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# The End of the PC

I find solace in the knowledge that technological innovations continue to develop at ever-increasing speeds in a realm where increasing complexity and intricacy also come along as a certainty. This gives me faith that, technologically, we are only at the mere beginning of what we will achieve in the future. Processing speed has been exponentially increasing for decades, while the space and power needed to harness that speed has been decreasing dramatically. It is no wonder, then, that innovation would eventually lead us to technological innovations such as the mobile world we live in today.

Whether or not we are living in a “post-PC” world is often disputed, but there is little question that our lives and computing needs are becoming increasingly mobile. Our computing needs have been trending towards the cloud, with computing increasingly being migrated server side, and raw computing power becoming less and less important. What, then, is the fate of the personal computer as we understand it? To answer this question, we turn to Dean Klein’s analysis of this shifting trend towards mobile and cloud computing solutions in *The PC is Dead – Long Live the PC: Making Computing More Personal*. Here we see that it may not be the end of the personal computer, but perhaps a re-envisioning of it. Perhaps the “personal computer” may need to evolve with technical innovation; insofar as that today’s mobile solutions are much more of a personal computing device than the traditional PC.

With technology becoming increasingly complex, compounded with new platforms and environments that are on the forefront of technology, there has been an increasingly large call to evaluate a strategic shift to more fixed-price contracting to reduce acquisition costs and program risks for the DoD. Don O’Neill champions this view, advocating large-scale fixed-priced contracts for software-intensive system development in *Software Doctrine for Fixed-Price Contracting*. Mr. O’Neill tackles the common concerns of fixed-price contracting with viable solutions as well as advocates his vision of

affordability and innovation through a doctrine of tenets.

With an increase in hardware complexity also brings the caveat of software complexity as well. To move forward with mission-critical software and still maintain the exacting quality and security requirements needed for aerospace and defense projects, we see an increasing reliance on the realm of testing and software assurance. In *Uncovering Weaknesses in Code With Cyclomatic Path Analysis*, the authors argue for a tighter integration of development and testing as a way to reduce security vulnerabilities, with a fascinating analysis between code coverage software testing methodologies for detecting vulnerabilities early in development.

With increasing intricacy of code necessitating complex sequence of events tests, the authors of *Efficient Methods for Interoperability Testing Using Event Sequences* provide a framework for using combinatorial methods, such as sequence covering arrays, with significantly fewer tests than previous procedures. The authors in *Building Confidence in the Quality and Reliability of Critical Software* tackle the issue of the imperative quality standards in aerospace and defense projects by evaluating the formal methodologies in software verification and testing to meet the high quality standards. Finally, we conclude the issue with Dale Childs and Paul Kimmerly’s enlightening comments on process improvement by drawing connections to famous quotes in *Process Performance, Words of Wisdom*.

I think you will agree this issue’s collection of articles provides helpful insight into current computing trends and the future of the PC.

**Justin T. Hill**

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