

Interact.

Inform.

Inspire.

Conference Program



CHI2006
montréal



Conference at a Glance

	517 AB	517 C	511 ABDE	516 C	516 AB	510 ABCD	516 DE	511 CF	
SUN	Networking Gathering Palais des Congrès, Level 2 Foyer, 17:30 – 21:30 Course 1. HCI: Introduction and Overview - Room 514 ABC. 18:00 - 21:00								
	8:30 10:30	Opening Plenary Session: Scott Cook, Intuit: Creating 'Game Changing' Innovation - Room: 517ABC CHI Madness - Room: 517ABC							
MONDAY	11:30 13:00	Panel Usability from the CIO's Perspective	Papers Navigation	Papers Mobile Surfing & Effects of Wearables	Papers Games	Papers Privacy 1	Interactivity Listen!: Voice Interfaces	Experience Reports Usability Evaluations: Challenges & Solutions	
	14:30 16:00	Panel Managing International User Research	Papers Participatory Design	Papers Interaction Techniques: Haptic & Gestural	Papers Activity & Usability: Design Implications	Papers Social Computing 1	Interactivity PDAs, Space Invaders, & Chickens: Mobility & Collaboration		
	16:30 18:00	Research Overview Large Display Research	Papers End User Programming	Papers Personal Information Management	Papers Multidisplay Environments	Papers Managing Voice Input	alt.chi Design is Fun & People are Great	Experience Reports Design Representations	
TUESDAY	8:30	CHI Madness - Room: 517AB							
	9:00 10:30	Plenary Panel: Expert Design Critique: XBOX 360 - Room: 517AB							
	11:30 13:00	Panel Putting Personas to Work	Panel Institutionalizing HCI: What Do I-Schools Offer?	Papers Interaction Methods	Papers Understanding Programs & Interfaces	Papers Games & Performances	Papers Designing for Tangible Interactions	SIG Mobile iTV	Experience Reports End to End Design
	14:30 16:00	Panel Managing Deviant Behavior in Online Communities	Panel Building User Value into the Business Case	Papers Text Input	Papers Visualization & Search	Papers Information Handling	Papers Design: Creative & Historical Perspectives	Interactivity Meet the Artists: Music, Dance, & Painting	Experience Reports Real-World Design Solutions
	16:30 18:00	Panel Service Innovation & Design	Panel Agile Development: Opportunity or Fad?	Papers Automatic Generation & Usability	Papers Security	Papers Media	alt.chi It's a Small World After All		Experience Reports Usability in the Wild
WEDNESDAY	8:30	CHI Madness - Room: 517AB							
	9:00 10:30	Plenary Panel: Add a Dash of Interface: Taking Mash-Ups to the Next Level - Room 517AB							
	11:30 13:00	Panel Why Do Tagging Systems Work?	Panel Integrating Socially Relevant Projects into HCI Teaching	Papers Ubiquitous Computing	Papers Search & Navigation: Mobiles & Audio	Student Design Competition: Final Round	Papers Using Knowledge to Predict & Manage	Papers Collecting & Editing Photos	Experience Reports Managing Design
	14:30 16:00	Panel Does Think Aloud Work? How Do We Know?	Panel Design Communication: How Do You Get Your Point Across?	Papers Privacy 2	Papers Pen	Papers Everyday Use of Mobiles	Interactivity Touch Me: Haptics & Clothes	Papers Visualization 1	HCI Overviews HCI Overviews 1
	16:30 18:00	Panel The Route to the Sea for User Value	Research Overview End-User Programming	Papers Awareness & Presence	Papers Healthcare	Papers Online Communities	Papers Visualization 2	SIG The CHI Design Community	HCI Overviews HCI Overviews 2
THURSDAY	8:30	CHI Madness - Room: 517AB							
	9:00 10:30	Panel HCI Engineering for Disasters, Driving, and Distributed Work		Papers Novel Methods: Emotions, Gestures, Events	Papers Social Computing 2	Papers Selecting & Tracking	Papers Menus		Experience Reports Creative User Experience Methods
	11:30 13:00	Panel The State of Tangible Interfaces: Projects, Studies, & Open Issues		Papers Beliefs & Affect		Papers Gestures & Visualizations	alt.chi Loving Me Loving You	Papers Disabilities	Experience Reports User-Centered Design for Learning & Education
	14:30 16:00		Panel "It's About the Information, Stupid!"	Papers Social Computing 3	Papers Usability Methods	Papers Interacting with Large Surfaces	Papers Computer-Mediated Communication		Experience Reports Mobile Design Experiences
16:30 18:00	Closing Plenary Session: Digital Comics: An Art Form in Transition, Scott McCloud - Room: 517ABC								

Conference at a Glance

	515 C	513 CD	513 EF	514 ABC	513 AB	515 AB	COMMONS	SPECIAL EVENTS	
8:30 10:30									
11:30 13:00	SIG International Usability Evaluation: Issues & Strategies	Course 2 An Introduction to Designing for the Scent of Information	Course 5 Web Bloopers: Avoiding Common Web Design Mistakes	Course 7 Top 10 Field Interview Mistakes: Recognizing & Preventing Them	Course 9 Faceted Metadata for Information Architecture & Search		Conference Reception, Posters, & Exhibits Grand Opening 18:30 – 21:30	Newcomers' Orientation Room 511ABCD 10:30 – 11:00 Focus on Doctoral Consortium & Workshop Posters Level 2 Foyer 16:00 – 16:30	MONDAY
14:30 16:00	SIG Testing Interactive Software	Course 3 Designing for the Scent of Information: Advanced Concepts		Course 8 Building Affinity Diagrams to Reveal User Needs & Engage Developers					
16:30 18:00	SIG Producing HCI-Competent Managers, CIOs, & CEOs	Course 4 The Goldilocks Content Framework: What Users Want		Course 6 An Exercise in the Politics of Usability: Test Your Skills					
8:30									
9:00 10:30		Course 13 The Usability Engineering Lifecycle	Course 10 Understanding Users in Context: An In-Depth Introduction to Fieldwork	Course 11 Re-Positioning User Experience as a Strategic Process	Course 14 Usability & Product Development: A Usability Course for Management	Course 12 Personal Information Management in Theory & Practice	Commons Open: 08:00 – 20:00 Exhibits, Interactivity 10:30 – 18:00 Focus on Posters, including Student Design Competition 10:30 – 11:30 Job Fair 18:00 – 20:00		TUESDAY
11:30 13:00	SIG Rhetoric & Argumentation								
14:30 16:00	SIG Assessing & Improving Information Usability								
16:30 18:00	SIG Designing Environments for Outdoors Gaming & Play								
8:30									
9:00 10:30		Course 15 The Art of Speaking: Fundamentals for HCI Professionals: Part 1	Course 19 From Usability Testing to User Experience: Tools for Data Collection & Analysis	Course 20 Analyzing Qualitative Data from Field Studies	Course 18 Designing for User Efficiency	Course 17 Web Design for Usability	Commons Open: 08:00 – 18:00 Exhibits, Interactivity 10:30 – 18:00 Focus on Posters 10:30 – 11:30	SIGCHI Member Meeting Room 511ABDE 18:10 – 19:30 Hospitality Events Hyatt Regency Montréal 18:30 – 20:30	WEDNESDAY
11:30 13:00	SIG The CHI Engineering Community								
14:30 16:00	SIG The CHI Management Community	Course 16 The Art of Speaking: Fundamentals for HCI Professionals: Part 2							
16:30 18:00	SIG The CHI Education Community								
8:30									
9:00 10:30	SIG Tips & Tricks for Better Usability Test Recommendations	Course 22 The Art of Speaking: Advanced Skills for the Lecture Hall & the Hallway		Course 24 How to Build Rich Personas from Field Data	Course 21 Usable for the World: A Practical Guide to International User Studies		Commons Open: 08:00 – 12:00 Exhibits, Interactivity 10:30 – 12:00 Focus on Posters 10:30 – 11:30		THURSDAY
11:30 13:00	SIG Usability Community: Past, Present, & Future			Course 25 How to Collect Field Data & Produce a Tested Design in 1-8 Weeks					
14:30 16:00	SIG Online Health Communities	Course 23 Designing Responsive Software							
16:30 18:00									

Welcome from the Chairs



Welcome to CHI 2006! CHI is the leading international conference on human-computer interaction (HCI). It provides an opportunity to interact with your colleagues, to inform each other about the latest results and methods in the HCI field, and to inspire each other to move the field forward.

CHI takes on some new forms this year. We have expanded the technical program to four days, in large part due to the growth of activity in the many areas of HCI. We have made courses part of the regular technical program and have included them in the registration fee.

This year we have made an explicit effort to engage the many communities that make up the CHI field. The goal has been to ensure that the conference program contains events that will appeal to all communities. Of course, many events are cross-cutting, appealing to multiple communities.

- Design – Design processes for creating user experiences; user interface innovations.
- Education – Advancing HCI education at all levels.
- Engineering – Organizing the design and construction of interactive artifacts to achieve desired outcomes.
- Management – The business and organizational sides of HCI.
- Research – Scientifically advancing the state of the field in all areas.
- Usability – Methods, tools, and strategies to improve the user experience of products and services.

The CHI 2006 conference is being held at the Palais des Congrès (convention center) in the heart of Montréal. This facility is within walking distance of many attractions. The conference hotels are all clustered near the Palais. Montréal is a wonderful, cosmopolitan city, an interesting mix of European and North American influences.

We hope you enjoy this year's conference.

Gary Olson
Conference Chair

Robin Jeffries
Technical Program Chair

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Conference Committee

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For the latest tools in HCI research and usability testing, visit the Noldus booth! Our innovative solutions take your work to the next level. We offer scalable solutions that fit everything from straightforward usability testing to sophisticated multimodal HCI research. New items on display:

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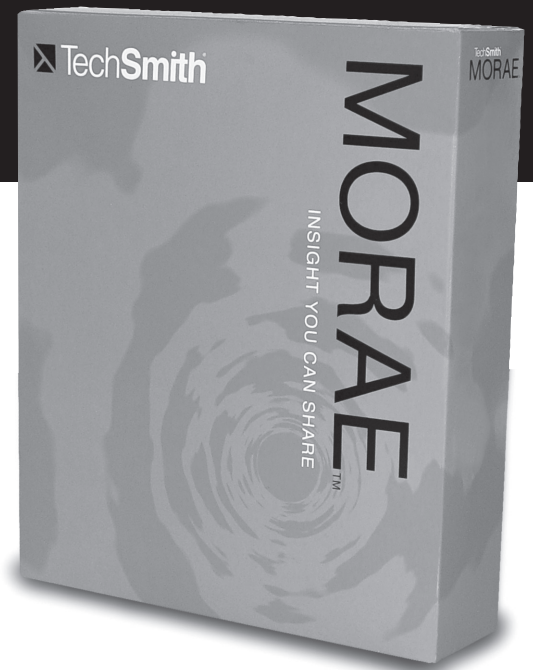
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General Information

ACM SIGCHI

The CHI 2006 Conference is sponsored by ACM's Special Interest group on Computer-Human Interaction (ACM SIGCHI). ACM, the Association for Computing Machinery, is a major force in advancing the skills and knowledge of Information Technology (IT) professionals and students throughout the world. ACM serves as an umbrella organization offering its 71,000 members a variety of forums in order to fulfill its members' needs, the delivery of cutting edge technical information, the transfer of ideas from theory to practice, and opportunities for information exchange. Providing high quality products and services, world-class journals and magazines, dynamic special interest groups, numerous 'main event' conferences, tutorials, workshops, local special interest groups and chapters, and electronic forums, ACM is the resource for lifelong learning in the rapidly changing IT field.

SIGCHI is the premier international society for professionals, academics, and students who are interested in human-technology and human-computer interaction (HCI). We provide a forum for the discussion of all aspects of HCI through our conferences, including our flagship CHI conference, publications, web sites, email discussion groups, and other services. We advance education in HCI through courses, workshops, and outreach and we promote informal access to a wide range of individuals and organizations involved in HCI. Members can be involved in HCI-related activities with others in their region through local SIGCHI chapters.

Visit our booth at the conference; come to our membership meeting on Wednesday at 6:10 in Room 511ABCDE; or visit www.sigchi.org to learn more about SIGCHI

Membership Information

Please contact ACM's Member Services Department online: www.acm.org

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USA

Sessions Overview

The CHI 2006 technical program showcases presentations of outstanding human-computer interaction (HCI) research, demonstrations of new and innovative technology, discussions of timely and controversial issues, and presentations of the latest developments in HCI design and practice.

Pre-Conference (Saturday–Sunday)

Doctoral Consortium

The doctoral consortium provides an opportunity for a group of invited doctoral students to explore their research interests and participate in an interdisciplinary workshop with other students and a group of experienced researchers. Participant posters will be shown in the Commons starting Monday at 16:00.

Doctoral Consortium Faculty:

[CHAIR] John M. Carroll, *The Pennsylvania State University, USA*
Alan Borning, *University of Washington, USA*
Kori Inkpen, *Dalhousie University, Canada*
Bonnie Nardi, *University of California, Irvine, USA*
Stephen Payne, *University of Manchester, UK*

Workshops

Workshops provide a valuable opportunity for small communities of people with diverse perspectives to engage in rich one and two-day discussions about topics of common interest. Workshop participants were pre-selected based on submitted position papers and results will be displayed as posters in the Commons starting Monday at 16:00.

Course: Human-Computer Interaction: Introduction and Overview

Location: Room 514ABC

Time: Sunday, 18:00 – 21:00

Keith A. Butler, Robert J.K. Jacob, David Kieras

This course is a tried-and-true introduction to the field of human-computer interaction (HCI). It has become a CHI conference tradition. If you are a newcomer to the field of HCI, this tutorial will give you the background you need to get the most out of the CHI conference.

Refer to page 23 for more information on this course.

Conference

The CHI technical program includes presentations and posters.

Choosing Sessions

The CHI 2006 Conference Proceedings and Extended Abstracts contain information about each presentation. You may wish to refer to these materials in the DVD in your conference bag to help you choose which sessions to attend. Each morning, before the first session of the day, we will also present CHI Madness, a fast-paced overview of many of the presentations of the day, to help you decide how to spend your time that day. You can also attend the newcomers orientation at 10:30 on Monday where we offer suggestions on planning your conference experience. Conference volunteers are also available to answer questions.

Leaving Sessions

If you plan to leave during the middle of a session, please be considerate of the speakers and others around you by taking a seat near an exit.

Presentation/Session Length

Approximate lengths of each type of session are:

alt.chi	15 minutes
HCI Overviews	30 minutes
Experience Reports	30 minutes
Interactivity	15 minutes
Panels	90 minutes
Papers	30 minutes
Notes	15 minutes
SIGs	90 minutes

Expect about the last third of each presentation to be used for a question and answer session.

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These invited sessions allow controversial, hard to publish, and/or alternative perspectives on HCI to be expressed in a format that encourages lively audience participation.

CHI Madness

At the beginning of each day, we will give a fast-paced overview of many elements of that day's program. This will take place in the plenary room.

Courses

For the first time, the CHI conference offers courses as part of the technical program. The goal of these courses is to provide professional development opportunities for people in the HCI community or those wishing to join.

Courses are strictly limited and pre-registration is required. Please register for courses at the registration desk on the Level 2. CHI 2006 regrets any inconvenience should the course you wish to attend be filled. Please check with the registration desk periodically to see if a space has opened in a particular class due to cancellation.

HCI Overviews

HCI overviews showcase a particular organization or virtual organization that is focused on some aspect of HCI. Of interest is the big picture: how did a group come into being; how do the participants influence each other as well as other groups; the group's plans and visions for the future; and the basis for these plans.

Invited Research Overviews

This year, we will have two Invited Research Overviews, where leading researchers will provide an overview of a specific research area.

Interactivity

Experience HCI yourself at the Chamber, a hub for Interactivity activities in the Commons. Inside the Chamber are hands-on setups that push the boundaries of tangible, multimodal, collaborative, and multimedia interfaces. Interactivity participants will also present their research in a regular conference session.

Experience Reports

Experience reports are examples of the practice of HCI that are based on real world experience, described and generalized in a way to be of interest and instructive to other members of the community.

Panels

Panels let audience members understand and interact with different perspectives on an emerging or controversial topic. Panels stimulate thought and discussion about ideas and issues of interest to the human-computer interaction community. We have panels from the six different communities, as well as many cross-community panels.

Papers and CHI Notes

Research Papers present significant contributions to research, development, and practice in all areas of the field of human-computer interaction. All accepted papers were rigorously reviewed. Papers in the CHI Proceedings are read and cited worldwide and have wide impact on the development of HCI principles, theories, and techniques, and on their practical application.

CHI Notes is a new participation category, modeled on the successful UIST TechNotes and CSCW Notes categories. CHI Notes are briefer and more focused than Research Papers and follow the same reviewing process used for the Papers. The goal is to increase the diversity of the fully-reviewed technical program by encouraging submissions that might not fit well within the traditional Papers program.

Special Interest Groups (SIGs)

Special Interest Groups enable conference attendees who share similar interests to meet for 90 minutes of facilitated discussion.

Student Design Competition

Professionals in the field of human-computer interaction are unique in their ability to impact the quality of people's lives. Tackling real-world problems, HCI researchers and designers - in both academia and industry - face many fascinating challenges in designing usable and enjoyable services, applications, interfaces, and environments. This year's Student Design Competition problem challenged students to apply their creativity to designing an experience in the area of health and fitness.

CHI 2006 Student Design Competition entries will be found on posters in the Commons. Be sure to review them and attend the finalists' presentations on Wednesday at 11:30 and see if you can guess the winners to be announced at the Closing Plenary on Thursday.

Work-in-Progress Posters

These are brief descriptions of work that is ongoing. They will be presented during the Conference Reception as posters and highlighted in various breaks. This is your opportunity to see the very latest work in HCI and interact with the authors in as much depth as you like.

Special Events

Networking Gathering

Location: Palais des Congrès, Level 2 foyer

Time: Sunday, 17:30 – 20:00

CHI participants are invited to gather, catch up with old friends and make newcomers feel welcome! Complimentary snacks and light appetizers will be served and a cash bar is available.

Conference Reception and Exhibits Grand Opening

Location: The Commons (Hall 210)

Time: Monday, 18:30 – 21:30

Join us for an evening of fellowship, fine food, and circus acrobatics at the Palais des Congrès. You will see some of Montréal's famous street performers and aerial acrobats who will have performances throughout the evening! You will also have a chance to visit our exhibitors, interact with the authors of Work-in-Progress posters, Student Design Competition posters, Doctoral Consortium posters, and posters describing the Workshops held over the preceding weekend. The event is included with the Conference registration. Additional tickets may be purchased at Registration for \$50 USD.

Newcomers' Orientation

Location: Room 511ABDE

Time: Monday, 10:30 – 11:00

Join ACM SIGCHI President Joseph Konstan and Conference Chair Gary Olson after the Opening Plenary and find out how to get the most from CHI. This session offers first-time attendees information on navigating the conference and making session choices in an environment with many options. The session will also provide a brief history of SIGCHI and an overview of its current structure and activities.

Job Fair

Location: The Commons (Hall 210)

Time: Tuesday, 18:00 – 20:00

To enhance recruiting this year, CHI 2006 is featuring a Job Fair on Tuesday evening. Recruiters and job candidates are invited to take advantage of this key event. Visit the Recruiting Boards and designated exhibit booths throughout the conference to find out more about available positions.

Champion Sponsor Recruiters:

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Teligence
The Mathworks, Inc
The Vanguard Group
Ubisoft
VMware, Inc.

Recruiting Boards

Please check the recruiting boards in the poster area for information about career opportunities with different organizations. You may submit your resume in response to these opportunities to the CHI 2006 Information Booth. The recruiting boards open at 18:30 Monday evening and will be available during the Commons' hour of operation.

Hospitality Events

Location: Hyatt Regency Montréal

Time: Wednesday, 18:30 – 20:30

Champion Sponsors:

Google, Inc., *Hospitalité*
Intuit, *Café Fleuri*
Microsoft Corporation, *Alfred-Rouleau A*

Others:

Human Factors International, Inc., *Été des Indiens*

Exhibits

Location: The Commons (Hall 210)

Hours:

Monday 18:30 – 21:30 (Grand Opening)
Tuesday 10:30 – 18:00 (Job Fair 18:00 – 20:00)
Wednesday 10:30 – 18:00
Thursday 10:30 – 12:00

Exhibits provide an opportunity for conference attendees to learn about a broad spectrum of HCI offerings. They feature the latest HCI-oriented products and services from commercial vendors, institutions, and publishers.

The Exhibit area opens at the beginning of the conference reception on Monday evening. See page 100 for individual exhibit descriptions.

Interactive Posters

Location: The Commons (Hall 210)

Time: During CHI Commons hours

Posters for the Work-in-Progress, Doctoral Consortium, Student Design Competition, and Workshops are on display beginning Monday and throughout the rest of the conference during the Commons hours. Visit the poster authors and discuss their work with them directly during Monday's reception and during other breaks.

Monday afternoon break (16:00 – 16:30),

View the Workshop and Doctoral Consortium posters in the Foyer on Level 2

Monday evening at the Conference Reception

Authors of odd numbered posters will be at their posters 18:30 – 19:30

Authors of even numbered posters will be at their posters 20:00 – 21:00

Tuesday morning break (10:30 – 11:30), The Commons

Interact with authors of Work-in-Progress posters 57 – 121

Interact with authors of the Student Design Competition posters

Wednesday morning break (10:30 – 11:30), The Commons
Interact with authors of Work-in-Progress posters 122 – 187

Thursday morning break (10:30 – 11:30), The Commons
Interact with authors of Work-in-Progress posters 188 – 252

ACM SIGCHI Member Meeting

Location: Room 511ABDE

Time: Wednesday, 18:10 – 19:30

SIGCHI officers will present ongoing programs and activities, followed by an audience question and answer session. Participants interested in shaping SIGCHI's future are encouraged to attend.

CHI 2006 at the Palais

Internet Access

Wireless high-speed Internet access is provided by CHI 2006 from Sunday to Thursday throughout the Palais des Congrès de Montréal for CHI 2006. Hotspots exist throughout the building and are posted for your convenience. Hard wire connections and computers are not provided.

CHI 2006 Information Booth

Location: The Commons (Hall 210)

Hours:

Monday	8:00 – 18:00 (Level 2 Foyer)
Tuesday	8:00 – 17:30
Wednesday	8:00 – 17:30
Thursday	8:00 – 12:00

The CHI 2006 information booth will be staffed by CHI local members and student volunteers who are happy to assist you. The information booth formally opens on Monday. If you need assistance during the pre-conference dates, please inquire at the registration desk.

Lunch with Locals

The CHI local members offer complimentary local tours and a 'Lunch with a Local' program, uniquely designed for your enjoyment. You can sign up for these activities by visiting the Information Booth at the beginning of the conference.

Speaker Preparation and Rehearsal

Location: Room 512G

Hours:

Sunday	9:00 – 18:00
Monday	7:30 – 18:00
Tuesday	7:30 – 18:00
Wednesday	7:30 – 18:00
Thursday	7:30 – 14:30

Conference speakers may reserve a LCD projector in this room to help them prepare materials and rehearse for their presentations. There is only one room for your use, therefore space is limited. Please, reserve in advance in room 512G.

Registration

Location: Level 2, Area 200

Hours:

Sunday	9:00 – 19:30
Monday	7:00 – 21:30
Tuesday	8:00 – 18:30
Wednesday	8:00 – 18:30
Thursday	8:00 – 14:30

Pre-registered attendees can pick up their badges and conference materials at Registration. On-site registration is also available.

Accompanying Persons

CHI 2006 welcomes accompanying persons, ages 18 or older, to the conference to share in the excitement of the event. Accompanying persons are encouraged to register for one-day access.

Additional tickets for the conference reception only may be purchased at the CHI Registration Desk for US \$50. Reception tickets will not be sold on the evening of the event. Each reception ticket includes one complimentary beer, wine, or soda.

Student Volunteers

Student Volunteers are great sources of information about the conference. Many are working on their Masters or Ph.D.s and some are looking for job or internship opportunities. They help give the conference a friendly, helpful face and work hard to assist during the whole conference. Please be courteous to them and feel free to ask them questions. You can identify Student Volunteers by their white T-shirts.

The Commons

Location: Hall 210

Hours:

Monday	18:30 – 21:30
Tuesday	8:00 – 20:00
Wednesday	8:00 – 18:00
Thursday	8:00 – 12:00

The Commons is a large central area that is the site for all main conference breaks, exhibits, posters, and other interactive activities. Seating areas make The Commons the perfect place to meet with old or new friends, enjoy a refreshing beverage during a coffee break, or just relax between sessions. You will also find tables labeled with the names of each of the six communities, so you will be able to interact with others from your own community or other communities.

Coffee Breaks

The complimentary morning and afternoon coffee breaks take place as follows:

Monday

10:30 – 11:30: Outside the meeting rooms on Level 5 & Level 2
15:30 – 16:00: Outside the meeting rooms on Level 5 & Level 2

Tuesday

10:30 – 11:30: CHI Commons
16:00 – 16:30: CHI Commons

Wednesday

10:30 – 11:30: CHI Commons
16:00 – 16:30: CHI Commons

Thursday

10:30 – 11:30: CHI Commons
16:00 – 16:30: Outside Room 517

Conference Management Office

Location: Room 512D

The Conference Management Office is available to address your questions regarding lost & found items, special access needs, dietary issues, or audio-visual equipment for presenters. We may be able to assist with other issues. Stop by when you do not know where else to turn.

Press Office

Location: Room 512C

CHI 2006 welcomes members of the Press! Please stop by the CHI 2006 Chair's Office to get information on scheduled Press Events and to learn more about CHI 2006, SIGCHI, and future CHI conferences. CHI 2006 media coordinators will be happy to schedule interviews with selected authors at the conference.

Policies

Cell Phones

CHI 2006 requests that all cellular phones, pagers, and other equipment with audible alarms be turned off in all sessions as a courtesy to the presenters and to the other attendees.

Recording

The use of any type of audio or video recording device is not permitted during any part of the conference. The use of still cameras is permissible. However, reprinting photographs in print or electronic publications is prohibited without the written permission of the people photographed.

Bloggging and Photosharing

CHI encourages conference participants to blog CHI while at the event.

Please add the category/keyword of "CHI2006" to your blog entries.

To make sure that your blog is discovered, please either:

- Trackback your blog entries to the "blogging chi" entry at the CHI 2006 site, www.chi2006.org/blogs/official/archives/2006/02/bloggging_chi_re.html
- Leave a comment that provides a link to your blog posts at the above site.

We also encourage photosharing by services such as flickr.

Again, please add the tag "CHI2006" to your photos.

You may link those pages to us via the comment field at www.chi2006.org/blogs/official/archives/2006/02/bloggging_chi_re.html

Alcoholic Beverages

The legal drinking age in Quebec is 18 years old.

Smoking

The Palais des Congrès de Montréal is a non-smoking facility.

Montréal, Quebec

Montréal is a spectacular blend of Old World charm and North American modernity. You can count on a memorable convention while you're here, thanks to the array of attractions and activities offered throughout the city.

The Palais de Congrès de Montréal is located at the heart of four city districts. From the Palais, visitors can easily access the Quartier International, Chinatown, the downtown business core, or Old Montréal. Visitors heading to the Palais will find themselves at the very center of a bustling and animated downtown, only a five-minute walk from some 12,000 hotel rooms in a safe and friendly environment.

Attire

CHI conferences are casual dress. A light jacket and/or sweater is suggested for the evenings. During the later part of April, Montréalers find themselves enjoying the re-birth of spring with daytime temperatures in the 50's (avg. 10°C / 51°F) and late evening getting into the 30's (avg. 1°C / 34°F). You may expect a range of weather during the conference; we recommend dressing in layers.

Currency Exchange

It's easy to exchange foreign currency in Montréal. You can cash travellers cheques at banks and exchange offices (Bureau de change in French) which are common in the areas you'll be visiting. Banking and credit cards are also welcome, so you can withdraw with your bank card, use major credit cards, or even pay directly at stores, restaurants, etc. Many businesses will also accept US dollars and travellers cheques, but it's always a good idea to carry Canadian money with you.

Taxes

Two kinds of taxes apply in Montréal: the 7% federal Goods and Services Tax (GST) and Québec's 7.5% provincial tax (QST). The GST applies to most purchases. However, it is refundable if you qualify.

Visit <http://www.cra-arc.gc.ca/visitors/> for information on qualifying and the required forms.

Transportation

City Transportation

The Société de Transportation de Montréal (STM) offers tourists and convention delegates passes valid for a one, three, or seven-day period, allowing them unlimited access to its bus and metro network

Fares (bus and métro): Adult fare: \$2.50

Booklet of 6 tickets: \$11.25

The STM tourist pass: 1 day, \$8; 3 days, \$16

Bus

514-842-2281

L'Aerobus is the shuttle service from Montréal's Pierre Elliott Trudeau International Airport to the Montréal Central Bus Station. For more information on bus schedules and fares, contact the Station Central d'Autobus Montréal. The staff can provide schedule and fare information for all bus service from Montréal, including the independent companies that provide service to all Québec and some Ontario destinations.

