Good Things Come in Small Packages

"Good things come in small packages." Most people have probably heard this saying from the time they were kids. Small things just don't seem to get the respect they deserve – including small projects. Most of the articles in this month's CrossTalk provide insightful advice for adapting large project processes for small projects. But what about the other side of the story? Small projects have much to offer. Maybe larger projects should consider what they can adapt from small projects. Three areas that large projects may benefit from the lessons learned by smaller projects are Agile techniques, bottom-up estimation, and communication improvements.

There have been efforts to scale Agile practices to large projects. One such effort involves breaking large projects into smaller projects. This might work for the small pieces, but what about when the pieces need to be brought back together? A consistent approach is still needed to pull them together. However, portions of Agile programming can still work on large projects. Pair programming is one such idea: It may seem reasonable that pairing software developers has been shown to decrease errors, and contrary to conventional logic, pairing up programmers also has been shown to increase productivity. The cyclical development of agile programming also scales to large projects and is discussed in depth with the variations of the Spiral Model which is now espoused in the software community. Barry Boehm and his co-authors discuss this thoroughly in back issues of CrossTalk.

Bottom-up software estimation is another technique used in many small projects that may apply to large projects. While it usually is not practical to use bottom-up estimates at the beginning of a large project, bottom-up software estimation is certainly applicable as a sanity check of the estimates as the project progresses, as work is divided into smaller pieces, and as it is assigned to smaller groups and individuals.

And, of course, there is *communication*. A 2002 CrossTalk article discusses new engineers in large companies sitting in their cubicles and accomplishing little because they don't want to make a bother of themselves by asking a lot of questions. Communication tends to be easier on small projects, and someone just sitting will certainly be noticed more readily. Providing tools for communication such as white boards and open space can be implemented in large companies, and the resulting camaraderie has also been shown to improve productivity.

We start this month's issue with Fred Smullin's story of one small project finding its way in the big Department of Defense world in *Navigating The Enterprise Forest*. In *Development Practices for Small Software Applications*, Capers Jones shares his insights, comparing the benefits and drawbacks of the Capability Maturity Model Integration (CMMI) with Agile development for small projects. We next provide a series of articles with expertise on adapting large processes for small projects including *Is CMMI Useful and Usable in Small Settings? One Example* by Sandra Cepeda, Suzanne Garcia, and Jacquelyn Langhout; *Why Do I Need All That Process? I'm Only A Small Project* by Mark Brodnik, Robyn Plouse, and Terry Leip; *Small Project Survival Among the CMMI Level 5 Big Processes* by Alan C. Jost; and *Field Guide to Provide Step-by-Step Examples for Improving Processes in Small Settings* by Caroline Graettinger, Suzanne Garcia, Christian Carmody, M. Lynn Penn, and William Peterson.

On a side note, CrossTalk will be celebrating the 20th anniversary of our first issue in August. We would like to celebrate this milestone with stories of how CrossTalk has helped our readers save time and money, improve processes, salvage projects, and make your jobs easier. We received several success stories with our survey in 2004 – those responses resulted in the continuation of this journal. Your responses now will enable us to thank our co-sponsors for their continued support and strengthen our position as we seek additional co-sponsors.

Large projects tend to fail more frequently than small projects for a variety of reasons. While small projects are figuring out how to benefit from the practices of large projects, large projects can also learn lessons from small projects. Meanwhile, CrossTalk will continue to offer strategies for both.

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