



**FORM 100**  
**Personal Data Form**  
**PART I**

Date  
2010/10/24

Family name Booth	Given name Kellogg	Initial(s) of all given names KS	Personal identification no. (PIN) 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	Tenured or tenure-track academic appointment Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Department Computer Science	Part-time appointment <input type="checkbox"/> Full-time appointment <input checked="" type="checkbox"/>
Campus Point Grey	<ul style="list-style-type: none"> <li>For all non-tenured or non tenure-track academic appointment and Emeritus Professors, complete Appendices B &amp; C</li> <li>For life-time Emeritus Professor and part-time positions, complete Appendix C</li> </ul>
Canadian postsecondary institution British Columbia	

**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)		Total
	Supervised	Co-supervised	Supervised	Co-supervised	
Undergraduate	1	1	5	1	8
Master's	1	1	6	10	18
Doctoral	2	1	2	3	8
Postdoctoral		1	1	1	3
Others		1	1	1	3
Total	4	5	15	16	40

Personal identification no. (PIN)

10455

Family name

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)
Professor	British Columbia	Computer Science	1990/08
Scientific Director	Network of Centres of Excellence Program	GRAND NCE	2009/12
Director Academic Research Centre (consultant)	Business Objects / SAP	Vancouver	2007/07 to 2008/12
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

Personal identification no. (PIN)

10455

Family name

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)
Associate Professor	University of Waterloo	Computer Science	1981/07 to 1986/06
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

Personal identification no. (PIN)

Family name

10455

Booth

**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.			
<b>a) Support held in the past 4 years</b>			
Baecker, RM	NECTAR - Network for Effective Collaboration Technologies through Advanced Research	875,500 (7%)	2004
	NSERC	1,031,069 (7%)	2005
	strategic network grant	1,245,501 (7%)	2006
	30 hours/month	1,260,624 (7%)	2007
		1,100,011 (7%)	2008
Marti, JR	Decision coordination for critical linkages in a national network of infrastructures	340,000 (10%)	2005
	NSERC-PSEPC	340,000 (10%)	2006
	Joint infrastructure interdependencies research program	340,000 (10%)	2007
	20 hours/month		
Booth, KS	Collaboration technology and multi-user interfaces	59,000	2005
	NSERC	59,000	2006
	Discovery grant	59,000	2007
	30 hours/month	59,000	2008
		59,000	2009
Staub-French, SAS	ARTIFACT: Advanced Research, Techniques, and Informatics for Future Advantages in Construction Technology	147,500 (20%)	2006
	NSERC	147,500 (20%)	2007
	Strategic project grant	0 (20%)	2008
	20 hours/month	147,500 (20%)	2009

Personal identification no. (PIN)

10455

Family name

Booth

**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.			
<b>a) Support held in the past 4 years</b>			
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
Lea, RJ	Vision based sensing in the home Panasonic Corporation industrial contract (includes overhead) 5 hours/month	100,000 (10%)	2007
Booth, KS	Research contribution from a former undergraduate student anonymous donation 1 hours/month	100	2009

Personal identification no. (PIN)

10455

Family name

Booth

**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.			
<b>b) Support currently held</b>			
Booth, KS	GRAND: Graphics, Animation and New Media Canada (Graphisme, Animation et Nouveau Média Canada) NCE 2009 competition for new networks 60 hours/month	4,650,000 (1%) 4,650,000 (1%) 4,650,000 (1%) 4,650,000 (1%) 4,650,000 (1%)	2010 2011 2012 2013 2014
Kellogg S. Booth	Collaboration technology and multi-user interfaces NSERC Discovery Grant 60 hours/month	31,000	2010
<b>c) Support applied for</b>			
Booth, KS	Collaboration technology and multi-user interfaces NSERC Discovery grant 60 hours/month	74,100 74,100 74,100 74,100 74,100	2011 2012 2013 2014 2015