Complimentary Minibus

514-631-1856

A complimentary minibus shuttle service is also available between the Montréal Central Bus Station and major downtown hotels. Please call to make a reservation for the minibus shuttle service.

Metro

The Montréal metro is made up of 65 stations spread out along four lines. The metro station closest to the Palais de Congrès is the Place-d'Armes on the Orange line. Following are the hours of operation for the metro lines in Montréal:

Green and Orange line

Monday to Friday and Sunday 5:30 – 00:30

Saturday 5:30 – 1:00

Yellow line

Monday to Friday and Sunday 5:30 – 1:00

Saturday 5:30 – 1:30

Blue line

Every day 5:30 – 00:15

Taxi Services

Diamond Taxi: 514-273-6331

Taxi Co-op Montréal: 514-725-2667

Local Conference Hotels

Delta Centre-Ville

(514) 879-1370

777 University Street

Montréal (Quebec) Canada H3C 3Z7

Fairmont Queen Elizabeth Hotel

(514) 954-2221

900 René-Levesque Boulevard West

Montréal (Québec) Canada H3B 4A5

Holiday Inn Select Montréal Centre-Ville

(514) 878-9888

99 Viger Avenue and St. Urban Street

Montréal (Québec) Canada H2Z 1E9

Hyatt Regency Montréal (Conference Headquarters)

(514) 982-1234

1255 Jeanne-Mance, PO Box 130

Montréal (Québec) Canada H5B 1E5

Le Centre Sheraton

(514) 878-2000

1201 René-Levesque Boulevard West

Montréal (Québec) Canada H3B 2L7

SIGCHI 2006 Awards

2006 Lifetime Achievement Award Winners

Judith S. Olson and Gary M. Olson

Gary M. Olson is Paul M. Fitts Collegiate Professor of Human Computer Interaction at the University of Michigan, a Professor and Associate Dean for Research in the School of Information, and a Professor in the Department of Psychology. Since 1993 he has been Professor of Psychology at the Institute of Psychology, Chinese Academy of Science, Beijing.

Judith S. Olson is Richard W. Pew Collegiate Professor of Human Computer Interaction at the University of Michigan, a Professor in the School of Information, the Stephen M. Ross School of Business, and the Department of Psychology.

Both have been extremely active in CHI affairs: Gary is Conference Chair of CHI 2006. Judy served as co-chair for papers for CHI 94. Gary and Judy together served as technical program co-chairs for CHI 91 and as papers co-chairs for the 1996 conference on Computer Supported Cooperative Work, CSCW. Gary served as conference co-chair for DIS 95, DIS 97, and CSCW 2004.

The fact that they co-chaired the program for CSCW 96 is symptomatic, for their major contributions have been to the study of collaboration, which they do by practicing what they preach and study. For many years they have studied collaboration, first in the School of Business at the University of Michigan and now in the School of Information. Although both have published prolifically independently, they have been co-authors together on approximately 49 of their papers.

Both Gary and Judy have each made substantive, independent, original contributions to the fields of human-computer interaction and collaboration, and have served these fields well through academic and leadership positions at the University of Michigan, on editorial boards of the major journals, service to the professional societies (CHI, CSCW, ACM), and as major members of the organizing committees of CHI's international conferences. Although each stands alone as a strong, independent contributor and was each separately inducted into the CHI Academy, this award recognizes their major, lifetime impact as the collaborative study of collaboration: not only making a major contribution to the development of the science of collaboration, but living the same role themselves. We therefore feel it is only fitting that this award be made to the joint team of Gary M. Olson and Judith S. Olson. This award honors their long, productive collaboration as a single, unique contribution to the field of computer-human interaction, or perhaps more accurately, of human-human collaboration, mediated and enhanced through modern technologies.

2006 CHI Academy Inductees

Scott Hudson

Scott Hudson is a Professor in the Human-Computer Interaction Institute at Carnegie Mellon University where he directs the HCII Ph.D. program. His research focuses on exploration of new interaction techniques and software tools to assist interface development. With over 30 CHI and UIST papers, his impressive body of work includes investigation of database management, interactive and spreadsheet-based specification of user interfaces, direct manipulation interfaces (e.g., integrating snapping and gesture, rule-based techniques, layout by example, light-weight constraints), authoring multimedia documents, information visualization (e.g., ambient displays, information percolator, information collages, kinetic typography), pen-based interaction, sensor-based statistical models of interruptability, and privacy and disruption tradeoffs in awareness systems. His community service record is equally impressive. He serves as a regular member of the CHI and UIST program committees and was a founding associate editor of ACM TOCHI.

Hiroshi Ishii

Hiroshi Ishii is Associate Professor at the MIT Media Lab, where he founded and continues to head the Tangible Media Group. He has led the field in exploring how people live on the "border" between the digital and tangible worlds. His research group has developed an impressive series of creative and influential demonstrations, such as mediaBlocks, Luminous Room, ambientROOM, musicBottles, metaDESK, Illuminating Clay, I/O Brush, Actuated Workbench, and numerous others. These explorations all integrate the digital with the physical, pointing the way to a world of ubiquitous computing that draws on human physical embodiment and appeals to the senses. In addition to his keen understanding of the underlying philosophy and principles, Ishii has brought a unique sense of beauty and playfulness to interaction design.

Michel Beaudouin-Lafon

Michel Beaudouin-Lafon is Director of the Laboratoire de Recherche en Informatique at Université Paris-Sud and CNRS and Professor in Computer Science at Université Paris-Sud. Michel was instrumental in establishing human-computer interaction as a discipline in France and he was one of the founders and first president of AFIHM, the French national equivalent of ACM SIGCHI. In recent years he has played major roles in the CHI, UIST, and ECSCW conferences and is currently member-at-large of the ACM Council and member of the ACM Publications Board. His research includes both technical/engineering aspects of interface construction

and development and design aspects with work on novel interaction techniques including recent work on two handed zoom and point interactions that support Fitts' Law selection over many orders of magnitude, even on small screens. He started his academic career working on Petri Nets, but his interest in interfaces developed early including a paper in 1987 on "A Framework for Man-Machine Interface Design" at a major UNIX conference. While covering many areas since then, some of his recent innovative interface techniques are still applied to Petri Net design environments. Michel's research work continues to inspire and excite readers and his AVI paper in 2004 has been one of the most heavily downloaded papers in the ACM Digital Library

Jakob Nielsen

Jakob Nielsen is a principal of Nielsen Norman group. He coined the term 'Discount Usability Engineering' and is one of the most prolific authors of the HCI field. A co-inventor of the heuristic evaluation method, Nielsen has made strong academic contributions to HCI through his publications while worked as a researcher at Bellcore, IBM Research, and as a Distinguished Engineer at Sun Microsystems. Since he co-founded Nielsen Norman group, he has made even stronger contributions to the practice of HCI. His highly visible work and often provocative commentary have enhanced the visibility of the HCI field in the business world. Jakob is one of the few individuals in our field who have been highly successful at both academic research and making real world impact. He has also been an active member of SIGCHI since its founding, serving as paper co-chair of CHI 1993, among other roles.

Peter Pirolli

Peter Pirolli is a Research Fellow at PARC and one of the most important theorists of HCI. His work has concerned the interaction of human and computational knowledge-based systems, first in intelligent tutoring systems, then in cognitive models for human-computer interaction, methods for analyzing information seeking and Internet behavior, sensemaking, visual attention, and most recently in social foraging. The Lisp tutor built with colleagues is one of the first industrial-strength, successful tutors. Information foraging theory reframed the conventional approach to information retrieval. His work combines bold theoretical moves with concern for how these can shape systems in HCI. Pirolli was formerly a professor at the University of California, Berkeley and Associate Director of the UC Berkeley Cognitive Science Program. He is a Fellow of the National Academy of Education and the American Association for the Advancement of Science.

George Robertson

George Robertson is a Senior Researcher at Microsoft Research. Robertson has been involved in interactive technologies almost from the beginning. He has been one of the few people able to work across the intersection between systems programming at the operating system design level, and human-computer interaction. His early contributions include ZOG (one of the earliest operational hypertext systems), Diamond (the first multimedia messaging system), and co-designing the predecessor to the Mach operating system. While at Xerox PARC, he coined the term 'Information Visualization' and was the architect for the Information Visualizer system building early visualization paradigms, including Cone Trees and Web Forager. He has been innovative in his use of animation to highlight and show relationships in information. More recently he has contributed to visualizing polyarchies of data, interacting with large screen real estate and the visualization of tasks. Robertson is a Fellow of the ACM.

2006 Lifetime Service Award

Susan M. Dray

Since 1979, Dr. Susan M. Dray has worked in the field of human factors to increase the quality and intuitiveness of user interface designs for users around the world. She has worked as both an internal and external consultant and combines expertise in interface evaluation, usability evaluation, and contextual and ethnographic research with a cross-cultural and organizational perspective. As President of Dray & Associates, Inc., she consults internationally on interface design and usability. She has evaluated and helped redesign user interfaces for all types of websites, desktop and Web applications, as well as both hardware and software consumer products and technical equipment. She specializes in international user studies, and has conducted user research in 17 countries, including one of the largest international usability evaluations ever done - studying 120 users in eight countries in Europe and Asia.

A pioneer in human-computer interaction, she was Director of Human Factors at IDS [now American Express Financial Advisors], where, in 1988, she developed one of the first corporate usability labs outside the computer industry. Previously, at Honeywell, she was involved in evaluating usability of consumer product hardware and software, as well as military technologies. Dr. Dray was also a pioneer in the Association for Computing Machinery's Special Interest Group on Computer-Human Interaction (ACM SIGCHI) as liaison from the established Human Factors organization in the early 1980's. She was instrumental in building an interdisciplinary CHI community and continues to work

tirelessly for CHI today, teaching tutorials, lecturing world-wide, and editing the Business column of the ACM magazine, interactions.

As a leader in the Human Factors profession nationally and internationally, Dr. Dray has given over 80 talks at conferences and symposia in the U.S.A., Europe, and Australia, including the invited Plenary Address to the 10th Congress of the International Ergonomics Association in Sydney, Australia, and the Keynote address at the 2nd South African Conference on Human-Computer Interaction, in Pretoria, South Africa in 2001. In addition, she has published numerous papers and book chapters. Dr. Dray was also the North American editor of the prestigious international journal "Behavior and Information Technology." She was elected a Fellow of the Human Factors and Ergonomics Society and has chaired both the Organizational Design and Management Technical Group and the Computer Systems Technical Group of this same organization, as well as the Computers and Communications Scientific and Technical Committee of the International Ergonomics Association.

Dr. Dray received her doctorate in Psychology from University of California, Los Angeles in 1980 and is a Board Certified Human Factors Professional.

2006 SIGCHI Social Impact Award

Ted Henter

As a young man, Ted Henter was ranked eighth in the world on the motorcycle racing circuit. After a race in London, England he was in an automobile accident that left him blind. Determined not to let this tragedy alter his active lifestyle, he set out to become the U.S.A. Blind Water Skiing Champion and achieved this honor six years running, plus one world championship. Mr. Henter graduated from the University of Florida in 1974 with a bachelor's degree in mechanical engineering. After he was blinded, he took several computer courses at the University of South Florida, which led to his passion for assistive technology. In 1985, he started his own business. Two years later, he founded Henter-Joyce (now a division of Freedom Scientific) and began developing his first screen reader software that converts computer text to speech so people who are vision impaired can use a computer. In 1987, Mr. Henter and his new company invented JAWS, then a DOS based program and in 1995, he developed a Windows version of the product. Today, JAWS for Windows is the world's best selling screen reading software, exceeding 78,000 users worldwide and growing. By allowing persons who are blind or with low vision achieve the same or higher productivity in computer-based jobs as sighted people, JAWS has increased employment and educational opportunities while helping employers meet requirements

established by the Americans with Disabilities Act (ADA) requirements. Henter-Joyce also developed other software products including MAGIC screen magnification and Connect Outloud Web access software. Ted Henter has received numerous national honors, including the Smithsonian Institute Award for developing JAWS.

Note: We are also recognizing 2005 SIGCHI Distinguished Service Awardee Gary Perlman (who is local to Montréal and could not join us in Portland):

Gary Perlman

Gary is perhaps most well known for the popular, early repository of HCI publications and bibliographic information, the HCI Bibliography. The HCI Bibliography web site has been accessed over 4.5 million times since April 4th, 1998. Gary worked on the committee for the CHI 1986 conference, served as ACM BuckCHI Chair 1997-1998, ACM SIGCHI Vice-Chair for Publications 1995-97, SIGCHI Education Chair 1991-1995, participated on many conference technical program committees, and has published in and refereed for several HCI journals over many years. In addition, Gary set up the current system of SIGCHI mailing lists. Gary served on the SIGCHI Curriculum Development Group and created the web version of the group's 1992 report. Gary currently telecommutes as a Consulting Research Scientist at OCLC Online Computer Library Center, from Montréal, Canada where his focus there is on the design of useful and usable web-based bibliographic and full text retrieval tools.

Past Honorees

SIGCHI Lifetime Achievement Award

- 1998 Douglas Engelbart
- 2000 Stuart K. Card
- 2001 Ben Shneiderman
- 2002 Donald A. Norman
- 2003 John M. Carroll
- 2004 Thomas P. Moran
- 2005 Tom Landauer

SIGCHI Lifetime Service Award

- 2001 Austin Henderson
- 2002 Dan R. Olsen Jr.
- 2003 Lorraine Borman
- 2004 Robin Jeffries, Gene Lynch
- 2005 Sara Bly, John "Scooter" Morris, Don Patterson, Gary Perlman, Marilyn Mantei Tremaine

CHI Academy Members

Class of 2001

Stuart K. Card
James D. Foley
Morten Kyng
Thomas P. Moran
Judith S. Olson
Ben Shneiderman

Class of 2004

George Furnas
Jonathan Grudin
William Newman
Brad Myers
Dan R. Olsen Jr.
Brian Shackel
Terry Winograd

Class of 2002

William A. S. Buxton
John M. Carroll
Douglas C. Engelbart
Sara Kiesler
Thomas K. Landauer
Lucy A. Suchman

Class of 2005

Ron Baecker
Susan Dumais
John Gould
Saul Greenberg
Bonnie John
Andrew Monk

Class of 2003

Thomas Green
James D. Hollan
Robert E. Kraut
Gary M. Olson
Peter G. Polson

Best of CHI Awards

SIGCHI and CHI 2006 are proud to announce CHI 2006's 'Best of CHI' nominees and award winners

The SIGCHI 'Best of CHI' Program is designed to recognize outstanding work in the field of human-computer interaction by selecting and honoring exceptional submissions to SIGCHI-sponsored conferences. This year, the Papers and Notes committees took part in this program, nominating up to 5% of their submissions as Award Nominees. A separate awards committee then chose a select group of these submissions—no more than 1% of the total submissions—to receive a 'Best' designation. We are proud to congratulate the award winners and nominees for their outstanding contributions to CHI 2006 and to our field.

CHI 2006 Best Papers, awarded by SIGCHI:

A Role for Haptics in Mobile Interaction: Initial Design Using a Handheld Tactile Display Prototype

Joseph Luk, *University of British Columbia, Canada*
Jerome Pasquero, *McGill University, Canada*
Shannon Little, Karon MacLean, *University of British Columbia, Canada*
Vincent Lévesque, Vincent Hayward, *McGill University, Canada*

Embedded Phenomena: Supporting Science Learning with Classroom-Sized Distributed Simulations

Tom Moher, *University of Illinois, Chicago, USA*

Trackball Text Entry for People with Motor Impairments

Jacob Wobbrock, Brad Myers, *Carnegie Mellon University, USA*

CHI 2006 Award Nominees, awarded by SIGCHI:

Interweaving Mobile Games With Everyday Life

Marek Bell, Matthew Chalmers, Louise Barkhuus, Malcolm Hall, Scott Sherwood, Barry Brown, *University of Glasgow, Scotland*
Duncan Rowland, *University of Lincoln, UK*
Steve Benford, Alastair Hampshire, Mauricio Capra, *University of Nottingham, UK*

Fast, Flexible Filtering with Phlat - Personal Search and Organization Made Easy

Edward Cutrell, Daniel Robbins, Susan Dumais, Raman Sarin, *Microsoft, USA*

Desperately Seeking Simplicity: How Young Adults with Cognitive Disabilities and Their Families Adopt Assistive Technologies

Melissa Dawe, *University of Colorado, Boulder, USA*

Implications for Design

Paul Dourish, *University of California, Irvine, USA*

"Alone Together?" Exploring the Social Dynamics of Massively Multiplayer Online Games

Nicolas Ducheneaut, *PARC, USA*
Nicholas Yee, *Stanford University, USA*
Eric Nickell, Robert J. Moore, *PARC, USA*

Generating Automated Predictions of Behavior Strategically Adapted to Specific Performance Objectives

Katherine Eng, NASA, USA
Richard L. Lewis, University of Michigan, USA
Irene Tollinger, NASA, USA
Alina Chu, University of Michigan, USA
Andrew Howes, Manchester University, UK
Alonso Vera, NASA, USA

Finding Design Qualities in a Tangible Programming Space

Ylva Fernaeus, Jakob Tholander, Stockholm University, Sweden

The Impact of Delayed Visual Feedback on Collaborative Performance

Darren Gergle, Robert E. Kraut, Susan R. Fussell, Carnegie Mellon University, USA

Providing Support for Adaptive Scripting in an On-Line Collaborative Learning Environment

Gahgene Gweon, Carolyn Rose, Zachary Zaiss, Carey Regan, Carnegie Mellon University, USA

Prototyping and Sampling Experience to Evaluate Ubiquitous Computing Privacy in the Real World

Giovanni Iachello, Khai Truong, Gregory Abowd, Gillian Hayes, Georgia Institute of Technology, USA
Molly Stevens, Logical Design Solutions, USA

The Sensual Evaluation Instrument: Developing an Affective Evaluation Tool

Katherine Isbister, Rensselaer Polytechnic Institute, USA
Kristina Höök, Swedish Institute for Computer Science, Sweden
Michael Sharp, Rensselaer Polytechnic Institute, USA
Jarmo Laaksolahti, Swedish Institute for Computer Science, Sweden

Evaluating Interfaces for Privacy Policy Rule Authoring

Clare-Marie Karat, Carolyn Brodie, John Karat, IBM, USA
Jinjuan Feng, University of Maryland, Baltimore County, USA

FaThumb: A Facet-Based Interface for Mobile Search

Amy Karlson, University of Maryland, USA
George Robertson, Daniel Robbins, Mary Czerwinski, Greg Smith, Microsoft, USA

Making Action Visible in Time-Critical Work

Jonas Landgren, Viktoria Institute, Sweden

Investigating Health Management Practices of Individuals with Diabetes

Lena Mamykina, Siemens, USA
Elizabeth D. Mynatt, Georgia Institute of Technology, USA
David R. Kaufman, Columbia University, USA

The Effect of Speech Recognition Accuracy Rates on the Usefulness and Usability of Webcast Archives

Cosmin Munteanu, Ronald Baecker, Gerald Penn, Elaine Toms, David James, University of Toronto, Canada

"LINC-ing" the Family: The Participatory Design of an Inkable Family Calendar

Carman Neustaedter, University of Calgary, Canada
A.J. Bernheim Brush, Microsoft, USA

Remote Usability Evaluations with Disabled People

Helen Petrie, University of York, UK
Fraser Hamilton, Neil King, Pete Pavan, Designed for All, UK

An Evaluation of Using Programming by Demonstration and Guided Walkthrough Techniques for Authoring and Utilizing Documentation

Madhu Prabaker, Carnegie Mellon University, USA
Lawrence Bergman, Vittorio Castelli, IBM, USA

Routine Patterns of Internet Use and Psychological Well-Being: Coping with a Residential Move

Irina Shklovski, Robert Kraut, Carnegie Mellon University, USA
Jonathon Cummings, Duke University, USA

Time is of the Essence: An Evaluation of Temporal Compression Algorithms

Simon Tucker, Steve Whittaker, Sheffield University, UK

Improving Accessibility of the Web with a Computer Game

Luis von Ahn, Shiry Ginosar, Mihir Kedia, Manuel Blum, Carnegie Mellon University, USA

Verbosity: A Game for Collecting Common-Sense Facts

Luis von Ahn, Mihir Kedia, Manuel Blum, Carnegie Mellon University, USA

Synchronous Broadcast Messaging: The Use of ICT

Justin D. Weisz, Carnegie Mellon University, USA
Thomas Erickson, Wendy A. Kellogg, IBM, USA

Dispelling "Design" as the Black Art of CHI

Tracee Vetting Wolf, IBM, USA
Jennifer A. Rode, University of California, Irvine, USA
Jeremy Sussman, Wendy A. Kellogg, IBM, USA

Do Security Toolbars Actually Prevent Phishing Attacks?

Min Wu, Robert Miller, MIT, USA
Simsion Garfinkel, Harvard University, USA

COURSE 1

ROOM 514ABC

Human-Computer Interaction: Introduction and Overview

Keith A. Butler, *Microsoft, USA*

Robert J.K. Jacob, *Tufts University, USA*

David Kieras, *University of Michigan, USA*

This course is a tried-and-true introduction to the field of human-computer interaction (HCI). It has become a CHI conference tradition. If you are a newcomer to the CHI field, this course will give you the background you need to get the most out of the CHI conference.

[INTENDED AUDIENCE] Mainly first-time CHI attendees, typically professionals from computing-related fields who are new to the field of human-computer interaction. No background in HCI is assumed.

[PRESENTATION STYLE] Lecture

[FEATURES]

- * What is HCI and why is it important?
- * Brief history of HCI
- * Introduction to building usable systems
- * Introduction to the psychology of HCI
- * Introduction to computer technologies for HCI
- * Future directions of HCI
- * Where to learn more during the conference
- * Where to learn more in the published HCI literature

Opening Plenary Session Scott Cook, Intuit: Creating 'Game Changing' Innovation - Room: 517ABC p.28 CHI Madness - Room: 517ABC p.28													
8:30 - 10:30	517 ABC	511 ABDE	516 C	516 AB	510 ABCD	516 DE	511 CF	515 C	513 CD	513 EF	514 AB	513 ABC	
11:30 - 13:00	Panel Usability from the CIO's Perspective p. 29	Papers Navigation p. 29	Papers Mobile Surfing & Effects of Wearables p. 29	Papers Games p. 30	Papers Privacy 1 p. 30	Interactivity Listen!: Voice Interfaces p. 31	Experience Reports Usability Evaluations: Challenges & Solutions p. 31	SIG International Usability Evaluation: Issues & Strategies p. 31	Course 2 An Introduction to Designing for the Scent of Information p. 39	Course 5 Web Bloopers: Avoiding Common Web Design Mistakes p. 39	Course 7 Top 10 Field Interview Mistakes: Recognizing & Preventing Them p. 39	Course 9 Faceted Metadata for Information Architecture & Search p. 39	
14:30 - 16:00	Panel Managing International User Research p. 33	Papers Participatory Design p. 32	Papers Interaction Techniques: Haptic & Gestural p. 32	Papers Activity & Usability: Design Implications p. 33	Papers Social Computing 1 p. 33	Interactivity PDAs, Space Invaders, & Chickens: Mobility & Collaboration p. 34	SIG Testing Interactive Software p. 34	Course 3 Designing for the Scent of Information: Advanced Concepts p. 40	Course 8 Building Affinity Diagrams to Reveal User Needs & Engage Developers p. 40			Course 6 An Exercise in the Politics of Usability: Test Your Skills p. 40	
16:30 - 18:00	Research Overview Large Display Research p. 35	Papers End User Programming p. 35	Papers Personal Information Management p. 36	Papers Multidisplay Environments p. 36	Papers Managing Voice Input p. 37	alt.chi Design is Fun & People are Great p. 37	Experience Reports Design Representations p. 38	SIG Producing HCI-Competent Managers, CIOs, & CEOs p. 38	Course 4 The Goldilocks Content Framework: What Users Want p. 40				
8:30 - 10:30	Conference Reception, Posters, & Exhibits Grand Opening 18:30 - 21:30 p. 12, 13, 14, 87, 100												
COMMONS											SPECIAL EVENTS		NOTES
											Newcomers Orientation Room 511ABCD 10:30 - 11:30 p. 13		Focus on Doctoral Consortium & Workshop Posters Level 2 Foyer 16:00 - 16:30



OPENING PLENARY SESSION

ROOM 517ABC

Creating 'Game-Changing' Innovation

Scott Cook, co-founder, Intuit, USA

What role does the customer play in your innovation process? What role do you play in fostering innovation in your work? Hear first-hand from Scott Cook, co-founder of Intuit, about Intuit's philosophy of Customer-Driven Innovation and how you can drive innovation in your work group, business, or community to create breakthrough products and offerings. Scott will describe how Intuit's unwavering focus on the customer has led to the creation of such wildly popular products as Quicken, QuickBooks, and TurboTax and transformed the way people manage their business and financial lives.

[PRESENTER BIO] Scott Cook co-founded Intuit Inc. in 1983 and now serves as executive committee chairman. Before founding Intuit, Mr. Cook managed consulting assignments in banking and technology for Bain & Co., a corporate strategy consulting firm. He previously served Procter & Gamble in various marketing positions, including brand manager, for four years. Mr. Cook is a board member of eBay; Procter & Gamble; the Asia Foundation; the Harvard Business School Dean's Advisory Board; the Center for Brand and Product Management at the University of Wisconsin; and the Intuit Scholarship Foundation. He earned an MBA degree from Harvard University and received a bachelor's degree in economics and mathematics from the University of Southern California.

CHI Madness

Confused about what to do next? Too many options for you to choose from? We end this session with CHI Madness. The presenters in many of today's sessions will have one minute each to tell you what's exciting about their presentation. It's fast paced; it's fun; sometimes it's even funny.

Join us Tuesday, Wednesday, and Thursday morning at 8:30 for that day's Madness, led by Patrick Baudisch of Microsoft, USA.

PANEL

ROOM 517ABC

Usability from the CIO's Perspective

[PANELISTS]

James A. Euchner (moderator), *Pitney Bowes, USA*
Tod Thompson, *JetBlue Airways, USA*
Keith McGarr, *Reed-Elsevier, USA*
Ron Blitstein, *Improve Technology Advisors, LLC, USA*
Jim Roche, *The Research Board, USA*

CIOs are frustrated with the field success of their systems. HCI professionals are frustrated with the marginalization of usability in systems development. This panel of CIOs will consider strategies and techniques used to balance the apparently competing challenges of faster/better/cheaper systems and the expense of developing highly usable systems.

PAPERS

ROOM 511ABDE

Navigation

[SESSION CHAIR] George Furnas, *University of Michigan, USA*

[PAPER] Faster Document Navigation with Space-Filling Thumbnails

Andy Cockburn, *University of Canterbury, NZ*
Carl Gutwin, *University of Saskatchewan, Canada*
Jason Alexander, *University of Canterbury, NZ*

Describes the Space-Filling Thumbnails interface for document navigation, which replaces scrolling with page-selection from a thumbnail matrix. Evaluations show large performance advantages over scrolling across various document types and lengths.

[PAPER] An Evaluation of Pan&Zoom and Rubber Sheet Navigation with and without an Overview

Dmitry Nekrasovski, Adam Bodnar, Joanna McGrenere,
University of British Columbia, Canada
François Guimbretière, *University of Maryland, USA*
Tamara Munzner, *University of British Columbia, Canada*

A comparison of Pan&Zoom navigation to a Focus+Context technique, both with and without an overview. Pan&Zoom is found to be significantly faster, while presence of overview improves user satisfaction.

[PAPER] OrthoZoom Scroller: 1D Multi-Scale Navigation

Caroline Appert, *Université Paris-Sud, France*
Jean-Daniel Fekete, *INRIA Futurs, France*

We introduce and evaluate OrthoZoom Scroller, a mouse-based multi-scale 1D scrolling and pointing technique that performs about twice better than the only other mouse-based multi-scale technique.

PAPERS

ROOM 516C

Mobile Surfing and Effects of Wearables

[SESSION CHAIR] Thad Starner, *Georgia Institute of Technology, USA*

[PAPER] Minimap—A Web Page Visualization Method for Mobile Phones

Virpi Roto, Andrei Popescu, *Nokia, Finland*
Antti Koivisto, *Nokia, USA*
Elina Vartiainen, *Nokia, Finland*

We have developed a modeless web page visualization method for mobile phones. In a long-term usability study, 18 out of 20 participants preferred this Minimap method to a state-of-the-art method.

[PAPER] An Examination of the Effects of a Wearable Display on Informal Face-to-Face Communication

Gerard McAtamney, *Yell Com, Scotland*
Caroline Parker, *Glasgow Caledonian University, Scotland*

Presents findings of a study exploring impact of a wearable display on face-to-face conversation. Demonstrates need for careful design of wearable displays to avoid negative social impact.

[CHI NOTE] Time Based Patterns in Mobile-Internet Surfing

Martin Halvey, Mark T. Keane, Barry Smyth, *University College Dublin, Ireland*

Describes data analyses of mobile web surfing behavior as a function of time and subject. Offers predictive temporal models that improve the design and experience of web personalization.

