

Phased Participatory, Work-Centered Design for Innovation

Patricia Sachs, Jim Euchner,
Austin Henderson, Frederick Ryan, Deborra Zukowski, Jill Boncek Lawrence

Goal: Our goal is to provide a case study-in-process of our three-year work-and-organization redesign of a leading R&D organization. We'd like to use the case as the basis for raising a series of questions regarding the real-life challenges of undertaking such an effort, along with working solutions, for discussion by the attendees.

Objective: The purpose of this workshop is to provide a context to discuss the challenges faced in making the participatory design of a work system and organization actually work.

Methods: We have designed a two-part event. The first is a panel discussion with the VP of the R&D organization, several members of the organization who participated in the redesign of the organization, who will provide an overview of the case and key issues that arose. The panel will take questions from the attendees. The second part of the event is an interactive discussion that will initially be organized around a set of questions the panel has provided, and which will also engage the attendees in issues they have faced in similar situations. We will also provide representative tools we used in our work as a focus for discussion.

Leaders: This workshop is led by a team of people, all of whom participated in the redesign of the work system, organization, and space of the R&D organization, and who have lived in the organization over the past three years. The two leaders—Patricia Sachs and Jim Euchner, have conducted several organizational participatory design projects since 1991.

- o Patricia Sachs; Anthropologist/Organizational Transformation Consultant to Pitney Bowes Advanced Concepts & Technology and co-leader of the participatory redesign

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- o Jim Euchner, VP, Advanced Concepts & Technology at Pitney Bowes
- o Rick Ryan, Senior Fellow, co-leader of the redesign effort
- o Deborra Zukowski, Principal Engineer, member of design team and lead on redesign of space
- o Jill Boncek Lawrence, Work Anthropologist, member of design team and a member of the Concept Studio
- o Austin Henderson, Director, Concept Studio
- o We also hope to bring a client of ours to participate on the panel.

Intended Participants: Individuals who have led, been a part of, or plan to conduct participatory design of a work system or organization. We would welcome attendees who are seeking to embed a socio-technical and/or participatory approach into engineering work, concept development, or systems development. We don't have a maximum number. If the group gets very large, we will split into sub groups for the workshop portion.

Description: This panel and workshop focus on the transformation of a traditional R&D organization into a innovative one that "creates big ideas that get traction." This transformation was (and is being) achieved through intensive and ongoing participatory design of the work system, the organization, and the physical environment. We discuss the challenges and benefits of transforming an organization in this manner.

The first part of this event is a panel discussion, providing an overview of key issues the team addressed. Panel members will discuss:

1. The holistic, phased design approach that addressed the work system, organization, and space
2. The experience of living in a redesigned organization: how do you integrate socio-

- technical practice into existing engineering practice?
3. The annual open space whole community that does “redesign on the hoof”: whole system participation
 4. The work of getting the management team aligned: challenges and benefits

The second part of the event is a workshop that will examine the challenges making this holistic approach to participatory, socio-technical design work. Participants are invited to bring issues they are confronting for discussion by the group.

- Learning As You Go: Adapting Practice To Make The System Work;
- The Role Of Language In Implementing Change;
- Communicating The Change With Key Stakeholders (New Practices, New Tensions)
- How Do You Manage Subtle Nuance And Support The Spirit Of The Design And Not Rather The Letter Of The Law?
- Does Something Get Lost? What Is The Relationship Between The Technological Edge And Participatory Design?

Paper Prototyping - a Collaborative Design Methodology

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Goal: The purpose of the session is to introduce paper prototyping as an interaction design methodology and a means to test assumptions of interaction designs.

Learning Objectives:

1. Gain an understanding of paper prototyping methodology.
2. Understand how and when to implement paper prototyping within the design phase of a project.
3. Participate in a collaborative design environment.
4. Understand the value of prototyping from a financial, political and design perspective.

Methods: Although the workshop introduction (10-15 minutes) will take a lecture format, the remainder of the workshop will be completely hands-on and interactive.

Leaders: The two workshop leaders, Sarah English and Shannah Segal, are principals of Usability Matters Inc., a consulting firm based in Toronto, Canada that provides information architecture and usability services that help organizations create more usable digital products (www.usabilitymatters.com).

Terry Costantino, the third principal of Usability Matters, may be onsite for backup support if required.

Sarah English

As a founding member of Usability Matters, Sarah's role as a user advocate takes many forms, but always serves the same goal: to communicate the needs of

the end-user. Her user-centered approach has benefited clients such as ING Direct, Expedia Canada, CIBC/Amicus Holdings Ltd, and CBC Radio Canada.

