

# The 2016 Visualization Career Award

John Dill

The 2016 Visualization Career Award goes to John Dill in recognition of major industrial and academic research advances spanning CAE/CAD, HCI, and data visualization as well as organizational leadership that helped develop the field of visual analytics.

## BIOGRAPHY

John Dill is a Professor Emeritus in the School of Interactive Arts and Technology and in the School of Engineering Science at Simon Fraser University in Vancouver, BC. He received a B.A.Sc. (1962) in Engineering Physics from UBC, a MS (1965) in Biomathematics from North Carolina State University and a Ph.D. (1970) in Engineering Science from the California Institute of Technology. He discovered computer graphics working with the LINC computer—perhaps the world’s first true personal computer—at NC State, working on the mechanics of breathing, and went on to develop graphics software for the IBM 2250 to help study the neurophysiology of insect vision at Caltech for his PhD.

Professor Dill’s early research career was at the General Motors Research Laboratories, where he developed computer graphics approaches for computer-aided design, business analytics and human-computer interaction. One example was showing how to visualize the aesthetics of shape using surface curvature.

Subsequent to GMR he moved to Cornell, where, with Don Greenberg, he established the College of Engineering’s Computer Aided Design Instructional Facility. He later returned to Vancouver to become a manager at MPR Teltech Ltd. Finding management wasn’t as rewarding as he’d hoped, Dill returned to academia, joining Simon Fraser University’s School of Engineering Science where he focussed on information visualization and HCI.

Dill’s industrial experience, contacts and background helped him establish and lead several successful joint industry-academia research efforts. The first was a project with colleagues at MPR and SFU to improve user interfaces for managing large complex real-time systems such as telecommunications networks. One of the results was a detail-in-context method to visualize large hierarchical networks, called Continuous Zoom. With colleagues Brian Fisher, Chris Jones, and Gerald Collaud and several students, it was further developed into a system for organizing information from the Web and became the basis for a start-up.

Dill later took advantage of an invitation from the Pacific Northwest National Labs’ Jim Thomas, an ex-GMR colleague, to participate in the US National Visual Analytics Center Research Agenda panel that founded visual analytics. With Thomas’ encouragement and help, he worked with colleagues Fisher, Rensink, and Pennant to introduce visual analytics to Canada. Again building on long-term industrial relationships, Dill and colleagues obtained a grant from The Boeing Company to develop visual analytics in Canada, and



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to study applications of VA to aerospace. The work, performed with Boeing’s Dave Kasik, resulted in several new VA-related research projects as well as establishment of a joint SFU-UBC Visual Analytics Institute in Vancouver. Collaborators included Brian Fisher, Ron Rensink, Fred Popowich, Chris Shaw, Rob Woodbury, and Dave Darvill. One project, CZSaw, generated several publications and received VAST Contest Awards. The Institute, VIVA, has since developed several industry-oriented VA courses, established a national center, and an industrial consortium, to further Canadian visual analytics adoption.

Professor Dill has a long history of service to organizations and conferences in CAD, graphics and visualization. He is a member of the IEEE Computer Society, a former member of ACM and ACM SIGGRAPH and has served on many program committees (ACM SIGGRAPH, IEEE InfoVis, IEEE VAST, ACM UIST, and Graphics Interface, among others). He was Papers Chair for ACM SIGGRAPH 88, ACM SIGGRAPH 95 Exhibits Chair, Program Co-chair for IEEE InfoVis in 1997 and 1998, General Symposium Chair for IEEE InfoVis 2002, Co-chair of IEEE VAST 2007 and has served on the Steering Committees for both IEEE InfoVis and IEEE VAST. He served for many years on the Editorial Board of IEEE *Computer Graphics and Applications*, including four years as Editor-in-Chief, and is currently on the Board’s Advisory Committee.

Most importantly, much of Professor Dill’s success in—and enjoyment from—these fields has come from being able to work with outstanding colleagues and students, and to be able to work on joint university-industry projects where new problems generate interesting research that has an impact.

## AWARD INFORMATION

The IEEE VGTC Visualization Career Award was established in 2004. It is given every year to recognize an individual for a seminal technical achievement in visualization. VGTC members may nominate individuals for the Visualization Career Award by contacting the awards chair, Larry Rosenblum, at [vgtc-vis-awards@vgtc.org](mailto:vgtc-vis-awards@vgtc.org).