PAPERS

ROOM 516AB

Games[SESSION CHAIR] Cliff Lampe, *Michigan State University, USA*[PAPER] **Peekaboom: A Game for Locating Objects in Images**Luis von Ahn, Ruoran Liu, Manuel Blum, *Carnegie Mellon University, USA*

Introduces an online interactive system that is an enjoyable game for locating objects in images. By playing, thousands of people have constructed a large database for training computer vision algorithms.

[PAPER] **Representation of Interwoven Surfaces in 2-1/2 D Drawing**Keith Wiley, Lance R. Williams, *University of New Mexico, USA*

Describes Druid, a novel drawing program which permits the construction of scenes of interwoven surfaces. In addition, Druid's user interface possesses affordances that are isomorphic to those of physical surfaces.

[CHI NOTE] **Verbosity: A Game for Collecting Common-Sense Facts**Luis von Ahn, Mihir Kedia, Manuel Blum, *Carnegie Mellon University, USA*

Introduces an online interactive system in the form of a game that collects verified and structured common-sense knowledge. Enables builders of intelligent applications to collect large fact databases more easily.

[CHI NOTE] **Improving Accessibility of the Web with a Computer Game**Luis von Ahn, Shiry Ginosar, Mihir Kedia, Ruoran Liu, Manuel Blum, *Carnegie Mellon University, USA*

Presents a game that is an online interactive system in which people, as a side effect of playing, enter explanatory image captions. Enables improved web accessibility through wider captioning.

PAPERS

ROOM 510ABCD

Privacy 1[SESSION CHAIR] Wayne Lutters, *University of Maryland, Baltimore County, USA*[PAPER] **Evaluating Interfaces for Privacy Policy Rule Authoring**Clare-Marie Karat, John Karat, Carolyn Brodie, *IBM, USA*
Jinjuan Feng, *Towson University, USA*

Presents design and evaluation of privacy policy rule authoring approaches in field and laboratory settings. Presents empirical work done in support of the design of privacy enabling technology.

[PAPER] **Putting People in Their Place: An Anonymous and Privacy-Sensitive Approach to Collecting Sensed Data in Location-Based Applications**Karen P. Tang, Pedram Keyani, James Fogarty, Jason I. Hong, *Carnegie Mellon University, USA*

Presents a privacy risk analysis of hitchhiking, a new approach to end-user privacy in location-based applications. Hitchhiking is location-centric, using mobile devices to collect sensed information from locations people visit.

[CHI NOTE] **Advancing Ambiguity**Kirsten Boehner, Jeffrey T. Hancock, *Cornell University, USA*

Examines the use of ambiguity as a resource for personal communication systems by overturning primary assumptions. Proposes guidelines for designers and evaluators in reconceptualizing ambiguity in everyday interactions.

[CHI NOTE] **Girls, Technology, and Privacy: Is My Mother Listening?**Wendy March, *Intel, USA*
Constance Fleuriot, *Featherhouse, UK*

Describes the results of research with teenage girls to understand privacy practices supported by technology. Provides examples of the use of photoblogs as a tool for gathering research data.

INTERACTIVITY

ROOM 516DE

Listen!: Voice Interfaces

[SESSION CHAIR] Rafael Ballagas, *RWTH Aachen University, Germany*

Feedback Management in the Pronunciation Training System ARTUR

Olov Engwall, Olle Bälter, Anne-Marie Öster, Hedvig Kjellström, *KTH, Sweden*

Presents a software system to help people with speaking disabilities or foreign speakers improve pronunciation. Provides varying levels of auditory and visual feedback based on user performance, progress and mood.

Enhancing Interactivity in Webcasts Using VoIP

Ronald Baecker, Melanie Baran, Jeremy Birnholtz, Clarence Chan, Joe Laszlo, Kelly Rankin, Russ Schick, Peter Wolf, *University of Toronto, Canada*

Demonstrates a system that combines webcast-style audio/video streaming and voice-over-IP audioconferencing for remote or distributed presentations. Discusses the positive user impact of this combination when used for e-Learning.

VoiceCode: An Innovative Speech Interface for Programming-By-Voice

Alain Désilets, *National Research Council of Canada, Canada*
David C. Fox, *Nuance, USA*
Stuart Norton, *University of California, Santa Cruz, USA*

Describes a tool that uses speech recognition to dictate and navigate source code. May allow programmers with RSI to write code by voice instead of using mouse and keyboard.

EXPERIENCE REPORTS

ROOM 511CF

Usability Evaluations: Challenges and Solutions

[SESSION CHAIR] Janice Rohn, *World Savings Bank, USA*

No IM Please, We're Testing

Richard P. Boardman, *Google, USA*

The author surveyed usability moderators and observers about their experiences using instant messaging to communicate between interview and observation rooms. Observers were more positive than moderators, who found distraction an issue.

Influences of Personal Preference on Product Usability

Shinyoung Park, *University of Tsukuba, Japan*
Akira Harada, *Sapporo City University, Japan*
Hiroya Igarashi, *University of Tsukuba, Japan*

The authors describe a comparative experiment using the NASA-TLX workload assessment tool that demonstrated lower mental/physical demands on participants when using products they preferred. Brand image perceptions influenced participants' subjective evaluations of usability.

SIG

ROOM 515C

International Usability Evaluation: Issues and Strategies

[ORGANIZERS]

Emilie W. Gould, *Acadia University, Canada*
Aaron Marcus, *Aaron Marcus and Associates, USA*
Apala Lahiri Chavan, *Human Factors International, India*
Huatong (Hannah) Sun, *Grand Valley State University, USA*

In this SIG, practitioners will discuss challenges they faced in selecting and customizing methods for international usability design. Facilitators and then participants will contribute experiences, case studies, and helpful multicultural contacts.

PANEL

ROOM 517ABC

Managing International User Research

[PANELISTS]

Alexandra Mack (moderator), *Pitney Bowes*, USA
 Susan M. Dray, *Dray and Associates*, USA
 Patrick Larvie, *Yahoo!*, USA
 Tracey Lovejoy, *Microsoft*, USA
 Girish Prabhu, *Intel*, USA
 Christian Sturm, *Arolis*, Germany

Many corporate researchers spend a great deal of their time traveling the globe to meet and study consumers, while others look to partner with other researchers or outsource the work entirely. This panel will explore these diverse approaches, how and why choices are made, the issues and challenges faced, and lessons learned based on past experiences.

PAPERS

ROOM 511ABDE

Participatory Design[SESSION CHAIR] Michael Muller, *IBM*, USA[PAPER] **"LINC-ing" the Family: The Participatory Design of an Inkable Family Calendar**

Carman Neustaedter, *University of Calgary*, Canada
 A.J. Bernheim Brush, *Microsoft*, USA

Describes the participatory design of an inkable family calendar for the home in an effort to address family coordination problems. Presents key implications for the design of family coordination systems.

[PAPER] **Participatory Design with Proxies: Developing a Desktop-PDA System to Support People with Aphasia**

Jordan L. Boyd-Graber, Sonya S. Nikolova, *Princeton University*, USA
 Karyn A. Moffatt, *University of British Columbia*, Canada
 Kenrick C. Kin, Joshua Y. Lee, Lester W. Mackey, *Princeton University*, USA
 Marilyn M. Tremaine, *Rutgers University*, USA
 Maria M. Klawe, *Princeton University*, USA

A novel system to aid people with aphasia was developed via participatory design with therapists as surrogates for the primary audience and highlights the unique information gleaned from ethnographic interviewing.

[PAPER] **Participatory Design in Emergency Medical Service: Designing for Future Practice**

Margit Kristensen, Morten Kyng, *University of Aarhus*, Denmark
 Leysia Palen, *University of Aarhus & University of Colorado*, Boulder, Denmark & USA

Results of a participatory design process for emergency medical service address future practice and challenges of designing for major incidents

PAPERS

ROOM 516C

Interaction Techniques: Haptic and Gestural[SESSION CHAIR] Kori Inkpen, *Dalhousie University*, Canada[PAPER] **A Role for Haptics in Mobile Interaction: Initial Design Using a Handheld Tactile Display Prototype**

Joseph Luk, *University of British Columbia*, Canada
 Jérôme Pasquero, *McGill University*, Canada
 Shannon Little, Karon MacLean, *University of British Columbia*, Canada
 Vincent Lévesque, Vincent Hayward, *McGill University*, Canada

Describes principled process applying haptics to mobile interaction needs, including scenarios, a new device and its perceptual characterization. Provides insight into appropriate mappings between technology and application roles.

[PAPER] **The Springboard: Multiple Modes in One Spring-Loaded Control**

Ken Hinckley, *Microsoft*, USA
 François Guimbretière, *University of Maryland*, USA
 Patrick Baudisch, Raman Sarin, Maneesh Agrawala, Ed Cutrell, *Microsoft*, USA

Contributes Springboard technique and experiment that underscores why it is difficult to design local marking menus that can beat round-trips to a tool palette at the edge of the screen.

[PAPER] **The GlobeFish and the GlobeMouse: Two New Six Degree of Freedom Input Devices for Graphics Applications**

Bernd Froehlich, Jan Hochstrate, Verena Skuk, Anke Huckauf, *Bauhaus-Universitaet Weimar*, Germany

Describes two new 6-DOF input devices for graphics applications and a user study. The devices are shown to perform better than the SpaceMouse and subjective data confirms these results.

PAPERS

ROOM 516AB

Activity & Usability: Design Implications[SESSION CHAIR] Bonnie Nardi, *University of California, Irvine, USA*[PAPER] **Making Action Visible in Time-Critical Work**Jonas Landgren, *Viktoria Institute & Göteborg University Sweden*

Ethnographic accounts of time-critical physical work. Design implications for making verbal communication persistent to provide accountability. Inspiration for designers and practitioners of systems and applications for time-critical settings.

[PAPER] **Support for Activity-Based Computing in a Personal Computing Operating System**Jakob Bardram, Jonathan Bunde-Pedersen, Mads Soegaard, *University of Aarhus, Denmark*

Presents the design, implementation, and evaluation of activity-based computing support embedded in Windows XP. Enables users to handle multiple parallel activities which can move between different computers.

[PAPER] **Share and Share Alike: Exploring the User Interface Affordances of File Sharing**Stephen Volda, W. Keith Edwards, *Georgia Institute of Technology, USA*Mark W. Newman, *PARC, USA*Rebecca E. Grinter, *Georgia Institute of Technology, USA*Nicolas Ducheneaut, *PARC, USA*

Describes a typology of sharing technologies and presents a new user interface for file sharing. Informs the design of file sharing mechanisms that more closely match users' actual sharing practices.

PAPERS

ROOM 510ABCD

Social Computing 1[SESSION CHAIR] Elizabeth Churchill, *PARC, USA*[PAPER] **Dogear: Social Bookmarking in the Enterprise**David R. Millen, Jonathan Feinberg, Bernard Kerr, *IBM, USA*

Describes an enterprise social bookmarking service (dogear), supporting shared and non-anonymous bookmarking for internet and intranet sources. Design approach and results will benefit designers of related kinds of social software.

[PAPER] **Increasing User Decision Accuracy Using Suggestions**Pearl Pu, Paolo Viappiani, Boi Faltings, *EPFL, Switzerland*

Proposes novel strategies for improving the accuracy and usability of example-based recommender systems and evaluates their performance on user studies.

[PAPER] **Co-Authoring with Structured Annotations**Qixing Zheng, Kellogg Booth, Joanna McGrenere, *University of British Columbia, Canada*

Describes a comprehensive taxonomy of structured annotations for collaborative authoring based on requirements derived from a field investigation. Structured annotations improve speed and accuracy and thereby improve reviewing workflow.

INTERACTIVITY

ROOM 516DE

PDAs, Space Invaders, and Chickens: Mobility and Collaboration

[SESSION CHAIR] Jan Borchers, *RWTH Aachen University*, Germany

Age Invaders: Social and Physical Inter-Generational Family Entertainment

Eng Tat Khoo, Shang Ping Lee, Adrian David Cheok,
Nanyang Technological University, Singapore
Sameera Kodagoda, *University of Moratuwa*, Sri Lanka
Yu Zhou, Gin Siong Toh, *Nanyang Technological University*, Singapore

Proposes a game in which children play with their grandparents while parents participate remotely over the net. Suggests a way to close generational gaps in society and connect distributed families.

mSpace Mobile: a UI Gestalt to Support On-the-Go Info-Interaction

Max Wilson, Daniel A. Smith, Alistair Russel, m c schraefel,
University of Southampton, UK

Demonstrates seven interaction techniques for mobile devices built around a focus+context viewer that rearranges web content. Enables users on the move to rapidly search information and explore compound query results.

Poultry.Internet: A Remote Human-Pet Interaction System

Keng Soon Teh, Shang Ping Lee, Adrian David Cheok,
Nanyang Technological University, Singapore

Presents a system that forwards touch information from a doll to a distant pet wearing a jacket, and feeds back pet movements. Allows humans to connect to their pets remotely.

SIG

ROOM 515C

Testing Interactive Software: a Challenge for Usability and Reliability

[ORGANIZERS]

Philippe Palanque, *University Toulouse*, France
Regina Bernhaupt, *Universität Salzburg*, Austria
Ronald Boring, *Idaho National Laboratory*, USA
Chris Johnson, *University of Glasgow*, Scotland

This SIG provides a forum for researchers and practitioners interested in testing interactive software. Our goal is to define a roadmap of activities to cross fertilize usability and reliability testing.

INVITED RESEARCH OVERVIEW

ROOM 517ABC

Large Display Research[SESSION CHAIR] Judith S. Olson, *University of Michigan, USA*Mary Czerwinski, *Microsoft, USA*

Our early user studies documenting the increased productivity gained through the use of large displays allowed us to observe quite quickly that Windows and current applications do not scale well when vast amounts of screen real estate are available. Our group therefore set about iteratively designing software tools, based on real user problems, to support large-scale navigation and interaction. To ensure our software user interfaces provided value, we ran user studies against existing features and performed user-centered design. This talk will provide an overview of the prototypes we designed, and our methodology. In addition, I will discuss a few areas of long-term basic research on information visualization and interaction, and our attempts to scale the user experience across the spectrum of large and smaller displays.

[PRESENTER BIO] Mary Czerwinski is a Senior Researcher and Manager of the Visualization and Interaction Research group at Microsoft Research. The group is responsible for studying and designing advanced technology and interaction techniques that leverage human capabilities across a wide variety of input and output channels. Mary's primary research areas include spatial cognition, information visualization and task switching. Mary has been an affiliate assistant professor at the Department of Psychology, University of Washington since 1996. More information about Dr. Czerwinski can be found at <http://research.microsoft.com/users/marycz>.

PAPERS

ROOM 511ABDE

End User Programming[SESSION CHAIR] Mary Beth Rosson, *The Pennsylvania State University, USA*[PAPER] **Tinkering and Gender in End-User Programmers' Debugging**Laura Beckwith, Cory Kissinger, Margaret Burnett, *Oregon State University, USA*Susan Wiedenbeck, *Drexel University, USA*Joseph Lawrance, *Oregon State University, USA*Alan Blackwell, *University of Cambridge, UK*Curtis Cook, *Oregon State University, USA*

Investigates males' and females' tinkering (feature 'playfulness') in end-user debugging environments. Our results show that tinkering, reflection, and self-efficacy combine to impact debugging effectiveness differently for each gender.

[PAPER] **An Evaluation of Using Programming by Demonstration and Guided Walkthrough Techniques for Authoring and Utilizing Documentation**Madhu Prabaker, *Carnegie Mellon University, USA*Lawrence Bergman, Vittorio Castelli, *IBM, USA*

Describes and evaluates combining programming-by-demonstration and guided walkthrough techniques to create live documentation. Enables more efficient and accurate creation and consumption of documentation than traditional tools.

[PAPER] **Providing Support for Adaptive Scripting in an On-Line Collaborative Learning Environment**Gahgene Gweon, Carolyn Rose, Regan Carey, Zachary Zaiss, *Carnegie Mellon University, USA*

Provides motivation and support for exploring issues related to structuring productive group dynamics in collaborative e-learning environment. The authors experimentally evaluate mechanisms for enhancing collaborative learning interactions.

PAPERS

ROOM 516C

Personal Information Management

[SESSION CHAIR] William Newman, *Microsoft & University College London, UK*



[PAPER] **Fast, Flexible Filtering with Phlat - Personal Search and Organization Made Easy**

Edward Cutrell, Daniel Robbins, Susan Dumais, Raman Sarin, *Microsoft, USA*

We describe the design and deployment of a new UI for searching personal information. The interface encourages fast, intuitive query iteration and includes a unified tagging system for personal content.

[PAPER] **To Have and to Hold: Exploring the Personal Archive**

Joseph 'Jofish' Kaye, Janet Vertesi, Shari Avery, Allan Dafoe, Shay David, Lisa Onaga, *Cornell University, USA*
Ivan Rosero, *Amazon.com, USA*
Trevor Pinch, *Cornell University, USA*

Describes a study of 48 academics' personal archives, highlights their rationales behind archiving: 'finding it later', legacy, sharing, confronting fears, identity construction. Describes how this affects archive structure and function.

[CHI NOTE] **The Project Fragmentation Problem in Personal Information Management**

Ofer Bergman, *Tel Aviv University, Israel*
Ruth Beyth-Marom, *The Open University of Israel, Israel*
Rafi Nachmias, *Tel Aviv University, Israel*

This study sheds light on the Project Fragmentation Problem - the separation of project-related documents, emails, and web favorites into different collections. A new solution is presented to improve usability.

[CHI NOTE] **Peripheral Display of Digital Handwritten Notes**

Gary Hsieh, *Carnegie Mellon University, USA*
Kenneth Wood, Abigail Sellen, *Microsoft, UK*

Describes the development and initial testing of a peripheral display supporting digital handwritten notes. Guides designers in balancing serendipity with the costs of ambient display.

PAPERS

ROOM 516AB

Multidisplay Environments

[SESSION CHAIR] Dan Horn, *Army Research Institute, USA*

[PAPER] **Perspective Cursor: Perspective-Based Interaction for Multi-Display Environments**

Miguel A. Nacenta, Samer Sallam, Bernard Champoux, Sriram Subramanian, Carl Gutwin, *University of Saskatchewan, Canada*

We present Perspective Cursor, a technique that uses a mouse and the user's perspective for multi-display interaction. We show through a user study that Perspective Cursor is better than existing alternatives.

[PAPER] **Improving Selection of Off-Screen Targets with Hopping**

Pourang Irani, *University of Manitoba, Canada*
Carl Gutwin, *University of Saskatchewan, Canada*
Xing Dong Yang, *University of Alberta, Canada*

Introduces Hop, a technique for selecting off-screen targets that combines halos and proxies. A study showed that hopping is faster than either zooming or panning, and is strongly preferred

[PAPER] **Effects of Display Position and Control Space Orientation on User Preference and Performance**

Daniel Wigdor, *University of Toronto & Mitsubishi Electric Research Labs, Canada & USA*
Chia Shen, Clifton Forlines, *Mitsubishi Electric Research Labs, USA*
Ravin Balakrishnan, *University of Toronto, Canada*

Two experiments that explore the impact of display space position and input control space orientation on users' subjective preference and objective performance. Provide guidelines as to optimal display placement and control orientation in collaborative computing environments with one or more shared displays.

PAPERS

ROOM 510ABCD

Managing Voice Input

[SESSION CHAIR] Paul Aoki, *PARC*, USA

[PAPER] The Benefits of Augmenting Telephone Voice Menu Navigation with Visual Browsing and Search

Min Yin, Shumin Zhai, *IBM*, USA

A set of experiments demonstrating that telephone voice menu navigation can be significantly improved with a visual channel augmentation, resulting in both human performance improvement and user experience satisfaction.

[PAPER] Time is of the Essence: An Evaluation of Temporal Compression Algorithms

Simon Tucker, Steve Whittaker, *Sheffield University*, UK

We evaluate novel techniques for accessing speech recordings, developing a new evaluation method. Users prefer and perform better with excision that removes unimportant speech, than with standard speedup techniques.

[PAPER] Error Correction of Voicemail Transcripts in SCANMail

Moira Burke, *Carnegie Mellon University*, USA
Brian Amento, Philip Isenhour, *AT&T Labs*, USA

Describes a system that generates text transcripts of voicemail messages, and an empirical evaluation of transcript error correction. Users can skim, archive, and retrieve voicemail transcripts from mobile devices.

alt.chi

ROOM 516DE

Design is Fun and People are Great

[SESSION CHAIR] Sidney Fels, *University of British Columbia*, Canada

A New Playground Experience: Going Digital?

Susanne Seiting, Elisabeth Sylvan, Oren Zuckerman,
Marko Popovic, Orit Zuckerman, *MIT*, USA

Explores the benefits and drawbacks of integrating digital technologies into outdoor playgrounds. Presents new prototypes, a participatory design process, and field observations. Frames future HCI work on computationally enhanced playgrounds.

Tokyo Youth at Leisure: Towards the Design of Media to Support Leisure Planning and Practice

Diane Schiano, Ame Elliot, Victoria Bellotti, *PARC*, USA

A large project explored leisure practices and resources—including mobile phones and other media—of Tokyo young adults. Findings will help inform the design of future leisure support technologies.

RoomBugs: Simulating Insect Infestations in Elementary Classrooms Using Commodity Hardware

Michael Barron, Tom Moher, *University of Illinois, Chicago*, USA

Jeff Maharry, *Galileo Scholastic Academy of Mathematics and Science*, USA

This paper examines the creation of an embedded simulation inside a classroom. Using minimal instrumentation we attempt to create a rich environment useful for student scientific observation and manipulation.

The Orbital Browser: Composing Ubicomp Services Using Only Rotation and Selection

Nicolas Ducheneaut, Trevor F. Smith, James 'Bo' Begole,
Mark W. Newman, *PARC*, USA
Chris Beckmann, *University of California, Berkeley*, USA

Presents the design of a novel user interface to control large networks of devices using only two operations: rotation and selection.

Quill: A Narrative-Based Interface for Personal Document Retrieval

Daniel Gonçalves, Joaquim A. Jorge, *Instituto Superior Técnico*, Portugal

We present a novel interaction paradigm, narrative-based interfaces, usable for information retrieval. We describe the Quill system: soundly designed, based on user studies, it uses narratives to retrieve personal documents.

EXPERIENCE REPORTS

ROOM 511CF

Design Representations

[SESSION CHAIR] Kristina Höök, *Swedish Institute of Computer Science, Sweden*

Growing Bloom: Design of a Visualization of Project Evolution

Bernard Kerr, Li-Te Cheng, *IBM, USA*
Timothy Sweeney, *Carnegie Mellon University, USA*

Bloom Diagram is a tool to visualize the evolution of individual participants' code and comment contributions to open source software projects. The design blends techniques such as concentric pie charts, animation, motion trails, and social proxies to produce a compact presentation of the large scale dynamics around software development.

Scalability in System Management GUIs: A Designer's Nightmare

Andreas Dieberger, Eser Kandogan, Cheryl A. Kieliszewski,
IBM, USA

Designing effective interactions and representations of large systems with intricate relationships among components is a formidable challenge. The presented approach addresses these challenges by extensive use of semantic zooming and progressive information disclosure.

SIG

ROOM 515C

Producing Human-Centered, Usability-Sensitive, and HCI-Competent Managers, CIOs, and CEOs

[ORGANIZER]

Ping Zhang, *Syracuse University, USA*

Taking a collaborative and multi-disciplinary perspective, we discuss issues and opportunities in college education so that our future managers, CIOs, and CEOs are inherently and intrinsically human-centered, usability-sensitive, and HCI-competent.

Monday Courses

COURSE 2

ROOM 513CD

An Introduction to Designing for the Scent of Information

11:30 – 13:00

Jared M. Spool, *User Interface Engineering*, USA

Using the results of hundreds of usability tests, we will show you how users follow a scent trail and the different ways your design could be blocking scent.

[INTENDED AUDIENCE] Web Designers & Usability Practitioners

[PRESENTATION STYLE] Lecture

[FEATURES]

- * What is the scent of information?
- * What does scent look like when it works?
- * What does scent look like when it doesn't work?
- * Common scent blockers
- * Optimal link length
- * Three types of graphics
- * The design process for scent
- * Measuring scent with user confidence

COURSE 5

ROOM 513EF

Web Bloopers: Avoiding Common Web Design Mistakes

11:30 – 18:00

Jeff Johnson, *UI Wizards, Inc.*, USA

The web is not commercial product quality, largely due to poor usability. This class explains how to avoid common web design mistakes, illustrated with examples from real websites.

[INTENDED AUDIENCE] Web designers and developers, mainly those lacking experience designing and evaluating websites and web applications. Also: Web Q/A engineers, usability testers, and managers.

[PRESENTATION STYLE] Lecture, blooper-spotting quizzes, blooper-correction exercises, and website-review exercises.

[FEATURES]

- * Common bloopers, organized into types: Content, Task-Support, Navigation, Form, Search, Text & Writing, Link Presentation, and Graphic & Layout.
- * Uses real web examples.
- * Explains how to avoid each blooper. Includes exercises in which participants:
 - Spot bloopers
 - Correct bloopers
 - Review live websites for bloopers and discuss how to avoid them.

COURSE 7

ROOM 514ABC

Top 10 Field Interview Mistakes: Recognizing and Preventing Them

11:30 – 13:00

Karen Holtzblatt, *InContext Enterprises*, USA
Shelley Wood, *InContext Enterprises*, USA

Tested techniques for getting the most out of user interviews, giving you tools for improving your skills that you can also use as a framework for assisting others in your organization.

[INTENDED AUDIENCE] No specific background is required. It is appropriate for all roles.

[PRESENTATION STYLE] Lecture and group discussion

[FEATURES]

Attendees will learn:

- * The top mistakes that lead to ineffective field interviews
- * Interview styles to be avoided, such as 'Court Reporter' and 'Police Interrogator'
- * Techniques for avoiding mistakes and how to take corrective steps when mistakes occur

COURSE 9

ROOM 513AB

Faceted Metadata for Information Architecture and Search

11:30 – 16:00

Marti Hearst, *University of California, Berkeley*, USA
Preston Smalley, *eBay*, USA

Learn the advantages of and strategies for using faceted metadata for integrating browsing and search of large information collections. Examples are drawn from formal studies and results of real-world applications.

[INTENDED AUDIENCE] The intended audience is usability professionals, especially information architects.

[PRESENTATION STYLE] Instruction will consist of lectures, case studies, and in-class discussion.

[FEATURES]

Attendees will learn:

- * The advantages of and strategies for using faceted metadata for integrated browsing and search of large information collections.
- * Examples drawn from both formal studies and from real-world application
- * Emphasis on interface design issues.

COURSE 3

ROOM 513CD

Designing for the Scent of Information: Advanced Concepts

14:30 – 16:00

Christine Perfetti, *User Interface Engineering*, USA

An in-depth look at the five types of navigation and the three predictors of failure found in UIE's advanced research of the Scent of Information.

[INTENDED AUDIENCE] Web Designers & Usability Practitioners

[PRESENTATION STYLE] Lecture

[FEATURES]

- * Five types of navigation pages
- * The role of trigger words
- * Three predictors of failed scent
- * Three types of navigation approaches
- * Most effective use of screen real estate

COURSE 8

ROOM 514ABC

Building Affinity Diagrams to Reveal User Needs and Engage Developers

14:30 – 16:00

Karen Holtzblatt, *InContext Enterprises*, USA
Shelley Wood, *InContext Enterprises*, USA

How to build affinity diagrams that reveal design implications—not just organize user data—and then leverage them as communication tools that stakeholders pay attention to.

[INTENDED AUDIENCE] No specific background is required.

[PRESENTATION STYLE] Lecture, group discussion, exercises

[FEATURES]

Attendees will learn how to:

- * Use inductive reasoning to create data groupings and write labels that reveal insights
- * Run affinity building sessions and drive to completion
- * Use the affinity to generate design ideas and identify holes for future inquiry
- * Leverage the affinity as a communication tool

COURSE 4

ROOM 513CD

The Goldilocks Content Framework: What Users Want

16:30 – 18:00

Jared M. Spool, *User Interface Engineering*, USA

A research-based framework that explains the content users are seeking. You'll see how different approaches to information architecture, site navigation, layout, and content affect the success of your users.

[INTENDED AUDIENCE] Web Designers & Usability Practitioners

[PRESENTATION STYLE] Lecture

[FEATURES]

- * Novice vs. expert knowledge
- * The knowledge gap
- * Tool knowledge vs. domain knowledge
- * Designing for tool knowledge
- * Challenges of domain knowledge
- * The Goldilocks research project
- * The Goldilocks content framework

COURSE 6

ROOM 513AB

An Exercise in the Politics of Usability: Test Your Skills

16:30 – 18:00

Rolf Molich, *DialogDesign*, Denmark

A fun and realistic exercise to gauge your strengths in the area of usability politics—specific, practical actions to promote usability in an organization.

[INTENDED AUDIENCE] Usability professionals at all levels who want to increase their political impact in their organization.

[PRESENTATION STYLE] 1. Participants study a business case presented by the instructor, propose actions and discuss them with other participants. 2. Discussion of the instructor's suggested solution, which is based on discussions with many experienced usability professionals. 3. Participants compare themselves anonymously to their peers.

[FEATURES]

- * A thorough discussion of a carefully researched, hypothetical but highly realistic political usability business case (scenario).
- * Practical and efficient actions to promote usability in a commercial or public organization.

