inside:

the bookworm

by Peter H. Salus

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Readers of this column probably know that I'm a devotee of history, which is great since the main items this month are two history books. Each has some shortcomings, but they are both excellent and help us understand just how we got here, with respect to both hardware and software.

Software

Martin Campbell-Kelly has been writing interesting historical work for quite a while. I recall his book on ICL occupied me while I was at a UKUUG about 15 years ago. His collaboration with Aspray, *Computer*, is an excellent survey. This new book on the software industry is really splendid. I can only fault it for what's not there.

Describing the history and development of software can make one feel like one of the blind men examining the elephant. Campbell-Kelly has chosen to look at the industry from the 1950s to 1995. What he chooses to represent in those 40 years is quite selective, too: FORTRAN and COBOL, but no ALGOL; C, but no C++; SHARE, but not DECUS or ADUS; SCO but not mtXinu. There is one line on Linux; nothing on any of the BSDs. Burroughs is there, but not Ferranti. The general "feel" is Anglocentric: SAP but no Chorus.

But that's the sort of thing I complain about. What I'd really like to see is a genuine history of software: one that includes languages and tools (like grep

or make or sort or . . .); one that includes GNU and BSD and Linux; Gnome; Opera; even the Open Software Foundation's Motif. News – Usenet – isn't "commercial," I guess. But Usenet and UUNET were really important, as were rn, ANews, BNews, and CNews.

This is a book about the software industry – economics and business. It's not a history of software. Campbell-Kelly limns a portion of the story and does it very, very well. I wish someone would try the whole thing.

Hardware

The first edition of Ceruzzi appeared five years ago. The new, second edition is emended and enlarged. The enlargement consists of an additional chapter covering the period 1995–2001. Even though Ceruzzi's emphasis is on hardware, he does a fine job where the Microsoft antitrust suit and Linux are concerned. There is a very clear (though brief) discussion of open source software (though Stallman and GNU are never mentioned).

One gets the impression that Ceruzzi, in the National Air and Space Museum in Washington, DC, is more urbane than Campbell-Kelly at the University of Warwick. Ceruzzi mentions the Ferranti Atlas and the Cromemco. He recognizes Zuse and work at the ETH in Zurich. He recognizes the importance of Wilkes and of Dijkstra (neither of whom appears in Campbell-Kelly).

There are things one might want described differently, but on the whole Ceruzzi's book is one anyone interested in computing can read with profit.

Buy them both. They're really worthwhile.

TCP/IP, Once More

Mansfield has produced a very handy, very useful book which is applicable to "Linux and Windows." I know nothing

about running TCP/IP on a Windows network, and a provident deity may render it unnecessary for me to acquire such knowledge. But I can reveal that the information concerning Linux is well-presented, and – as far as I can tell – correct. (This last is not as silly as it may seem; I try not to write about the books that just get it wrong.) This is not intended to replace the Comer or the Stevens sets, but I think it's more detailed than Craig Hunt's O'Reilly volume. The inside front covers contain a useful list of TCP and UDP port numbers; the rear covers have a table of decimal, binary, and hex numbers. As I'll be 1000001 by the time you read this, you may need it to keep score.

Third At-Bat

Garfinkel and Spafford hit a homer over a decade ago with *Practical Unix Security*. They hit another five years later with *Practical Unix and Internet Security* (1996). The cast now includes Alan Schwartz, and the third edition, actually marginally shorter than its predecessor, is another base-clearer. The book really covers Solaris, MacOS X, Linux, and FreeBSD, and it should sit on your shelf together with Bishop and Cheswick, Bellovin and Rubin. Fine job!

Another Return

Understanding and Deploying LDAP Directory Services was really useful when it appeared five years ago. The new edition has put on nearly a hundred pages, but it's still the LDAP book to have. These guys know their stuff; just look at RFCs 1558, 1778, 1823, 1959, 1960, 2251, 2254, 2255, 2559, 2587, 2596, 2696, 2798, and 2849.

Twenty Years Ago in USENIX

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Toronto. A beautiful city; over 1200 attendees; an interesting meeting.

Tuesday evening, July 12, 1983

Neil Groundwater convened a meeting of the Software Tools User Group. The first speaker was Brian Kernighan, who delivered a personal view of the development of the tool concept and the tools from 1969 to the formation of STUG.

Wednesday, July 13

Mike Tilson thanked everyone for everything. Lou Katz announced that the next meeting would be in Washington, D.C. (to be dubbed "snowstorm #1") and the subsequent one in Salt Lake City (memorable for Stu Feldman's architecture keynote).

Mike Lesk then delivered the keynote: "Technology-Driven Software vs. Psychology of Users." Among the points made were:

- Less documentation is better.
- Terseness does not mean documentation need be cryptic.
- The UNIX manual used to be small; now manuals issue a master's degree in stty.

Once upon a time (before the 7th edition), you could carry the UNIX docs in your briefcase; today you can do it only because the docs are on CD.

Mike was followed by Larry Iseley of Western Electric (remember them?). It was divulged that UNIX licensing had been assigned to Western Electric; that the Technology Licensing Group had moved *in toto* to North Carolina; and that it was now headed by Otis Wilson. He gave the number of source licenses,

but he refused to say how many binary licenses there were. (Note: the PC had appeared; IBM had introduced the PC-AT. The XT would be released in 1984.)

A Few Other Papers

There were a few other papers: Holt, Mendel, & Perlgut of the CSRG talked about TUNIS, which was a UNIX-compatible kernel written in Euclid; Michel Gien talked about the Sol Operating System, which was implemented in Pascal and ended up as Chorus.

Thursday, July 14

Bob Kridle and Kirk McKusick delivered a paper on "Performance Effects of Disk Subsystem Choices for VAX Systems Running 4.2BSD UNIX." John Chambers and John Quarterman spoke on "UNIX System V and 4.1C BSD," followed by Mike O'Dell on "Berkeley UNIX after 4.2BSD."

Rob Pike delivered "UNIX Style, or cat -v Considered Harmful," and Dave Korn introduced "KSH – A Shell Programming Language."

It's really amazing to look back 20 years and reflect on the importance of much of this. But there was yet more.

Friday, July 15

Mike O'Dell chaired a session on UNIX mail. He gave a brief talk, too. But the other participant was Jim McKie, on "Where Is Europe?" – he hadn't moved from Amsterdam to New Jersey, yet.

Laura Breeden and Mike O'Brien talked about the (brand new) CSNET; Joe Yao spoke on "Dynamic Configuration" and Dan Klein gave a paper on "MIRAGE – An Assembler Generator and Relocatable Linker."

A really fine conference.