CSIRO Unix ports

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The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is an Australian Government agency.

1. Unison, SIRONIX

Siromath

Siromath Pty Ltd was founded in 1981 as a mathematics consulting company. Previously the CSIRO Division of Mathematics and Statistics (DMS) did some consulting to private industry. Dr Richard Tweedie resigned from DMS to become General Manager of Siromath. Siromath went into receivership in 1989.

In 1980, DMS were running a version of Six Edition Unix developed by the Universities of New South Wales and Sydney. The Australian UNIX Share Access Method (AUSAM).⁴

The 1982 DMS annual report describes SIRONIX as a distribution of System III.⁵ Chris Rowles was head of the Unix Group at Siromath.⁶ An overview of SIRONIX mentioned Siromath would be offering binary licenses.⁷ SIRONIX was initially available for PDP-11, VAX, and Unison machines.⁷

Siromath ported its version of Unix called SIRONIX to Unison. 8 SIRONIX for the Unison was based on Seventh Edition Unix and System III. 9

Siromath marketed and supported Xenix for the Apple Lisa and IBM PC XT computers. 10, 11

DMS had Motorola 68000 based Unity machines from Digital Electronics Pty Ltd that ran System III and 4.2BSD. 12 Seemingly rebadged Integrated Solutions machines. 13

Information Mechanics Incorporated

William Hollier (who had worked at the University of Melbourne Department of Computer Science) designed the Unison computer in 1981. ^{14, 8} Hollier's company was Information Mechanics Incorporated Pty Ltd (IMI). ⁸

Hollier says colleagues at the University of Melbourne ported Unix to the Unison. 15

According to Peter Thorne the Unison computer was developed by Jurij Semkiw, Robert Elz and others including Steven Lynch and Michael Flower. ¹⁶

L & L Australia

- L & L Australia Pty Ltd was founded by Corrie de Waard. ⁸ L & L was formed as a merger of a company that sold computerised petrol pumps and Kelvinator Australia, which at the time was a subsidiary of Email Ltd. ⁸ Kelvinator Australia became a subsidiary of Email Ltd on 24 January 1980. ¹⁷ L & L Australia was later renamed to Email Electronics Pty Ltd. ¹⁸
- L & L purchased Australian manufacturing rights to Unison. The Unison machines were made by L & L in Kilsyth, a suburb of Melbourne. They were 8 MHz Motorola 68000 based machines in Eurocard compatible cabinets. Unison D10 with 10 slots, and Unison D21 with 21 slots.

2. CSIRONET workstation, System V/68

CSIRONET

In 1967, the CSIRO Computing Research Section was renamed to the Division of Computing Research (DCR). The DCR maintained the CSIRO Computing Network (SIRONET, later CSIRONET). In January 1985 the DCR was split into multiple organisations. CSIRONET for the computing service, and the Division of Information Technology (DIT). CSIRONET was privatised in 1987 and became known as PAXUS ComNet. PAXUS ComNet closed in 2000. 23

It was decided to replace the PDP-11 CSIRONET nodes with a Motorola 68000 based design.²⁴ The initial Micronode machines were deployed on CSIRONET in mid-1983.²⁵ Micronodes used a 8 MHz Motorola 68000 with 256 kB of memory. There was a VERSAbus card cage for up to 6 cards. One of which was the CPU board.²⁶

There were plans to create an enhanced version of the Micronode hardware that could function as a Unix workstation.²⁵ The workstation project was announced in August 1983.²⁷ Siromath Pty Ltd was to be involved in developing Unix for the workstation hardware.²⁵ At the end of 1983 it was planned for the workstations to run 4.2BSD from Siromath.²⁸

Techway

Techway was founded in 1979 by Peter Jones.^{29, 30} Techway listed on the Australian Stock Exchange in 1993.³⁰ The company was sold to Intellect in 1997 who closed it.³¹

Techway sold an ELXSI 6400 computer to the Australian Department of Defence in 1984.³²

Office Automation

Office Automation was acquired by Techway Ltd in 1986. 33, 34, 29 It was renamed to Network Research. 35

Office Automation Pty Ltd of Canberra won a tender to build the Micronode.³⁶ It was jointly developed with DCR.³⁷ In 1987, CSIRONET and Techway Ltd created a joint venture called Network Automation Pty Ltd. Network Automation was to commercially market the Micronode hardware as the Ultranode.^{33, 38} Network Automation closed in 1993.³⁹

Neology

Fawnray Pty Ltd was founded in April 1980 by Greg Rose, John O'Brien and Allan More as an Australian distributor of Whitesmiths Ltd's Idris operating system. 40, 41, 42 In November 1984, Fawnray merged with Prance Computer Software Pty Ltd to become Fawnray Prance Ltd. In March 1985 the combined company changed its name to Neology Ltd. 41, 42 The company was declared insolvent in November 1985. 42

A port of Unix System V to the ELXSI was completed in December 1984.⁴² A port of Unix System V/68 to the proposed CSIRONET workstation was started.^{42, 43} System V Release 2.⁴⁴ Neology sold a computer known as Neat. An IBM PC-AT with a co-processor which ran System V Release 2.⁴⁵ The Neat computer was announced at Infotex Canberra in November 1985.⁴⁵

Whitesmiths Australia

Whitesmiths Australia Pty Ltd was founded in 1986 by John O'Brien. 46, 47 The company was later renamed to Whitesmiths Group Pty Ltd?