517 AB	517 C	511 ABDE	516 C	516 AB	510 ABCD	516 DE	511 CF	515 C	513 CD	513 EF	514 ABC	513 AB	515 AB
<p>8:30 CHI Madness - Room: 517AB p.44</p> <p>9:00 – 10:30 Plenary Panel: Expert Design Critique: XBOX 360 - Room: 517AB p.44</p>													
<p>11:30 – 13:00</p> <p>Panel Putting Personas to Work p. 45</p>	<p>Panel Institutional- izing HCI: What Do I-Schools Offer? p. 45</p>	<p>Papers Interaction Methods p. 45</p>	<p>Papers Understand- ing Programs & Interfaces p. 46</p>	<p>Papers Games & Perfor- mances p. 46</p>	<p>Papers Designing for Tangible Interactions p. 46</p>	<p>SIG Mobile iTV p. 47</p>	<p>Experience Reports End to End Design p. 47</p>	<p>SIG Rhetoric & Argumenta- tion p. 47</p>	<p>Course 13 The Usability Engineering Lifecycle</p>	<p>Course 10 Understand- ing Users in Context: An In-Depth Introduction to Fieldwork</p>	<p>Course 11 Re- Positioning User Experience as a Strategic Process</p>	<p>Course 14 Usability & Product Develop- ment: A Usability Course for Management</p>	<p>Course 12 Personal Information Management in Theory & Practice</p>
<p>14:30 – 16:00</p> <p>Panel Managing Deviant Behavior in Online Communi- ties p. 48</p>	<p>Panel Building User Value into the Business Case p. 48</p>	<p>Papers Text Input p. 48</p>	<p>Papers Visualization & Search p. 49</p>	<p>Papers Information Handling p. 48</p>	<p>Papers Design: Creative & Historical Perspectives p. 50</p>	<p>Interactivity Meet the Artists: Music, Dance, & Painting p. 50</p>	<p>Experience Reports Real-World Design Solutions p. 51</p>	<p>SIG Assessing & Improving Information Usability p. 51</p>					
<p>16:30 – 18:00</p> <p>Panel Service Innovation & Design p. 52</p>	<p>Panel Agile Develop- ment: Opportunity or Fad? p. 52</p>	<p>Papers Automatic Generation & Usability p. 52</p>	<p>Papers Security p. 52</p>	<p>Papers Media p. 53</p>	<p>alt.chi It's a Small World After All p. 53</p>		<p>Experience Reports Usability in the Wild p. 54</p>	<p>SIG Designing Environments for Outdoors Gaming & Play p. 54</p>					
<p>COMMONS</p> <p>Commons Open: 08:00 – 20:00 p. 16</p> <p>Exhibits, Interactivity 10:30 – 18:00 p. 12, 14, 15, 100</p> <p>Focus on Posters Including Student Design Competition 10:30 – 11:30 p. 13, 14, 15, 89</p> <p>Job Fair 18:00 – 20:00 p. 14</p>													
<p>NOTES</p>													

ROOM 517AB

CHI Madness

8:30 – 9:00

[SESSION CHAIR] Patrick Baudisch, *Microsoft, USA*

Join us again for the session that will tell you what's what and where to go. Presenters for today's sessions will again have less than a minute each to entice you to their session.

PANEL

ROOM 517AB

Expert Design Critique: Xbox 360

9:00 – 10:30

[PANELISTS]

Russ Glaser (moderator), *Microsoft, USA*

Paolo Malabuyo, *Microsoft, USA*

Duan Evans, *AKQA, UK*

Peter Boatwright, *Carnegie Mellon University, USA*

Nicole Lazzaro, *XEODesign, USA*

Maxime Beland, *Ubisoft, Canada*

Scott Berkun, *ScottBerkun.com, USA*

Get a behind the scenes look into the actual process used to solve design problems behind the creation of the Xbox 360 and hear expert critique of the process and results.

PANEL

ROOM 517AB

Putting Personas to Work

[PANELISTS]

Tamara Adlin (moderator), *Adlin, Inc.*, USA
 John Pruitt, *Microsoft*, USA
 Kim Goodwin, *Cooper*, USA
 Colin Hynes, *Staples*, USA
 Karen McGrane, *Avenue A / Razorfish*, USA
 Aviva Rosenstein, *Yahoo! Inc.*, USA
 Michael Muller, *IBM*, USA

This panel brings together professionals who have used personas to solve real business problems.

PANEL

ROOM 517C

Institutionalizing HCI: What Do I-Schools Offer?

[PANELISTS]

John M. Carroll, *The Pennsylvania State University*, USA
 Paul Dourish, *University of California, Irvine*, USA
 Batya Friedman, *University of Washington*, USA
 Masaaki Kurosu, *Graduate University for Advanced Studies*, Japan
 Gary M. Olson, *University of Michigan*, USA
 Alistair Sutcliffe, *University of Manchester*, UK

I-schools (schools of information, of informatics, of information studies, and of information sciences) have emerged as a new academic home for university programs in HCI. This panel will discuss the significance of i-schools, the trajectory of HCI within i-schools, and the role the CHI community can play in this development.

PAPERS

ROOM 511ABDE

Interaction Methods

[SESSION CHAIR] Shumin Zhai, *IBM*, USA

[PAPER] **symSpline: Symmetric Two-Handed Spline Manipulation**

Celine Latulipe, Stephen Mann, Craig S. Kaplan, Charlie L.A. Clarke, *University of Waterloo*, Canada

This paper describes a new interaction technique for manipulating splines that uses dual mice and dual cursors. An experiment shows that symSpline outperforms other techniques in a spline matching task.

[PAPER] **Effects of Feedback, Mobility, and Index of Difficulty on Deictic Spatial Audio Target Acquisition in the Horizontal Plane**

Georgios N. Marentakis, Stephen A. Brewster, *University of Glasgow*, Scotland

Deictic acquisition of feedback marked 3D-audio targets is effective in standing and mobile situations without increasing workload, users maintaining 73% of their walking speed. Mobility degrades interaction performance by 20%.

[CHI NOTE] **Prototyping Retractable String-Based Interaction Techniques for Dual-Display Mobile Devices**

Gabor Blasko, *Columbia University*, USA
 Chandra Narayanaswami, *IBM*, USA
 Steven Feiner, *Columbia University*, USA

Introduces a novel interaction method based on retractable strings with embedded linear displays. Provides end-users and designers with an expressive but mechanically simple I/O method for small devices.

[CHI NOTE] **Enhancing Human-Machine Interactions: Virtual Interface Alteration Through Wearable Computers**

Alexandre Plouznikoff, Nicolas Plouznikoff, Jean-Marc Robert, Michel Desmarais, *École Polytechnique de Montréal*, Canada

Presents a system enabling the virtual augmentation of real-world appliance interfaces. Provides designers with a means of helping end-users to navigate appliance interfaces more efficiently.

PAPERS

ROOM 516C

Understanding Programs and Interfaces

[SESSION CHAIR] Ronald Baecker, *University of Toronto, Canada*

[PAPER] Evaluating a Fisheye View of Source Code

Mikkel R. Jakobsen, Kasper Hornbæk, *University of Copenhagen, Denmark*

Describes a fisheye view for supporting programmers' navigation and understanding based on both syntactic and semantic relations in programs. The fisheye view significantly improves task completion times and satisfaction.

[PAPER] Barista: An Implementation Framework for Enabling New Tools, Interaction Techniques, and Views in Code Editors

Andrew J. Ko, Brad A. Myers, *Carnegie Mellon University, USA*

Toolkit that enables the creation of structured code editors with visualizations, annotations and alternative views embedded in code. Helps editor designers explore new tools not possible with textual code editors.

[PAPER] Answering Why and Why Not Questions in User Interfaces

Brad A. Myers, David A. Weitzman, Andrew J. Ko, Duen H. Chau, *Carnegie Mellon University, USA*

The new 'Why' interaction techniques can significantly help people understand what their user interfaces are doing, increasing learning, productivity, etc.

PAPERS

ROOM 516AB

Games and Performances

[SESSION CHAIR] Dennis Wixon, *Microsoft, USA*

[PAPER] Alone Together? Exploring the Social Dynamics of Massively Multiplayer Online Games

Nicolas Ducheneaut, *PARC, USA*
 Nicholas Yee, *Stanford University, USA*
 Eric Nickell, Robert J. Moore, *PARC, USA*

Reports on longitudinal analysis of play and grouping patterns in one of the largest massively multiplayer online games. Offers guidelines for the design of future games and online social spaces.

[PAPER] Interweaving Mobile Games With Everyday Life

Marek Bell, Matthew Chalmers, Louise Barkhuus, Malcolm Hall, Scott Sherwood, Paul Tennent, Barry Brown, *University of Glasgow, Scotland*
 Duncan Rowland, *University of Lincoln, UK*
 Steve Benford, Alastair Hampshire, *University of Nottingham, UK*

The first detailed study of a mobile multiplayer game, showing how people fit it into their everyday lives and took advantage of the game's exposure of ubicomp infrastructure.

[PAPER] Designing for the Opportunities and Risks of Staging Digital Experiences in Public Settings

Steve Benford, Andy Crabtree, Stuart Reeves, *University of Nottingham, UK*
 Jennifer Sheridan, Alan Dix, *Lancaster University, UK*
 Martin Flintham, Adam Drozd, *University of Nottingham, UK*

Studying a touring mixed-reality performance reveals how designers exploit opportunities and manage risks associated with blurring the boundaries of public interaction, inspiring proposals for extending design frameworks for spectator interfaces.

PAPERS

ROOM 510ABCD

Designing for Tangible Interactions

[SESSION CHAIR] Wendy Mackay, *INRIA, France*

[PAPER] Getting a Grip on Tangible Interaction: A Framework on Physical Space and Social Interaction

Eva Hornecker, *University of Sussex, UK*
 Jacob Buur, *MCI & University of Southern Denmark, Denmark*

We introduce a framework that contributes to understanding the (social) user experience of tangible interaction and provides concepts aiding analysis and design.

[PAPER] Finding Design Qualities in a Tangible Programming Space

Ylva Fernaeus, Jakob Tholander, *Stockholm University, Sweden*

Through experimental designs we contribute to the understanding of the design of tangible programming tools for children. We specifically address how to support children's collaborative construction of screen-based systems.

[PAPER] Design Requirements for Technologies that Encourage Physical Activity

Sunny Consolvo, *Intel & University of Washington, USA*
 Katherine Everitt, *University of Washington, USA*
 Ian Smith, *Intel, USA*
 James Landay, *Intel & University of Washington, USA*

Presents design requirements for technology to encourage physical activity and fitness derived from an *in situ* pilot study. Can prevent designers and developers from overlooking key elements of fitness-enabling technologies.

SIG

ROOM 516DE

Mobile iTV: New Challenges for the Design of Pervasive Multimedia Systems**[ORGANIZERS]**

Anxo Cereijo Roibás, *University of Brighton, UK*
 David Geerts, Licia Calvi, *Centre for Usability Research, Belgium*
 Akseli Anttila, *Nokia, Finland*
 Owen Daly-Jones, *Serco Usability Services, UK*

This SIG will stimulate informal debate around the futures of interfaces for pervasive multimedia systems such as mobile and ubiquitous iTV with special attention to the new contextual usage of this media in entertainment, work, and government contexts.

EXPERIENCE REPORTS

ROOM 511CF

End-to-End Design**[SESSION CHAIR] Thea Turner, FXPAL, USA****The Experience Engineering Framework Applied in Two Contexts**

Rick Spencer, Monty Hammontree, Donna Wallace,
Microsoft, USA

Analysis of existing User-centered Design methods revealed an underlying common framework consisting of three components and three principles. It is named the Experience Engineering Framework (EEF) and two applications of EEF are discussed.

Theatre as an Intermediary between Users and CHI Designers

Alan F. Newell, M. E. Morgan, Peter Morgan, Alex Carmichael, *University of Dundee, Scotland*

Through a theatre, including professional actors, scriptwriters and artistic directors, it is possible to do requirements gathering, usability testing, and communicate the results of such work to the design community, or individual designers.

Phases of Use: A Means to Identify Factors that Influence Product Utilization

Karin den Bouwmeester, Edward Bosma, *Océ Technologies, Netherlands*

A very easy to use product that exactly fits the tasks of the users is no guarantee that the product will be a success. The users must be aware of the product, be seduced to try it, learn the product, and change their behaviour to imbed the product in their daily lives.

SIG

ROOM 515C

How Can Rhetoric and Argumentation Help Us Make the Case for UCD?**[ORGANIZERS]**

Colleen Pettit Jones, Nick Sabadosh, *Cingular Wireless, USA*
 Susan J. Robinson, *Centers for Disease Control and Prevention, USA*
 David Bishop, *MAYA Design, Inc., USA*
 Sanjay Koyani, *U.S. Department of Health and Human Services, USA*

This SIG will explore how rhetoric and argumentation can help advance the case for UCD on organizational and project levels in various contexts and organizations.

PANEL

ROOM 517AB

Managing Deviant Behavior in Online Communities

[PANELISTS]

Amy Bruckman, *Georgia Institute of Technology*, USA
 Catalina Danis, *IBM*, USA
 Cliff Lampe, *Michigan State University*, USA
 Janet Sternberg, *Fordham University*, USA
 Chris Waldron, *Cartoon Network New Media*, USA

How do designers of online communication systems decide what kind of conduct is acceptable? How are these expectations communicated to members? How can designers help prevent and manage deviant behavior? What are the implications of corporate control of content for ideals of free expression? The panel will explore current issues in this complex research area.

PANEL

ROOM 517C

Building User Value into the Business Case

[PANELISTS]

Austin Henderson (moderator), *Pitney Bowes*, USA
 Monty Hammontree, *Microsoft*, USA
 Patrik Heuman, *Sony Ericsson*, USA

Product managers with experience in making user-centered business cases will discuss the practical realities of building effective business cases, the role of user value in those cases, and what HCI professionals can do to help product managers make mutually satisfying business cases.

PAPERS

ROOM 511ABDE

Text Input

[SESSION CHAIR] Yves Guiard, *University of Marseilles*, France

[CHI NOTE] An Intuitive Text Input Method for Touch Wheels

Morten Proschowsky, Nette Schultz, *Technical University of Denmark*, Denmark
 Niels Ebbe Jacobsen, *Nokia*, Denmark

This paper introduces a method for using language knowledge to improve text entry speed. The method is transparent for the user and does not require any extra user interaction.

[CHI NOTE] A New Error Metric for Text Entry Method Evaluation

Jun Gong, Peter Tarasewich, *Northeastern University*, USA

Describes a new metric for text entry error analysis that uses the complete keypress input stream. Can assist designers in better understanding how users input text using a given interface.

[CHI NOTE] Text Entry Using a Dual Joystick Game Controller

Andrew D. Wilson, *Microsoft*, USA
 Maneesh Agrawala, *Microsoft* and *University of California, Berkeley*, USA

Presents a new bimanual text entry technique designed for today's dual-joystick game controllers. The technique is readily learnable and provides strong performance benefits over traditional onscreen selection keyboards.

[CHI NOTE] Few-Key Text Entry Revisited: Mnemonic Gestures on Four Keys

Jacob Wobbrock, Brad Myers, Brandon Rothrock, *Carnegie Mellon University*, USA

Presents a gestural text entry method that uses only four keys, and compares it to predominant few-key methods. Has implications for mobile device design, mobile text entry, and wearable computing.

[PAPER] Trackball Text Entry for People with Motor Impairments

Jacob Wobbrock, Brad Myers, *Carnegie Mellon University*, USA

Presents a novel text entry method designed specifically for trackballs. Helps motor-impaired users to enter text with mnemonic, Roman-like gestures significantly faster than with on-screen keyboards.

PAPERS

ROOM 516C

Visualization and Search

[SESSION CHAIR] Ed Cutrell, *Microsoft, USA*

[PAPER] The Effect of Speech Recognition Accuracy Rates on the Usefulness and Usability of Webcast Archives

Cosmin Munteanu, Ronald Baecker, Gerald Penn, *University of Toronto, Canada*

Elaine Toms, *Dalhousie University, Canada*

David James, *University of Toronto, Canada*

Study investigating on effects of the accuracy of transcripts obtained through speech recognition on webcast archives' usefulness and usability. Can assist designers in enhancing webcast interfaces by integrating text transcripts.

[PAPER] Visual Search and Reading Tasks Using ClearType and Regular Displays: Two Experiments

Andrew Dillon, Lisa Kleinman, Gil Ok Choi, Randolph Bias, *University of Texas, Austin, USA*

Two experiments tested reading of digital documents with ClearType display enhancement. Contributes to readability research by demonstrating speed improvements for different ways users work online (scanning versus reading for meaning).

[CHI NOTE] Using Hybrid Networks for the Analysis of Online Software Development Communities

Yevgeniy "Eugene" Medynskiy, *Cornell University, USA*

Nicolas Ducheneaut, *PARC, USA*

Ayman Farahat, *PricewaterhouseCoopers, Inc., USA*

Describes method for visualizing heterogeneous networks of users, digital artifacts, and relationships, integrating multiple data sources. Supports analysts of role and work patterns in online communities.

[CHI NOTE] Visualization of Large Hierarchical Data by Circle Packing

Weixin Wang, Hui Wang, Guozhong Dai, Hongan Wang, *Chinese Academy of Sciences, China*

Describes a novel approach for tree visualization using nested circles. Offers widget designers an alternative to tree-maps with improved visual properties (aspect ratio and hierarchy).

PAPERS

ROOM 516AB

Information Handling

[SESSION CHAIR] Stu Card, *PARC, US*

[PAPER] Mobile Phones and Paper Documents: Evaluating A New Approach for Capturing Microfinance Data in Rural India

Tapan S. Parikh, Paul Javid, *University of Washington, USA*

Sasi K. Kumar, *ekgaon technologies, India*

Kaushik Ghosh, *Human Factors India, India*

Kentaro Toyama, *Microsoft, India*

Description and evaluation of a novel mobile interface for collecting data from rural microfinance groups in India. Demonstrates that mobile phones, with an appropriate UI, are viable for rural computing.

[PAPER] Handling Documents and Discriminating Objects in Hybrid Spaces

Paul Luff, Christian Heath, *King's College London, UK*

Hideaki Kuzuoka, *University of Tsukuba, Japan*

Keiichi Yamazaki, *Saitama University, Japan*

Jun Yamashita, *University of Tsukuba, Japan*

This paper suggests implications for the design of collaborative systems such as enhanced video-mediated communication systems and for the understanding of the conduct to be supported by such technologies.

[PAPER] ButterflyNet: A Mobile Capture and Access System for Field Biology Research

Ron Yeh, *Stanford University, USA*

Chunyuan Liao, *University of Maryland, USA*

Scott Klemmer, *Stanford University, USA*

François Guimbretière, *University of Maryland, USA*

Brian Lee, Boyko Kakaradov, Jeannie Stamberger, Andreas Paepcke, *Stanford University, USA*

Introduces techniques for enriching field biologists' paper notes through automatic capture, correlation with other data sources, and transformation. Reports on current practice, system implementation, and evaluation with field biologists.

PAPERS

ROOM 510ABCD

Design: Creative and Historical Perspectives[SESSION CHAIR] Jodi Forlizzi, *Carnegie Mellon University, USA***[PAPER] Dispelling "Design" as the Black Art of CHI**

Tracee Vetting Wolf, *IBM, USA*
 Jennifer A. Rode, *University of California, Irvine, USA*
 Jeremy Sussman, Wendy A. Kellogg, *IBM, USA*

This paper differentiates creative design from user centered design. A key contribution of this work is an example providing a framework to CHI.

[PAPER] Interaction in Creative Tasks: Ideation, Representation, and Evaluation in Composition

Tim Coughlan, Peter Johnson, *University of Bath, UK*

Identifies key factors in the individual and collaborative creative processes of composers, describes the design of a support tool, considers the application of this knowledge to supporting other creative activities.

**[PAPER] Implications for Design**

Paul Dourish, *University of California, Irvine, USA*

Provides an alternative account of the value of ethnographic work based on historical and conceptual exploration of ethnographic practice. Helps practitioners, researchers, and reviewers assess ethnographic studies and their contributions.

INTERACTIVITY

ROOM 516DE

Meet the Artists: Music, Dance, and Painting

[SESSION CHAIR] Elaine Huang, *Georgia Institute of Technology, USA*

Magic Asian Art

Eunkwang Park, Byeongsoo Kim, William Salim, Adrian David Cheok, *Nanyang Technological University, Singapore*

Presents a system that lets viewers of a painting influence its contents dynamically, using gaze tracking, object movement models, and Asian-style rendering. Can make art viewing a more interactive experience.

iSymphony: An Adaptive Interactive Orchestral Conducting System for Digital Audio and Video Streams

Eric Lee, Henning Kiel, Saskia Dedenbach, Ingo Gruell, Thorsten Karrer, Marius Wolf, Jan Borchers, *RWTH Aachen University, Germany*

Presents an interactive exhibit that recognizes different conducting gestures and time-stretches a digital recording accordingly in real time. Lets users conduct audio-visual orchestral recordings while adapting to their skill level.

Virtual Rap Dancer: Invitation to Dance

Dennis Reidsma, Anton Nijholt, Ronald Poppe, Rutger Rienks, Hendri Hondorp, *University of Twente, Netherlands*

Presents a system that displays a virtual avatar dancing to the beat of incoming music or human dance movements. Uses captured styles of various rap dancers to generate its moves.

EXPERIENCE REPORTS

ROOM 511CF

Real-World Design Solutions

[SESSION CHAIR] Jim Miller, *Miramontes Computing, USA*

Café Life in the Digital Age: Augmenting Information Flow in a Café-Work-Entertainment Space

Elizabeth F. Churchill, Les Nelson, *PARC, USA*
Gary Hsieh, *Carnegie Mellon University, USA*

In this paper we describe our installation of a large-screen public, interactive community board, the eyeCanvas, in a neighbourhood café and art gallery in San Francisco.

The Design of a Tangible Interaction Device to Alleviate Anxiety and Pain in Paediatric Burns Patients

Sam Bucolo, *ACID, Australia*
Roy Kimble, Jonathan Mott, *Royal Children's Hospital, Australia*

This paper presents a case study of the design of a unique tangible media device to alleviate anxiety and pain in paediatric burns patients.

Use of Keyboard for Mouseless Data Entry in UI Design

Rachel M. Nilsson, Sam J. Racine, *Unisys Corporation, USA*

In the airline industry, mouseless operation is a standard form of user interface design. The presented design solution relies on a particular configuration of commands mapped to specific keys of the keyboard.

SIG

ROOM 515C

Current Issues in Assessing and Improving Information Usability

[ORGANIZERS]

Stephanie Rosenbaum, *Tec-Ed, Inc., USA*
Judith Ramey, *University of Washington, USA*

In this 16th annual forum on human factors of information design, we address information usability issues from the facilitators' list of topics, augmented by attendees' suggestions. Five issues are selected by the group and discussed in depth.

PANEL

ROOM 517AB

Service Innovation and Design

[PANELISTS]

Jeanette Blomberg, *IBM, USA*
 Shelley Evenson, *Carnegie Mellon University, USA*
 Ryan Armbruster, *The Mayo Clinic, USA*
 Mark Jones, *IDEO, USA*
 Mary Jo Bitner, *Arizona State University, USA*
 Terry Winograd, *Stanford University, USA*

This panel introduces the CHI community to a growing area of innovation and business development that leverages new technology platforms, namely service design. This topic is explored through a series of case studies of service design in a diverse set of industries and contexts from healthcare delivery to IT services.

PANEL

ROOM 517C

Agile Development: Opportunity or Fad?

[PANELISTS]

Helen Sharp, *The Open University, UK*
 Robert Biddle, *Carleton University, Canada*
 Philip D. Gray, *University of Glasgow, Scotland*
 Lynn Miller, *Alias, Canada*
 Jeff Patton, *Thoughtworks, USA*

Agile development, e.g., eXtreme Programming (XP), is an approach to software engineering that explicitly champions an active role for the customer. This panel explores whether agile development provides an opportunity to integrate software engineering and HCI and overcome problems encountered with more traditional development processes.

PAPERS

ROOM 511ABDE

Automatic Generation and Usability

[SESSION CHAIR] Erik Nilsen, *Lewis & Clark University, USA*

[PAPER] UNIFORM: Automatically Generating Consistent Remote Control User Interfaces

Jeffrey Nichols, Brad Myers, Brandon Rothrock, *Carnegie Mellon University, USA*

This paper describes UNIFORM, the first system to automatically generate consistent remote control user interfaces from models of appliances that are guaranteed not to be consistent.



[PAPER] Generating Automated Predictions of Behavior Strategically Adapted to Specific Performance Objectives

Katherine Eng, *NASA, USA*
 Richard L. Lewis, *University of Michigan, USA*
 Irene Tollinger, *NASA, USA*
 Alina Chu, *University of Michigan, USA*
 Andrew Howes, *Manchester University, UK*
 Alonso Vera, *NASA, USA*

Describes a novel modeling capability to generate multiple predictions of strategic performance by manipulating an objective function (speed / working memory load). Supports affordable interface and procedure modeling for designers.

[PAPER] Automated Summative Usability Studies: An Empirical Evaluation

Ryan West, Katherine Lehman, *SAS Institute, USA*

Empirical evaluation of a method for automating summative usability studies and conducting them remotely. Offers practitioners an affordable way to conduct summative studies remotely and describes the trade-offs compared to manual lab testing.

PAPERS

ROOM 516C

Security

[SESSION CHAIR] Batya Friedman, *University of Washington, USA*

[PAPER] Why Phishing Works

Rachna Dhamija, *Harvard University, USA*
 J. D. Tygar, Marti Hearst, *University of California, Berkeley, USA*

This paper provides the first empirical evidence about phishing strategies that successfully deceive users. To design systems that protect users from fraudulent websites, we must understand how users are deceived.

[PAPER] Secrecy, Flagging, and Paranoia: Adoption Criteria in Encrypted Email

Shirley Gaw, Edward W. Felten, Patricia Fernandez-Kelly, *Princeton University, USA*

Qualitative study analyzing why encrypted e-mail has failed to gain popularity and demonstrating how social norms affect adoption. Can assist designers incorporate social context in secure e-mail clients.

 [PAPER] **Do Security Toolbars Actually Prevent Phishing Attacks?**

Min Wu, Robert C. Miller, Simson L. Garfinkel, *MIT, USA*

User study showing that security toolbars are not effective at preventing people from being tricked by fake websites. Can assist in developing usable software to protect people's online identity.

PAPERS

ROOM 516AB

Media

[SESSION CHAIR] Bill Gaver, *Royal College of Art, UK*

[PAPER] **Olfoto: Designing a Smell-Based Interaction**

Stephen Brewster, David McGookin, Christopher Miller, *University of Glasgow, Scotland*

Study looking at the use of smell to evoke memories to help recall of digital photos. Can help designers use smell effectively and users to search for images more efficiently.

[PAPER] **Personal vs. Commercial Content: The Similarities Between Consumer Use of Photos and Music**

Frank Bentley, Crysta Metcalf, Gunnar Harboe, *Motorola Labs, USA*

Our work explores similarities between consumer use of music and photos based on two separate ethnographic studies. This work contributes new insights for applications that manage and share digital content.

[CHI NOTE] **The Television Will Be Revolutionized: Effects of PVRs and Filesharing on Television Watching**

Barry Brown, Louise Barkhuus, *University of Glasgow, Scotland*

Presents the first study of the effects of personal video recorders (PVR) and filesharing on TV watching. Illustrates the changing 'media lifecycle' of TV and new design concepts.

alt.chi

ROOM 510ABCD

It's a Small World After All

[SESSION CHAIR] Joseph 'Jofish' Kaye, *Cornell University, USA*

Snapshots from a Study of Context Photography

Maria Håkansson, Sara Ljungblad, Lalya Gaye, Lars Erik Holmquist, *Viktoria Institute, Sweden*

Presents a user study of a novel camera application, in which contextual movement and sound visually affect the picture. Shows how photography can be extended beyond the analogue metaphor.

TinyMotion: Camera Phone Based Interaction Methods

Jingtao Wang, John F. Canny, *University of California, Berkeley, USA*

This paper presents TinyMotion, a pure software approach that detects the movements of cellphones in real time by analyzing image sequences captured by the built-in camera.

Virtual Information Piles for Small Screen Devices

QianYing Wang, Tony Tsieh, Meredith Ringel Morris, Andreas Paepcke, *Stanford University, USA*

We present our design and implementation of the Piles Across Space system. This facility breaks through the screen real-estate barrier that PDAs impose on their applications.

Z-agon: Mobile Multi-Display Browser Cube

Takashi Matsumoto, Daisuke Horiguchi, Shihori Nakashima, Naohito Okude, *Keio University, Japan*

Based on research of user needs and user interaction, a cubic multi-display device named Z-agon was envisioned as a packaged design of the hardware, tangible interface and contents.

CarCOACH: A Polite and Effective Driving Coach

Ernesto Arroyo, Shawn Sullivan, Ted Selker, *MIT, USA*

Experiment evaluating an in-vehicle driving advisor using controlled feedback and continuous feedback (positive and negative). Can assist designers in deciding what type of feedback works best for guidance systems.

