Natural Sciences and Engineering Research Council of Canada

Conseil de recherches en sciences naturelles et en génie du Canada

FORM 100
Personal Data Form
PART I

Date

2009/10/25

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Booth	Kellogg	KS	10455

☐ I hold a faculty position at an eligible Canadian college (complete Appendices B1 and C)

☐ I do not or will not hold an academic appointment at a Canadian postsecondary institution

_____

Place of employment other than a Canadian postsecondary Institution (give address in Appendix A)

APPOINTMENT AT A POSTSECONDARY INSTITUTION

Title of position
Professor

Department
Computer Science

Campus
Point Grey

Canadian postsecondary institution
British Columbia

Tenured or tenure-track academic appointment   Yes [X]   No ☐

Part-time appointment ☐   Full-time appointment [X]

- For all non-tenured or non tenure-track academic appointment and Emeritus Professors, complete Appendices B & C
- For life-time Emeritus Professor and part-time positions, complete Appendix C

ACADEMIC BACKGROUND

Degree	Name of discipline	Institution	Country	Date yyyy/mm
Bachelor's	Mathematics	California Institute of Technology	United States	1968/06
Master's	Computer Science	University of California, Berkeley	United States	1970/06
Doctorate	Computer Science	University of California, Berkeley	United States	1975/11

TRAINING OF HIGHLY QUALIFIED PERSONNEL

Indicate the number of students, fellows and other research personnel that you:

	Currently		Over the past six years (excluding the current year)		
	Supervised	Co-supervised	Supervised	Co-supervised	Total
Undergraduate	2		4	2	8
Master's	2	1	5	7	15
Doctoral	2	1	1	3	7
Postdoctoral		1	1	1	3
Others		1	2	1	4
Total	6	4	13	14	37

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Completed

ACADEMIC, RESEARCH AND INDUSTRIAL EXPERIENCE (use one additional page if necessary)

Position held (begin with current)	Organization	Department	Period (yyyy/mm to yyyy/mm)
Professor	British Columbia	Computer Science	1990/08
Director Academic Research Centre (consultant)	Business Objects	Vancouver	2007/07
Adjunct Scientist	New Media Innovation Centre, Vancouver BC		2001/07 to 2002/06
Adjunct Professor	University of Toronto	Computer Science	2000/01 to 2002/12
Director	University of British Columbia	Media&Graphics Interdisciplinary Centre	1990/08 to 2002/06
Adjunct Professor	University of Waterloo	Computer Science	1990/08 to 1994/06
Professor	University of Waterloo	Computer Science	1986/07 to 1990/07
Visiting Associate Professor	University of California, Santa Cruz	Computer & Information Science	1985/03 to 1985/08
Associate Professor	University of Waterloo	Computer Science	1981/07 to 1986/06

	Personal identification no. (PIN)	Family name
	10455	Booth

ACADEMIC, RESEARCH AND INDUSTRIAL EXPERIENCE (use one additional page if necessary)

Position held (begin with current)	Organization	Department	Period (yyyy/mm to yyyy/mm)
Visiting Scientist	Tektronix Laboratories	Computer Research	1980/02 to 1980/09
Assistant Professor	University of Waterloo	Computer Science	1977/01 to 1981/06
Lecturer	University of California, Berkeley	Computer Science	1975/09 to 1976/03
Lecturer	University of California, Davis	Applied Science	1974/04 to 1976/12
Computer Scientist/ Math Programmer	Lawrence Livermore Laboratory	Computation	1968/06 to 1976/12

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RESEARCH SUPPORT

Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year	Years of tenure (yyyy)
List all sources of support **(including NSERC grants and university start-up funds)** held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.			

