

## 38-year-old code-writing tool released for general use

March 14 2018, by Robyn Mills

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One of the world's early computer software editors, developed by the University of Adelaide and still in use today, is being released by the University for free use by developers around the world.

Under open source licence, beneficial features of "Ludwig" as a software development tool that are not found in other text and code [editors](#) will be now open to all developers.

Ludwig, a "full screen" editor, was originally designed by Computer Science staff to enable software development on the University's first VAX (Virtual Address eXtension) interactive computers, bought in 1979 to replace the previous [computer](#) systems of punch cards, printed output, and batch processing.

In 1979, the University bought three Digital Equipment VAX-11/780 computers for both teaching and research use, the first commercially available 32-bit computers.

"At the time, these computers represented a major shift in computing power and teaching for the University," says Emeritus Professor Chris Barter, who led the Ludwig development team.

"Users could now interact directly with the computers using video terminals located around the campus, in student laboratories or a researcher's own office."

A core component of the new interactive computing was the ability to support editing of text – usually computer programs – directly on the computer system. At the time, most computer text editors were primitive, usually difficult to use "line editors", allowing access to a single line of text at a time, and requiring significant effort to master.

The "full screen" editors that were available provided a vastly more easy to use and productive environment, but were typically very resource hungry and only available on a few computer systems, which did not include the VAX computers.

Professor Barter and three programmers, Wayne Agutter, Bevin Brett and Kelvin Nicole, designed and constructed Ludwig v1.0, ready for the 1980 academic year. At the time, there was no equivalent in Australia.

"The ability to host 20 to 30 simultaneous users, all editing and developing programs, plus many more users running programs, on a machine boasting a scant 1 million instructions per second and four megabytes of memory, was world beating," says Professor Barter. "Ludwig was also easy to learn and use and had significant power – it was taken up by users throughout Australia and worldwide."

Over the years further developments took place including adapting Ludwig to later computer systems, including Unix, Linux and Microsoft Windows.

Ludwig is still in use today, with a small number of people who have developed Ludwig further under restricted licenses for their own private use.

To enable these developments to be consolidated, and made generally and freely available, the University has released Ludwig and its source code under the MIT Open Source License.

Open Source Industry Australia welcomes the release. Jack Burton, OSIA company secretary and director, says: "Open sourcing Ludwig will help attract a broader community of contributing developers and end users, as this historically significant software continues to evolve in the future."

Files will be made accessible on the [open source](#) repository [GitHub](#).

Provided by University of Adelaide

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