EXPERIENCE REPORTS

ROOM 511CF

Usability in the Wild

[SESSION CHAIR] Gary Marsden, *University of Cape Town, South Africa*

Web Tool for Health Insurance Design by Small Groups: Usability Study

Laurie Kantner, *Tec-Ed, Inc., USA*
Marion Danis, *National Institutes of Health, USA*
Susan Dorr Goold, Mike Nowak, Lesa Monroe-Gatrell,
University of Michigan, USA

The authors describe iterative usability evaluation of a web-based collaborative health insurance benefits planning application, which was developed by the U.S. National Institutes of Health and the University of Michigan.

Applying Contextual Design to ERP System Implementation

Inka Vilpola, Kaisa Väänänen-Vainio-Mattila, Taru Salmimaa,
Institute of Human-Centered Technology, Finland

Enterprise resource planning systems (ERP) affect the daily work of millions of users. Applying Contextual Design introduces the missing user-centered approach in ERP implementations and improves the system success.

Making Oracle Behave

Sofie Vanophem, Kris Vanstappen, *The Human Interface Group, Belgium*

The authors describe how usability consultants worked with developers using Oracle Designer to build an ERP tool for temporary agencies, creating a custom user interface for 7,000 end-users familiar with Windows, not Oracle applications.

SIG

ROOM 515C

Designing Interactive Environments for Outdoors Gaming and Play

[ORGANIZERS]

Oren Zuckerman, *MIT, USA*
Narcis Pares, *Universitat Pompeu Fabra, Spain*
Steve Benford, *University of Nottingham, UK*
Henrik Hautop Lund, *University of Southern Denmark, Denmark*

In this SIG we want to discuss the key points in the design of an outdoor interactive environment, including interaction techniques, appropriate technologies, usage patterns, robustness, and safety.

Tuesday Courses

COURSE 13

ROOM 513CD

The Usability Engineering Lifecycle

9:00 – 18:00

Deborah J. Mayhew, *Deborah J. Mayhew & Associates, USA*

In this course you will obtain an overview of a highly structured but adaptable engineering process for designing high quality user interfaces to traditional and web-based software applications.

[INTENDED AUDIENCE] Managers, developers, designers, and usability engineers in both traditional software development and web development organizations. The course is at an introductory level.

[PRESENTATION STYLE] Lecture materials will provide an overview of The Usability Engineering Lifecycle. 'War stories' and concrete examples, one detailed case study that runs throughout the course and audience discussion will augment the lecture materials.

[FEATURES]

- * Setting the stage by applying usability requirements analysis techniques
- * Extracting usability goals from requirements analysis data
- * Applying a structured top-down approach to user interface design
- * Applying iterative evaluation techniques to validate designs
- * Integrating 'The Usability Engineering Lifecycle' into an underlying software development methodology
- * Applying 'The Usability Engineering Lifecycle' to web development projects

COURSE 10

ROOM 513EF

Understanding Users in Context: An In-Depth Introduction to Fieldwork

9:00 – 18:00

Susan M. Dray, David A. Siegel, *Dray & Associates, Inc., USA*

Getting into field research? Learn key skills and approaches for observational field studies, and about the many issues that must be addressed in planning and carrying out field research.

[INTENDED AUDIENCE] This hands-on session is aimed at practitioners doing, planning, and leading field research, including developers, designers, and managers who are responsible for user experience or user requirements identification. This is an introductory to intermediate level

course. It will be useful for beginners in fieldwork, as well as those with some experience who want to broaden their knowledge of approaches.

[PRESENTATION STYLE] Lecture, group discussion, and small group hands-on exercises

[FEATURES]

- * Learn how field research complements other User-Centered Design (UCD) techniques
- * Learn what it takes to make fieldwork more than just 'anecdote collecting'
- * Learn fine points of four data-gathering techniques
 - Naturalistic Observation
 - Contextual Inquiry
 - Artifact Walkthroughs
 - Naturalistic Usability Evaluation
- * Learn when and how to apply these methods to user-centered design
- * Identify next steps for data analysis

COURSE 11

ROOM 514AB

Re-Positioning User Experience as a Strategic Process

9:00 – 18:00

Liam Friedland, *SAP, USA*

Jon Innes, *Intuit, USA*

This course covers the operational, organizational, and strategic aspects that UX groups impact within product development companies. Course includes case studies and exercises aimed at intermediate to advanced HCI practitioners.

[INTENDED AUDIENCE] Course content includes case studies and group exercises aimed at intermediate to advanced practitioners with HCI experience in corporate settings, or managers charged with championing user-centered design processes.

[FEATURES]

This course covers the operational, organizational, and strategic aspects that UX groups can and should impact within product development companies. Attendees will learn:

- * A framework for thinking about UX as a strategic business process
- * The difference between operational, tactical, and strategic activities
- * How resources, processes, and values impact design organizations
- * How UX is uniquely positioned to help organizations survive strategic inflection points
- * To articulate the rationale for UX as a must-have competence

COURSE 14

ROOM 513AB

Usability and Product Development: A Usability Course for Management

9:00 – 18:00

Jon Meads, *Usability Architects, Inc., USA*

A management course on integrating usability into product development: why usability is non-trivial, the value of and when to use various techniques, and the issues and concerns for successful integration.

[INTENDED AUDIENCE] Managers with responsibility for integrating usability engineering into the product development process. No previous knowledge of usability engineering is assumed.

[PRESENTATION STYLE] A lecture presentation interspersed with attendee discussion

[FEATURES]

- * Explains why usability is difficult to achieve and why usability engineering is needed;
- * Description of the usability engineering lifecycle and its relationship to the product development lifecycle;
- * Reviews the major usability engineering techniques, their value, and use;
- * Explains how usability engineering can be justified by ROI and strategic advantage.

COURSE 12

ROOM 515AB

Personal Information Management in Theory and Practice

9:00 – 18:00

William Jones, *University of Washington, USA*
Jacek Gwizdka, *Rutgers University, USA*

This highly interactive, general-audience course provides an overview of personal information management (PIM) both as a field of inquiry and as an activity that each of us performs every day.

[INTENDED AUDIENCE] The course is designed for a general audience and provides a highly interactive combination of lectures, exercises, and group discussions.

[FEATURES]

Attendees will gain an understanding for:

- * PIM and its key activities.
- * The history and current state of PIM research and development (R&D)
- * How PIM relates to human-computer interaction (HCI).
- * How to assess individual practices of PIM
- * How to map from key activities and fundamental problems of PIM to the design and evaluation of supporting tools and strategies.
- * How new directions in R&D will likely impact PIM over the next 10 years.

517 AB	517 C	511 ABDE	516 C	516 AB	510 ABCD	516 DE	511 CF	515 C	513 CD	513 EF	514 ABC	513 AB	515 AB
<p>8:30 CHI Madness - Room: 517AB p.60</p> <p>9:00 – 10:30 Plenary Panel: Add a Dash of Interface: Taking Mash-Ups to the Next Level - Room 517AB p.61</p>													
<p>11:30 – 13:00</p> <p>Panel Why Do Tagging Systems Work? p. 61</p>	<p>Panel Integrating Socially Relevant Projects into HCI Teaching p. 61</p>	<p>Papers Ubiquitous Computing p. 61</p>	<p>Papers Search & Navigation: Mobiles & Audio p. 62</p>	<p>Student Design Competition: Final Round p. 62</p>	<p>Papers Using Knowledge to Predict & Manage p. 62</p>	<p>Papers Collecting & Editing Photos p. 63</p>	<p>Experience Reports Managing Design p. 63</p>	<p>SIG The CHI Engineering Community p. 63</p>	<p>Course 15 The Art of Speaking: Fundamentals for HCI Professionals: Part 1 p. 70</p>	<p>Course 19 From Usability Testing to User Experience: Tools for Data Collection & Analysis p. 70</p>	<p>Course 20 Analyzing Qualitative Data from Field Studies p. 70</p>	<p>Course 18 Designing for User Efficiency p. 71</p>	<p>Course 17 Web Design for Usability p. 71</p>
<p>14:30 – 16:00</p> <p>Panel Does Think Aloud Work? How Do We Know? p. 64</p>	<p>Panel Design Communication: How Do You Get Your Point Across? p. 64</p>	<p>Papers Privacy 2 p. 64</p>	<p>Papers Pen p. 64</p>	<p>Papers Everyday Use of Mobiles p. 65</p>	<p>Interactivity Touch Me: Haptics & Clothes p. 65</p>	<p>Papers Visualization 1 p. 66</p>	<p>HCI Overviews HCI Overviews 1 p. 66</p>	<p>SIG The CHI Management Community p. 66</p>	<p>Course 16 The Art of Speaking: Fundamentals for HCI Professionals: Part 2 p. 71</p>				
<p>16:30 – 18:00</p> <p>Panel The Route to the Sea for User Value p. 67</p>	<p>Research Overview End-User Programming p. 67</p>	<p>Papers Awareness & Presence p. 67</p>	<p>Papers Healthcare p. 68</p>	<p>Papers Online Communities p. 68</p>	<p>Papers Visualization 2 p. 69</p>	<p>SIG The CHI Design Community p. 69</p>	<p>HCI Overviews HCI Overviews 2 p. 69</p>	<p>SIG The CHI Education Community p. 69</p>					
<p>COMMONS</p> <p>Commons Open: 08:00 – 18:00 p. 16</p> <p>Exhibits, Interactivity 10:30 – 18:00 p. 12, 14, 15, 100</p> <p>Focus on Posters 10:30 – 11:30 p. 14, 15, 87</p> <p>SIGCHI Member Meeting Room 511ABDE 18:10 – 19:30 p. 15</p> <p>Hospitality Events Hyatt Regency Montréal 18:30 – 20:30 p. 14</p>													
<p>SPECIAL EVENTS</p>													
<p>NOTES</p>													

ROOM 517AB

CHI Madness

8:30 – 9:00

[SESSION CHAIR] Patrick Baudisch, *Microsoft, USA*

Join us again for the session that will tell you what's what and where to go. Presenters for today's sessions will again have less than a minute each to entice you to their session.

PANEL

ROOM 517AB

Add a Dash of Interface: Taking Mash-Ups to the Next Level

9:00 – 10:30

[SESSION CHAIR] David Gilmore, *Intel, USA*

[PANELISTS]

Ben Metcalfe, *BBC, UK*

Bret Taylor, *Google, USA*

Hart Rossman (discussant), *SAIC, USA*

Mash-ups traditionally consisted of the fusion of two or more data sources to create a new proposition. Ben Metcalfe and Bret Taylor will introduce how the remix community is going to take mash-ups to the next level—by combining data sources with your innovate interfaces to produce consumer-friendly mash-ups. Find out why extendable interfaces and open design patterns are a welcome addition to Web2.0 to the community.

[PRESENTER BIOS] Ben Metcalfe is the Project Lead of <http://backstage.bbc.co.uk>, the BBC's developer network. Before helping to create backstage, Ben was a software engineer on the award winning BBC News website. He has also been a member of the BBC's New Media Accessibility Working Group and is a strong advocate for user-centred design processes. Ben blogs at <http://benmetcalfe.com/blog/>

Bret Taylor is the Product Manager for Google Maps. He joined Google in early 2003 and has managed a number of products, including Google Local, Google's web search infrastructure, and Search Quality. Prior to Google, Bret worked as a software engineer at Reactivity, a startup incubator in Silicon Valley. Bret holds an M.S. and B.S. in Computer Science from Stanford University.

PANEL

ROOM 517AB

Why Do Tagging Systems Work?

[PANELISTS]

George Furnas, *University of Michigan*, USA
 Caterina Fake, *Yahoo!*, USA
 Luis von Ahn, *Carnegie Mellon University*, USA
 Joshua Schachter, *del.icio.us, Inc.*, USA
 Kevin Fox, *Google*, USA
 Scott Golder, *Hewlett-Packard Laboratories*, USA
 Marc Davis, Cameron Marlow, Mor Naaman, *Yahoo!*, USA

Web-based social tagging systems such as Del.icio.us and Flickr allow participants to annotate a particular resource, such as a web page or an image, with a freely chosen set of keywords ('tags'). As tagging systems grow in scale and popularity, new challenges must be addressed in their design and affordances.

PANEL

ROOM 517C

Making a Difference: Integrating Socially Relevant Projects into HCI Teaching

[PANELISTS]

Ben Shneiderman, *University of Maryland*, USA
 Batya Friedman, *University of Washington*, USA
 Jonathan Lazar, *Towson University*, USA
 Gary Marsden, *University of Cape Town*, South Africa
 Cliff Nass, *Stanford University*, USA
 Matt Jones, *University of Swansea*, UK
 Ann Bishop, *University of Illinois*, USA

Leading human-computer interaction educators describe how they enrich their courses with socially-relevant team projects that provide compelling opportunities for students to improve their education and make socially beneficial contributions. These group projects can produce life-changing experiences for students and give them excellent portfolios when seeking employment.

PAPERS

ROOM 511ABDE

Ubiquitous Computing

[SESSION CHAIR] Lars Erik Holmquist, *Viktoria Institute*, Sweden

[PAPER] Beyond Record and Play - Backpacks: Tangible Modulators for Kinetic Behavior

Hayes Raffle, Amanda Parkes, Hiroshi Ishii, Joshua Lifton, *MIT*, USA

Backpacks are physical components that modulate parameters of motion recordings in modular robotic creations, extending the conceptual limits of record-and-play by making tangible some of the benefits of symbolic abstraction.

[PAPER] Embedded Phenomena: Supporting Science Learning with Classroom-Sized Distributed Simulations

Tom Moher, *University of Illinois, Chicago*, USA

Describes method and case studies extending ambient media to represent simulated science phenomena in classrooms. Can assist designers in development of classroom learning environments and activities supporting science inquiry.

[CHI NOTE] TAP: Touch-And-Play

Duck Gun Park, Jin Kyung Kim, Jin Bong Sung, Jung Hwan Hwang, Chang Hee Hyung, Sung Weon Kang, *Electronics and Telecommunications Research Institute*, Republic of Korea

Describes a system for controlling interaction between intelligent devices using intra-body signaling. Provides designers with a practical and intuitive means of creating ad hoc device networks.

PAPERS

ROOM 516C

Search and Navigation: Mobiles and Audio[SESSION CHAIR] Stephen Brewster, *University of Glasgow, Scotland***[PAPER] A Large Scale Study of Wireless Search Behavior: Google Mobile Search**Maryam Kamvar, *Google & Columbia University, USA*
Shumeet Baluja, *Google & Carnegie Mellon University, USA*

This is the first large-scale study of mobile users' search behavior. We hope this provides insight to facilitate a quantitative understanding of the needs and shortcomings of wireless search interfaces.

**[PAPER] FaThumb: A Facet-Based Interface for Mobile Search**Amy K. Karlson, *University of Maryland, USA*
George G. Robertson, Daniel C. Robbins, Mary Czerwinski,
Greg R. Smith, *Microsoft, USA*

A novel facet-based navigation technique is presented for searching large datasets on mobile phones. Study results characterize tasks for which the technique is most effective, providing a better user experience.

[PAPER] Searching in Audio: The Utility of Transcripts, Dichotic Presentation, and Time-CompressionAbhishek Ranjan, Ravin Balakrishnan, Mark Chignell,
University of Toronto, Canada

Contributes empirical data evaluating the value of text transcripts, dichotic presentation, and time-compression in user ability to search in audio streams. Results can guide design of audio access interfaces.

SPECIAL

ROOM 516AB

Student Design Competition[SESSION CHAIR] Elizabeth F. Churchill, *PARC, USA*[SESSION CHAIR] Steven Wall, *University of Glasgow, Scotland*

[JUDGES]

Kenton O'Hara, *Hewlett-Packard, UK*
Gilbert Cockton, *University of Sunderland, UK*
Wendy March, *Intel, USA*
Jamie Sanchez, *University of Chile, Santiago, Chile*
Kori Inkpen, *Dalhousie University, Canada*
Rebecca E. Grinter, *Georgia Institute of Technology, USA*

This is the third and final round of the CHI 2006 Student Design Competition. This session offers the four finalist student teams the opportunity to present their design projects to CHI attendees. A panel of expert judges will evaluate and score the projects on the basis of this presentation, considering the design process as well as the final product.

PAPERS

ROOM 510ABCD

Using Knowledge to Predict and Manage[SESSION CHAIR] Joe Konstan, *University of Minnesota, USA***[PAPER] Responsiveness in Instant Messaging: Predictive Models Supporting Inter-Personal Communication**Daniel Avrahami, Scott E. Hudson, *Carnegie Mellon University, USA*

Describes the successful creation of statistical models that are able to accurately predict users' responsiveness to incoming instant messages, and in particular responsiveness to attempts at initiating a new session.

[PAPER] Leveraging Characteristics of Task Structure to Predict the Cost of InterruptionShamsi T. Iqbal, Brian P. Bailey, *University of Illinois, USA*

Contributes a model for predicting the cost of interruption (COI) at subtask boundaries. Systems can use it to predict a more accurate COI, enabling effective decisions about when to interrupt.

[PAPER] A Goal-Oriented Web BrowserAlexander Faaborg, Henry Lieberman, *MIT, USA*

Presents how large scale knowledge bases of semantic information can be leveraged to expand the breadth and functionality of programming by 'Example Systems' and 'Data Detectors.'

PAPERS

ROOM 516DE

Collecting and Editing Photos

[SESSION CHAIR] Andreas Paepcke, *Stanford University, USA*

[PAPER] Understanding Photowork

David Kirk, *University of Nottingham, UK*
Abigail Sellen, Carsten Rother, Kenneth Wood, *Microsoft, UK*

Field study of how users work with their home photo collections. Offers implications for software design and a descriptive framework of realistic tasks against which new tools can be assessed.

[PAPER] Gaze-Based Interaction for Semi-Automatic Photo Cropping

Anthony Santella, *Rutgers University, USA*
Maneesh Agrawala, *University of California, Berkeley, USA*
Doug DeCarlo, *Rutgers University, USA*
David Salesin, *Adobe Systems & University of Washington, USA*
Michael Cohen, *Microsoft, USA*

Presents a gaze-based interface allowing photo cropping with no explicit user effort. Includes an algorithm for identifying important photo content that should be broadly useful in gaze-based interaction with photographs.

[PAPER] Tabletop Sharing of Digital Photographs for the Elderly

Trent Apted, Judy Kay, *University of Sydney, Australia*
Aaron Quigley, *University College Dublin, Ireland*

Usability studies of digital photograph sharing interfaces for the demographic with the most life experience to share—the elderly—has been neglected. We contribute a novel interface and study.

EXPERIENCE REPORTS

ROOM 511CF

Managing Design

[SESSION CHAIR] Austin Henderson, *Pitney Bowes, USA*

Managing International Usability Projects: Cooperative Strategy

Lada Gorlenko, *IBM, USA*
Sven Krause, *Foviance, UK*

Managing international usability teams using cooperative strategy, particularly the setup and data analysis.

When Design Is Not the Problem: Better Usability Through Non-Design Means

Luke Kowalski, Jeremy Ashley, Misha Vaughan, *Oracle, USA*

In shipping quality software, design is not the hard part. Through interdisciplinary collaboration, design impact can instead be made through non-design means: technology, organizational, legal, marketing, documentation/QA, and development tools.

In Search of End-Users

Rachel K. E. Bellamy, Tracee Vetting Wolf, Rhonda Rosenbaum, *IBM, USA*

In order to learn from end-users we need to find end-users to collaborate with. However, finding end-users can be the hardest part of a project.

SIG

ROOM 515C

The CHI Engineering Community

[ORGANIZERS]

Bonnie E. John, *Carnegie Mellon University, USA*
William Newman, *Consultant, Microsoft, UK*
Alan Blackwell, *Cambridge University, United Kingdom*
Scooter Morris, *University of California, San Francisco, USA*

This SIG will provide a forum for people interested in bringing the best of the field of engineering to the field of HCI.

PANEL

ROOM 517AB

Does Think Aloud Work? How Do We Know?

[PANELISTS]

Judith Ramey, *University of Washington, USA*
Ted Boren, *The Church of Jesus Christ of Latter-day Saints, USA*
Elisabeth Cuddihy, *University of Washington, USA*
Joe Dumas, *Bentley College, USA*
Zhiwei Guan, *University of Washington, USA*
Maaikje J. van den Haak, Menno D.T. De Jong, *University of Twente, Netherlands*

The think-aloud method is widely employed in usability research to gain insights into underlying usability problems, but concerns remain about its validity and usefulness. This panel presents current studies of the think-aloud method, examines its usage in the field, discusses pitfalls that may threaten its validity, and comments on how to apply the method.

PANEL

ROOM 517C

Design Communication: How Do You Get Your Point Across?

[PANELISTS]

Scott Jenson (moderator), *Google, USA*
Harry Sadler, *Nasa, USA*
Charlie Hill, *IBM Software Group, USA*
Carl DiSalvio, *Carnegie Mellon University, USA*

One of the core issues of design is communication. Not only between designers, but just as importantly between managers and developers. There hasn't been much discussion in the design community on how to communicate design.

PAPERS

ROOM 511ABDE

Privacy 2

[SESSION CHAIR] Ian Smith, *Intel, USA*

[PAPER] Keeping Up Appearances: Understanding the Dimensions of Incidental Information Privacy

Kirstie Hawkey, Kori Inkpen, *Dalhousie University, Canada*

Survey investigated the privacy of incidental information visible in web browsers. Provides understanding of dimensions of privacy that combine to affect a user's comfort level when others view their display.

[PAPER] Being Watched or Being Special: How I Learned to Stop Worrying and Love Being Monitored, Surveilled, and Assessed

Erica Robles, Abhay Sukumaran, Kathryn Rickertsen, Cliff Nass, *Stanford University, USA*

Experimental study shows that rationale mediates perceptions and judgments of being monitored and evaluated in public/private. Interdisciplinary understanding of social aspects of public/private suggested as needed research area.

PAPERS

ROOM 516C

Pen

[SESSION CHAIR] Jean-Marc Robert, *Ecole Polytechnique de Montréal, Canada*

[PAPER] Effectiveness of Annotating by Hand for Non-Alphabetical Languages

Muhd Dzulkhiflee Hamzah, Shun'ichi Tano, Mitsuru Iwata, Tomonori Hashiyama, *The University of Electro-Communications, Japan*

Describes a quantitative analysis of the effectiveness of hand-written annotations during a note-taking task in Japanese. Can assist in developing better annotation systems for non-alphabetical languages such in East Asian countries.

[PAPER] Speech Pen: Predictive Handwriting Based on Ambient Multimodal Recognition

Kazutaka Kurihara, *The University of Tokyo*, Japan
 Masataka Goto, Jun Ogata, *National Institute of Advanced Industrial Science and Technology, Japan*,
 Takeo Igarashi, *The University of Tokyo & JST*, Japan

Shows that handwriting with prediction can be useful in Japanese, and presents a prototype system using speech and handwriting recognition. Can make digital writing faster and more efficient.

[PAPER] Hover Widgets: Using the Tracking State to Extend the Capabilities of Pen-Operated Devices

Tovi Grossman, *Microsoft and University of Toronto*, USA & Canada
 Ken Hinckley, Patrick Baudisch, *Microsoft*, USA
 Maneesh Agrawala, *Microsoft and University of California, Berkeley*, USA
 Ravin Balakrishnan, *University of Toronto*, Canada

The paper presents Hover Widgets, a new technique for pen-based interfaces using gestures made in the tracking state. We found Hover Widgets to have beneficial qualities in a formal evaluation.

PAPERS

ROOM 516AB

Everyday Use of Mobiles**[SESSION CHAIR] Panu Korhonen, Nokia, Finland****[PAPER] Everyday Practices with Mobile Video Telephony**

Kenton O'Hara, *Hewlett-Packard*, UK
 Alison Black, *Alison Black Research and Consulting*, UK
 Matthew Lipson, *Orange*, UK

The paper presents a study of everyday use of mobile video telephony. Real use episodes highlight key motivations underlying video calling and the social and practical barriers that hinder it.

[CHI NOTE] Sashay: Designing for WondermentEric Paulos, Chris Beckmann, *Intel*, USA

Presents a cultural perspective on locative media, and descriptions of two projects that intervene in the urban landscape. Provides a strong rethinking of methods and goals for designing systems in urban context.

[CHI NOTE] Urbanhermes: Social Signaling with Electronic FashionChristine M. Liu, Judith S. Donath, *MIT*, USA

Describes a prototype 'communicative accessory', a brief user study and the underlying conceptual framework for social signaling. Draws insights for the design of 'fashion signaling' systems.

[PAPER] Because I Carry My Cell Phone Anyway: Functional Location-Based Reminder Applications

Pamela J. Ludford, Dan Frankowski, Ken Reily, Kurt Wilms, Loren Terveen, *University of Minnesota*, USA

Develops a novel location-based reminder system. Demonstrates its utility for everyday task management and identifies a rich model for effective location-based information delivery.

INTERACTIVITY

ROOM 510ABCD

Touch Me: Haptics and Clothes**[SESSION CHAIR] Eric Lee, RWTH Aachen University, Germany****MultiVis: Improving Access to Visualisations for Visually Impaired People**

David McGookin, Stephen Brewster, *University of Glasgow*, Scotland

Illustrates a system to construct and browse mathematical graphs using haptic and auditory feedback. Points to better ways for visually impaired users to create and interact with graph-based data representations.

A Haptic Memory Game Using the STReSS2 Tactile Display

Qi Wang, Vincent Levesque, Jerome Pasquero, Vincent Hayward, *McGill University*, Canada

Presents a memory card game that uses tactile feedback on the finger tip to distinguish cards. Showcases a new 2D haptic display and three different tactile rendering techniques.

Memory-Rich Clothing

Joanna Berzowska, Marcelo Coelho, *Concordia University*, Canada

This paper describes conceptual and technical prototypes of reactive body-worn artifacts that display their history of use and communicate physical (or embodied) memory.

PAPERS

ROOM 516DE

Visualization 1[SESSION CHAIR] Mary Czerwinski, *Microsoft, USA***[PAPER] GUESS: A Language and Interface for Graph Exploration**Eytan Adar, *University of Washington, USA*

The main contributions of GUESS are a) the design of a domain-specific language for graph exploration and the experience of its design and b) the interactive interpreter which connects visual components to the programming environment.

[PAPER] The Sandbox for Analysis—Concepts and EvaluationWilliam Wright, David Schroh, Pascale Proulx, Alex Skaburskis, Brian Cort, *Oculus, Canada*

New sense-making system uses innovative human information interactions and visualizations to provide flexible, expressive thinking environment for analysis. Experiments show it's easy to learn, encourages best practices and saves time.

[PAPER] Visual Exploration of Multivariate GraphsMartin Wattenberg, *IBM, USA*

This paper describes a new visualization technique for a common type of graph structure. We believe it is broadly applicable and a useful complement to current graph visualization methods.

HCI OVERVIEWS

ROOM 511CF

HCI Overviews 1[SESSION CHAIR] David Millen, *IBM, USA***UCD of Financial Services at the Smart Internet Technology Centre**Supriya Singh, *RMIT University, Australia*

The experience of contributing sociological and anthropological perspectives to the user-centered design of financial services in the Smart Internet Technology Cooperative Research Centre in Australia.

COST294-MAUSE: A Pan European Usability Research CommunityEffie Lai-Chong Law, *ETH Zurich, Switzerland*
Ebba Thora Hvannberg, *University of Iceland, Iceland*

COST294-MAUSE is a usability research community whose goal is to apply more science to usability evaluation methods and transfer this deeper understanding to industry and educators. Its working groups address usability database management, comparative studies, defect classification, and formalized models.

The HTI Lab @ ftw: User Research for Telecom SystemsPeter Fröhlich, Lynne Baillie, Peter Reichl, Raimund Schatz, Florian Hammer, Georg Niklfeld, *Telecommunications Research Center Vienna (ftw.), Austria*

This overview presents the Human-Telecom Systems Interaction Laboratory at the Telecommunications Research Center (FTW), Vienna. The current setup of the HTI Lab and its contributions to related application-oriented projects at FTW are described.

SIG

ROOM 515C

The CHI Management Community

[ORGANIZER]

James A. Euchner, Austin Henderson, *Pitney Bowes, USA*

This SIG will provide those interested in the interplay between management and HCI to explore this subject and the ongoing development of the Management Community at the CHI conferences.

PANEL

ROOM 517AB

The Route to the Sea for User Value

[PANELISTS]

Austin Henderson (moderator), *Pitney Bowes*, USA
Lisa Anderson, *Intuit*, USA
Jeremy Ashley, *Oracle*, USA
Patrik Heuman, *Sony Ericsson*, USA
Janice Rohn, *World Savings Bank*, USA

HCI managers with experience in participating in delivering user value as shipping products that make good businesses will discuss the hazards that the product development process holds, and what it takes for HCI managers to ensure that user value remains in the products throughout that process.