a) Support held in the past 4 years

Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year		Years of tenure (yyyy)
Baecker, RM	NECTAR - Network for Effective Collaboration Technologies through Advanced Research NSERC strategic network grant 30 hours/month	875,500 1,031,069 1,245,501 1,260,624 1,100,011	(7%) (7%) (7%) (7%) (7%)	2004 2005 2006 2007 2008
Marti, JR	Decision coordination for critical linkages in a national network of infrastructures NSERC-PSEPC Joint infrastructure interdependencies research program 20 hours/month	340,000 340,000 340,000	(10%) (10%) (10%)	2005 2006 2007
Booth, KS	Direct multi-touch interaction for a very large wall display NSERC research tools and instruments	113,000	(30%)	2006
Lea, RJ	Large screen interaction and co-located interaction in the digital home of the future Panasonic Corporation industrial contract (includes overhead) 10 hours/month	100,000	(20%)	2006

RESEARCH SUPPORT

Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year	Years of tenure (yyyy)
List all sources of support **(including NSERC grants and university start-up funds)** held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.			

a) Support held in the past 4 years

Lea, RJ	Vision based sensing in the home Panasonic Corporation industrial contract (includes overhead) 5 hours/month	100,000 (10%)	2007

b) Support currently held

Booth, KS	Collaboration technology and multi-user interfaces NSERC Discovery grant 30 hours/month	59,000 59,000 59,000 59,000 59,000	2005 2006 2007 2008 2009
Staub-French, SAS	ARTIFACT: Advanced Research, Techniques, and Informatics for Future Advantages in Construction Technology NSERC Strategic project grant 20 hours/month	147,500 (20%) 147,500 (20%) 0 (20%) 147,500 (20%)	2006 2007 2008 2009
Booth, KS	Research contribution from a former undergraduate student anonymous donation 1 hours/month	100	2009

RESEARCH SUPPORT

Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year	Years of tenure (yyyy)
List all sources of support **(including NSERC grants and university start-up funds)** held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.			

c) Support applied for

Booth, KS	GRAND: Graphics, Animation and New Media Canada (Graphisme, Animation et Nouveau Média Canada) NCE 2009 competition for new networks 120 hours/month	4,650,000 (2%) 4,650,000 (2%) 4,650,000 (2%) 4,650,000 (2%) 4,650,000 (2%)	2010 2011 2012 2013 2014
Booth, KS	Collaboration technology and multi-user interfaces NSERC Discovery grant 60 hours/month	74,100 74,100 74,100 74,100 74,100	2010 2011 2012 2013 2014
Booth, KS	Large screen video processor to enable cross-platform compatibility NSERC Research tools and instrumentation	98,167 (40%)	2010

Highly Qualified Personnel (HQP)
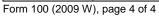
Provide personal data about the HQP that you currently, or over the past six years, have supervised or co-supervised.

