

Profile

Through her consulting practice of over ten years Diane McKerlie has led the interaction design effort at Tier One organizations such as NCR, Canada Post, TD Canada Trust, Department of National Defense, and the US Postal Service. By recognizing her clients' competitive advantages and differentiators, she leads product stakeholders to consensus on simple, elegant, and innovative solutions. Her designs are successful because they meet end-user expectations for ease of use and they influence customer behaviours toward organizational goals.

Trained and experienced in the user interface analysis, design, and evaluation process:

- leadership of cross-functional teams,
- user needs analysis,
- requirements capture and management,
- iterative design of UI structure, navigation, layout, and workflow,
- information architecture and content design,
- use case definition,
- usability testing and heuristic evaluation,
- solution prototyping.

Designed or evaluated user interfaces in a variety of application domains:

- financial and investment services,
- medical imaging and 3D graphics,
- performance assurance of web-based systems,
- retail point-of-service,
- surface mail and courier services,
- mobile communications technology,
- document copier technology,
- warehouse management,
- education materials and tools.

“Negotiation, collaboration, and influence are as much a part of designing and solution building as creativity and innovation.”

Routinely produce the following documents or deliverables:

- usability engineering plan, expense plan, and budget,
- statement of requirements,
- user interface architecture,
- user interface style guide,
- interaction design specification,
- functional specification,
- usability evaluation plan and protocol,
- software test plan, test cases, and test descriptions.

Education

PhD, *Explicit design knowledge: Investigating design space analysis in practice and opportunities for its development*, London South Bank University, UK, 1999.

MSc, Interactive Computer Systems, University of Guelph, 1991.

Honours BA, Computer Science, University of Guelph, 1989.

“A real-world approach supported by a principled and academic foundation.”

Positions Held

Principal Consultant, Design | Strategy Inc. (1993 - 2006). designstrategy.ca

Design | Strategy Inc. was established in 1993 by Diane McKerlie to deliver interaction design and usability evaluation services. We provide thought-leadership in design strategy, assisting cross-functional teams to understand the human side of technology. We create simple, elegant and innovative solutions.

Lecturer, *Human-Computer Interaction II*, University of Toronto (2000). cs.toronto.edu

Research Scientist, *EuroPARC Xerox Research Centre Europe*, UK (1991 - 1993).

Research Associate, University of Guelph and The Open University, UK (1989 - 1991).

“Reshape
techno-centric
and data-driven
ideas; then
design a
solution that is
meaningful to
real end-users.”

Experience User Interface Design and Development

Created the user interface design for a teller application with RAD International. Design challenge: to improve usability for 50,000 tellers at a national US bank with a modern look and feel application despite an existing collection of legacy systems (2005 - 2006). radintl.com

Created the user interface design for a teller application as a proof-of-concept leading to the successful award of the full contract at a national US bank with RAD International. Design challenge: to demonstrate measurable improvements in end-user productivity (2005). radintl.com

Designed the user interface for a radiological acquisition and reading station at Cedara Software. Design challenge: to integrate designs across multiple scanner consoles (2003 - 2004). cedara.com

Created the interaction design for a web-based investment prototype, contracted by Sage Information Consultants for TD Canada Trust. Design challenge: to lead diverse stakeholders to consensus on business goals and alternative designs at joint application design sessions (2001).

Designed the user interface of PerformaSure™ for Sitraka Software, which assists end-users to investigate performance problems of web-based applications. Design challenge: to represent and navigate large volumes of time-based data, revealing the cause of the performance problem (2001). quest.com

Created user interface designs for surgical applications at Cedara Software and SNS. The applications generate 3D volumes of anatomical structures from 2D image data, then dynamically track the location of surgical instruments within the patient anatomy during surgery. Design challenge: the operating room environment required solutions that respect the sterile field and the surgeon's concentration on the task at hand (1998 - 2000). cedara.com

Conducted the usability engineering effort for a retail, point-of-service workstation, contracted by NCR Corporation for the US Postal Service. Design challenge: to create a single solution for a diverse user population; the 30,000 installations across the US included remote corner stores and large city-center outlets. Defined the functional specifications and use cases for the retail and back office applications. Wrote software test plans and test cases for system integration (1996 - 1997). ncr.com

Produced a style guide contracted by SHL Systemhouse, for the Department of National Defense. The guide balanced industry standards to reflect a multi-platform application (1995).