INVITED RESEARCH OVERVIEW

ROOM 517C

End-User Programming

[SESSION CHAIR] Dan Olsen, *Brigham Young University*, USA

Brad Myers, *Carnegie Mellon University*, USA

In the past few decades there has been considerable work on empowering end users to be able to write their own programs, and as a result, users are indeed doing so. In fact, we estimate that over 12 million people in American workplaces would say that they do programming at work, and almost 50 million people use spreadsheets or databases (and therefore may potentially program), compared to only 3 million professional programmers. The motivation for end-user programming is to have the computer be useful for each person's specific individual needs. While the empirical study of programming has been an HCI topic since the beginning the field, it is only recently that there has been a focus on the End-User Programmer as a separate class from novices who are assumed to be studying to be professional programmers. Another recent focus is on making end-user programming more reliable, using End-User Software Engineering. My presentation will summarize the current and past research in the area of End-User Programming.

[PRESENTER BIO] Brad A. Myers is a Professor in the Human-Computer Interaction Institute in the School of Computer Science at Carnegie Mellon University, where he is the principal investigator for various research projects including: the Pebbles Hand-Held Computer Project, Natural Programming, User Interface Software, and Demonstrational Interfaces. He is the author or editor of over 275 publications, including the books "Creating User Interfaces by Demonstration" and "Languages for Developing User Interfaces," and he is on the editorial board of five journals.

He became an ACM Fellow in 2005, and in 2004, he was elected to the CHI Academy. His research interests include user interface development systems, user interfaces, hand-held computers, programming by example, end-user programming, visual programming, programming language design, interaction techniques, window management, and programming environments.

PAPERS

ROOM 511ABDE

Awareness and Presence

[SESSION CHAIR] Steve Benford, *University of Nottingham*, UK

[PAPER] From Awareness to Connectedness: The Design and Deployment of Presence Displays

Anind K. Dey, *Carnegie Mellon University*, USA
Ed de Guzman, *University of Illinois, Urbana-Champaign*, USA

Describes user-centered process for designing awareness displays and evaluation demonstrating these displays improve sense of awareness and connectedness. Assists display designers in building displays that effectively support awareness and connectedness.

[CHI NOTE] Negotiating Presence-in-Absence: Contact, Content, and Context

Steve Howard, *The University of Melbourne*, Australia
Jesper Kjeldskov, Mikael B. Skov, Kasper Garnæs, Olga Grünberger, *Aalborg University*, Denmark

Develops an analytic framework integrating previous HCI findings on intimate communication and illustrates it with a case study. Offers a design space for social presence systems.

[CHI NOTE] Using Linguistic Features to Measure Presence in Computer-Mediated Communication

Adam D. I. Kramer, *University of Oregon*, USA
Lui Min Oh, *DSO National Laboratories*, Singapore
Susan R. Fussell, *Carnegie Mellon University*, USA

Presents a new technique for measuring presence in computer-mediated communication using linguistic features of dialogues. Provides an easy-to-use method for assessing the effects of communications technologies on presence.

[PAPER] The Paradox of the Assisted User: Guidance Can Be Counterproductive

Christof C. van Nimwegen, *Utrecht University*, Netherlands
 Daniel Burgos, *Open University of the Netherlands*, Netherlands
 Herre H. van Oostendorp, Hermina H.J.M Schijf, *Utrecht University*, Netherlands

This paper contributes to the empirical and cognitive foundation of principles underlying human computer interaction. It shows that guidance in interfaces by externalizing information does not always yield better performance.

PAPERS

ROOM 516C

Healthcare**[SESSION CHAIR]** Lisa Neal, *Lisaneal.com*, USA **[PAPER] Investigating Health Management Practices of Individuals with Diabetes**

Lena Mamykina, *Siemens*, USA
 Elizabeth D. Mynatt, *Georgia Institute of Technology*, USA
 David R. Kaufman, *Columbia University*, USA

The paper presents analysis of diabetes self-management practices using qualitative interviews, an observational study and a technology probe. We draw implications for the design of health monitoring applications.

[PAPER] Tensions in Designing Capture Technologies for an Evidence-Based Care Community

Gillian Hayes, Gregory Abowd, *Georgia Institute of Technology*, USA

An analysis of privacy, surveillance, and awareness concerns with regard to evidence-based healthcare and education. The design of socially appropriate capture technologies for the community of stakeholders in this domain.

[CHI NOTE] Pride and Prejudice: Learning How Chronically Ill People Think about Food

Katie A. Siek, Kay H. Connelly, Yvonne Rogers, *Indiana University*, USA

Presents a formative study exploring how chronically ill people organize food and read nutrition indicator icons. Can assist researchers develop nutrition applications and motivate participant usage for patient populations.

PAPERS

ROOM 516AB

Online Communities**[SESSION CHAIR]** John Thomas, *IBM*, USA**[CHI NOTE] Insert Movie Reference Here: A System to Bridge Conversation and Item-Oriented Web Sites**

Sara Drenner, Max Harper, Dan Frankowski, John Riedl, Loren Terveen, *University of Minnesota*, USA

Describes and evaluates a system that identifies discussion forum movie references to link forums with recommender systems. Suggests a design tradeoff between content augmentation and inter-site navigation.

[CHI NOTE] Motivating Participation by Displaying the Value of Contribution

Al M. Rashid, *University of Minnesota*, USA
 Kimberly Ling, Regina D. Tassone, *Carnegie Mellon University*, USA
 Paul Resnick, *University of Michigan*, USA
 Robert Kraut, *Carnegie Mellon University*, USA
 John Riedl, *University of Minnesota*, USA

Describes an experimental study of under-contribution in online communities. Suggests that designers can motivate contributions by giving end-users feedback about its value to others.

[PAPER] Talk to Me: Foundations for Successful Individual-Group Interactions in Online Communities

Jaime Arguello, *Carnegie Mellon University*, USA
 Brian S. Butler, *University of Pittsburgh*, USA
 Lisa Joyce, *Edinboro University*, USA
 Robert Kraut, Kimberly Ling, *Carnegie Mellon University*, USA
 Xiaoqing Wang, *University of Pittsburgh*, USA

Longitudinal archival study of newsgroup messages identifying individual, content, and context factors that influence community responsiveness and individual commitment. Results can assist developers building tools to enhance community interactions.

 **[PAPER] Routine Patterns of Internet Use and Psychological Well-Being: Coping with a Residential Move**

Irina Shklovski, Robert Kraut, *Carnegie Mellon University*, USA
 Jonathon Cummings, *Duke University*, USA

This paper examines a complex interaction between habitual technology use behaviors and psychological well-being, extending research and raising new questions

PAPERS

ROOM 510ABCD

Visualization 2

[SESSION CHAIR] Martin Wattenberg, *IBM, USA*

[PAPER] Visualizing Email Content: Portraying Relationships from Conversational Histories

Fernanda B. Viégas, *IBM, USA*
 Scott Golder, *Hewlett-Packard, USA*
 Judith Donath, *MIT, USA*

Presents a visualization of email content. Discusses different interaction modes that emerged in user study: exploration of overall trends and detail-oriented investigation. Can help improve user interaction with email archives.

[PAPER] Clipping Lists and Change Borders: Improving Multitasking Efficiency with Peripheral Information Design

Tara Matthews, *University of California, Berkeley, USA*
 Mary Czerwinski, George Robertson, Desney Tan, *Microsoft, USA*

We compare abstraction techniques in peripheral interfaces to determine their effects on task flow, resumption timing, and reacquisition in multitasking situations. Our empirical results will help guide future peripheral design.

[PAPER] A Fisheye Follow-up: Further Reflections on Focus + Context

George Furnas, *University of Michigan, USA*

Further understanding for creating small interfaces to large information worlds, includes unification of several visual techniques, discussion of non-visual fisheye-views, and models for why these kinds of presentations are valuable.

SIG

ROOM 516DE

The CHI Design Community

[ORGANIZERS]

David Gilmore, *Intel, USA*
 Kristina Höök, *Swedish Institute of Computer Science, Sweden*
 Jon Kolko, *Savannah College of Art and Design, USA*
 Bill Lucas, *MAYA, USA*

While most of the HCI literature can be seen as part of an engineering-science practice (with an emphasis on the acquisition and interpretation of 'facts'), the CHI 2006 Design Community focuses on how arts and engineering come together in the construction, study and interpretation of created objects (maybe more like the study of literature and criticism).

HCI OVERVIEWS

ROOM 511CF

HCI Overviews 2

[SESSION CHAIR] Mike Atwood, *Drexel University, USA*

Games in Asia Project

Vivian Hsueh-Hua Chen, Henry Been-Lirn Duh, *Nanyang Technological University, Singapore*
 Beth Kolko, *University of Washington, USA*
 Leo Sang-Min Whang, *Yonsei University, Republic of Korea*
 Michael Ching-Hui Fu, *Gamania INC, Taiwan*

The new technologies associated with computer games bring tremendous changes in human life at both the individual and societal level. This project seeks to understand the social, cultural, psychological, economic and educational implications of game playing in different Asian regions.

The ChiCI Group

Janet C. Read, Stuart MacFarlane, S. Rebecca Kelly, Emanuela Mazzone, Matthew Horton, *University of Central Lancashire, UK*

This overview describes the work, the vision, and the approach of the Child Computer Interaction (ChiCI) group at the University of Central Lancashire in the UK. This group, formed four years ago, has grown to become one of the leaders in its field whilst maintaining a democratic structure, an open mind, and an invigorating message.

HCI for Older and Disabled People in the Queen Mother Research Centre at Dundee University, Scotland

Alan F. Newell, Peter Gregor, Alm Norman, *University of Dundee, Scotland*

Research on cognitive support for elderly users. Includes designers, nurses, therapists, linguists, etc.

SIG

ROOM 515C

The CHI Education Community

[ORGANIZERS]

James Foley, *Georgia Institute of Technology, USA*
 Jenny Preece, *University of Maryland, USA*

The purpose of this SIG is to ask "What can the CHI Education Community do for you at CHI conferences?" and to discuss criteria for CHI Education Experience Reports.

Wednesday Courses

COURSE 15

ROOM 513CD

The Art of Speaking: Fundamentals for HCI Professionals: Part 1

9:00 – 13:00

Lisa B. Marshall, *lisabmarshall.com*, USA

Deborah A. Boehm-Davis, *George Mason University*, USA

Scientific professionals need more than good ideas to get ahead. Just as important is the ability to clearly and persuasively communicate ideas. This tutorial helps develop those fundamental presentation skills.

[INTENDED AUDIENCE] This course is targeted at developing fundamental presentation skills for any presenter who would like to improve his or her presentations

[PRESENTATION STYLE] Mostly lecture

[FEATURES]

- * Plan presentation strategy and objectives
- * Organize presentations
- * Get and keep the audience's attention
- * Reduce rambling and eliminate non-words
- * Practice appropriate eye contact
- * Make smooth transitions
- * Use gestures, facial expressions, and posture for clarity and emphasis
- * Design visuals to reinforce major points and explain complex data
- * Enhance your skills for on-going self-evaluation

COURSE 20

ROOM 514ABC

Analyzing Qualitative Data from Field Studies

9:00 – 18:00

David A. Siegel, Susan M. Dray, *Dray & Associates, Inc.*, USA

Field study data can be overwhelming and messy. Learn analysis methods to go beyond 'anecdote collecting,' improve the quality of findings, and provide better input to product planning and design.

[INTENDED AUDIENCE] This intermediate to advanced course is intended for people with some experience or training in fieldwork. It does not cover data-gathering techniques.

[PRESENTATION STYLE] Lecture, demonstration, discussion, and hands-on exercises built around simulated field research.

The course also includes a demonstration of Computer Assisted Qualitative Data Analysis Software.

[FEATURES]

- * Applying 'scientific rigor' to qualitative data
- * How software tools can help archive data to maintain the link between data and conclusions and to facilitate analysis
- * How to triangulate in on valid conclusions through complementary analyses, including coding strategies, clustering and affinity diagramming, extracting dimensions, and exploring networks of relations
- * How to deal with common validity concerns, such as small samples, outliers, and generalization from qualitative data
- * Tips and tricks for managing organizational issues in communicating fieldwork findings

COURSE 19

ROOM 513EF

From Usability Testing to User Experience: Tools for Data Collection and Analysis

9:00 – 18:00

Lucas P.J.J. Noldus, Tobias Heffelaar, *Noldus Information Technology BV*, Netherlands

This course brings you up to date with video technology, software tools, and integrated solutions. You will learn how to select the right tools for field studies or lab tests.

[INTENDED AUDIENCE] HCI researchers and usability practitioners (usability engineers, UI designers, usability testers) working in academia or industry.

[PRESENTATION STYLE] Classroom lectures, group exercises, discussion and hands-on training.

[FEATURES]

- * Video recording and screen capture, storage and retrieval
- * Designing a usability lab
- * Observational data collection
- * Automatic logging of user-system interaction
- * Multimodal measurements: eye tracking and physiology
- * Qualitative data analysis
- * Quantitative data analysis
- * Creating usability test reports

COURSE 18

ROOM 513AB

Designing for User Efficiency

9:00 – 18:00

Deborah J. Mayhew, *Deborah J. Mayhew & Associates, USA*

This course focuses on how to achieve motor, cognitive, and perceptual efficiency or ease-of-use (as opposed to intuitiveness or ease-of-learning) in software user interface design.

[INTENDED AUDIENCE] This course is aimed at anyone (developers, designers, usability engineers, end-users, managers, marketers, trainers, etc.) who has an interest in achieving end-user productivity (i.e., efficiency) through the design of software tools. It is presented at an introductory level.

[PRESENTATION STYLE] Lecture materials will provide an overview of the 'what, when, why, and how' of designing for user efficiency. The materials include real examples and 'war stories' from the instructor's experience, and will be augmented by audience discussion.

[FEATURES]

The course is structured according to answers to four questions:

- * What is efficiency?
- * When is efficiency the key usability goal?
- * Why is efficiency important?
- * How can we optimize efficiency in software user interface design?

COURSE 17

ROOM 515AB

Web Design for Usability

9:00 – 18:00

William Hudson, *Syntagm Ltd, UK*

A combined tutorial and workshop where you will discover and use a range of principles and techniques for designing usable web sites, including an innovative approach to card sorting.

[INTENDED AUDIENCE] Web and intranet designers, developers and managers. Usability and HCI professionals interested in the practical aspects of usable design. No specialist skills or knowledge are required.

[PRESENTATION STYLE] The course is approximately 60% tutorials and 40% activities or group discussions

[FEATURES]

On completion of this course you will be able to:

- * apply the principles of user-centered design
- * be sure you understand users' needs
- * improve usability and accessibility
- * build on existing user experience

COURSE 16

ROOM 513CD

The Art of Speaking: Fundamentals for HCI Professionals: Part 2

14:30 – 18:00

Lisa B. Marshall, *lisabmarshall.com, USA*

Deborah A. Boehm-Davis, *George Mason University, USA*

Practice makes perfect. Put the presentation skills described in Part 1 of this tutorial into practice by revising existing slides and receiving constructive feedback on practice presentations. (Registration restricted to those who have completed Part 1).

[INTENDED AUDIENCE] This course develops fundamental presentation skills for any presenter who would like to improve his or her presentations. Participants should bring copies of slides from a recent presentation for use in this tutorial. Participants must have taken Part 1 of this course.

[PRESENTATION STYLE] Combines lecture and hands-on experiences to provide the opportunity to practice the skills described in Part 1 and reviewed in Part 2.

[FEATURES]

- * Plan presentation objectives and strategy
- * Organize the presentation
- * Practice appropriate eye contact
- * Make smooth transitions
- * Use gestures, facial expressions, and posture for clarity and emphasis
- * Design visuals to reinforce major points and explain complex data
- * Enhance skills for on-going self-evaluation

517 AB	517 C	511 ABDE	516 C	516 AB	510 ABCD	516 DE	511 CF	515 C	513 CD	514 ABC	513 AB	515 AB
8:30 CHI Madness - Room: 517AB p. 74												
9:00 – 10:30	9:00 – 10:30	11:30 – 13:00	11:30 – 13:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00	14:30 – 16:00
Panel HCI Engineering for Disasters, Driving, & Distributed Work p. 74	Papers Novel Methods: Emotions, Gestures, Events p. 74	Papers Social Computing 2 p. 74	Papers Selecting & Tracking p. 75	Papers Menus p. 75	Papers Disabilities p. 78	Experience Reports Creative User Experience Methods p. 76	SIG Tips & Tricks for Better Usability Test Recommendations p. 76	Course 22 The Art of Speaking: Advanced Skills for the Lecture Hall & the Hallway p. 84	Course 24 How to Build Rich Personas from Field Data p. 84	Course 21 Usable for the World: A Practical Guide to Interna- tional User Studies p. 84	Course 26 Usability Design: A New Rational Unified Process Discipline p. 85	
Panel The State of Tangible Interfaces: Projects, Studies, & Open Issues p. 77	Papers Beliefs & Affect p. 77	Papers Interacting with Large Surfaces p. 81	Papers Usability Methods p. 80	Papers Social Computing 3 p. 80	Papers "It's About the Information, Stupid!" p. 80	Panel alt.chi Loving Me Loving You p. 78	Experience Reports User-Centered Design for Learning & Education p. 79	SIG Usability Community: Past, Present, & Future p. 79	Course 25 How to Collect Field Data & Produce a Tested Design in 1-8 Weeks p. 85	Course 23 Designing Responsive Software p. 84		
16:30 – 18:00 Closing Plenary Session: Digital Comics: An Art Form in Transition, Scott McCloud - Room: 517ABC p. 83												
COMMONS												
NOTES												
Commons Open: 08:00 – 12:00 p. 16												
Exhibits, Interactivity 10:30 – 12:00 p. 12, 14, 15, 100												
Focus on Posters 10:30 – 11:30 p. 14, 15, 87												

ROOM 517AB

CHI Madness

8:30 – 9:00

[SESSION CHAIR] Patrick Baudisch, *Microsoft, USA*

Join us again for the session that will tell you what's what and where to go. Presenters for today's sessions will again have less than a minute each to entice you to their session.

PANEL

ROOM 517AB

Real HCI: What it Takes to do HCI Engineering for Disasters, Driving, and Distributed Work

[PANELISTS]

Stuart Card, *PARC, USA*

Robin Murphy, *University of South Florida, USA*

Judith S. Olson, *University of Michigan, USA*

John D. Lee, *University of Iowa, USA*

William Newman, *Microsoft, UK*

How are interactive technologies helping tackle major societal problems? Panelists will present and contrast four very different yet topical problem domains, describing how HCI research is enabling measurable advances in each. They will join with the audience in discussing how best to engineer progress for society.

PAPERS

ROOM 511ABDE

Novel Methods: Emotions, Gestures, Events

[SESSION CHAIR] Terry Winograd, *Stanford University, USA*



[PAPER] **Prototyping and Sampling Experience to Evaluate Ubiquitous Computing Privacy in the Real World**

Giovanni Iachello, *Georgia Institute of Technology, USA*

Khai N. Truong, *University of Toronto, Canada*

Gregory D. Abowd, Gillian R. Hayes, *Georgia Institute of Technology, USA*

Molly Stevens, *Logical Design Solutions, USA*

Presents an event-contingent experience sampling technique to gather situated opinions on technology with reference to real-life situations. The technique can improve the design of mobile and ubiquitous computing applications.

[CHI NOTE] **Design and Experimental Analysis of Continuous Location Tracking Techniques for Wizard of Oz Testing**

Yang Li, Evan Welbourne, *University of Washington, USA*
James A. Landay, *University of Washington & Intel, USA*

Describes and evaluates two new gesture-based techniques for continuously tracking a moving object by hand, for use in Wizard of Oz studies of location-aware systems. Study shows an improvement in terms of task load.

[CHI NOTE] **Measuring Emotional Valence during Interactive Experiences: Boys at Video Game Play**

Richard L. Hazlett, *Johns Hopkins University, USA*

Describes the use of facial EMG as a measure of positive and negative emotion during interactive computer games. These methods appear useful for associating the player's emotion with game events, and could be applied to HCI in general.

[PAPER] **A Continuous and Objective Evaluation of Emotional Experience with Interactive Play Environments**

Regan L. Mandryk, *Simon Fraser University, Canada*

M. Stella Atkins, *Simon Fraser University, Canada*

Kori M. Inkpen, *Dalhousie University, Canada*

We present a method for modeling emotion, based on physiology, for ludic experience. Our modeled emotions are quantitative and objective, have a high evaluative bandwidth, and correspond to reported emotion.

PAPERS

ROOM 516C

Social Computing 2

[SESSION CHAIR] Victoria Bellotti, *PARC, USA*

[PAPER] **Using Intelligent Task Routing and Contribution Review to Help Communities Build Artifacts of Lasting Value**

Dan Cosley, Dan Frankowski, Loren Terveen, John Riedl, *University of Minnesota, USA*

We provide researchers and designers with experimentally-supported algorithms and models for influencing and reasoning about contributions to lasting artifacts of value created and maintained by online communities.

[PAPER] groupTime: Preference Based Group Scheduling

Mike Brzozowski, Kendra Carattini, Scott Klemmer, Patrick Mihelich, Jiang Hu, Andrew Y. Ng, *Stanford University, USA*

Introduces a user interface that combines machine learning and direct manipulation for lightweight group scheduling, exploiting social pressure while preserving plausible deniability. Describes design implications for similar intelligent user interfaces.

[PAPER] Accounting for Taste: Using Profile Similarity to Improve Recommender Systems

Philip Bonhard, Clare Harries, John McCarthy, M. Angela Sasse, *University College London, UK*

This paper presents insights into user decision-making strategies in online environments. It uses this as a basis to suggest how the utility and usability of recommender systems can be improved.

PAPERS

ROOM 516AB

Selecting and Tracking

[SESSION CHAIR] Brad Myers, *Carnegie Mellon University, USA*

[PAPER] Face-Tracking as an Augmented Input in Video Games: Enhancing Presence, Role-Playing, and Control

Shuo Wang, *Microsoft, China*
 Xiaocao Xiong, *Tsinghua University, China*
 Yan Xu, *Renmin University, China*
 Chao Wang, *Tsinghua University, China*
 Weiwei Zhang, Xiaofeng Dai, Dongmei Zhang, *Microsoft, China*

We designed and implemented two game prototypes, applying face/head information to different user experiences. These prototypes were based on analysis from prior camera-based games and face tracking technology.

[CHI NOTE] Direct Pointer: Direct Manipulation for Large-Display Interaction Using Handheld Cameras

Hao Jiang, *Tsinghua University, China*
 Eyal Ofek, *Microsoft, China*
 Neema Moraveji, *Microsoft, China*
 Yuanchun Shi, *Tsinghua University, China*

Introduces and evaluates a new pointing technique for large (possibly multi-user) displays using input from a hand-held camera. Provides designers with a method with reduced hardware requirements and UI modifications.

[CHI NOTE] Interacting with Communication Appliances: An Evaluation of Two Computer Vision-Based Selection Techniques

Jacob Eisenstein, *MIT, USA*
 Wendy E. Mackay, *INRIA Futurs, France*

Experimentally compares two computer-vision based selection techniques (object-tracking, motion-sensing). Suggests that designers should consider object-tracking as well as (the widely-accepted) motion-sensing.

[PAPER] Attention Funnel: Omnidirectional 3D Cursor for Mobile Augmented Reality Platforms

Frank Biocca, *Michigan State University, USA*
 Arthur Tang, *University of Central Florida, USA*
 Charles Owen, Fan Xiao, *Michigan State University, USA*

Research contributes unique mobile AR interface technique. General and broad applicability. Guides attention via any location-aware interface including cell phones. Controlled experiment validates improved user performance on search time, consistency, and mental workload.

PAPERS

ROOM 510ABCD

Menus

[SESSION CHAIR] Robert Jacobs, *Tufts University, USA*

[PAPER] Improving Menu Interaction: A Comparison of Standard, Force Enhanced, and Jumping Menus

David Ahlstrom, Rainer Alexandrowicz, Martin Hitz, *Klagenfurt University, Austria*

Based on an analysis of low level GUI interaction models, a cursor warping technique to facilitate selection tasks in cascading-pull-down menus is described. The technique can significantly reduce menu-selection times.

[PAPER] Zone and Polygon Menus: Using Relative Position to Increase the Breadth of Multi-Stroke Marking Menus

Shengdong Zhao, *University of Toronto, Canada*
 Maneesh Agrawala, *University of California, Berkeley & Microsoft, USA*
 Ken Hinckley, *Microsoft, USA*

New multi-stroke marking menu designs that consider relative position of strokes to increase menu breadth by 2x or more. User studies show new techniques outperform purely orientation-based menus.

[PAPER] Measuring the Difficulty of Steering Through Corners

Robert Pastel, *Michigan Technological University, USA*

Laboratory experiments extend the steering law to negotiating corners. Analysis and models predict the difficulties and illustrate design improvements for menu hierarchies and gestures.

EXPERIENCE REPORTS

ROOM 511CF

Creative User Experience Methods

[SESSION CHAIR] A.J. Brush, *Microsoft, USA*

Developing User Interface Guidelines for DVD Menus

Karin Kappel, Martin Tomitsch, Thomas Koltringer, Thomas Grechenig, *Vienna University of Technology, Austria*

Watching DVDs can be frustrating because their menus are complex and difficult to navigate. The authors present guidelines for designing usable DVD menus and a general methodology for developing user-interface guidelines.

Understanding Users in Consumer Electronics Experience Design

Joonhwan Kim, Sanghee Lee, SungWoo Kim, *Samsung Electronics, Republic of Korea*

The authors describe user research methodologies Samsung Electronics applies to experience design: ethnographic in-home interviews for understanding user requirements, subjective design preference measurements, and a new approach to stimulated recall in usability testing.

AdWords Help Center

Yelena Nakhimovsky, *Google & Georgia Institute of Technology, USA*

Rudy Schusteritsch, Kerry Rodden, *Google, USA*

The authors describe adapting card-sorting methodology to redesign the information architecture of the Google AdWords Help Center. The process can be applied to other large information sets where traditional card sorting is impractical.

SIG

ROOM 515C

Tips and Tricks for Better Usability Test Recommendations**[ORGANIZERS]**

Rolf Molich, *DialogDesign, Denmark*

Kyle Pero, *Usable Interface, USA*

Neha Modgil, *Human Factors International, India*

Will Schroeder, *The MathWorks, USA*

This SIG will discuss what are useful and usable recommendations, and why some are less valuable than expected. The examples come from the CUE-5 study, where 13 usability teams independently evaluated the IKEA PAX wardrobe planning tool.

PANEL

ROOM 517AB

The State of Tangible Interfaces: Projects, Studies, and Open Issues

[PANELISTS]

Oren Zuckerman, MIT, USA
 Brygg Ullmer, Louisiana State University, USA
 Lars Erik Holmquist, Viktoria Institute, Sweden
 Hiroshi Ishii, MIT, USA
 George Fitzmaurice, Alias, Canada
 Yvonne Rogers, Indian University, USA
 Wendy Mackay, I.N.R.I.A., France
 Tom Rodden, University of Nottingham, UK

Pioneers and active researchers in tangible user interfaces (TUIs) will give an up-to-date picture of TUI-related projects, research findings, and industry adoption case studies. The panel will discuss the merits and drawbacks of TUIs, review the open issues in the field, and hopefully help interested researchers to better direct their future research efforts.

PAPERS

ROOM 511ABDE

Beliefs and Affect

[SESSION CHAIR] Elissa Giaccardi, University of Colorado, USA

[PAPER] Can a Virtual Cat Persuade You? The Role of Gender and Realism in Speaker Persuasiveness

Catherine Zambaka, Paula Goolkasian, Larry Hodges,
 University of North Carolina, Charlotte, USA

Presents findings revealing how virtual characters are as persuasive as real people and that cross-gender interactions transfer to virtual speakers. Explains how virtual characters can be exploited for persuasive interfaces.



[PAPER] The Sensual Evaluation Instrument: Developing an Affective Evaluation Tool

Katherine Isbister, Rensselaer Polytechnic Institute, USA
 Kristina Höök, Swedish Institute for Computer Science, Sweden
 Michael Sharp, Rensselaer Polytechnic Institute, USA
 Jarmo Laakolahti, Swedish Institute for Computer Science, Sweden

Describes an instrument for collecting real-time self-assessment of affect. Portable, may work across cultures, offers consistency and flexibility. Can help elicit emotional feedback quickly and easily during the design process.

[CHI NOTE] Listening to Your Inner Voices: Investigating Means for Voice Notifications

Saurabh Bhatia, Scott McCrickard, Virginia Tech, USA

Reports on a user study of the notification qualities of voice and the development and deployment of a system exploiting the results. Suggests that voice familiarity is a useful property for notification.

PAPERS

ROOM 516AB

Gestures and Visualizations

[SESSION CHAIR] Deborah Tatar, Virginia Polytechnic Institute and State University, USA

[PAPER] Collaborative Coupling Over Tabletop Displays

Anthony Tang, Melanie Tory, Barry Po, University of British Columbia, Canada
 Petra Neumann, Sheelagh Cpendale, University of Calgary, Canada

Describes two observational studies investigating group cohesion for visualization tasks on an interactive tabletop display. Presents design guidelines based on six identified styles of group cohesion.

[PAPER] Comparing Remote Gesture Technologies for Supporting Collaborative Physical Tasks

David Kirk, University of Nottingham, UK
 Danae Stanton Fraser, University of Bath, UK

A study comparing performance in a collaborative assembly task using remote gesture systems constructed with combinations of three different gesture formats. Results are of benefit to those developing gesture systems.

