Panel on Technical Debt: From Metaphor to Theory and Practice

Technical debt is a metaphor that software developers and managers increasingly use to communicate key tradeoffs related to release and quality issues. Clearly technical debt is an issue at the heart of the software maintenance research community, although topics may appear under different names. Technical debt research, in fact, benefits from decades of ongoing work in maintenance-related areas, such as: software aging and decay, software metrics, prediction and estimation, release planning, and architecture. Industry's increasing interest in concrete practices, and the emergence of organization-specific practices, can be seen as indications that industry needs clearly defined approaches for managing technical debt, to deal with issues such as evolution, strategic resource management, and bridging the stakeholder communication gap. This panel will bring together researchers and practitioners to discuss and debate strategies for managing debt and how to focus research on critical industry problems.

Panel Organizers

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CSM Pioneers Panel

ICSME has only twice before repeated city locations, Monterey in 1983 and 1996 on the Pacific coast, and Montreal in 1993 and 2002 in Canada. It is particularly fitting then that we return to both the Pacific coast and Canada for the 30th event, in Victoria, exactly 20 years since it was last held there in 1994.

Much has changed since the early days of the conference to become a cornerstone of what is now a weeklong series of co-located events. The name itself has been a case of change. The conference began in 1983 as the Software Maintenance Workshop. For the second event, in 1985, it became known as the Conference on Software Maintenance (CSM). In 1994, it became ICSM (prepending an “I” for “International”) and in 2014, it became ICSME (appending an “E” for “Evolution”). Indeed, the conference always had a new name by the time it revisited a city. Yet, what remains constant is that the event is the premier international conference for research and practice in software maintenance and evolution, providing the supportive and stimulating conditions to advance the discipline.

But, how did all this start? It is too easy to lose sight of the early pioneers and organizers of the conference, who played instrumental roles in the formative decade of the field. To name a few, Norm Schneidewind saw the crucial role of software maintenance in providing quality software, and chaired the first event, which had over 260 attendees from diverse institutions around the world. Robert Arnold also helped to organize the conference, and his 1993 compendium of landmark software reengineering papers provided a foundation and tutorial for the discipline. Nicholas Zvegintzov, of Software Maintenance News, Inc., provided a series of tutorials and technology guides for software change and maintenance. All three reported on the first event in the November 1984 issue of the Communications of ACM. Ned Chapin published several reports on early CSM conferences. Many of the challenges recognized then still endure even today.

A few pioneers of the first decade still contribute to and attend the conference regularly. Many are now retired or have other interests. For the 30th conference, it is a particularly apt time to recognize their contributions, take a retrospective look at where we have been, and envision the road ahead to address future software challenges.

This moderated panel session has several software maintenance and evolution pioneers who were able to attend ICSME 2014. Two of them are also from the very first steering committee, elected in 1991. The panelists include: Ned Chapin, Malcolm Munro, Vaclav Rajlich, Lee White, and Nicholas Zvegintzov; Robert Arnold, Roger Martin, Victor Basili and Dieter Rombach may also participate by conference call. They will present their view of the software maintenance and evolution field from their historical perspective.

Panel Organizers

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