VR Experts around the World

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Thomas A. DeFanti, PhD, at the University of California, San Diego, is a research scientist at the California Institute for Telecommunications and Information Technology (Calit2). At the University of Illinois at Chicago, DeFanti is director of the Electronic Visualization Laboratory (EVL), a distinguished professor and a distinguished professor emeritus in the department of Computer Science, and the director of the Software Technologies Research Center. Currently, he is principal investigator of the NSF International Research Network Connections Program TransLight/StarLight award to UIC that provides a persistent 10 Gigabit networking infrastructure between the USA and Europe, and he is co-principal investigator of the NSF OptIPuter cooperative agreement with UCSD (Larry Smarr being the principal investigator).

DeFanti is an internationally recognized expert in computer graphics since the early 1970s. DeFanti has amassed a number of credits, including: use of EVL hardware and software for the computer animation produced for the 1977 “Star Wars” movie; contributor and co-editor of the 1987 National Science Foundation-sponsored report “Visualization in Scientific Computing;” recipient of the 1988 ACM Outstanding Contribution Award; appointed an ACM Fellow in 1994; and appointed one of several USA technical advisors to the G7 GIBN activity in 1995. He also shares recognition along with EVL director Daniel J. Sandin for conceiving the CAVE virtual reality theater in 1991.

Striving for a more than a decade to connect high-resolution visualization and virtual reality devices over long distances, DeFanti has collaborated with Maxine Brown to lead state, national and international teams to build the most advanced production-quality networks available to scientists, with major NSF funding. He is a founding member of GLIF, the Global Lambda Integrated Facility, a global group that manages international switched wavelength networks for research and education. In the USA, DeFanti established the 10 Gigabit Ethernet CAVEwave research network between EVL/StarLight, Seattle/Pacific Northwest GigaPop, and UCSD/Calit2 for OptIPuter and other national/international research uses, which is a model for future high-end science and engineering collaboration infrastructure.

DeFanti has also been active in the ACM SIGGRAPH organization and in the ACM/IEEE Supercomputing (SC) conferences. Current and past activities include: secretary of SIGGRAPH (1977-1981); co-chair of the SIGGRAPH 79 conference; chair of the 11,000-member SIGGRAPH organization (1981-1985); co-chair of the 1998, 2000, 2002, and 2005 iGrid conferences, and continuing editor of the “SIGGRAPH Video Review” video publication, which he founded in 1979.

RECENT SELECTED PUBLICATIONS

[1] J. C. Hart, G. W. Lescinsky, D. J. Sandin, T. A. DeFanti and L. H. Ka uffman. Scientific and Artistic Investigation of Multi-Dimensional Fractals on the AT&T Pixel Machine, The Visual Computer, May 1993.

[2] T. A. DeFanti, D. J. Sandin and C. Cruz-Neira. A ’Room’ with a ’V iew’, IEEE Spectrum, pp. 30-33, October 1993.

[3] C. Cruz-Neira, D. J. Sandin and T. A. DeFanti. Surround-Screen Proje ction-Based Virtual Reality: The Design and Implementation of the CAVE, Computer Graphics (Proceedings of SIGGRAH '93), ACM SIGGRAPH, pp. 135-142, August 1993.

[4] M. Ghazisaedy, D. Adamczyk, D. J. Sandin, R. V. Kenyon and T. A. De Fanti. Ultrasonic Calibration of a Magnetic Tracker in a Virtual Reality Space, Proceedings of the IEEE Virtual Reality Annual lInternational Symposium (VRAIS 95), Research Triangle Park, NC,March 1995.