	Personal identification no. (PIN)	Family name
	10455	Booth

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Fernquist, J	Master's (In Progress)	Co-supervised 2009 -	Tabletop multi-touch interaction	MSc student, UBC CS
MacKenzie, R	Master's (In Progress)	Supervised 2009 -	Collaboration support for collocated meetings	MSc student, UBC CS
Leung, G	Technician (In Progress)	Co-supervised 2008 -	Human-centred technology labs	Technician, UBC ICICS
Perswain, P	Undergraduate (In Progress)	Supervised 2008 -	Collaboration support for collocated meetings	BSc student, UBC Cognitive Systems
Hawkey, K	Postdoctoral (In Progress)	Co-supervised 2007 -	Usability of security systems and collaboration technology	Postdoctoral fellow, ECE & CS, UBC
Shoemaker, Garth	Doctoral (In Progress)	Supervised 2006 -	Shadow reaching for large displays	PhD student, Computer Science, UBC
(Name withheld)	Undergraduate (Completed)	Supervised 2008 - 2009	Mid-air input techniques for large wall-sized displays	(unknown)
MacKenzie, R	Technician (Completed)	Supervised 2008 - 2009	Wall-sized stereo display system	MSc student, Computer Science, UBC
Masakarov, E	Master's (Completed)	Supervised 2007 - 2009	Multi-person direct multi-touch stereo 3D augmented reality	(just graduated)
Lanier, Yoel	Doctoral (Completed)	Supervised 2006 - 2009	A paradigm for classroom presentations on large displays	Postdoctoral fellow, University of Haifa
Parker, Karen	Doctoral (Not Completed)	Co-supervised 2005 - 2009	Pointing for large collaborative displays	Software engineer, Vancouver BC
Ha, Vicki	Master's (Completed)	Supervised 2007 - 2008	Artifact-based table-top interaction techniques (project)	MASc student, Architecture, UBC
MacKenzie, R	Undergraduate (Completed)	Supervised 2007 - 2008	Hand-held stereo 3D augmented reality	MSc student, Computer Science, UBC
(Name withheld)	Undergraduate (Completed)	Supervised 2007 - 2008	Large-screen augmented reality	BSc student, Computer Science, UBC
Chan, Clarence	Master's (Completed)	Supervised 2006 - 2008	ePresence annotation extensions	Usability & systems analyst, Analytic Design Group Inc.
Lai, Sherman	Master's (Completed)	Co-supervised 2006 - 2008	Collaborative visualization for simulation studies and evalu	Project coordinator, UBC Fisheries Centre
Liu, Zhangbo	Master's (Completed)	Supervised 2006 - 2008	Cross-platform multi-user shared large display collaboration	Software engineer, IUGO Mobile Entertainment, Vancouver BC
Zhang, Ying	Master's (Completed)	Co-supervised 2006 - 2008	A collaborative environment for user studies	Software engineer, Magnetar Games, Vancouver BC
Fussell, Ron	Technician (Completed)	Co-supervised 2005 - 2008	Human-centred technology labs	Consultant, Vancouver BC
Arksey, Nicole	Master's (Completed)	Co-supervised 2006 - 2007	Digital home of the future entertainment and new media	User experience designer, Inetco Systems Ltd, Vancouver BC

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Highly Qualified Personnel (HQP)

Provide personal data about the HQP that you currently, or over the past six years, have supervised or co-supervised.

	Personal identification no. (PIN)	Family name
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Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Htun, Yamin	Master's (Completed)	Co-supervised 2006 - 2007	Tools for creating structured collaborative annotations	Software developer, Apparent Networks, Vancouver BC
Matthews, Adam	Undergraduate (Completed)	Supervised 2006 - 2007	Haptic aspects of augmented reality	MSc student, Carnegie-Mellon University
Argue, Ritchie	Master's (Completed)	Co-supervised 2004 - 2007	Network extended displays	Independent consultant, Vancouver BC
Swindells, Colin	Doctoral (Completed)	Co-supervised 2002 - 2007	Kinesthetic feel & behavior of a rotary manual control	Postdoctoral fellow, Computer Science, UVic
Merritt, Alex	Undergraduate (Completed)	Co-supervised 2005 - 2006	User studies for large-screen and tabletop display interacti	Master's student, University of Amsterdam
Po, Barry	Postdoctoral (Completed)	Supervised 2005 - 2006	Tabletop and wall-based collaborative displays	Senior user experience researcher, HSBC, Burnaby BC
Tory, Melanie	Postdoctoral (Completed)	Co-supervised 2004 - 2006	Collaborative information visualization	Assistant professor, Computer Science, UVic
Sprague, David	Master's (Completed)	Supervised 2003 - 2006	The importance of accurate head registration for fine motor	PhD student, Computer Science, UVic
Zheng, Qixing	Master's (Completed)	Co-supervised 2003 - 2006	Structure annotations to support collaborative writing workf	User experience advisor, Microsoft Canada, Toronto ON
Berry, Lior	Master's (Completed)	Co-supervised 2003 - 2005	Sharing windows across multiple screens	Software engineer, Israel
Po, Barry	Doctoral (Completed)	Supervised 2002 - 2005	Cognitive, perceptual, and sensorimotor factors in pointing	Senior user experience researcher, HSBC, Burnaby BC
Minto, Shawn	Undergraduate (Completed)	Supervised 2004 - 2004	Web-based content for C++ data structures	Software engineer, Mylyn development team, Vancouver BC
Argue, Ritchie	Technician (Completed)	Supervised 2003 - 2004	Collaboration technology for shared screen environments	Independent consultant, Vancouver BC
Hancock, Mark	Master's (Completed)	Supervised 2002 - 2004	Improving menu placement strategies for pen input	PhD student, Computer Science, Calgary
Cubranic, Davor	Doctoral (Completed)	Co-supervised 1998 - 2004	Project history as a group memory: Learning from the past	Software engineer, Business Objects, Vancouver BC
Argue, Ritchie	Undergraduate (Completed)	Co-supervised 2002 - 2003	Mighty mouse collaboration tool	Independent consultant, Vancouver BC
Martindale, David	Doctoral (Completed)	Co-supervised 2000 - 2003	A pipelined framework for multi-scale image comparisons	Software engineer, Radical Entertainment, Vancouver BC

