PDC 2000 Proceedings of the Participatory Design Conference

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Introduction to the Proceedings of PDC 2000 the sixth biennial Participatory Design Conference

Literary intellectuals at one pole--at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension--sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding.

- C. P. Snow, The Two Cultures, (1959) p. 4.

Almost a half century after C.P. Snow's lectures in Cambridge, England on "The Two Cultures," another world which extends from the one Snow addressed remains stubbornly divided. The divisions now are clearly apparent in the applied world of digital technology design and its use. Computer use increased extensively during the last half of the twentieth century. Today, computer use is a common activity in everyday life. Yet, for the most part, those who design computer system hardware and software remain puzzled, and often ignorant of the conditions of use by those on the non-technical side of the digital divide.

The Participatory Design conferences, held every two years since 1990, have been committed to bringing together researchers and practitioners from the humanities, social sciences, and applied sciences to report on ideas and explore new ways of applying these ideas—together. The conferences, and their written record in proceedings, journal articles, books and special journal issues, have been rooted in the idea that understanding the use of technology is essential for informing design. In particular the conferences have argued that people who use technology should actively participate in the design and development of the products and services they use.

The authors and participants of these conferences view active involvement of users as more than a formula for corporate investment in focus groups, surveys, sample interviews, or usability lab experiments. The idea and practice of active participation of user groups encourages technical specialists to interact with users in the context of their work and use environments. And as a parallel process, the authors and conference participants encourage user groups to speak and act in ways that can have an impact on designers on the other side of the technical wall. In addition, participants have worked to make visible the processes and structures that sustain the divide between "technical" and "non-technical" activities. The work of participatory design is to recognize the many hybrids in practice and use them as the basis for enlarging the dialogues across the differences.

The divorce of the design of technology from the environment of its use has been a persistent thread in western applied science and technology. In practical terms the organizers of the Participatory Design Conferences (PDC) have attempted to stitch together one small corner of this separation, namely the involvement of users in the design of everyday computer systems. While many in the mass media claim that wide-spread computer use and the internet have opened up democratic possibilities previously undreamed of, we believe that democracy is not necessarily a given in design and use of computer systems. Indeed the gap between design of technical artifacts from web sites to software applications and their use, seems to be getting wider. Workplace applications for example, like those in hospitals, insurance companies, and industrial bakeries, are designed to control the flow of work and pace of workers. (Cherkasky and Scannell 1999) Web sites are often designed to appeal to purchasing by leading users through a set of links designed to make them buy. And even large scale application programs like Office Suites and Web browsers have been designed by system developers and programmers far removed from the daily tasks and activities of the people who use them.

A series of ethical and political issues lie embedded in the current dilemmas concerning the separation of design and use of computer systems. These issues involve questions of who has the power and the authority for deciding what goes into the specifications that provide the foundation of computer system design. Our central theme "Designing Digital Environments: Bringing in More Voices" directly tackles these issues of power and politics by bringing together multidisciplinary researchers and practitioners who question and test the assumptions about designs which are usually unspoken during the design and development process.

While it is now common for software firms to test out new products through focus groups and usability labs, our emphasis on participation makes the role of users more central and dramatically extends it in two ways. First, the participatory design approach addressed in our prior conferences and papers, books and workshops, calls for early intervention on the part of future users, rather than only 'testing' or surveying users after software products have been developed. Secondly, we focus on methods for active involvement of users, through a wide range of techniques for giving more voice to groups with less power; techniques which have been used in Germany and Scandinavia since the 1960s for active participation by citizens groups and workers councils.

