Invited Talk on

Managing Sustainable Software Systems

By

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Abstract of the Talk

Software intensive systems in the industrial control domain are typically large, complex and long-lived and are developed in geographically distributed organizations. These systems are evolved and maintained for more than 15 years and may be installed at customers' cites for as long as 30 years. It is a challenge to sustain an efficient and profitable business, capitalizing on the investments made in the software, since not only the software architecture itself changes and erode during this time. Business contexts, organizations, software technologies, and processes, change much more frequent than the software architecture does, and we believe that all these dimensions must harmonize in order to have an efficient software product development. Consequently, we need to continuously manage and nurse the architecture.

This talk defines the meaning of sustainable software systems, what their characteristics are, factors that are important for achieving software system sustainability, and the challenges we are facing in industry today.

Profile of the Speaker:

Dr. Anders Wall is a Principal Scientist at ABB Corporate Research. He received his M.sc in Computer Science from Uppsala University in 1994, his Ph.Lic from Uppsala University in September 2000, and his Ph.D. from Mälardalen University in September 2003.

Anders has many years of industrial experience from software development of industrial control systems.

At ABB Anders has been leading several software architecture improvement initiatives for different large and long-lived software intensive control systems that typically is developed and maintained in complex, distributed organizational settings. He is also involved in ABB's process improvement initiative which is based on CMMI.

Anders is an associated researcher at Mälardalen University where he does research on software development in complex organizations and is supervising several Ph.D. students. His main research interest is development of sustainable software intensive products, including software architecture in general and software architecture for real-time systems in particular, product development processes, organization, and business aspects. Other areas where Anders has been active academically include component based software engineering for real-time systems and formal methods for real-time systems.

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