Personal information collected on this form and appendices will be stored in the Personal Information Bank for the appropriate program. Version française disponible

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Note: Throughout the application, citations in **[brackets]** refer to entries in the list of references; those in **{braces}** refer to entries in this Personal Data Form 100.

1. Most Significant Contributions

Collaboration tools – Research begun in the mid-1990s on human-computer interaction studies of children in learning environments combined traditional HCI methodology and learning technology to analyze effectiveness of support for collaborative learning activities. This was followed by work on collaborative software to support art therapy followed by experimental studies of fundamental perceptual and cognitive aspects of shared viewing environments (LIU ET AL., 2005) and techniques for coordinating activity in co-present shared display environments (VOGT ET AL., 2004; SHOEMAKER ET AL., 2007).

Virtual and augmented reality – Since 1990 I have worked on problems in virtual and augmented reality involving human factors based on perceptual and motor performance. This work has been in collaboration with psychologists and kinesiologists. More recently I have been applying this to collaborative displays in a variety of settings, including architectural building models that is part of an NSERC strategic grant on construction technology. Recent studies include human performance in simulated 3-D environments (SPRAGUE ET AL., 2006) and work in progress on multi-modal augmented reality (MACKENZIE, BOOTH ET AL., 2009) and very large wall-sized "whale tank VR" (MAKSKOV ET AL., 2009).

Document authoring and presentation tools – Prototype tools to support collaborative authoring, especially in the editing and revision cycle introduced structured annotations were developed and evaluated (ZHENG ET AL., 2006). An early prototype for ensuring privacy of information during public presentations (BERRY ET AL., 2005) is being extended for use in a general meeting support tool (MACKENZIE, LIU, ET AL., 2009) and a series of studies have been conducted on presentation software that employs multiple screens has been effectively demonstrated in classrooms by instructors in a variety of disciplines (LANIR, BOOTH & FINDLATER, 2008; LANIR, BOOTH & TANG, 2008; LANIR & BOOTH, 2009). This is ongoing work in the area of instructional technology.

Touch in the user interface – A series of collaborative studies on the role of touch (haptics) in the user interface (SWINDELLS ET AL., 2006; SWINDELLS ET AL., 2007; SWINDELLS ET AL., 2009) are being extended with new work involving multi-touch displays. This is work in collaboration with industry partner Smart Technologies (Calgary).

Knowledge and Technology Enhancement and Exploitation – I recently served as the Vancouver director for the newly established Academic Research Centre Business Objects/SAP. My role was to establish joint research projects involving Business Objects and academic researchers, modeled loosely after the successful IBM CAS (Centre for Advanced Studies) model in which I was involved as a technical advisor (1990). This year I organized an application to the Networks of Centres of Excellence Program for a proposed NCE on New Media, Animation, and Games. A letter of intent was accepted in May of 2009. The full proposal was submitted in August 2009 and a site visit was held later that month. A funding announcement is expected by early November 2009.