"Broadening participation" was the theme of the last conference, PDC 98, held in Seattle. Scholars and practitioners from the fields of urban, housing, planning and disability design were invited to address the conference and help the computer specialists among us build a bridge to other participatory design disciplines. The papers and invited presentations in this volume continue this interdisciplinary diversity. Jean Lave, co-author of Situated Learning: Legitimate Peripheral Participation (Lave and Wenger, 1991) and Plenary speaker, is well-known among educators and psychologists for her practical research about the social and political context in which learning takes place. Susan Leigh Star and Geoffrey Bowker, authors of Sorting Things Out (1999), are interdisciplinary boundary jumpers whose work on understanding the social construction of technical infrastructures have caught wide-spread attention. And the opening evening session of the conference weaves musical improvisation by the acclaimed Mick Rossi Trio, with a discussion and participation facilitated by Gustavo Moretto, an Argentinean born composer whose interests blend the creation and interpretation of music through experiences of composer and audience.

The conference theme this year, "Designing Digital Environments," was developed by the PDC conference program committee to heighten awareness that the worlds of art and technology are acutely apparent on the web and through the wide-spread use of mobile digital devices. Web and mobile device users are bombarded with often clumsy visual and navigational designs that don't fit their expectations or experiences. Technical designers on the other hand, particularly those from the dot-com "world," are expected to blend art and technology with some technical tools, but with little guidance from those that will try to use their designs. C.P. Snow's warning bell about the persistence of two academic cultures is unfortunately alive and well in the applied commercial world of web design and use. PDC authors and participants are engaged in a long term struggle to bridge the divide through language and actions. Our sub theme of "bringing in more voices" is represented in the papers and summaries in this volume.

The Proceedings are divided into three parts. The first section is a collection of scholarly papers reporting on theory and practices by people actively engaged in developing and testing participatory design ideas. The list of contributors includes international and new authors from Australia, Turkey, Japan, as well as researchers from Austria, Germany, England, Scotland and the Scandinavian countries. Papers address participatory processes and politics, tools and techniques, and tactics and strategies. Issues of conflict, dissent and risk are discussed alongside techniques involving workflow, video, and drama. Topics span not only fields bearing directly on computer use, but also architecture, management, labor, healthcare, and graphic design.

The second part of the Proceedings gives an overview of ten Workshops that are presented at the conference. These three-hour Workshops have been an important feature of PDC. They are an active opportunity for people to experience and participate in techniques from areas and disciplines outside their usual sphere. This year the Workshops include techniques in using and understanding psychology, mapping, and planning, and are intended to address participant designers who are children, product users, and citizens. Topics range from pedagogy and learning environments, to ethnography and the design of internet environments, to on-line and off-line community building.

The third part of the Proceedings is a new feature added this year: Works in Progress reports. Since many researchers and practitioners are often involved in stories of participation which go on over a longer period of time, without specific so-called 'scientific' findings, we felt it would be useful to include their stories and reports as well. The work-in-progress reports will initiate conversations on trends in information technology design, technology assessment, PD and structural change, and on involving children in participatory design. Several reports address the ethical dimensions of information technology. How can avoiding overconsumption be a challenge that progressive designers address more often? Has the way of thinking about society kept pace with technical development? Other reports show the diversity of approaches and tools used in participatory design. One report applies Activity Theory to analysis and design. Another considers how photography can elicit heterogeneous views on design problems and solutions. In others, collaboration becomes the focus through case studies of design teams and small enterprises.

These Proceedings are printed in a limited number. Please pass them on to colleagues and friends who were not able to attend the conference. We plan to make and keep some of the material available on the web, and to publish selected papers as part of a special journal issue. The most important part of participatory design, as a conference and as a collection of materials is the energy and interest which you, the participant, put into sharing what you have learned with others. We look forward to ongoing dialogues across the many cultures of design and use of technology.

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Computer Professionals for Social Responsibility

CPSR's Mission

CPSR is a public-interest alliance of computer scientists and others concerned about the impact of computer technology on society. We work to influence decisions regarding the development and use of computers because those decisions have farreaching consequences and reflect our basic values and priorities.

As technical experts, CPSR members provide the public and policymakers with realistic assessments of the power, promise, and limitations of computer technology. As concerned citizens, we direct public attention to critical choices concerning the applications of computing and how those choices affect society.

Every project we undertake is based on five principles:

We foster and support public discussion of, and public responsibility for decisions involving the use of computers in systems crucial to society.