## 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
Hendy, Jeffrey	Doctoral (In Progress)	Co-supervised 2010 -	Keyboard-based interfaces for GUIs	PhD student, Computer Science, UBC
(Name withheld)	Undergraduate (In Progress)	Co-supervised 2010 -	Keyboard-based dialogue boxes	research assistant, Computer Science, UBC
Nobarany, Syavash	Doctoral (In Progress)	Supervised 2010 -	Social network management	PhD student, Computer Science, UBC
Su, Tao	Master's (In Progress)	Supervised 2010 -	Collaborative neighborhood design	MSc student, Computer Science, UBC
Raja, Fahimeh	Master's (In Progress)	Co-supervised 2009 -	Usable security for personal firewalls	MASc student, ECE, UBC
Leung, Galen	Technician (In Progress)	Co-supervised 2008 -	Human-centred technology labs	Technician, ICICS, UBC
Perswain, Presley	Undergraduate (In Progress)	Supervised 2008 -	Collaboration support for collocated meetings	research assistant, Computer Science, UBC
Hawkey, Kirstie	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
Fernquist, Jennifer	Master's (Completed)	Co-supervised 2009 - 2010	Tabletop multi-touch interaction	user experience team, Synaptics
MacKenzie, Russell	Master's (Completed)	Supervised 2009 - 2010	Collaboration support for collocated meetings	software engineer, Conversion Works, Vancouver BC
(Name withheld)	Undergraduate (Completed)	Supervised 2008 - 2009	Mid-air input techniques for large wall-sized displays	(unknown)
MacKenzie, Russell	Technician (Completed)	Supervised 2008 - 2009	Wall-sized stereo display system	software engineer, Conversion Works, Vancouver BC
Hendy, Jeffrey	Master's (Completed)	Co-supervised 2007 - 2009	Graphically enhanced keyboard accelerators for GUIs	PhD student, Computer Science, UBC
Masakov, Evgeny	Master's (Completed)	Supervised 2007 - 2009	Multi-person direct multi-touch stereo 3D augmented reality	Software developer/engineer, O3XY Research Inc., Vancouver
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, Russell	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

## 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
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
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	Software engineer, Barco
Swindells, Colin	Doctoral (Completed)	Co-supervised 2002 - 2007	Kinesthetic feel & behavior of a rotary manual control	Co-Founder, Locarna Systems, Inc., Victoria BC
Merritt, Alex	Undergraduate (Completed)	Co-supervised 2005 - 2006	User studies for large-screen and tabletop display interacti	MSc 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
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
Hancock, Mark	Master's (Completed)	Supervised 2002 - 2004	Improving menu placement strategies for pen input	Assistant professor, Management Science, Waterloo
Cubranic, Davor	Doctoral (Completed)	Co-supervised 1998 - 2004	Project history as a group memory: Learning from the past	Software engineer, UBC



**Note:** Citations in [brackets] refer to entries in the accompanying Form 101's references; those in {braces} refer to entries in this Form 100.

## 1. MOST SIGNIFICANT CONTRIBUTIONS

**1.1 Collaboration tools** – Research begun in the mid-1990s on 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 collaborative software to support art therapy and experimental studies of fundamental perceptual and cognitive aspects of shared viewing environments {20, 46} and techniques for coordinating activity in co-present shared display environments {22, 27, 34}.

**1.2 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 was part of an NSERC strategic grant on construction technology. Recent studies include human performance in simulated 3-D environments {13} and work in progress on multi-modal augmented reality {31} and very large wall-sized “WHALE TANK VR” {4, 33}.

**1.3 Document authoring and presentation tools** – Prototype tools to support collaborative authoring, especially in the editing and revision cycle introduced structured annotations that were developed and evaluated {15, 38}. An early prototype for ensuring privacy of information during public presentations {16} is being extended for use in a general meeting support tool {32} and a series of studies have been conducted on presentation software employing multiple screens has been effectively

used in classrooms by instructors in a variety of disciplines {7, 8, 9, 47}. This is ongoing work in the area of instructional technology.

**1.4 Touch in the user interface** – A series of collaborative studies on the role of touch (haptics) in the user interface {5, 12, 14} are being extended with work involving multi-touch displays. This was in collaboration with industry partner Smart Technologies (Calgary). MSc student Fernquist led a UBC team that won the 2009 SMART Tabletop Multitouch Innovation Contest (a table worth \$5,000).

**1.5 Knowledge and Technology Enhancement and Exploitation** – I served as the Vancouver director for the Academic Research Centre (ARC) at Business Objects/SAP. My role was to establish joint research projects involving Business Objects and academic researchers. This was modeled after IBM CAS (Centre for Advanced Studies) in which I was involved as a technical advisor (1990). I helped establish 16 ARC fellowships and coordinated collaborative agreements for NSERC CRD and Strategic Research Network applications, BC Innovation Council awards, and MITACS ACCELERATE internships. I am the founding Scientific Director for GRAND, a Network of Centres of Excellence on New Media, Animation, and Games with 100+ researchers and 23 universities.

## 2. RESEARCH CONTRIBUTIONS AND PRACTICAL APPLICATIONS

All of my research is reported in the peer reviewed literature, usually appearing first as conference papers – these are the normal venues for fast-breaking research in computer science – and later, in more polished form, as capstone journal articles that often synthesize a number of related results.