2. Research Contributions and Practical Applications

Student co-authors are indicated in **BOLD FACE** in the following list of publications. Refereed publications include journal publications and major international conferences that are fully reviewed, usually with an author-rebuttal cycle. Partially reviewed and non-refereed publications are listed separately.

Refereed publications

1. **SWINDELLS, C.**, MACLEAN, K.E., & BOOTH, K.S. (2009). Designing for feel: Contrasts between human and automated parametric capture of knob physics. *IEEE Transactions on Haptics*. May 21, 12 pages.

2. **SHOEMAKER, G., FINDLATER, L., DAWSON, J.Q.,** BOOTH, K.S. (2009). Mid-air text input techniques for very large wall displays. *Proceedings of Graphics Interface 2009*, 231-238. Kelowna, British Columbia. May 25-27.

3. **LANIR, J.** & BOOTH, K.S. (2008). Presentation tools for high-resolution and multiple displays. In *Proceeding of the 3rd ACM International Workshop on Human-Centered Computing*, 61-68. Vancouver, British Columbia. October 31.

4. **LANIR, J.**, BOOTH, K.S., & **TANG, A.** (2008). MultiPresenter: a presentation system for (very) large display surfaces. In *Proceeding of the 16th ACM international Conference on Multimedia*, 519-528. Vancouver, British Columbia. October 26-31.

5. **LANIR, J.**, BOOTH, K.S., & **FINDLATER, L.** (2008). Observing presenters' use of visual aids to inform the design of classroom presentation software. *CHI Letters 10*(1), 1247-1256. (*Proceedings of the ACM Conference on Human Factors in Computing* (CHI 2008), Florence, Italy, April 5-10.)

6. **SHOEMAKER, G., TANG, A.T.**, & BOOTH, K.S. (2007). Shadow Reaching: A new perspective on interaction for large wall displays. In *Proceedings of UIST 2007 – The 20th Annual ACM Symposium on User Interface Software and Technology*, October 7-10, Providence, RI, 4 pages.

7. MCGRENERE, J., BAECKER, R.M., & BOOTH, K.S. (2007). A field study of an adaptable two-interface design for feature-rich software. *ACM Transactions on Computer-Human Interaction, 14*(1), 43 pages (May).

8. **SWINDELLS, C.**, MACLEAN, K.E., BOOTH, K.S., & MEITNER, M. (2007). Exploring affective design for physical controls. *CHI Letters 9*(1):933-942. (*Proceedings of the ACM Conference on Human Factors in Computing* (CHI 2007), San Jose, CA, April 28 – May 3.)

9. **SPRAGUE, D.W.**, PO, B.A., & BOOTH, K.S. (2006). The importance of accurate VR head registration on skilled motor performance. In *Proceedings of Graphics Interface 2006.* Quebec, Quebec. June 7-9, pp. 131-138.

10. **SWINDELLS, C.**, MACLEAN, K.E., BOOTH, K.S., & MEITNER, M. (2006). A case-study of affect measurement tools for physical user interface design. In *Proceedings of Graphics interface 2006* (Quebec, Canada, June 07 - 09, 2006). ACM International Conference Proceeding Series, vol. 137. Canadian Information Processing Society, Toronto, Ont., Canada, 243-250.

11. **ZHENG, Q.**, MCGRENERE, J.L., & BOOTH, K.S. (2006). Co-authoring with structured annotations. In *Proceedings of the ACM Conference on Human Factors in Computing* (CHI 2006) Montreal, Quebec, April 22-27, pp. 131-141.

12. **BERRY, L.**, BARTRAM, L.R., & BOOTH, K.S. (2005). Role-based policies to control shared application views. In *Proceedings of ACM User Interface Software & Technology 2005* (UIST), pp. 23-32.

13. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2005). A two-visual systems approach to understanding voice and gesture interaction. *Virtual Reality, 8*:231-241.

14. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2005). Comparing cursor orientations for mouse, pointer, and pen interaction.

Submitted to *Proceedings of the ACM Conference on Human Factors in Computing* (CHI 2005), Portland, OR, April 2-7, pp. 291-300.

15. **CUBRANIC, C.**, MURPHY, G.C., SINGER, J., BOOTH, K.S. (2005). Hipikat: Project memory for software development. *IEEE Transactions on Software Engineering, 31*(6)-446-465. Special Issue on Mining Software Repositories.

16. **LIU, G., AUSTEN, E.L.**, BOOTH, K.S., FISHER, B.D., REMPEL, M.I., & ENNS, J.T. (2005). Multiple object tracking is based on scene, not retinal, coordinates. *Journal of Experimental Psychology: Human Perception and Performance, 31*(2):235-247 (April).

17. **CUBRANIC, D.**, MURPHY, G.C., SINGER, J., & BOOTH, K.S. (2004). Learning from project history: A case study for software development. *ACM CSCW 2004,* Chicago, IL, November 6-10, pp. 82–91.

18. **VOGT, F., WONG, J., PO, B.A., ARGUE, R.**, FELS, S.S., & BOOTH, K.S. (2004). Exploring collaboration with group pointer interaction. In *Proceedings of CGI 2004* (Computer Graphics International), Hersonissos, Crete, Greece, June 16-19, pp. 636-639.

19. **SWINDELLS, C., PO, B.A., HAJSHIRMOHAMMADI, I., CORRIE**, B., DILL, J.C., FISHER, B.D., & BOOTH, K.S. (2004). Comparing CAVE, wall, and desktop displays for navigation and wayfinding in complex 3D models. In *Proceedings of CGI 2004* (Computer Graphics International), Hersonissos, Crete, Greece, June 16-19, pp. 420-427.

20. **HANCOCK, M.**, & BOOTH, K.S. (2004). Improving menu placement strategies for pen input. In *Proceedings of Graphics Interface 2004*. London, Ontario. May 17-19, pp. 221-230.

21. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2004). Mouse and touchscreen selection in the upper and lower visual fields. In *Proceedings of the ACM Conference on Human Factors in Computing* (CHI 2004) Vienna, Austria, April 21-26, pp. 359-366.

22. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2003). Pointing and visual feedback for spatial interaction in large screen display environments. In *Proceedings of the 3rd International Symposium on Smart Graphics*, July 2-4, Heidelberg, Germany, pp. 22-38.

Invited talks

23. BOOTH, K.S. (2008). 2^5 years ago I couldn't even spell Canadian, now I are one: Momentos of collaborating on, with, and about technology. *Proceedings of Graphics Interface 2008*. Windsor, Ontario. May 28-30, pp. 107-114.

Conference Posters

24. **HENDY, J.C.**, MCGRENERE, J.L., BOOTH, K.S. (2009). Graphically-enhanced keyboard accelerators. Poster in *Extended Abstracts, Graphics Interface 2009*. Kelowna, British Columbia. May 25-27.

25. **MACKENZIE, R.**, BOOTH, K.S., HAWKEY, K., & STAUB-FRENCH, S. (2009). Projected Fishtank Virtual Reality for Architectural Models. Poster in *Extended Abstracts, Graphics Interface 2009*. Kelowna, British Columbia. May 25-27.

26. **MACKENZIE, R., LIU, Z., PERSWAIN, P.**, HAWKEY, K., & BOOTH, K.S. (2009). Lacome: The Large Collaborative Meeting Environment. Poster in *Extended Abstracts, Graphics Interface 2009*. Kelowna, British Columbia. May 25-27.

27. **MAKSAKOV, E.**, HAWKEY, K., & BOOTH, K.S. (2009). Whale tank virtual reality: Collaboration in VR using a large screen. Poster in *Extended Abstracts, Graphics*

Interface 2009. Kelowna, British Columbia. May 25-27.