We work to dispel popular myths about the infallibility of technological systems.

We challenge the assumption that technology alone can solve political and social problems.

We critically examine social and technical issues within the computer profession, both nationally and internationally.

We encourage the use of information technology to improve the quality of life.

CPSR is a democratically organized membership organization. Our accomplishments result from the active involvement of our members, supported by the CPSR staff and computer professionals across the country.

CPSR Projects

By sponsoring both national and local projects, CPSR serves as a catalyst for indepth discussion and effective action in key areas. Some of CPSR's major projects have been:

The National Information Infrastructure

Civil Liberties and Privacy

Computers in the Workplace

Technology Policy and Human Needs

Reliability and Risk of Computer-Based Systems

In addition, CPSR's chapter-based projects and national working groups have tackled issues ranging from the implementation of Calling Number ID systems to the development of nanotechnology and virtual reality, from the use of computers in education to working conditions for computer professionals, from community networks to computer ethics.

Historical Highlights

- CPSR published the first papers and held the first public debates on the computing aspects of the Strategic Defense Initiative, or "Star Wars."
- CPSR members testified before a U.S. Senate subcommittee on the feasibility of SDI.
- CPSR/Boston produced an award-winning slide show and videotape called "Reliability and Risk: Computers and Nuclear War."
- CPSR members produced the first book for general audiences on computers in modern weapons systems.
- CPSR's report on the FBI's proposed National Crime Information Center upgrade (NCIC 2000) was widely credited for the FBI's decision to drop a proposal to track individuals who had not been charged with any crime.
- CPSR co-produced a "Special Report on Computers and Elections" for the 1988 Presidential Campaign, highlighting the potential for errors in electronic vote-counting.

- CPSR filed lawsuits under the Freedom of Information Act to force the FBI and Secret Service to reveal whether they monitor computer bulletin boards and electronic mail
- CPSR/Portland hosted a conference on Computers and the Environment
- The CPSR Workplace Project organized the 1990 Participatory Design Conference
- CPSR helped lead a successful grassroots campaign to convince the Lotus Development Corporation not to release their proposed Marketplace: Households product, which would have included data on 120 million Americans
- CPSR/Berkeley organized a media campaign to register concern over the deadly role of computing technology in the Persian Gulf War.
- CPSR participates in a broad coalition of public-interest organizations with concerns over the Telecom Reform Bill of 1996
- CPSR is a co-plaintiff in the lawsuit ACLU vs. Reno that overturns the Communication Decency Act.
- CPSR holds its sixth DIAC conference in Seattle, ten years after the first one was held.
- CPSR launches a new program on Internet Governance and publishes IETF draft "One Planet, One Net: Principles for an Internet Era."

Who can join CPSR?

CPSR everyone who uses or is concerned about the role of information technology in our society. CPSR is a democratically organized grass roots alliance. To become a member, just fill out the membership form attached as the last page of this volume, enclose a check, and mail it to CPSR, P.O. Box 717, Palo Alto, CA 94302.

Membership Benefits

As a member of CPSR, you are joining a nationwide network of concerned people who are committed to bringing a public interest perspective to all aspects of information technology. CPSR's work covers a wide variety of issues including the proposed National Information Infrastructure, privacy and freedom of information, the demilitarization of national technology policy, cryptography, participatory design approaches to system development, and more.

CPSR has a reputation for being on the forefront of issues pertaining to the impact of information technology on society, taking action to implement positive examples of the use of information technology such as local community networks as well as participating in regional and national policy discussions.

Other membership benefits include:

- Joining with other concerned people to affect policy-making at the local, regional, and national level
- Access to an international network of people who can provide expertise and wellresearched support for progressive positions concerning information technology policy.
- Access to on-line information and discussion groups on key topics concerning the socially responsible use of information technology.
- The chance to participate in local and national working groups on issues of particular interest to you.
- A quarterly newsletter containing indepth analysis of major issues as well as updates on CPSR activities and action alerts.
- Invitations and discounts to CPSR events and publications.

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