

Systematic Documentation of Requirements

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Abstract

When writing a requirements document, it is almost impossible to know when you are done. If one works with a list of assertions (whether formal or informal) checking for completeness and consistency is almost impossible. This tutorial explains how an application of the Four Variable Model and Tabular Notation allows one to produce documents that are demonstrably complete and consistent.

About the Speaker

David Lorge Parnas is the Director of the Software Engineering Programme at McMaster University, Canada. He has been Professor at the University of Victoria, the Technische Hochschule Darmstadt, the University of North Carolina at Chapel Hill, Carnegie Mellon University and the University of Maryland. He has also held non-academic positions advising Philips Computer Industry (Apeldoorn), the United States Naval Research Laboratory in Washington, D.C. and the IBM Federal Systems Division. At NRL, he instigated the Software Cost Reduction (A-7) Project, which develops and applies software technology to aircraft weapon systems. He has advised the Atomic Energy Control Board of Canada on the use of safety-critical real-time software at the Darlington Nuclear Generation Station.

The author of more than 200 papers and reports, Prof. Parnas is interested in most aspects of computer system design. In his teaching, as well as in his research, Dr. Parnas seeks to find a "middle road" between theory and practice, emphasising theory that can be applied to improve the quality of our products.

Professor Parnas received his B.S., M.S. and Ph.D. in Electrical Engineering - Systems and Communications Sciences from Carnegie Mellon University, and honorary doctorates from the ETH in Zurich and the Catholic University of Louvain in Belgium. Dr. Parnas won an ACM "Best Paper" Award in 1979, and two "Most Influential Paper" awards from the International Conference on Software Engineering. He is the 1998 winner of ACM SIGSOFT's "Outstanding Research Award". Dr. Parnas is a Fellow of the Royal Society of Canada and a Fellow of the Association for Computing Machinery (ACM). He is licensed as a Professional Engineer in the Province of Ontario.