

An Early Retrospective

Dennis Ritchie

This is a rendering of a paper from the somewhat fabled Bell System Technical Journal, Volume 57, Number 6, Part 2, July-August 1978. It's no longer possible to get an original copy of this edition of the journal either from AT&T or from Lucent; a reprinted edition, *UNIX System: Readings and Applications*, Prentice-Hall, 1987 in two volumes (ISBN 0-13-938532-0 and 0-13-939845-7) is likewise out of print.

This paper is amusing today, if only for the fact that I was already writing retrospectives about Unix less than 10 years after Unix appeared. When the paper was published, our own group was using a PDP-11/70, and were well launched on the Interdata 8/32 work demonstrating system portability, but the version for the VAX machine, which would turn into the 32V distribution that in turn flowered into the BSD family, wasn't ready for print. The longer retrospective today would be very much longer.

It's also fun to remember for me because the original version was, as documented in a footnote, written for and presented to the Hawaii International Conference on System Sciences, Honolulu, 1977. This was the first far-away and exotic business trip I took--driving up to Yorktown Heights for the original Unix paper with Ken, plus a visit or so to Bell Labs at Indian Hill near Chicago don't count as exotic--and I was acutely aware at the time that a conference in Hawaii might look like a boondoggle, which of course it was.

The paper itself does contain a few notable tidbits; it's a nice snapshot, and is reasonably honest. The disk performance analysis is naive, but the paper is good in seeing that the lack of IPC mechanisms other than anonymous pipes (wonderful as they are) is a serious problem that caused endless proliferation of attempted solutions. Much of its advice for the future (whether through Unix's influence or otherwise) seems to have happened: hierarchical file systems, use of at least moderately portable languages. Some has not: "The greatest care should be taken to ensure that there is only one format for files." Then I was worried about card-images vs. text, now I am harried by MS Word documents that cannot be read by MS Word.

The paper is available in these forms:

- [Browsable](#)
- [PostScript](#)
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