Developed a methodology to analyze and design the user interface for a warehouse management system, contracted by SHL Systemhouse, for the Department of National Defense (1995).

Experience Usability Evaluation

Conducted an expert usability review of the Virginia Department of Transport traffic and weather website for Maptuit. Analyzed findings and recommended design improvements (2004). maptuit.com 511virginia.org

“Catching a
usability
problem early
can significantly
reduce the cost
of fixing it.”

Evaluated the usability of *Helptrain* with end-users for Agora Consulting Partners. The web-based communication tool enables experts to “train” clients to use technology (2004). [sos.ca](#) [agorainc.com](#)

Planned and conducted a usability evaluation with end-users of the FedEx website address book; contracted by Quarry Integrated Communications for Federal Express (2002). [quarry.com](#) [fedex.com](#)

Conducted a usability evaluation with end-users of a multi-modal, graphical, mobile communications device for Bell-Northern Research—before ubiquity in the public domain! (1994).

Evaluated the usability of a product used to aid software acceptance testing for Bell-Northern Research. The evaluation was conducted as an expert review (1994).

Conducted a usability evaluation with end-users of Canada Post Corporation’s Omnipost product; a service combining email, fax, and long distance laser printing (1993). [canadapost.ca](#)

Experience Management and Team Leadership

At NCR Corporation, for the US Postal Service, directed the user interface design effort and the requirements management effort for an extensive retail point-of-service workstation. Led the user interface design, graphic design, and technical authoring teams (1996 - 1997). [ncr.com](#)

At the Department of National Defense, managed the usability evaluation and design recommendations of a query-based, data-management application (1995).

At SHL Systemhouse, for the Department of National Defense, co-managed the Usability Engineering Program for a warehouse management system upgrade project (1995).

At Bell-Northern Research, managed the usability evaluation of an in-house software product used to aid software acceptance testing (1994).

Experience Human-Computer Interaction Teaching and Research

For the University of Toronto, co-authored the graduate-level course, *Human-Computer Interaction II*. Delivered the course as part of a teaching team (2000). [cs.toronto.edu](#)

For EuroPARC Xerox Research Centre Europe, analyzed and evaluated user interface design methods. Investigated the use of design rationale techniques in practice by conducting case studies (1991 - 1993).

At The Open University and London South Bank University, UK, evaluated the design of multimedia teaching applications. Focused on pedagogical organization and presentation of materials (1991 - 1993).

For the University of Guelph, evaluated design methods, sound in the user interface, and approaches to computer supported co-operative work. Taught user interface design theory (1990 - 1991).

Selected Publications

Carey, T. T., McKerlie, D., Wilson, J., 1996. HCI Design Rationale as a Learning Resource. *Design Rationale: Concepts, Techniques, and Use*. Lawrence Earlbaum Associates, 373-392.

MacLean, A., McKerlie, D., 1995. Design Space Analysis and Use Representations. *Scenario-Based Design: Envisioning Work Technology in System Development*. John Willey, 183-206.

McKerlie, D., MacLean, A., 1994. Reasoning with Design Rationale: Practical Experience with Design Space Analysis. *Design Studies*, **15**(2), Butterworth-Heinemann, 214-226.

McKerlie, D., MacLean, A., 1993. QOC in Action: Using Design Rationale to Support Design. *INTERCHI'93 Video Program*, Amsterdam: ACM.

McKerlie, D., Preece, J., 1993. The Hype and the Media: Issues Concerned with Designing Hypermedia. *Journal of Microcomputer Applications*, **16**(1), 33-47.

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