Software Technology in the 21st Century: A Technology Forecast

Joseph P. Cavano
Rome Laboratory

Computing in the 21st Century will be driven by “Computational Plenty”—huge amounts of cheap, fast, reliable, high capacity information processing, storage, and communication. What impact will such advances have on military and commercial systems? What software capability will be needed to realize more advanced systems?

This “Software Technology Forecast Panel” will discuss the following issues from a software perspective:

1. Identify Information Technology areas such as “information fusion” which will cause explosive change in the future capabilities of information processing systems.

2. Anticipate technology directions in the computer industry and associated software technology capabilities—i.e., identify current trends in software technology and relate them to emerging trends such as multiple personal computing devices connected across wireless, mobile networks.

3. Compare DOD needs for software technology to those in the commercial sector and identify opportunities for effective technology transfer (including both “spin-off” and “spin-on”).

4. Identify technology barriers that must be overcome (e.g., how to intelligently manage unimaginable quantities of information) and propose promising research opportunities for surmounting these barriers.

5. Suggest the kinds of effects and consequences which will be felt by people as a result of the advances in computing technology (in communication, education, etc.)

The scenarios and ideas presented by the panelists will provide a reasonable starting point for audience discussion and solicitation of alternative views.

Panel Chair
Joseph P. Cavano
Rome Laboratory/C3CB
525 Brooks Road
Griffiss AFB, NY 13441
cavanoj@venus.se.rl.af.mil

Panelists
Carl Murphy
Accord Solutions
3533 Albatross Street
San Diego, CA 92103
“Carl G. Murphy”
<75144.2502@compuserve.com>

Kimberly A. Gibson
Motorola
Government & Space Tech Group
8201 E. Mc Dowell Road
Scottsdale, AZ 85257
(602) 441-5862
Kim_Gibson-P26298@email.mot.com

Jeffrey Mohr
Information Technology Solutions, Inc.
11600 Sunrise Valley Drive
Suite 832
Reston, VA 22091
mohr_j@access.digex.net

J.C. Browne
Dept of Computer Science
Taylor Hall
University of Texas
Austin, TX 78746
browne@cs.utexas.edu