28. **ARGUE, R.**, BOOTH, K.S., & INKPEN, K.M. (2007). Reflect & satellite displays: advanced multi-display configuration. Poster in *Extended Abstracts, Graphics Interface 2007*.

29. **LANIR, J.**, & BOOTH, K.S. (2007). Understanding instructors' use of visual aids in a classroom setting. Poster in *Extended Abstracts, Graphics Interface 2007*.

30. **LANIR, J.**, BERRY, L., & BOOTH, K.S. (2006). WinClone: Role-based control of distributed application views. Interactive demo at *ACM CSCW 2006,* Banff, AB, November 4-8.

31. **TANG, A.T., PARKER, K.J., LANIR, J.**, BOOTH, K.S., FELS, S.S. (2006). Studying collaborative surface use to guide large display interaction design. Poster at *ACM CSCW 2006,* Banff, AB, November 4-8.

32. **ZHENG, Q.**, BOOTH, K.S., & MCGRENERE, J. (2005). Designing structured annotations to support collaborative writing workflow. Poster in *Extended Abstracts, Graphics Interface 2005*.

33. **BERRY, L.**, BARTRAM, L.R., & BOOTH, K.S. (2005). Visual manipulations for improved generalized presentations. Poster in *Extended Abstracts, Graphics Interface 2005*.

Technical Reports

34. **LANIR, J.**, BOOTH, K.S., & WOLFMAN, S. (2009). Promoting collaborative learning in lecture halls using multiple projected screens with persistent and dynamic content. TR 2009-10. Department of Computer Science, University of British Columbia.

35. **SHOEMAKER, G., TSUKITANI, T.**, KITAMURA, Y., & BOOTH, K.S. (2009). Body-centric interactions with very large wall displays. TR 2009-12. Department of Computer Science, University of British Columbia.

Patents

36. **SHOEMAKER, G.**, & BOOTH, K.S. (2009). Method and Device to Interact with Large Scale Displays. U.S. provisional patent. Filed August 29, 2008.

In preparation for submission to a journal

37. **LANIR, J.**, BOOTH, K.S., HAWKEY, K. (2009). The effect of More Electronic Screen Space on Retention in Classroom Lectures. To be submitted to *Computers and Education*.

3. Other Evidence of Impact and Contributions

I am a Distinguished Member in the Association for Computing Machinery and I was awarded an Achievement Award by the Canadian Human-Computer Communications Society in 2008.

I directed the Media and Graphics Interdisciplinary Centre (MAGIC) at UBC for its first twelve years. MAGIC is a Faculty of Graduate Studies centre whose mandate is multidisciplinary research and educational activities involving emerging media-based and computer graphics technologies. I was responsible for identifying potential new media applications and initiating and leading research projects that would lead to integration of the technology into the research and educational infrastructure at UBC.

I was an adjunct scientist at the New Media Innovation Centre (NewMIC), a partnership between the federal government, the Province of British Columbia, and the universities and some of the colleges in British Columbia. My role at NewMIC as one of the senior academic researchers was liaison with the academic community, and consultant in defining projects with industry in the area of advanced

multimedia and in establishing the Immersion Laboratory (an Advanced Collaborative Environment jointly funded by NRC) and the User Centred Design Laboratory (a usability lab that was available to industrial and academic partners for conducting HCI studies). Included in this were activities with Sony, Electronic Arts, and General Motors. The latter has continued at UBC and SFU Surrey under the leadership of Dr. Brian Fisher, with whom I worked at NewMIC where the initial research was done.