My work on collaboration technology has both theoretical and practical importance. A beta version of the MULTIPRESENTER software has been available for download for over a year,

with more than a dozen users at UBC (we don't track downloads elsewhere). MULTIPRESENTER had significant use in classrooms during Lanir's research. After integration with other classroom technology (proposed in this application) it could have potential for commercialization.

Much of my research involves industry partners: NECTAR, ARTIFACT, and GRAND all have significant ties with industry to move results from research to practical application through students or various types of technology transfer. Discovery Grant funding often is the first step in a chain that leads to these partnerships.

Refereed publications listed below include journals and fully reviewed major international conferences. Partially reviewed and non-refereed publications are listed separately. Student co-authors are in **BOLD FACE**.

### **Refereed publications**

1. **RAJA, F.**, HAWKEY, K., **JAFERIAN, P.**, BOOTH, K.S., & BEZNOSOV, K. (to appear). It's too complicated, so I turned it off! Expectations, perceptions, and misconceptions of personal firewalls. *SafeConfig 10*, 8 pages.
2. **LANIR, J.**, BOOTH, K.S., & HAWKEY, K. (2010). The benefits of more electronic screen space on students' retention of material in classroom lectures. *Computers and Education*, 55:892-903.
3. **HENDY, J.C.**, BOOTH, K. S., & HAWKEY, J.L., (2010). Graphically enhanced keyboard accelerators for GUIs. *Graphics Interface 2010*, 3-10.
4. **MAKSAKOV, E.**, BOOTH, K. S., & MCGRENERE, K., (2010). Whale tank virtual reality. *Graphics Interface 2010*, 185-192.
5. **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*, 2(4):200-211.
6. **SHOEMAKER, G.**, **FINDLATER, L.**, **DAWSON, J.Q.**, BOOTH, K.S. (2009). Mid-air text input techniques for very large wall displays. *Graphics Interface 2009*, 231-238.
7. **LANIR, J.** & BOOTH, K.S. (2008). Presentation tools for high-resolution and multiple displays. *3rd ACM International Workshop on Human-Centered Computing*, 61-68.
8. **LANIR, J.**, BOOTH, K.S., & **TANG, A.** (2008). MultiPresenter: a presentation system for (very) large display surfaces. *ACM Multimedia 2008*, 519-528.
9. **LANIR, J.**, BOOTH, K.S., & **FINDLATER, L.** (2008). Observing presenters' use of visual aids to inform the design of classroom presentation software. *CHI 2008*, 1247-1256.
10. **SHOEMAKER, G.**, **TANG, A.T.**, & BOOTH, K.S. (2007). Shadow Reaching: A new perspective on interaction for large wall displays. *UIST 2007*, 53-56.
11. MCGRENERE, J., BAECKER, R.M., & BOOTH, K.S. (2007). A field study of an adaptable two-interface design for feature-rich software. *ACM ToCHI*, 14(1), 43 pages.
12. **SWINDELLS, C.**, MACLEAN, K.E., BOOTH, K.S., & MEITNER, M. (2007). Exploring affective design for physical controls. *CHI 2007*, 933-942.
13. **SPRAGUE, D.W.**, PO, B.A., & BOOTH, K.S. (2006). The importance of accurate VR head registration on skilled motor performance. *Graphics Interface 2006*, 131-138.
14. **SWINDELLS, C.**, MACLEAN, K.E., BOOTH, K.S., & MEITNER, M. (2006). A case-study of affect measurement tools for physical user interface design. *Graphics Interface 2006*, 243-250.