[PAPER] Cooperative Gestures: Multi-User Gestural Interactions for Co-Located Groupware

Meredith Ringel Morris, Stanford University, USA
 Anqi Huang, Harvard University, USA
 Andreas Paepcke, Terry Winograd, Stanford University, USA

We define cooperative gesturing and discuss appropriate application scenarios for this multi-user interaction technique. We present an implementation of cooperative gestures and discuss lessons learned from observations of system use.

alt.chi

ROOM 510ABCD

Loving Me Loving You

[SESSION CHAIR] Michael Lyons, *Advanced Telecommunications Research Labs, Japan*

I Just Clicked To Say I Love You: Rich Evaluations of Minimal Communication

Joseph 'Jofish' Kaye, *Cornell University, USA*

Describes a method for developing an in-depth understanding of a subject's technology use. Studies five couples in long-distance relationships and their use of a simple technology design to transmit intimacy.

ComSlipper: An Expressive Design to Support Awareness and Availability

Chun-Yi Chen, Jodi Forlizzi, Pamela Jennings, *Carnegie Mellon University, USA*

An emotionally rich communication device that supports showing presence and availability. Can help the user to initiate a socially appropriate conversation, and ultimately, enhance the quality of computer-mediated relationships.

Lover's Cups: Drinking Interfaces as New Communication Channels

Hyemin Chung, Chia-Hsun Jackie Lee, Ted Selker, *MIT, USA*

We suggest a new kind of communication channel, social drinking interactions, and test its potential in remote communications.

AuraOrb: Social Notification Appliance

Mark Altosaar, Roel Vertegaal, Changuk Sohn, Daniel Cheng, *Queen's University, Canada*

Discusses the design of an ambient notification appliance that implements progressive notification techniques through the use of eye contact sensing.

Dance Your Work Away: Exploring Step User Interfaces

Brian Meyers, A.J. Bernheim Brush, Steve Drucker, Marc A. Smith, Mary Czerwinski, *Microsoft, USA*

Formative evaluation of novel step user interfaces to encourage physical movement and promote enjoyment while completing real world tasks. Provides design considerations for step user interfaces.

The Affective Remixer: Personalized Music Arranging

Jae-woo Chung, G. Scott Vercoe, *MIT, USA*

Describes a mechanism for using affect data in real time to modify the experience of playing of music. Such systems have the potential to modify users' affective state.

PAPERS

ROOM 516DE

Disabilities

[SESSION CHAIR] Gilbert Cockton, *University of Sunderland, UK*

[PAPER] Feeling What You Hear: Tactile Feedback for Navigation of Audio Graphs

Steven Wall, Stephen Brewster, *University of Glasgow, Scotland*

Presents guidelines and a prototype evaluation using tactile feedback to support point-and-click interaction for data access by sight impaired users. Can assist in developing accessible multimodal interfaces.

[PAPER] Remote Usability Evaluations with Disabled People

Helen Petrie, *University of York, UK*
Fraser Hamilton, Neil King, Pete Pavan, *Designed for All, UK*

Two case studies describing the use of remote evaluation techniques with disabled participants. Can assist in understanding the advantages and disadvantages of using remote techniques with disabled users.

[PAPER] Desperately Seeking Simplicity: How Young Adults with Cognitive Disabilities and Their Families Adopt Assistive Technologies

Melissa Dawe, *University of Colorado, Boulder, USA*

Case studies describing how families with individuals with cognitive disabilities adopt and incorporate assistive technologies. Illuminates the complexity of the adoption process and presents clear recommendations for assistive technology designers.

[CHI NOTE] **Adaptive Language Behavior in HCI: How Expectations and Beliefs About a System Affect Users' Word Choice**

Jamie Pearson, *University of Edinburgh, Scotland*
 Jiang Hu, *Stanford University, USA*
 Holly P. Branigan, Martin J. Pickering, *University of Edinburgh, Scotland*
 Cliff I. Nass, *Stanford University, USA*

Experimentally demonstrates that users adapt language behaviors depending on beliefs about the sophistication of a system. Suggests that designers should attend to relevant 'non-functional' system characteristics.

EXPERIENCE REPORTS

ROOM 511CF

User-Centered Design for Learning and Education

[SESSION CHAIR] Gregory Abowd, *Georgia Institute of Technology, USA*

Evaluating Web Lectures as an Alternative Approach to Education: A Case Study from HCI

Jason A. Day, James D. Foley, *Georgia Institute of Technology, USA*

Presents a novel use of educational technology, and a longitudinal study demonstrating its effectiveness for HCI education. Illustrates use of HCI methodology for educational technology design and evaluation.

Practical Service Learning Issues in HCI

Jennifer Mankoff, *Carnegie Mellon University, USA*

Presents an approach to incorporating service learning into undergraduate human-computer interaction teaching. Provides practical guidance for using service learning in regularly-taught, large courses.

HCI Techniques from Idea to Deployment: A Case Study for a Dynamic Learning Environment

John C. Thomas, Robert Farrell, *IBM, USA*

The authors describe HCI techniques employed for iterative design and evaluation of a 'Dynamic Learning Environment' now in use at IBM, that extends XML standards for digital content (the IEEE Learning Object Metadata Standard).

SIG

ROOM 515C

Usability Community: Past, Present, and Future

[ORGANIZERS]

Janice Rohn, *World Savings Bank, USA*
 Stephanie Rosenbaum, *Tec-Ed, Inc., USA*

This SIG is sponsored by the CHI 2006 and CHI 2007 Usability Community chairs to collect feedback and discuss how CHI can best serve the Usability Community, both at the annual conference and in other activities.

PANEL

ROOM 517C

"It's About the Information, Stupid!", Why We Need a Separate Field of Human-Information Interaction

[PANELISTS]

William Jones, *University of Washington, USA*
 Peter Pirolli, Stuart Card, *PARC, USA*
 Raya Fidel, *University of Washington, USA*
 Nahum Gershon, *The Mitre Corporation, USA*
 Peter Morville, *Semantic Studios, USA*
 Bonnie Nardi, *University of California, Irvine, USA*
 Daniel M. Russell, *Google, USA*

The past few years have seen increasing discussion of the need for—even the inevitability of—a field of human-information interaction (HII). The 'I' in HII implies a focus on information and not computing technology. The panel is structured to encourage an exploration of both pros and cons in favor of a separate field of HII. Panelists provide a diversity of perspectives from several different disciplines and research traditions including cognitive modeling and the study of human cognition, information science, information architecture, personal information management, ethnography, and anthropology.

PAPERS

ROOM 511ABDE

Social Computing 3

[SESSION CHAIR] Jeremy Birnholtz, *University of Toronto, Canada*

[PAPER] Collective Creation and Sense-Making of Mobile Media

Antti Salovaara, Giulio Jacucci, Antti Oulasvirta, Timo Saari, Pekka Kanerva, Esko Kurvinen, Sauli Titta, *Helsinki Institute for Information Technology, Finland*

Analyzing a field trial of a prototype we show the importance of collective use of mobile group media and its connections to social achievements, presence, and shared experience between people.

[CHI NOTE] Watching the Cars Go Round and Round: Designing for Active Speaking

Mattias Esbjörnsson, *Interactive Institute, Sweden*
 Barry Brown, *University of Glasgow, Scotland*
 Oskar Juhlin, Daniel Normark, Mattias Östergren, *Interactive Institute, Sweden*
 Eric Laurier, *University of Edinburgh, Scotland*

Presents a study of audiences in car rally events and a prototype to support active spectating. Draws implications for the design of technology for sport audiences.

[CHI NOTE] Ethnography in the Kindergarten: Examining Children's Play Experiences

Peta Wyeth, *University of Queensland, Australia*

Explores the effectiveness of an ethnographic study in supporting the design of playful technology for young children. Provides designers with useful guidelines for developing technology for kindergarten environments.

[CHI NOTE] Robot-Human Interaction with an Anthropomorphic Percussionist

Gil Weinberg, Scott Driscoll, *Georgia Institute of Technology, USA*

Describes a perceptual robotic percussionist that combines the power of computational modeling with the richness, visual interactivity, and expression of acoustic playing. Can provide novel expressive interactive musical experiences.

PAPERS

ROOM 516C

Usability Methods

[SESSION CHAIR] Alistair Sutcliffe, *University of Nottingham, UK*

[PAPER] Breaking the Fidelity Barrier: An Examination of our Current Characterization of Prototypes and an Example of a Mixed-Fidelity Success

Michael McCurdy, *NASA, USA*
 Christopher Connors, *Apple, USA*
 Guy Pyrzak, *San Jose State University Foundation, USA*
 Bob Kanefsky, *University of California, Santa Cruz, USA*
 Alonso Vera, *Carnegie Mellon University, USA*

This paper presents a method for characterizing prototypes and an example prototype constructed using this method. Applying this method can yield more focused prototype development and better return on investment.

[PAPER] Getting the Right Design and the Design Right: Testing Many is Better Than One

Maryam Tohidi, *University of Toronto, Canada*
 William Buxton, *Microsoft, Canada*
 Ronald Baecker, *University of Toronto, Canada*
 Abigail Sellen, *Microsoft, UK*

Experiment demonstrates the impact of evaluating three meaningfully distinct designs in one usability session, rather than just one. Brings process in line with design practice and provides more accurate results.

[PAPER] The Validity of the Stimulated Retrospective Think-Aloud Method as Measured by Eye Tracking

Zhiwei Guan, Shirley Lee, Elisabeth Cuddihy, Judith Ramey,
University of Washington, Seattle, USA

Provides evidence that retrospective think aloud (RTA) method provides valid and reliable information about users' performance. Supports the use of RTA to assess and identify usability issues.

PAPERS

ROOM 516AB

Interacting with Large Surfaces

[SESSION CHAIR] Scott Klemmer, *Stanford University, USA*

[PAPER] Precise Selection Techniques for Multi-Touch Screens

Hrvoje Benko, *Columbia University, USA*
 Andrew Wilson, Patrick Baudisch, *Microsoft, USA*

Our novel interaction techniques, called Dual Finger Selections, enable pixel-accurate selections on multi-touch screens. Our user study confirmed their low error rate performance and resilience to varying input noise.

[PAPER] TeamTag: Exploring Centralized versus Replicated Controls for Co-Located Tabletop Groupware

Meredith Ringel Morris, Andreas Paepcke, Terry Winograd,
 Jeannie Stamberger, *Stanford University, USA*

We describe an experiment comparing two alternative widget layout schemes for a collaborative tabletop interface. We discuss the benefits and drawbacks of each design based on our experimental results.

[PAPER] Keepin' It Real: Pushing the Desktop Metaphor with Physics, Piles, and the Pen

Anand Agarawala, Ravin Balakrishnan, *University of Toronto, Canada*

Contributes interaction and visualization techniques for a new physically realistic pen-based desktop using piles and casual object organization. Benefits to designers of pen-centric interfaces.

PAPERS

ROOM 510ABCD

Computer-Mediated Communication

[SESSION CHAIR] Bo Begole, *PARC, USA*

**[PAPER] Synchronous Broadcast Messaging: The Use of ICT**

Justin D. Weisz, *Carnegie Mellon University, USA*
 Thomas Erickson, Wendy A. Kellogg, *IBM, USA*

An empirical characterization of the use of a novel broadcast messaging system in a large organization. Such characterizations are an essential part of the research base for CMC and CSCW.

**[PAPER] The Impact of Delayed Visual Feedback on Collaborative Performance**

Darren Gergle, Robert Kraut, Susan Fussell, *Carnegie Mellon University, USA*

This work provides a detailed description of how pairs deal with visual delay in collaborative environments. The results inform the future development and deployment of such technologies.

[PAPER] Collocation Blindness in Partially Distributed Groups: Is There a Downside to Being Collocated?

Nathan Bos, Judith S. Olson, Ning Nan, *University of Michigan, USA*

N. Sadat Shami, *Cornell University, USA*
 Susannah Hoch, *Draper Laboratory, USA*
 Erik Johnston, *University of Michigan, USA*

Collocation, or working in one location, usually benefits work teams. But our recent experiments shows circumstances where 'collocation blindness' makes people ignore the outside world, to their detriment.

EXPERIENCE REPORTS

ROOM 511CF

Mobile Design Experiences

[SESSION CHAIR] Aaron Marcus, *Aaron Marcus Associates, USA*

Combining Multiple Gaming Interfaces in Epidemic Menace

Irma Lindt, Jan Ohlenburg, Uta Pankoke-Babatz, Wolfgang Prinz, *Fraunhofer FIT, Germany*
Sbiha Ghellal, *Sony NetServices, Germany*

A crossmedia game, Epidemic Menace, including a game board station, a mobile assistant and a mobile Augmented Reality (AR) system is described. Early results of an ethnographic observation are described, showing how the different gaming interfaces were used by the players to observe, collaborate and interact within the game.

Discovering Design Drivers for Mobile Media Solutions

Akseli Anttila, Younghee Jung, *Nokia, Finland*

By comparing the results of studies separated both by geographical and chronological space a set of constant design drivers was discovered. These were applied to a number of different design projects in the domain of mobile media.

Mobile Blogging: Experiences of Technologically Inspired Design

Russell Beale, *University of Birmingham, UK*

A technologically led design approach towards creating new artefacts is discussed, and the details of the architecture, design, and acceptability of the resulting system to support mobile blogging, called SmartBlog.

SIG

ROOM 515C

Online Health Communities

[ORGANIZERS]

Lisa Neal, *eLearn Magazine, USA*
Gitte Lindgaard, Kate Oakley, *Carleton University, Canada*
Derek Hansen, *University of Michigan, USA*
Sandra Kogan, *IBM, USA*

The importance of on-line health communities is evidenced by their popularity, as well as the significant impact they have on the lives of their members. This Special Interest Group (SIG) will explore current trends in online health communities, as well as discuss the socio-technical design challenges and opportunities that they afford.

CLOSING PLENARY SESSION

ROOM 517AB

Digital Comics: An Art Form in Transition

Scott McCloud, scottmccloud.com, USA

In the last 20 years, comics in its printed incarnation has struggled toward maturity through 'graphic novels'. Now, that same art form is entering a new infancy on the web and other digital venues, raising fundamental questions about the reading experience, the functions of storytelling media in society, how art forms adapt to dominant technologies, and the role of space in information design. Cartoonist and author Scott McCloud explores these and other questions in a fast-moving visual presentation.

[PRESENTER BIO] Scott McCloud has been writing and drawing independent comic books since 1984. His book "Understanding Comics" was a New York Times Notable book for 1994, is available in 15 languages. McCloud has lectured on comics and digital media at Harvard University, Pixar Animation Studios, Microsoft, and The Smithsonian Institution. His 5-Day Seminar in making comics was most recently held at MIT. McCloud's online comics can be found at scottmccloud.com



Thursday Courses

COURSE 22

ROOM 513CD

The Art of Speaking: Advanced Skills for the Lecture Hall and the Hallway

9:00 – 13:00

Lisa B. Marshall, *lisabmarshall.com*, USA

Deborah A. Boehm-Davis, *George Mason University*, USA

Are you terrified of being asked questions or about presentation disasters? Learn to present complex ideas concisely and accurately and to speak professionally in the lecture hall and the hallway.

[INTENDED AUDIENCE] Experienced presenters who would like to improve their presentation skills.

[PRESENTATION STYLE] Mostly lecture

[FEATURES]

- * Handling question and answer sessions, both at professional conferences and in industry settings
- * Overcoming presentation disasters
- * Presenting complex ideas concisely, accurately, and in an interesting fashion

COURSE 21

ROOM 513AB

Usable for the World: A Practical Guide to International User Studies

9:00 – 16:00

Susan M. Dray, David A. Siegel, *Dray & Associates, Inc.*, USA

Learn what's involved in planning and carrying out international user studies, including tailoring the study to "fit" local circumstances, working with and through local resources, and avoiding common pitfalls.

[INTENDED AUDIENCE] This class is aimed at people experienced in doing usability and user studies in their own country who want to learn how to conduct such studies in other countries.

[PRESENTATION STYLE] Lecture, group discussion, and small group exercises. The class includes a video of a usability evaluation from Hong Kong with simultaneous translation, and discussion of a set of multi-faceted real-life research scenarios.

[FEATURES]

- * Making the business case for international studies
- * Organizational planning for international user studies
- * Localizing the study plan
- * Evaluating and preparing international research partners, such as facilitators and translators
- * Preparing yourself and your team
- * Identifying strategies to handle common challenges in international studies
- * Evaluating the role of remote testing

COURSE 24

ROOM 514ABC

How to Build Rich Personas from Field Data

9:00 – 10:30

Karen Holtzblatt, Shelley Wood, *InContext Enterprises*, USA

Personas have had mixed success because they typically are not informed by deep data. Address this issue by using the data provided with Contextual Design work models and affinity diagrams.

[INTENDED AUDIENCE] No specific background is required. Although the course focuses on CD models, previous experience with them is not required

[PRESENTATION STYLE] Lecture, group discussion, exercises

[FEATURES]

Attendees will learn:

- * Why personas are powerful tools for communicating user needs to stakeholders
- * Why to be effective, personas need to be based on deep data that comes from field studies, and not just 2–3 field interviews
- * The steps for creating personas with Contextual Design (CD) data
- * How to harvest CD models for user goals, roles, tasks, and strategies

COURSE 26

ROOM 515AB

Usability Design: A New Rational Unified Process Discipline

11:30 – 16:00

Magnus Lif, Bengt Göransson, *Guide Redina AB*, Sweden

The Usability Design discipline will be explained. The course is aimed at those wanting to work with User-Centered Design (UCD) within a systems development framework such as the RUP.

[INTENDED AUDIENCE] This course is aimed at anyone interested in software development, typically usability professionals, project managers, software architects, etc. The participants should be familiar with standard usability methods. Knowledge about the RUP is not a prerequisite.

[PRESENTATION STYLE] Lecture, exercises, discussions, and a case study

[FEATURES]

- * Introduction to UCD
- * Problems with UCD in the 'Rational Unified Process'
- * Introduction to the new usability design discipline
- * Exercises and discussions
- * A case study
- * Practical tips and hints

COURSE 23

ROOM 513CD

Designing Responsive Software Despite Performance Limitations

14:30 – 16:00

Jeff Johnson, *UI Wizards, Inc.*, USA

Responsiveness is extremely important for user satisfaction with software and online services, but it is often poor. This class distinguishes responsiveness from performance and presents design principles for achieving responsiveness.

[INTENDED AUDIENCE] Software designers and developers of all experience levels. Also: Q/A engineers, usability testers, and managers.

[PRESENTATION STYLE] Lecture, Q&A.

[FEATURES]

Responsiveness is very important in determining user satisfaction with software and online services, but it is often poor. This class distinguishes responsiveness from performance and explains that performance need not limit responsiveness. It explains that the user interface is a real-time interface, with time-constraints systems must satisfy to be perceived as responsive. The class presents techniques for improving responsiveness, with examples of responsive and unresponsive systems.

COURSE 25

ROOM 514ABC

How to Collect Field Data and Produce a Tested Design in 1–8 Weeks

11:30 – 13:00

Karen Holtzblatt, Shelley Wood, *InContext Enterprises*, USA

Rapid Contextual Design provides tools for infusing customer data into designs, even when resources and schedules are restricted. Learn guidelines for selecting customers, creating schedules, and working inside agile development iterations.

[INTENDED AUDIENCE] No background is expected; the course will offer the most value to those leading user experience aspects of projects.

[PRESENTATION STYLE] Lecture and group discussion

[FEATURES]

Attendees will learn:

- * The 3 variants of Rapid CD and how to select the right one
- * Guidelines for selecting the right number and mix of customers given available time and project type
- * How to create day-by-day schedules based on project scope and available time, including agile iterations

Posters

Posters will be on display in the Commons area throughout the conference. Poster authors are asked to be at their posters at the following times:

Doctoral Consortium:

Monday afternoon break, Monday evening reception

Student Design Competition:

Monday evening reception, Tuesday morning break

Workshops:

Monday afternoon break, Monday evening reception

Work-in-Progress:

All posters: Monday evening reception

WIP posters 57 – 121: Tuesday morning break

WIP posters 122 – 187: Wednesday morning break

WIP posters 188 – 252: Thursday morning break

During the Monday Evening Conference Reception (for all types of posters):

All odd numbered posters: 18:30 – 19:30

All even numbered posters: 20:00 – 21:00

Doctoral Consortium

001 Video and Image-Based Reflective Learning Tools for Professional Training Environments

L. Amaya Becvar, *University of California, San Diego, USA*

002 Transference of Dance Knowledge through Interface Design

Natalie Erika Ebenreuter, *Swinburne University, UK*

003 Providing a Tailored Overview of Program Source Code

J. Louise Finlayson, *University of Aberdeen, UK*

004 Integrating Models of Human-Computer Visual Interaction

Tim Halverson, *University of Oregon, USA*

005 Knowledge Sharing, Maintenance, and Use in Online Support Communities

Derek L. Hansen, *University of Michigan, USA*

006 Assessing the Attractiveness of Interactive Systems

Jan Hartmann, *University of Manchester, USA*

007 Documenting and Understanding Everyday Activities through the Selective Archiving of Live Experiences

Gillian R. Hayes, *Georgia Institute of Technology, USA*

008 An Examination of User Behaviour During Web Information Tasks

Melanie Kellar, *Dalhousie University, Canada*

009 Embracing Agile Development of Usable Software Systems

Jason Chong Lee, *Virginia Polytechnic Institute & State University, USA*

010 Sharing Everyday Places I Go While Preserving Privacy

Pamela J. Ludford, *University of Minnesota, USA*

011 Multi-Touch Interaction

Tomer Moscovich, *Brown University, USA*

012 Making Sense of Social Networks

Adam Perer, *University of Maryland, USA*

013 Test Methodologies For Pedestrian Navigation Aids In Old Age

Michael Schellenbach, *Max-Planck-Institute for Human Development, Germany*

014 Residential Mobility, Technology, and Social Ties

Irina Shklovski, *Carnegie Mellon University, USA*

015 Physical-Digital Ensembles for Mobile Interaction

Ron B. Yeh, *Stanford University, USA*

Student Design Competition

016 Fitster: Social Fitness Information Visualizer

Noor Ali-Hasan, Diana Gavales, Andrew Peterson, Matthew Raw, *University of Michigan, USA*

017 Health View: A Simple and Subtle Approach to Monitoring Nutrition

Jesse R. Beach, Christian M. Briggs, Sam D. Shahrani, Craig A. Elliott, *Indiana University, USA*

018 Reflecting on Health: A System For Students to Monitor Diet and Exercise

Brandon Brown, Marshini Chetty, Andrea Grimes, Ellie Harmon, *Georgia Institute of Technology, USA*

019 Balance Pass: Service Design for a Healthy College Lifestyle

Aditya Chand, Monica González, Julian Missig, Purin Phanichphant, Pen Fan Sun, *Carnegie Mellon University, USA*

020 AVIVA: A Health and Fitness Monitor for Young Women

Rachel Gockley, Michael Marotta, Carin Rogoff, Adrian Tang,
Carnegie Mellon University, USA

021 PEDdo: Steps to a Healthy Lifestyle

Visda Goudarzi, Stanislav Tomic, *Vienna University of
Technology, Austria*

022 NutriStat - Tracking Young Child Nutrition

Victor Hanson-Smith, Daya Wimalasuriya, Andrew Fortier,
University of Oregon, USA

023 A Responsive and Persuasive Audio Device to Stimulate Exercise and Fitness in Children

Jeffrey Hartnett, Pearl Lin, *University of California, Berkeley,
USA*
Lillian Ortiz, *California College of the Arts, USA*
Lindsay Tabas, *University of California, Berkeley, USA*

024 myPyramid: Increasing Nutritional Awareness

Eunhyung Kim, Benjamin Koh, Jennifer Ng, Ray Su, *Carnegie
Mellon University, USA*

025 RoutePlanner

Marek Kudlacz, Robert Tan, Jon Prindiville, Marc Peters,
University of Toronto, Canada

026 NutraStick: Portable Diet Assistant

Barry Diarmuid Mulrooney, Mairead Anne McDermott,
Nick Justin Earley, *IADT Institute of Art, Design, and
Technology, Ireland*

027 My Health, My Life: A Web-Based Health Monitoring Application

Paul Nuschke, Tara Holmes, Yaseen Qadah, *North Carolina
Agricultural & Technical State University, USA*

028 Promoting a Healthy Lifestyle Through a Virtual Specialist Solution

Juan M. Silva, Selene Zamarripa, Elisa B. Moran, Monica
Tentori, Leonardo Galicia, *CICESE Research Center,
Mexico*

029 Chick Clique: Persuasive Technology to Motivate Teenage Girls to Exercise

Tammy Toscos, Anne Marie Faber, Shunying An, Mona
Praful Gandhi, *Indiana University, USA*

030 Food Information Network: Informed Shopping for Healthier Living

Jiawei Rong, Leo Ochoa, Lee Ritter, Erik Brown, *University of
Oregon, USA*

Workshops

031 Privacy-Enhanced Personalization

Alfred Kobsa, *University of California, USA*

032 Designing Technology for People with Cognitive Impairments

Joanna McGrenere, *University of British Columbia, Canada*
Jim Sullivan, *University of Colorado, USA*
Ronald M. Baecker, *University of Toronto, Canada*

033 The Many Faces of Consistency in Cross-Platform Design

Kai Richter, *Computer Graphics Center (ZGDV), Germany*
Jeffrey Nichols, *Carnegie Mellon University, USA*
Krzysztof Gajos, *University of Washington, USA*
Ahmed Seffah, *Concordia University, Canada*

034 Information Visualization and Interaction Techniques for Collaboration across Multiple Displays

Lucia Terrenghi, *University of Munich, Germany*
Richard May, *Pacific Northwest National Laboratory, USA*
Patrick Baudisch, *Microsoft, USA*

035 Misuse and Abuse of Interactive Technologies

Antonella De Angeli, *University of Manchester, UK*
Sheryl Brahn, *Missouri State University, USA*
Peter Wallis, *The University of Sheffield, UK*
Alan Dix, *Lancaster University, UK*

036 Entertainment Media at Home - Looking at the Social Aspects

Louise Barkhuus, *University of Glasgow, Scotland*
Jennifer Rode, *University of California, Irvine, USA*
Genevieve Bell, *Intel, USA*

037 Workshop on SIGCHI Public Policy

Benjamin B. Bederson, *University of Maryland, USA*
Jonathan Lazar, *Towson University, USA*
Jeff Johnson, *UI Wizards, Inc., USA*
Harry Hochheiser, *University of Maryland, USA*
Clare-Marie Karat, *IBM, USA*

038 Investigating New User Experience Challenges in iTV: Mobility & Sociability

Anxo Cereijo Roibás, *University of Brighton, UK*
David Geerts, *Katholieke Universiteit Leuven, Belgium*
Elizabeth Furtado, *Universidade de Fortaleza, Brazil*
Licia Calvi, *Katholieke Universiteit Leuven, Belgium*

039 About Face Interface: Creative Engagement in the New Media Arts and HCI

Pamela Jennings, *Carnegie Mellon University, USA*
Elisa Giaccardi, *University of Colorado, Boulder, USA*
Magda Wesolkowska, *University of Montréal, Canada*

040 Social Visualization: Exploring Text, Audio, and Video Interaction

Karrie Karahalios, *University of Illinois, USA*
Fernanda Viégas, *IBM, USA*

041 HCI and the Face

Michael J. Lyons, *ATR Intelligent Robotics and Communication Labs, Japan*
Christoph Bartneck, *Technical University of Eindhoven, Netherlands*

042 IT@Home: Unraveling Complexities of Networked Devices in the Home

David McDonald, *University of Washington, USA*
Bill Schilit, *Intel, USA*
Sara Bly, *Sara Bly Consulting, USA*

043 Privacy and HCI: Methodologies for Studying Privacy Issues

Sameer Patil, *University of California, Irvine, USA*
Natalia Romero, *University of Technology, Eindhoven, The Netherlands*
John Karat, *IBM, USA*

044 Usability Research Challenges for Cyberinfrastructure and Tools

Rob N. Procter, *National Centre for e-Social, UK*
Christine Borgman, *University of California, Los Angeles, USA*
Geof Bowker, *University of California, Santa Clara, USA*
Marina Jirotko, *Oxford University, UK*
Gary Olson, *University of Michigan, USA*
Cherri Pancake, *Oregon State University, USA*
Tom Rodden, *University of Nottingham, UK*
m c schraefel, *University of Southampton, UK*

045 Reality Testing: HCI Challenges in Non-Traditional Environments

Gisele Bennett, *Georgia Institute of Technology, USA*
Kay H. Connelly, *Indiana University, USA*
Gitte Lindgaard, *Carleton University, Canada*
Katie A. Siek, *Indiana University, USA*
Bruce Tsuji, *Carleton University, Canada*

046 Reflective HCI: Articulating an Agenda for Critical Practice

Phoebe Sengers, *Cornell University, USA*
John McCarthy, *University College Cork, UK*
Paul Dourish, *University of California, Irvine, USA*

047 Reinventing Trust, Collaboration and Compliance in Social Systems

Jens Riegelsberger, *Framfab UK Ltd., UK*
Asimina Vasalou, *Imperial College London, UK*
Philip Bonhard, *Anne Adams, University College London, UK*