I organized a one-day short course for the ACM SIGGRAPH 2002 conference on multimodal interfaces, which was continued for two more years by my colleagues. I have served on numerous program committees during the past six years, including: ACM CHI 2002, 2004, 2006 & 2008; ACM I3D 2001; ACM SIGGRAPH '98 & '99; ACM UIST '99, 2001, 2003, 2006 & 2008; and Graphics Interface '98. These are the top international conferences in HCI and interactive computer graphics, the two fields in which most of my research has been conducted. I have been a referee or reviewer for many journals, conferences, granting agencies, and tenure and promotion cases. Since 2002 I have been the president of the Canadian Human-Computer Communications Society. I was a fellow of the B.C. Advanced Systems Institute from 1992-2004.

I served as the associate director for NECTAR (Network for Effective Collaboration Technology through Advanced Research), a five-year NSERC Research Network. For the first six months of 2006 I was the acting director while the director (Dr. Ron Baecker) was on sabbatical leave. As a member of the Executive Committee and the Board of Directors for NECTAR, I have been heavily involved in developing the relationship between the six university research sites and the two major sponsors (Smart Technology and Microsoft Research / Microsoft Canada) as well as other companies involved in the research.

4. Delays in Research Activity

(none)

5. Contributions to the Training of Highly Qualified Personnel (HQP)

I have been very involved in the training of HQP and have supervised many students at all levels who are now working in industry or who hold academic positions. For the past 29 years many of my students have been involved in one or more projects funded under NSERC's strategic grant program. In many cases students subsequently accepted jobs with partners on those projects, a direct result of the training they received under my supervision and the involvement they had with the partners during the research.

Five of my former PhD students were awarded NSERC Postdoctoral Fellowships (one was an Industrial R&D Fellowship), I have supervised three postdoctoral fellows (two had NSERC PDFs), and one of my former master's students subsequently completed a doctorate and was awarded an NSERC IRDF. Four of my PhD students took faculty positions, graduating eight "grandchild" PhDs to date, at least two of whom hold research faculty appointments at Canadian universities where they are supervising graduate students.

Because HCI is a highly multidisciplinary field, my students learn both quantitative and qualitative research methods. This year, through NECTAR, a number of my students participated with me in a special graduate course on social science methods in HCI. The course was taught using web-based technology with students from across Canada. All of my graduate students are required to take a graduate-level course in experimental design and statistical analysis (or the equivalent).

Many of my students serve as student volunteers at major international conferences, exposing them to many aspects of research beyond what the experience in graduate school.

Natural Sciences and Engineering Research Council of Canada — Conseil de recherches en sciences naturelles et en génie du Canada

APPENDIX A
Personal Data
(Form 100)

Complete this appendix (i) if you are an applicant or co-applicant applying for the first time; (ii) if you need to update information submitted with a previous application; or (iii) if you do not hold an appointment at a Canadian postsecondary institution. For updates, include only the revised information in addition to the date, your name and your PIN.

This information will be used by NSERC primarily to contact applicants and award holders. It may also be used to identify prospective reviewers and committee members, and to generate statistics. It will not be seen or used in the adjudication process.

Date
2009/10/25

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Booth	Kellogg	KS	10455

Position and complete mailing address if your primary place of employment is not a Canadian postsecondary institution or if your current mailing address is temporary

If address is temporary, indicate:

Starting date

Leaving date

Telephone number	Facsimile number	E-mail address
1 (604) 822-8193	(604) 822-5485	ksbooth@cs.ubc.ca

Telephone number (alternate)
1 (604) 908-8222

Give an alternate telephone number only if you can be reached at that number during business hours.

Gender (completion optional)
X Male ☐ Female

LANGUAGE CAPABILITY

English	Read X	Write X	Speak X
French	Read ☐	Write ☐	Speak ☐

I wish to receive my correspondence: in English X in French ☐

AREA(S) OF EXPERTISE

Provide a maximum of 10 key words that describe your area(s) of expertise. Use commas to separate them. If you have expertise with particular instruments and techniques, specify which one(s).

animation, computer graphics, collaboration, data structures, electronic games, haptics, human-computer interaction, multimedia, user interfaces, visualization

Research subject code(s)

Primary
2716

Secondary
1605

Canada