ProSim 2005

Keynote Speaker: David M. Weiss

Title: Open Market Software Development

Abstract:
Two critical issues in a software development organization are how work is assigned to developers and how developers are compensated. Although these may sound like organizational issues, they are closely linked to technical issues, especially architectural issues. A development process such as software product line engineering, which often focuses on a common architecture for a product line, provides an opportunity to change the usual ways that work is assigned and developers are compensated. Open market software development is a proposal for making such a change, allowing developers more freedom to choose their work assignments and compensating them based on the value of their work.

Bio:
David M. Weiss received the B.S. degree in Mathematics in 1964 from Union College, and the M.S. in Computer Science in 1974 and the Ph.D. in Computer Science in 1981 from the University of Maryland. He is currently the head of the Software Technology Research Department at Avaya Laboratories, and is looking into the problem of how to improve the effectiveness of software development in general and of Avaya's software development processes in particular. In this capacity he heads the Avaya Resource Center for Software Technology.

Previously he was the Director of the Software Production Research Department at Lucent Technologies Bell Laboratories, which conducted research on how to improve the effectiveness of software development. Before joining Bell Labs, he was Director of the Reuse and Measurement Department of the Software Productivity Consortium (SPC). Prior to joining SPC Dr. Weiss spent a year at the Office of Technology Assessment, where he was co-author of a technology assessment of the Strategic Defense Initiative. During the 1985-1986 academic year he was a visiting scholar at The Wang Institute and for many years was a researcher at the Computer Science and Systems Branch of the Naval Research Laboratory (NRL), in Washington, D.C. He has worked as a programmer and as a mathematician. He is also a senior member of the IEEE and associate editor-in-chief of IEEE Transactions on Software Engineering.

Dr. Weiss's principal research interests are in the area of software engineering, particularly in software development processes and methodologies, software design, and software measurement. He is best known for his invention of the goal-question-metric approach to software measurement, his work on the modular structure of software systems, and his work in software product-line engineering as a co-inventor of the Synthesis process, and its successor the FAST process. He is co-author and co-editor of two books: Software Product Line Engineering and Software Fundamentals: Collected Papers of David L. Parnas.