15. **ZHENG, Q.**, MCGRENERE, J.L., & BOOTH, K.S. (2006). Co-authoring with structured annotations. *CHI 2006*, 131-141.
  16. **BERRY, L.**, BARTRAM, L.R., & BOOTH, K.S. (2005). Role-based policies to control shared application views. *UIST 2005*, 23-32.
  17. **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.
  18. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2005). Comparing cursor orientations for mouse, pointer, and pen interaction. Submitted to *CHI 2005*, 291-300.
  19. **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.
  20. **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 Exp. Psych.: Human Perception and Performance*, 31(2):235-247.
  21. **CUBRANIC, D.**, MURPHY, G.C., SINGER, J., & BOOTH, K.S. (2004). Learning from project history: A case study for software development. *ACM CSCW 2004*, 82-91.
  22. **VOGT, F.**, **WONG, J.**, **PO, B.A.**, **ARGUE, R.**, FELS, S.S., & BOOTH, K.S. (2004). Exploring collaboration with group pointer interaction. *CGI 2004*, 636-639.
  23. **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. *CGI 2004*, 420-427.
  24. **HANCOCK, M.**, & BOOTH, K.S. (2004). Improving menu placement strategies for pen input. *Graphics Interface 2004*, 221-230.
  25. **PO, B.A.**, FISHER, B.D., & BOOTH, K.S. (2004). Mouse and touchscreen selection in the upper and lower visual fields. *CHI 2004*, 359-366.
- Invited talks**
26. BOOTH, K.S. (2008). 2<sup>5</sup> years ago I couldn't even spell Canadian, now I are one: Momentos of collaborating on, with, and about technology. *Graphics Interface 2008*, 107-114.
- Conference posters, demos and short papers**
27. **RAJA, F.**, HAWKEY, K., **JAFERIAN, P.**, BEZNOSOV, K., & BOOTH, K.S. (2010). Expectations, perceptions, and misconceptions of personal firewalls. *SOUPS 2010*.
  28. **RAJA, F.**, HAWKEY, K., BEZNOSOV, K., & BOOTH, K.S. (2010). Investigating an appropriate design for personal firewalls. *CHI 2010*.
  29. **RAJA, F.**, HAWKEY, K., BOOTH, & K.S. (2009). Developing security and privacy requirements for a Local Area Collaborative Meeting Environment (LACOME). *USENIX-SEC 09*.
  30. **HENDY, J.C.**, MCGRENERE, J.L., BOOTH, K.S. (2009). Graphically-enhanced keyboard accelerators. *Graphics Interface 2009*.
  31. **MACKENZIE, R.**, BOOTH, K.S., HAWKEY, K., & STAUB-FRENCH, S. (2009). Projected Fishtank Virtual Reality for Architectural Models. *Graphics Interface 2009*.
  32. **MACKENZIE, R.**, **LIU, Z.**, **PERSWAIN, P.**, HAWKEY, K., & BOOTH, K.S. (2009). Lacome: The Large Collaborative Meeting Environment. *Graphics Interface 2009*.

33. **MAKSAKOV, E., HAWKEY, K., & BOOTH, K.S.** (2009). Whale tank virtual reality: Collaboration in VR using a large screen. *Graphics Interface 2009*.
34. **ARGUE, R., BOOTH, K.S., & INKPEN, K.M.** (2007). Reflect & satellite displays: advanced multi-display configuration. *Graphics Interface 2007*.
35. **LANIR, J., & BOOTH, K.S.** (2007). Understanding instructors' use of visual aids in a classroom setting. *Graphics Interface 2007*.
36. **LANIR, J., BERRY, L., & BOOTH, K.S.** (2006). WinClone: Role-based control of distributed application views. *ACM CSCW 2006*.
37. **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. *ACM CSCW 2006*.
38. **ZHENG, Q., BOOTH, K.S., & MCGRENERE, J.** (2005). Designing structured annotations to support collaborative writing workflow. *Graphics Interface 2005*.
39. **BERRY, L., BARTRAM, L.R., & BOOTH, K.S.** (2005). Visual manipulations for improved generalized presentations. *Graphics Interface 2005*.

#### ***UBC Computer Science Technical Reports***

40. **MACKENZIE, R., HAWKEY, K., PERSWAIN, P., & BOOTH, K.S.** (2010). Evaluating two window manipulation techniques on a large screen displays. TR-2010-03.
41. **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.
42. **SHOEMAKER, G., TSUKITANI, T., KITAMURA, Y., & BOOTH, K.S.** (2009).

Body-centric interactions with very large wall displays. TR 2009-12.

#### ***Patents***

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

#### ***Refereed submissions under review***

44. **FERNQUIST, J., SHOEMAKER, G.A., & BOOTH, K.S.** (2010). OhSnap: Helping users align digital objects on touch interfaces. *CHI 2011*.
45. **HENDY J.C., LINK, J., MCGRENERE, J.A., & BOOTH, K.S.** (2010). Parameter selection in keyboard-based dialog boxes. *CHI 2011*.
46. **SHOEMAKER, G.A., & BOOTH, K.S.** (2010). Modeling the effect of gain on mid-air pointing. *CHI 2011*.
47. **LANIR, J., BOOTH, K.S., & WOLFMAN, S.A.** (2010). An observational study of multiple display usage in university classroom lectures. *Human Computer Interaction*.

