Abstract: In some sense, software is the lifeblood of most modern complex systems. Software can fail, but worse yet, software can be intentionally made to fail by attackers. Instead of defending our systems by isolating them from the network (an impossible task), we must build security in from the beginning. Both social networking and mobile device security provide important security lessons that can inform a reasoned approach. Modern malicious code, including the Zeus Trojan, Stuxnet, and other persistent web threats, is as sophisticated as it is insidious. And future trends in attacks are even more alarming, leveraging rootkits, multi-core attacks, and hard-to-diagnose timing issues. Our sole recourse is software security. The good news is that we actually know what to do to build security in.