Attacking Information Overload in Software Development

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Abstract

The productivity of software developers is under constant attack due to a continual inundation of information: source code is easier and easier to traverse and to find, email inboxes are stuffed to capacity, RSS feeds and tweets provide a continual stream of technology updates, and so on. To enable software developers to work more effectively, tools are often introduced that provide even more information. The effect of more and more tools producing more and more information is placing developers into overload. To combat this overload, we have been building approaches rooted in structure and inspired by human memory models. As an example, the Mylyn project packages and makes available the structure that emerges from how a programmer works in an episodic-memory inspired interface. Programmers working with Mylyn see only the information they need for a task and can recall past task information with a simple click. We have shown in a field study that Mylyn makes programmers more productive; the half a million programmers now using Mylyn seem to agree. In this talk, I will describe the overload faced by programmers today and discuss several approaches we have developed to attack the problem, some of which may also pertain beyond the domain of software development.