Sarah has worked with clients and end-users to determine project requirements, objectives, and to produce detailed functional specifications for solutions that meet these goals. Beyond the planning and design of systems, Sarah is often involved throughout the production and evaluation phases of a project, facilitating ongoing usability testing.

Sarah's background includes business process analysis, end-user requirements gathering, visual software modeling, database design, process development, teaching, and instructional design. She has degrees in Biology/Psychology (with a focus on visual perception), Sociology (impacts of technology) and Education, and recently taught "Interface Design and Usability for the Web", part of the renowned New Media program at Centennial College.

Shannah Segal

Shannah brings a broad range of industry and educational experience to Usability Matters. Her commitment to clarity, efficiency and product excellence has enhanced the user experience elements of projects for numerous clients including Toronto Star, Expedia Canada, Toyota, and CBC Radio Canada.

Prior to joining Usability Matters, Shannah worked in both the Information Architecture and Project Management groups at ICE, an integrated digital communications and entertainment firm. Her career has also included positions as Content Manager for Corporate Communications at Bell Canada; and as Senior Writer for TMP Worldwide, a specialty advertising agency. Shannah's extensive experience

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in cross-cultural and communications positions drives her commitment to excellent usability.

Shannah holds a Bachelor of Arts in Communication Studies, and has also received formal training in Project Management, Technical Writing and Studies in Education. Her background allows her to ensure that products communicate effectively and demonstrate ease-of-use, regardless of the product, discipline or industry.

Intended Participants: Any individual involved with the planning, design, development or evaluation of digital products that has an interest in design methodologies involving multi-disciplinary teams and/or end-users.

The following requirements apply:

- Prior use of a digital product with an interface.
- Willingness to work as part of an interactive, collaborative team.

Workshop Outline:

1. Introduction to paper prototyping: Workshop leaders will introduce the concept of paper prototyping, including the following topics:

- Benefits and value
- Timing and participants
- Types of prototypes
- Basic prototyping concepts

2. Workshop instructions - "team challenge": Participants will be broken into teams and given instructions/handouts.
3. Workshop session: Teams will be given a design challenge, and asked to produce a paper prototype of an onscreen digital product or physical product that also involves use of screens.

Each team will be given approximately one hour to collaboratively develop their product using large format paper, post-it notes, coloured paper, transparencies, markers and other office supplies.

4. Prototype evaluations: Once the prototypes are complete, one representative from each group will act as a "user" and walk through a particular scenario with another team's product. Teams will then have time to revise/refine before a subsequent user walkthrough.

Wrap-up: Teams will debrief and discuss challenges and findings.

Exploring Values in Use—Eliciting and Understanding Participant Values in Design

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The proposed workshop intends to explore practices for identifying and understanding individual and organizational values in participatory and inter-organizational system design projects. My motivation for the workshop draws from continued attempts to incorporate values identification and requirements into design practices, and the issues in effectively using such approaches when no accepted methodology exists for expressing values (individual or organizational) as explicit requirements for design.

My own research has indicated that regardless of whether or not we explore values issues in the design process, that organizational values (i.e. Argyris' "values-in-use") become embedded in practices and introduce some, if not significant, influence. Such embedded values influence ranges from simple biases in requirements to occupational values conflicts that threaten project and product success. In response to these research interests, I propose an interactive workshop among practitioners interested in sharing methods used to elicit and understand user and organizational values. By surfacing values early in the design process, among designers and intended users, we may draw closer to goals of providing technological products that support the human and social values and aspirations, considering these as *values requirements*. While values are not a simple function to measure or map, the current fuzziness of the problem should not deter us from attempting to share approaches for revealing values in participatory practice, and manifesting and validating preferred values sets in designed work.

Goals and Objectives

The primary goal of this full-day workshop is to exchange practices and engage dialogue on promoting understanding of values in design. Given the sensitivity of PDC to values issues in the design process and understanding user values, this 3-hour conference workshop should aim for **initiating a community effort to develop shared and accepted approaches** for identifying, researching, and validating individual and organizational values in design.

Further goals aim to:

- Provide designers and researchers the opportunity to share research, knowledge and experience in values-oriented research. This will be met by promoting dialogue surfacing the issues raised in participants' current research.
- Identify and qualify specific measures, scaling methods, and data collection approaches applicable to identifying distinct individual values from individual or group interventions.
- Share and exchange dialogue on theoretical work and frameworks that inform our adoption of values in user research or participatory design.

