

Greetings, dear friends, one last time.

Michael D. O'Dell, Editor-in-Chief

Issue 4 of Volume 7 contains three papers for your consideration.

Our first paper, by Oliver Laumann and Carsten Bormann, describes “Elk,” a kit for building extension languages. The goal is to provide a reusable language interpreter which can be used to extend and proceduralize software which would probably not otherwise have such interface power. While there are other systems with a similar mission, Tcl probably being the best-known, designing such systems presents a number of interesting problems which must be solved and Elk solves some of them rather originally. This makes for quite good reading in the comparative anatomy of designs.

“Secure Timeliness” by Raphael Yahalom is a study in secure timekeeping. Some modern security protocols like Kerberos rely on “secure timeliness” provided by uncompromised clocks across a distributed system to guard against threats like replay attacks. This paper examines the implications of locally-untrustworthy timekeeping and how the protocols can be hardened to provide the required security themselves. Even if you aren't a Network Time Protocol “true-chimer” or a Kerberos security maven, I think you will find this fascinating reading.

Our last paper is “Reliable Real-Time Garbage Collection of C++” by Kelvin Nilsen. This paper combines two interesting, but usually antagonistic, ideas. The author first offers a dialect of C++ which provides reliable garbage collection and discusses the usually-ascribed positive effects on resulting C++ software. He then goes on to discuss applying garbage collection in real-time systems—something considered High Heresy in many real-time circles. The paper goes on to address the expected concerns regarding real-time performance impacts arising from garbage collection and how this system makes it possible to meet the demands of the real-time systems designers, while retaining for the C++ developers the considerable luxury of an automatic dynamic memory environment. The result is a very interesting system indeed.

As is our custom at the closing of a volume, we offer our thanks to the authors and readers who have made it all possible. As always, the sitting Editorial Board is on the page facing this “Greetings.” We are happy to welcome Judy Grass and Jim Waldo to it. But also as always, other readers not on the Editorial Board have graciously assisted us with the reading chores, and their names appear herewith, a modest token of our deep appreciation of their contributed energies: Matt Bishop, Keith Bostic, Frances Brazier, Kurt Horton, and Pete Wilson, as well as the readers listed in the two special issues this year.

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With the closing of volume 7, the cover is also closing on my tenure as your Editor-in-Chief. But being Editor for a few minutes longer, I have some thoughts and reflections to offer.

For its first seven volumes it has been my profound privilege to bring you *Computing Systems*. This Journal had its beginnings over eight years ago when Peter Salus planted a seed with the then-sitting USENIX Board of Directors, eventually convincing them that there was a need for a journal focusing on real “systems” work and offering authors quick turn-around for their contributions. I was approached to serve as the first Editor-in-Chief, and, with a bit of convincing, agreed to take the job.

Shaping a new publication is a fascinating task—from design and layout discussions to editorial policy and recruiting reviewers, you have the clay in your hands quite directly. No one should ever forget that the Journal is the product of many people with considerable and diverse talents; but in the beginning, someone must make the decisions that get the ball rolling, and being there to help make those decisions was a very special experience.

Several issues stand out in my mind, but none more so than “the music issue” (3.2), which was accompanied by a CD containing audio illustrations for the papers. In some ways, it achieved a height which we never really attempted again, having barely survived the first experience only with the aid of extreme luck coupled with the unbounded efforts of Peter Langston and the Journal production staff.

Speaking of issues, being the editor gives one a rather odd take on the finished product. I see the papers when they first come in the door, when they are being revised and reworked, and when they are accepted. They then disappear into the production pipeline and only much later emerge as the bound blue volumes which arrive in the mail. It is quite odd to pick up and read an issue—it provokes a strong and rather uncomfortable sense of *deja vu*. I find it hard to read through the final product for at least 6 months or so, until I can forget what the papers were about. Even then, I always find myself thinking “didn’t I read something like this somewhere before?” (This is the Editor’s eternal fear.)

Now it’s 7 volumes and 8 years later, and, time sure flies when you’re having fun. But now it’s been enough fun for one person, and I am moving on to other things. I am leaving the editorial stewardship in the very capable hands of Dave Presotto of AT&T Bell Labs, who will no doubt move in some new directions and bring new things to the party. Dave, my deepest personal thanks for coming aboard.

Now I must offer some acknowledgments. First, many thanks to my employers over the years, all of whom supported me in this effort. The Editorship requires both time and timeliness, and they have graciously afforded me both when it would

have been far more convenient to do otherwise. Many thanks to all of those companies, living and dead.

Without all the authors, we would have nothing, so I cannot pass without thanking them again for entrusting us with the fruits of their labors. Sending a manuscript off for journal review is an act of considerable courage.

A special thanks to all the general staff who have worked on the Journal over the years, at USENIX, the University of California Press, and at the MIT Press. And a special note of remembrance for Tom Strong, our first typesetter, whom we lost to cancer after volume 3, number 3.

Now I'm down to my Managing Editor, Peter Salus, who got me into this wonderful mess in the first place. Without Peter there would be no Journal, neither as conception nor as ongoing concern. He has been the backbone, the clearinghouse, the reminder system, the relentless nudge, the bookkeeper of loose ends, the stage mother, the worker of miracles—minor but occasionally major, the brutal critic and copy editor, and the unalloyed enthusiast and champion. Without him I wouldn't have made it to the first issue, much less the first volume, and the hand-off to Presotto would be unthinkable without his continuity.

Peter and I have, over zillions of phone calls and terabytes of e-mail, talked, dreamed, schemed, screamed, flamed, sweated, fretted, worried, and rejoiced. It is the longest sustained working relationship I've ever had, and I have enjoyed it immensely. Peter, my eternal thanks for talking me into this and then working to make it so continually rewarding.

And finally, my thanks to all of you who read the Journal. It is for you that we have done it; for without readers, there is no purpose. I appreciate the interest and support over the years and hope you keep reading. I deeply appreciate the opportunity I've been afforded to oversee the Journal and can only close by saying thank you all very, very much.