

The Surgical Team

The ‘surgical team’ strategy for software development is to put the available manpower to use on other important tasks rather than have everyone be coders. The rationale behind this is that a small number of good programmers is more desirable than a large number of mediocre programmers. By adding more manpower but not adding more coders, tasks such as editing, testing, etc. can be handled by other people leaving the programmers free to focus on their job: coding.

This strategy was echoed in an essay by Joel Spolsky of Fog Creek Software on his blog, www.joelonsoftware.com. Entitled “The Development Abstraction Layer,” Spolsky asserts that “any successful software company is going to consist of a thin layer of developers, creating software, spread across the top of a big abstract administrative organization.” The difficult part is that what Brooks and Spolsky are advocating is a radical departure from traditional management techniques. Instead of taking a top-down approach with the experienced people occupying management positions telling the less experienced people what to code, the best coders you have do the coding and the rest of the staff, including management, plays a support role.

In Spolsky’s words, “Management’s primary responsibility [is] to create the illusion that a software company can be run by writing code, because that’s what programmers do. And while it would be great to have programmers who are also great at sales, graphic design, system administration, and cooking, it’s unrealistic.” These other tasks are more up-to-date versions of the tasks that the various members of Mills’s surgical team are responsible for. While we may no longer need all of the specific

positions that Brooks describe, we do need systems administrators, graphic designers, testers, and much more. Having people who are responsible for the things they are best at (including programmers who are responsible for just that — programming) is the way to successfully, quickly, and efficiently develop software. Spolsky's essay does an excellent job of bringing the underlying ideas of Mill's Proposal up-to-date.