This workshop intends to explore what we've learned as researchers in values questions in both academic and practical settings. We plan to limit the group to 15 members, but will include others if interested.

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Workshop Participation Approach

Given a 3-hour workshop, the goal will be to squeeze as much dialogue and interaction as possible to explore the questions of the workshop. Following an initial brief presentation of the issues and the workshop approach, we will move into a dialogue session to allow participants to share their experience in dealing with values in design projects and their own organizations. Sample questions for engaging dialogue are listed in the agenda. One of the organizer's roles will include the facilitation and maintaining ground rules for dialogue. An unstructured approach to dialogue will be encouraged, surfacing key ideas and allowing the group to focus on issues of interest.

Two sample methods will be discussed by the organizer as approaches used in values research and design projects. Participants will be encouraged to share other approaches

The workshop will also explore how we might further develop the shared knowledge in a continuing forum or informal publication. We will reserve this topic for a final discussion period.

Proposed Agenda

2:00 – 2:20 Introduction of topic area, values issues to be explored, and personal introductions

2:30 – 3:00 Dialogue session: Open-ended questions in exploration: What are values in design? What are *your* values in design – personal and organizational – and how do they show up? How do we perceive and understand the interaction with values in work and systems? What has been our experience in identifying values issues and conflicts in practice?

What keeps us from exploring values issues in organizational settings?

What current methods do we use that afford the inclusion of eliciting values?

3:00 – 3:30 Discussion of values exploration and research methods used in design research. Values elicitation from interview (hermeneutics), Values scaling instruments, Survey, Artifact analysis (values stories and scenarios drawn from artifacts)

3:30 – 4:30 Breakout sessions (if more than 8 participants) of small groups to explore and develop their approaches to values in design. Suggest a three-group approach: Group 1) Identifying user values in design process, Group 2) Designing to meet individual or organizational values as requirements, group 3) Validating values in designed products or systems.

If a small group (less than 8), reach consensus on one or two approaches to do in series or group.

Breakout groups will be encouraged to explore such methods as interpretive diagramming, rich pictures, hermeneutic interview, projective collaging. Analytical methods such as verbal protocols analysis and scaling measures can also be discussed, but may not be as suitable as a more interactive method in breakout sessions. Also, other than “brand values” methods, there are fewer visual methods presented in the literature. It would be valuable to develop some shared knowledge around these creative approaches, which could be used in conjunction with analytical instruments.

4:40 – 5:00 Closing discussions, arranging for further work people may wish to explore.

Field trip to St Christopher House: A Community Learning Network Development Project

Randall Terada, organizer

Location: **St Christopher House, 248 Ossington (at Dundas)**

Transportation will be arranged to leave from the Bahen Centre 1:45 PM, returning by 5:30PM

This workshop will be of interest to those who are working in community technology and development areas, and PD more generally. The workshop is intended to enable participants to learn about SCH and the CLN development project, as well as to share expertise and insights on these kinds of projects.

St Christopher House (SCH) is a non-profit community organization in Toronto. SCH offers various services to the community, including immigration, settlement, and learning programs, and family support for low-income people. SCH administration recognized the need to position their organization to take advantage of the growing availability of ICT, and the **Community Learning Network** project was seen as a key step towards realizing this goal. The administration realized that their community was rapidly growing and there was an emergent and expanding demand for digital services of all kinds. The funding made available under the CLN program was seen as a key step towards ensuring their community would not be subjects of digital divides.

The Project goals of the SCH CLN portal are to fashion “a meeting and virtual learning/teaching facility that will test and push the horizon of the Internet’s capacity to provide relevant online content for a diverse

client population with a multiplicity of needs.” SCH is determined to use the CLN as a conduit for staff and program participants from the community to learn about using ICT, specifically the internet, for locating resources, communication and accessing SCH and other program or governmental services that may be available online. The CLN portal is intended to function as a community enabler – offering links to services offered online by SCH and other agencies relevant to the communities served by SCH, as well as linking community members and staff across the organization itself.

This half-day workshop, a field trip to SCH, will provide participants with a first hand look at how this community service organization uses technology and participatory approaches to engage their community members and address digital divides. A tour of SCH will be followed by a round table discussion of the implications of PD methods and the use of technology in community development projects more generally.

Randall Terada, principal workshop organizer, is the CLN Project Lead at SCH.

Co-Sponsor: The Canadian Research Alliance for Community Innovation and Networking (CRACIN), www.cracin.ca