

The Road Ahead: It Doesn't Get Any Easier

Dr. André M. van Tilborg
Deputy Under Secretary of Defense (Science & Technology)
Rosslyn, VA 22209
andre.vantilborg@osd.mil

The accomplishments of the real-time systems research community over the past 25 years have been substantial. Starting from a diffuse base of ideas from computer science, software engineering, operations research, queuing theory and other related disciplines, the real-time systems community established its distinct identity as a mainline research field able to achieve big impacts in real-world systems. Whether in networks and telecommunications, vehicle management systems, industrial process control, avionics and spacecraft, or many other applications, the real-time computing research community devised concrete techniques and technologies to ensure predictable, safe, and reliable operation of complex automated systems constrained by deadlines. But the story of the real-time computing research community does not end with these successes. The time-driven systems envisioned for the future present new challenges not even imagined at the first RTSS event a generation ago. At this Symposium, we have an opportunity to reminisce proudly about the accomplishments of the past quarter century, and to draw a bead on the challenges of the future.

Bio

Dr. van Tilborg is Director of the Information Systems Directorate in the Office of the Deputy Under Secretary of Defense (Science and Technology). He has oversight responsibility for the information technology research programs of the military Services and Agencies, including DARPA.

Prior to taking this position in August, 2002, Dr. van Tilborg served as Director of the Mathematical, Computer, and Information Sciences and Technology Division at the Office of Naval Research since 1994. From August, 2000, until his departure from ONR, Dr. van Tilborg simultaneously served as program manager and S&T lead for ONR's Knowledge Superiority and Assurance Future Naval Capability.

Dr. van Tilborg joined ONR in 1987 as Program Officer for the Computer Systems Research Program and was selected as SES Director of the Computer Science Division in 1989. From 1984-1986, Dr. van Tilborg was employed as a research faculty member in the Computer Science Department at Carnegie Mellon University. In addition to serving as project leader for the Archons Project, his specialized areas of research included decentralized resource management of distributed computing systems and networks, and real-time embedded computing systems.

Previously, he was employed as Principal Computer Systems Scientist at Honeywell Systems and Research Center in 1983-1984, where he was program manager of the Secure Ada Target trusted computer project.

Prior to working at Honeywell, Dr. van Tilborg was Principal Computer Scientist at Cornell Aeronautical Laboratory, where he served as Head of Distributed Computing Division.

Dr. van Tilborg holds a Ph.D. in computer science from State University of New York. He is author of approximately 30 open literature refereed technical publications and editor of two books on real-time computing systems. He has also served as conference chair and program chair for numerous international symposia, conferences, and workshops, particularly in the distributed and real-time computing systems technical areas.