitally and physically throughout the conference.

PittiMobi will also include a platform, currently in digital prototype, for impromptu conference connections called

“event spaces,” An event space is a mobile chat site created on demand for people at a common event to converse. A user that wishes to discuss, say, SampleBrand during Pitti Uomo uses PittiMobi to request the creation of a bar code for the Pitti Uomo “event space”. Then, any other attendees who capture that bar code can “join” the event space the initial user created, either joining in the initial user’s discussion or proposing another topic for discussion at Pitti Uomo.

In addition to traditional print or screen display, event space barcodes can also be displayed on the phone screen itself. We believe this feature makes event spaces suitable for impromptu conference use – as soon as one is created, its creator can tell anyone they meet to capture its barcode off their phone screen to instantly download the client and join the conversation. Those users in turn display the barcode for their own friends, and so on creating a loosely connected group using an event space to share their knowledge.

Event spaces can also be used within distinct social circles at conferences to stay in touch at times when maintained physical connection is not possible – for instance, “BrandA Alumni at Pitti Uomo” can be requested and proliferated from alumnus to alumnus throughout the conference. The event space can then be used for private discussion amongst said alumni at Pitti Uomo. In this case, an added benefit of viral spread is that existing members of a discussion room act as individual “gatekeepers” to decide on a person-by-person basis who else may join the event space.

Conclusions

We hope that explorations of the digital augmentation of conference environments will lead to valuable

insights on the role technology can play in mediating real-world connections at large social gatherings. Further, we hope that our multidisciplinary approach to designing fashion trade show technology for a very complex and untraditional target audience will inspire increased interdisciplinary work in both traditional human computer interaction and the growing field of interaction design.

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