### **3. OTHER EVIDENCE OF IMPACT AND CONTRIBUTIONS**

I am a Distinguished Member of the Association for Computing Machinery. I received an Achievement Award from the Canadian Human-Computer Communications Society in 2008 and an Outstanding Service Award from ACM SIGGRAPH in 2010.

I am the Scientific Director for GRAND, a new Network of Centres of Excellence. I was the associate director for NECTAR, a five-year NSERC Research Network. I was the founding Director for the Media and Graphics Interdisciplinary Centre (MAGIC) at UBC for its first twelve years. MAGIC's mandate is multidisciplinary research and education involving emerging media-based and computer graphics technologies.

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 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 Dr. Brian Fisher, with whom I worked at NewMIC.

I have served on program committees the top international conferences in HCI and interactive graphics: CHI 2002, 2004, 2006, 2008 & 2011; I3D 2001; SIGGRAPH '98 & '99; UIST '99, 2001, 2003, 2006, 2008; and Graphics Interface '98. I referee or review for many journals, conferences, granting agencies, and tenure and promotion cases.

I was president of the Canadian Human-Computer Communications Society from 2002-2008 and a Fellow of the B.C. Advanced Systems Institute from 1992-2004.

#### **4. DELAYS IN RESEARCH ACTIVITY**

(none)

#### **5. CONTRIBUTIONS TO THE TRAINING OF HIGHLY QUALIFIED PERSONNEL (HQP)**

I have been heavily involved in training HQP. I have supervised students at all levels who now work in industry or academia. For the past 30 years my students have been involved in projects funded under NSERC's Strategic Grant program. Many students subsequently took jobs with partners on those projects, a direct result of the training received under my supervision.

I have supervised three postdoctoral fellows (two had NSERC PDFs). Five former PhD students held NSERC Postdoctoral Fellowships. One former master's student was awarded an NSERC IRDF. Four PhD students took faculty positions, graduating eight "grandchild" PhDs; three hold research faculty appointments in Canada supervising graduate students.

My students learn both quantitative and qualitative research methods. My graduate students all take a graduate-level course in experimental design and statistical analysis (or the equivalent). Many serve as student volunteers at major international conferences, exposing them to aspects of research beyond what they experience in graduate school.

Trainees are involved in all aspects of my research program. Undergraduate students are engaged through NSERC USRA internships, course projects, and directed studies courses. They work embedded in my research lab on Honours theses or on projects for a fourth-year course in Cognitive Systems. Undergraduates are paired with graduate student mentors to provide a richer experience for the undergraduates and critical leadership skills for the graduate students.

Similar mentoring exists between PhD and master's students and postdoctoral fellows. Inclusion of postdocs in my research team has had a very positive impact on my productivity. I partially support postdocs co-supervised with other researchers. Postdoc are now part of the normal academic career path for computer scientists. I have had three postdocs in the past six years. Each played a significant role supervising students. One now leads a user experience group for a major bank, one holds a faculty position in Canada and the other will hold one effective January 1, 2011.



**SEND ONE  
ORIGINAL ONLY  
DO NOT  
PHOTOCOPY**

**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 2010/10/24
Family name <b>Booth</b>	Given name <b>Kellogg</b>	Initial(s) of all given names <b>KS</b>	Personal identification no. (PIN) <b>10455</b>
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  <b>2366 Main Mall Room X521 Vancouver BC V6T 1Z4 CANADA</b>			If address is temporary, indicate:  Starting date  Leaving date
Telephone number <b>1 (604) 822-8193</b>	Facsimile number <b>(604) 822-5485</b>	E-mail address <b>ksbooth@cs.ubc.ca</b>	
Telephone number (alternate) <b>1 (604) 908-8222</b>	Give an alternate telephone number only if you can be reached at that number during business hours.		Gender (completion optional) <input checked="" type="checkbox"/> Male <input type="checkbox"/> Female
<b>LANGUAGE CAPABILITY</b>			
<b>English</b>	Read <input checked="" type="checkbox"/>	Write <input checked="" type="checkbox"/>	Speak <input checked="" type="checkbox"/>
<b>French</b>	Read <input type="checkbox"/>	Write <input type="checkbox"/>	Speak <input type="checkbox"/>
I wish to receive my correspondence:		in English <input checked="" type="checkbox"/>	in French <input type="checkbox"/>
<b>AREA(S) OF EXPERTISE</b>			
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).  <b>animation, computer graphics, collaboration, data structures, electronic games, haptics, human-computer interaction, multimedia, user interfaces, visualization</b>			Research subject code(s)  Primary <b>2716</b>  Secondary <b>1605</b>