048 Theory and Method for Experience Centered Design

Mark A. Blythe, Peter C. Wright, *University of York, UK*
John McCarthy, *University College Cork, UK*
Olav W. Bertelsen, *University of Aarhus, Denmark*

049 Sexual Interactions: Why We Should Talk About Sex in HCI

Johanna Brewer, *University of California, Irvine, USA*
Joseph Kaye, *Cornell University, USA*
Amanda Williams, *University of California, Irvine, USA*
Susan Wyche, *Georgia Institute of Technology, USA*

050 The Next Step: From End-User Programming to End-User Software Engineering

Margaret Burnett, *Oregon State University, USA*
Brad Myers, *Carnegie Mellon University, USA*
Mary Beth Rosson, *The Pennsylvania State University, USA*
Susan Wiedenbeck, *Drexel University, USA*

051 Mobile Social Software: Realizing Potential, Managing Risks

Scott Counts, *Microsoft, USA*
Henri ter Hofte, *Telematica Instituut, Netherlands*
Ian Smith, *Intel, USA*

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222 Comparisons of Keystroke-Level Model Predictions to Observed Data

Leonghwee Teo, Bonnie E. John, *Carnegie Mellon University*, USA

223 Does Habituation Affect Fingerprint Quality?

Mary F. Theofanos, Ross J. Micheals, Jean C. Scholtz, Emile L. Morse, *National Institute of Standards and Technology, USA*
Peter S. May, *George Washington University, USA*

224 Beyond Just the Facts: Transforming the Museum Learning Experience

Jennifer Thom-Santelli, Kirsten Boehner, Geri Gay, Helene Hembrooke, *Cornell University, USA*

225 Shaping User Input in Speech Graffiti: A First Pass

Stefanie Tomko, Roni Rosenfeld, *Carnegie Mellon University, USA*

226 The EcoRaft Project: A Multi-Device Interactive Graphical Exhibit for Learning About Restoration Ecology

Bill Tomlinson, Man Lok Yau, Eric Baumer, Sara Goetz, Lynn Carpenter, Riley Pratt, Kristin Young, Calen May-Tobin, *University of California, Los Angeles, USA*

227 Usable Browsers for Ontological Knowledge Acquisition

Alicia Tribble, Carolyn Rose, *Carnegie Mellon University, USA*

228 Multi-Channel Consumer Behavior: Online and Offline Travel Preparations

Geke van Dijk, Shailey Minocha, Angus W. Laing, *The Open University, UK*

229 Interview Viz: Visualization-Assisted Photo Elicitation

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230 Introducing Human-Centered Research to Game Design: Designing Game Concepts For and With Senior Citizens

Veronika A. Vanden Abeele, Veerle Van Rompaey, *Leuven Engineering School, Belgium*

231 A Magic Box for Understanding Intergenerational Play

Frank Vetere, Hilary Davis, Martin R. Gibbs, Peter Francis, Steve Howard, *The University of Melbourne, Australia*

232 My MDE: Configuring Virtual Workspaces in Multi-Display Environments

Vicki Ha, Jim Wallace, Ryder Ziola, Kori Inkpen, *Dalhousie University, Canada*

233 Swordfish: User Tailored Workspaces in Multi-Display Environments

Jim Wallace, Ryder Ziola, Vicki Ha, Kori Inkpen, *Dalhousie University, Canada*

234 End-User Place Annotation on Mobile Devices: A Comparative Study

Jingtao Wang, John F. Canny, *University of California at Berkeley, USA*

235 Public Social Private Design (PSPD)

Andrew Warr, Eamonn O'Neill, *University of Bath, UK*

236 Visual Resonator: Interface for Interactive Cocktail Party Phenomenon

Junji Watanabe, *PRESTO Japan Science and Technology Agency, Japan*
Hideaki Nii, Yuki Hashimoto, Masahiko Inami, *The University of Electro-Communications, Japan*

237 Audio Tools for Sports Fan Interaction

Matthew Weldon, *Indiana University, USA*

238 User Experiences with Sharing and Access Control

Tara Whalen, *Dalhousie University, Canada*
Diana Smetters, Elizabeth F. Churchill, *PARC, USA*

239 The Message Center: Enhancing Elder Communication

Jennifer Wiley, Ja-young Sung, Gregory Abowd, *Georgia Institute of Technology, USA*

240 Exploring Wearable Ambient Displays for Social Awareness

Amanda M. Williams, *University of California, Irvine, USA*
Shelly Farnham, Scott Counts, *Microsoft, USA*

241 HotWire: An apparatus for Simulating Primary Tasks in Wearable Computing

Hendrik Witt, *University of Bremen, Germany*
Mikael Drugge, *Lulea University of Technology, Sweden*

242 Marmite: End-User Programming for the Web

Jeffrey Y. Wong, Jason I. Hong, *Carnegie Mellon University, USA*

243 Visualization Techniques for Collaborative Trajectory Management

Yan Xiao, Melissa M. Strader, Peter Hu, *University of Maryland School of Medicine, USA*
Matin Wasei, Peter Wieringa, *Technical University Delft, Netherlands*

244 Sheep and Wolves - Test Bed for Human-Robot Interaction

Min Xin, Ehud Sharlin, *University of Calgary, Canada*

245 Emoticons Convey Emotions without Cognition of Faces: An fMRI Study

Masahide Yuasa, Keiichi Saito, Naoki Mukawa, *Tokyo Denki University, Japan*

246 A Usability Evaluation Method for e-Learning: Focus on Motivation to Learn

Panagiotis Zaharias, *Athens University of Economics and Business, Greece*

247 Imlooking: Image-Based Face Retrieval in Online Dating Profile Search

Leizhong Zhang, Qiong Yang, Ta Bao, Dave Vronay, Xiaoou Tang, *Microsoft, China*

248 The Design of an Interactive and Dynamic Representation of the Firm

Lin Zhao, Julia Grant, Fred Collopy, *Case Western Reserve University, USA*

249 Exploratory Inspection: A Learning Model for Improving Open Source Software Usability

Luyin Zhao, *Rutgers University, USA*
Fadi P. Deek, *New Jersey Institute of Technology, USA*

250 BodyBeats: Whole-Body, Musical Interfaces for Children

Jamie Zigelbaum, *Tufts University, USA*
Amon Millner, *MIT, USA*
Bella Desai, *Harvard University, USA*
Hiroshi Ishii, *MIT, USA*

251 Whither or Whether HCI: Requirements Analysis for Multi-Sited, Multi-User Cyberinfrastructures

Ann Zimmerman, Bonnie A. Nardi, *University of California, Irvine, USA*

252 Navigating Persistent Audio

Aaron R. Zinman, Judith Donath, *MIT, USA*

Exhibits

Addison Wesley

Booth O

Addison Wesley is the premier publisher of User Interface books. Premier titles include: *Web Usability: A User-Centered Design Approach* by Lazar, *DTUI* by Shneiderman/Plaisant and *Designing Interactive Systems* by Benyon/Turner/Turner.

eBay, Inc.

Booth 1

(Contributing Sponsor, Recruiter)

eBay's User Experience & Design group generates user insights, designs global products, and creates a long-term user experience vision to address current and future user needs and opportunities.

Ethnio

Booth 12

Bolt | Peters User Experience presents Ethnio. The first remote usability testing web application that allows you to observe from anywhere, record video and audio, and recruit users live from the web. Moderated remote usability. Simplified.

FILTER/TALENT

Booth 10

(Recruiter)

FILTER/TALENT: a recruitment agency connecting UI and visual designers with hiring managers and HR departments, solving resource needs for web, software, and consumer product development. On-site/off-site or direct hire.

Google, Inc.

Booth D

(Champion Sponsor, Recruiter)

Google's ease of use is the result of a continued focus on putting the user first. Interested in the challenge of making information accessible? We're hiring and would love to talk to you!

Human Factors International, Inc.

Booth 9

(Recruiter)

HFI provides complete ongoing support for usability operations, including unique experts, local staff, global resources, methodology, toolsets, standards, training, and certification. See Eric Schaffer's *Institutionalization of Usability: A Step-by-Step Guide*.

Intuit

Booths Q & 16

(Champion Sponsor, Recruiter)

At Intuit, we know that our employees make the company great. We know that our customers inspire great products. Visit our booth to learn more about how Intuit values User Experience and what we have to offer.

Lawrence Erlbaum Associates

Booth 15

LEA publishes the scholarly journals, *Human-Computer Interaction* and *International Journal of Human-Computer Interaction* as well as cutting edge books and other journals in HCI, human factors, CSCW, educational technology, cognitive science, applied psychology, and related research disciplines.

LC Technologies/Eyegaze Systems

Booth 20

Eyegaze EyeFollower System: totally free head movement throughout 20 x 12 x 15 inches, automatic eye acquisition, 0.45 degree binocular gaze point tracking accuracy. Also preview our next generation inexpensive firewire binocular eyetracker.

Mangold International GmbH

Booth 3

We offer professional software solutions for the collection, transcription, and analysis of observational data in usability and HCI-research – successfully used all over the world.

Microsoft Corporation

Booths B & C

(Champion Sponsor, Recruiter)

Our mission is to enable people and businesses throughout the world to realize their full potential. Try out our latest software and connect with the people behind it. Check out our latest career opportunities as well.

Mobience

Booth 7

Universal text entry solution for a variety of mobile devices, including handsets, joysticks, gamepads, and pen devices. This solution is quite efficient, highly learnable, and generally extendable.

Morgan Kaufmann Publishers (an imprint of Elsevier)

Booth 2

Morgan Kaufmann, an imprint of Elsevier, works with leading computer scientists to publish books for researchers, professionals and students in human-computer interaction, computer architecture, databases/networking, graphics/gaming, and software engineering.

Noldus Information Technology

Booths G & H

Computer software and integrated systems for HCI research and usability testing. Tape-free mobile and stationary labs. Visit www.noldus.com/usability for information regarding new products. Contact us for special conference prices.

NTT Resonant, Inc.

Booth 13

The multimedia search of "goo" has a feature to browse the searched images at a glance with a mouse wheel and to sort them by similarities. Its XML interfaces seamlessly integrate it into the business applications. <http://mm.bsearch.goo.ne.jp>

Salesforce.com

Booth 21

(Recruiter)

The success of salesforce.com is a testament to the commitment to our solution's ease of use, global adoption, and a loyal community of over 400,000 users. Contribute your talents to the User Experience team and help elevate our products and services to a whole new level.

Samsung Electronics Co. Ltd.

Booth 6

The Interaction Part of Samsung Electronics presents its recent research results related to user experience and new interaction developments.

SAP

Booths A & 22

(Champion Sponsor, Recruiter)

As the world's third-largest independent software provider, SAP delivers business solutions to more than 28,000 customers in more than 120 countries. Connect with usability professionals at our booth.

SensoMotoric Instruments

Booth 8

SensoMotoric Instruments designs vision research systems for easy and flexible solutions in psychology, usability, advertising, etc. SMI products measure gaze path, fixations, pupil size, attention, saccades, and dwell time.

Springer

Booth K

Take your research and skills to the next level with Springer. Stop by our booth to discover an authoritative range books and journals in CHI. Save 20% on all titles.

St. Jude Medical, Inc.

Booth 18

(Recruiter)

St. Jude Medical's Design Team has the central role in creating useable interfaces for an expanding portfolio of life-saving medical products. Stop by to discover rewarding career opportunities.

TaskArchitect

Booth I

You know what task analysis is. You know it's good for you. Don Norman is saying we all need to do more of it. Come by our booth and see how easy it can be with TaskArchitect. Pick up a 30-day free trial while you're here.

Taylor and Francis

Booth 19

With over two hundred years' publishing experience, international offices and over 1050 titles in print, Taylor & Francis is a world leading publisher of academic journals. All Taylor & Francis journals have their own web pages with full journal information. Visit us at our booth.

TEA Intrinsic faceLab

Booth E

faceLAB: non-contact stereoscopic system for real-time tracking of head pose in 3D, gaze direction (2 eyes) and eyes' behaviour.

CAPTIV: data acquisition and synchronization system for video, measurements, and observations.

TechSmith Corporation

Booth P

TechSmith Corporation is the creator of Morae - a software solution to usability testing. Morae makes usability testing accessible, affordable, and hassle-free.

The MIT Press

Booth 5

The MIT Press publishes books in computer-human interaction and related fields of interest. Please come by our booth and receive a 20% discount on our newest and classic titles. <http://mitpress.mit.edu>

ThoughtForm and Alucid Solution

Booth L

ThoughtForm makes complex information clear in five design areas: branding, interactive, print, packaging, and environments. Alucid Solution provides user experience research and usability labs to enable a better understanding of your user.

Tobii Technology, Inc.

Booth 4

Tobii Technology manufactures eye tracking technology. Our hardware and software make usability studies much easier and give a powerful new stream of data. Use your eyes.

Ubisoft

Booth 11

Ubisoft is a leading international developer, publisher, and distributor of interactive entertainment products. Since its founding in 1986, Ubisoft has experienced strong, continuous growth thanks to its strategy of internal growth plus carefully targeted acquisitions with high growth potential.

UserZoom

Booth N

Xperience Consulting presents UserZoom, an Automated Remote Usability testing tool. Test users at their natural context and quantify usability and UX of digital interfaces with large volumes of users who are geographically dispersed.

VMware, Inc.

Booth F

Recruiter

VMware is the global leader in virtual infrastructure software for industry standard systems. We are always on the lookout for talented individuals across all functions who share our passion for technology, excellence, and innovation.

Wiley

Booth 14

As a publisher, Wiley is proud to offer comprehensive coverage of the most current topics in Human-Computer Interaction today. Stop by our stand for the first exclusive look at the forthcoming new edition of our global bestseller, *Interaction Design*, by Sharp, Preece, and Rogers.

Yahoo! Inc.

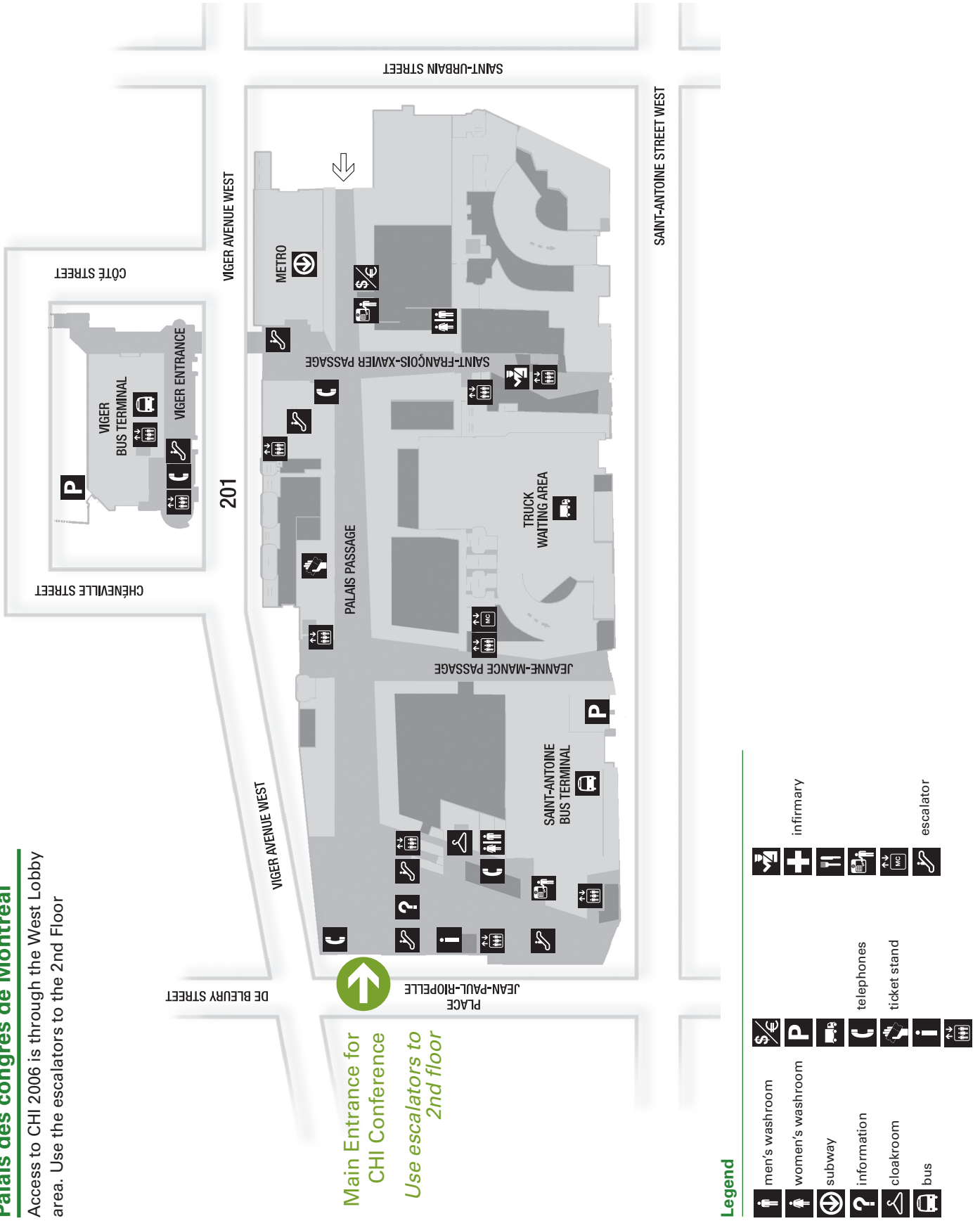
Booths R & 17

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Yahoo's User Experience and Design Team creates products and services that bring the world together. Help 429 million people connect with each other and the information most important to them. Drop by to discover our rewarding career opportunities.

















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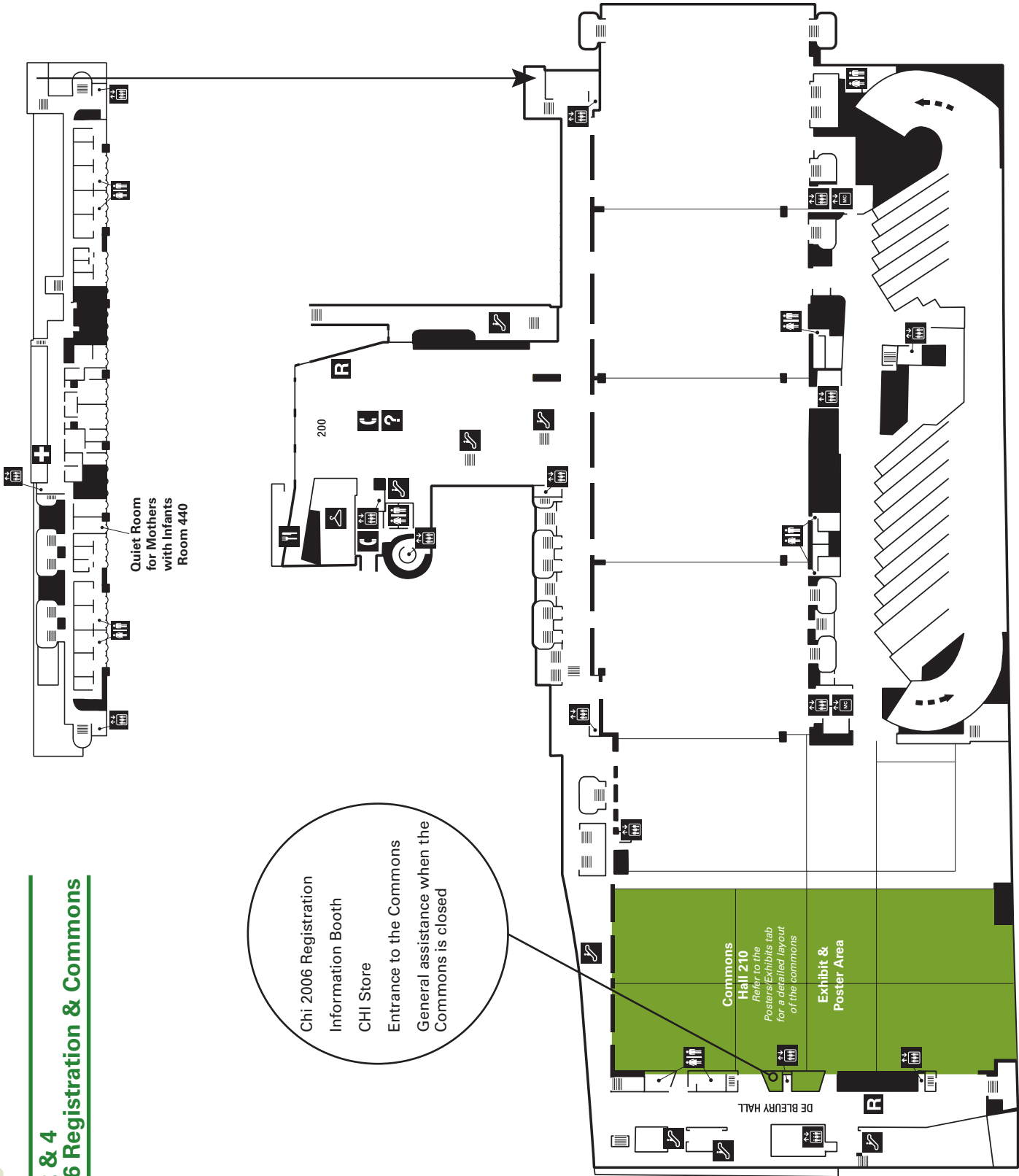


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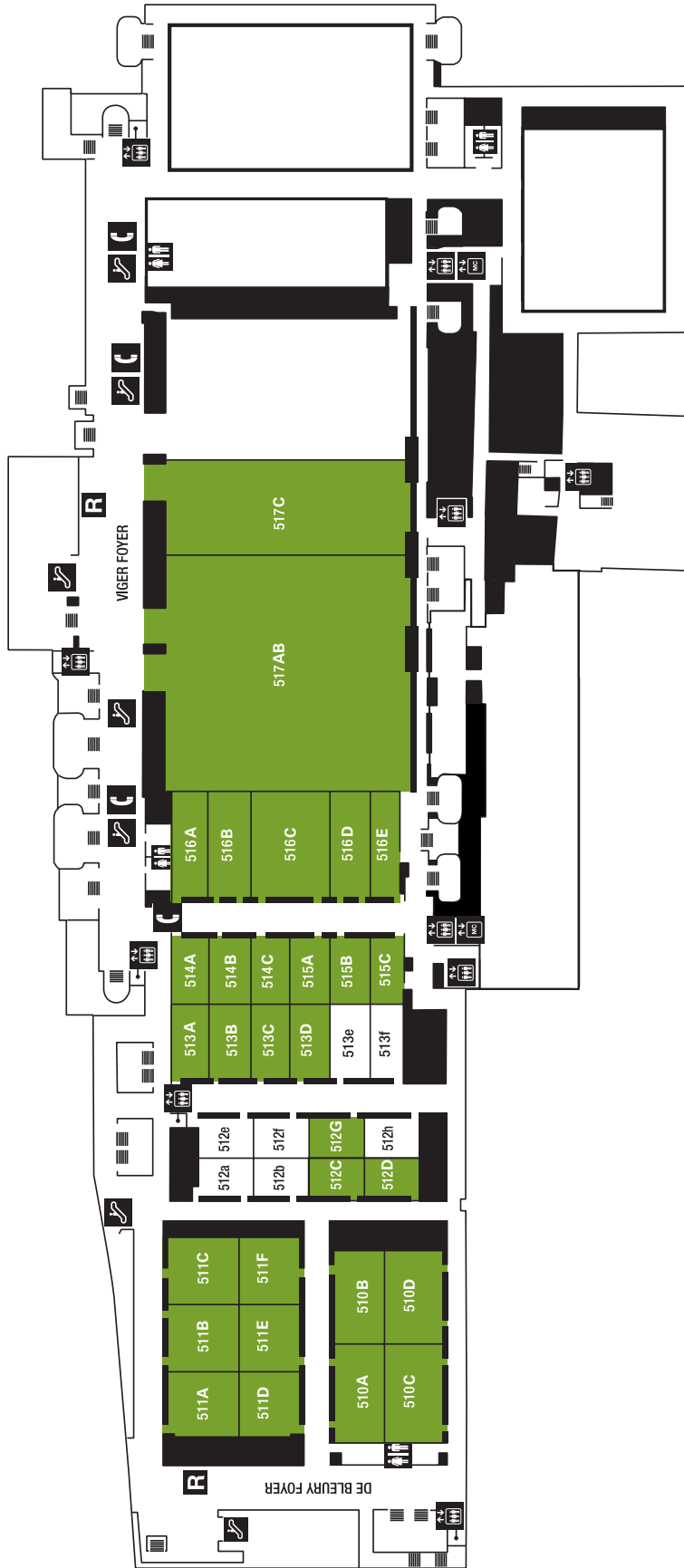
Legend

-  men's washroom
-  women's washroom
-  subway
-  information
-  cloakroom
-  bus
-  men's washroom
-  women's washroom
-  subway
-  information
-  cloakroom
-  bus
-  infirmary
-  telephones
-  ticket stand
-  escalator

















Levels 2 & 4
CHI 2006 Registration & Commons

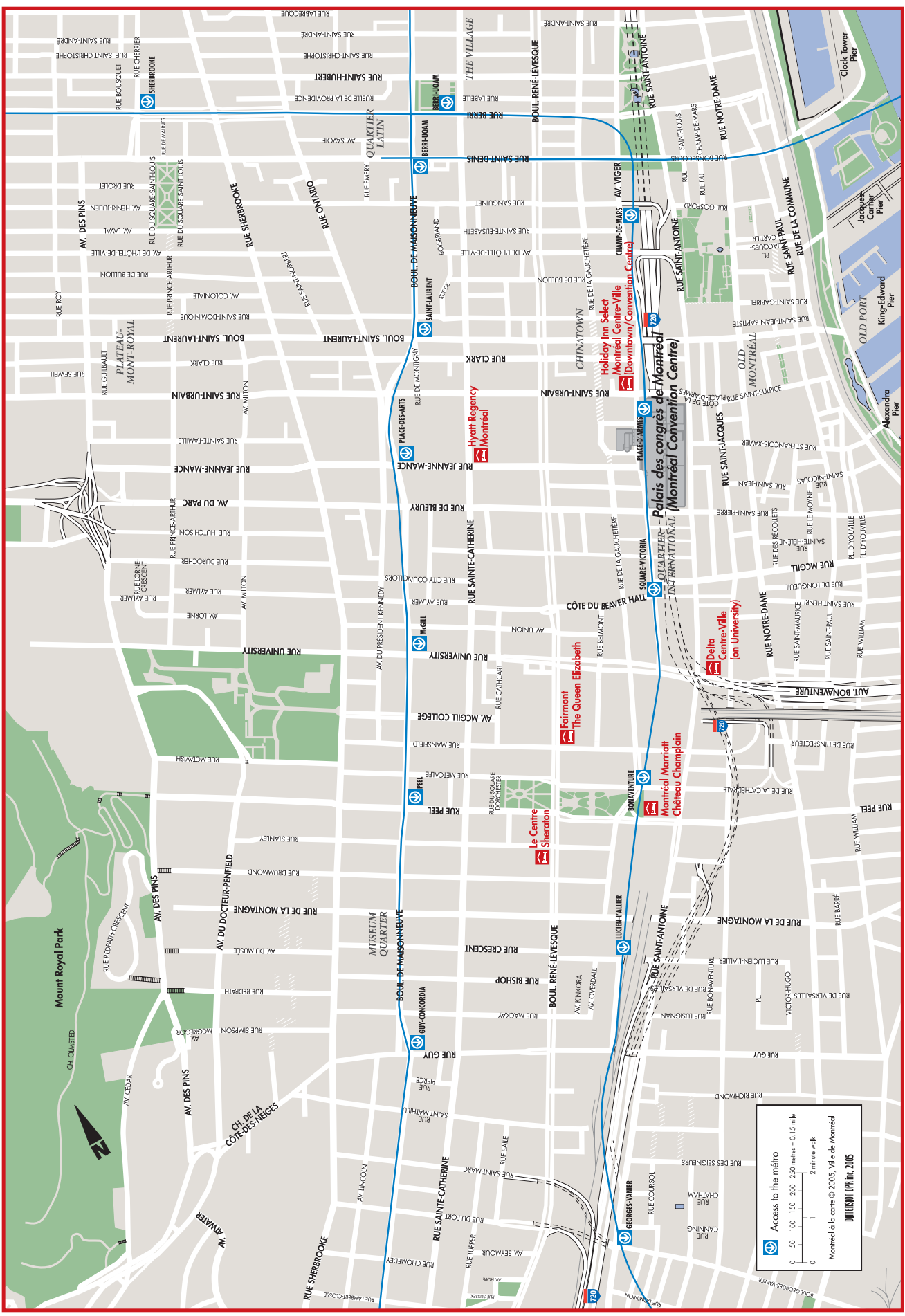



Level 5
CHI 2006 Session & Meeting Rooms



Legend

-  men's washroom
-  women's washroom
-  subway
-  information
-  cloakroom
-  bus
-  men's washroom
-  women's washroom
-  subway
-  information
-  cloakroom
-  bus
-  infirmiry
-  escalator
-  telephones
-  ticket stand



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