Softway

Softway was founded in January 1986 by Greg Rose and Chris Maltby. 40, 42 Techway had a 60% stake which was sold off in 1991. 48 Softway was renamed to Aurema Pty Ltd in 1999. 49 Aurema was sold to Citrix in 2007. 50

Softway completed the Unix port to the CSIRONET machine started at Neology.⁴²

References

- 1. David Thomson, *Speech at Siromath Launch* (February 1982). https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p; query=Id%3A%22media%2Fpressrel%2FHNC062016287447%22.
- 2. "Dr Richard Tweedie," *CoResearch*(259), p. 5 (February 1983). https://csiropedia.csiro.au/wp-content/uploads/2018/09/coresearch_1983.pdf.
- 3. "Numbers don't add up," *Australian Financial Review* (December 1989). https://www.afr.com/companies/numbers-dont-add-up-19891222-kaivw.
- 4. "The UNIX timesharing system in DMS," *DMS Newsletter*(70) (November 1980). https://csiropedia.csiro.au/wp-content/uploads/2019/08/csiro.dms_.newsletter.no_.7.UNIX_.pdf.
- 5. CSIRO DMS, Annual Report, p. 67 (1982).
- 6. David Glavonjic, "UNIX Distribution," CSIRONET news(168), p. 14 (December 1982).
- 7. Richard Tweedie, "SIRONIX Software UNIX System III," *CSIRONET news*(169), p. 8 (February 1983).
- 8. "L & L Australia," *Australian Microcomputer Magazine* **1**(7), p. 73 (October 1983). https://archive.org/details/australian_microcomputer_magazine-1983_10/page/72/mode/2up.
- 9. "The building blocks for a super system," *Australian Microcomputer Magazine* **1**(7), p. 81 (October 1983). https://archive.org/details/australian_microcomputer_magazine-1983_10/page/80/mode/2up.
- 10. "Unix on Lisa," *Australian Micro Computerworld*, p. 128 (November-December 1984). https://archive.org/details/australian_micro_computerworld-1984_11_12/page/128/mode/2up.
- 11. "Xenix Text Processing System," *Your Computer*, p. 45 (May 1985). https://archive.org/details/yc198505/page/44/mode/2up.
- 12. Dr. Trevor Hales and Dr. Ian Richards, *A Review of Academic and Research Networking in Australia*, pp. 64-74, C.S.I.R.O. Division of Information Technology (February 1987).
- 13. Ron Baxter, "How configurable is Ultrix on uVax II?" *net.unix-wizards* (October 1985). https://groups.google.com/g/net.unix-wizards/c/A3_f8ZwWbNw/m/Fh3GEfDJxokJ.
- 14. "Loan helps build super microcomputer," *Electronics Today International, Australia*, p. 71 (January 1983). https://archive.org/details/ETIA1983/ETI%201983-01%20January/page/n69/mode/2up.
- 15. William Hollier, *Linkedin profile*. https://au.linkedin.com/in/william-hollier-7a219896.
- 16. Peter Thorne, "Jurij Semkiw," October 2013. https://cis.unimelb.edu.au/about/csirac/jurij-semkiw.
- 17. "Email earnings 'encouraging'," *The Canberra Times*, p. 17 (May 1980). http://nla.gov.au/nla.news-article110955380.
- 18. National Standards Commission, *Email Omega 2000 Series Model BLC 80 FlowmeterIng System Controller* (August 1989). https://www.industry.gov.au/sites/default/files/nmi/certificates-approval/S191.pdf.
- 19. "They're growing in Unison," *Australian Microcomputer Magazine* **1**(7), pp. 96-99 (October 1983). https://archive.org/details/australian_microcomputer_magazine-1983_10/page/80/mode/2up.
- 20. CSIRO Division of Computing Research, *Newsletter*(28) (October 1967). https://csiropedia.csiro.au/wp-content/uploads/2019/08/CSIRO.DCR_.Newsletter.no_.28.pdf.
- 21. "SIRONET," CoResearch(157), p. 1 (April 1972).
- 22. Alison Foulsham, "Hard decisions lead to wins for PAXUS ComNet," *The Canberra Times*, p. 24 (May 1989). http://nla.gov.au/nla.news-article122262721.
- 23. M. C. Smith, "PAXUS COMNET PTY LIMITED (IN VOLUNTARY LIQUIDATION)," *Commonwealth of Australia Gazette. Business*(B38), p. 2292 (September 2000).
- 24. CSIRO DCR, Annual Report, p. 32 (1979-1980).
- 25. CSIRO DCR, Annual Report, pp. 28-31 (1983-1984).

- 26. CSIRO DCR, Annual Report, pp. 89-92 (1982-1983).
- 27. "New Agreement in Micronode Project," CSIRONET news(172), p. 10 (August 1983).
- 28. Peter Heweston, "Workstations, UNIX and CSIRONET," *CSIRONET news*(174), p. 8 (December 1983).
- 29. Colin Brammall, "Sydney-based Techway buys Canberra Firm," *The Canberra Times*, p. 17 (April 1986). http://nla.gov.au/nla.news-article118199584.
- 30. *1998 Pearcey Medal*, Pearcey Foundation. https://www.pearcey.org.au/awards/national/pearcey-medal/1998-pearcey-medal/.
- 31. Graeme Philipson, A Vision Splendid: The History of the Australian Computer Industry, Australian Computer Society (2017).
- 32. "Our new computer," *Royal Australian Navy News* **27**(8), p. 3 (May 1984). http://nla.gov.au/nla.news-article267089825.
- 33. "Csironet and Techway attack global markets," *Communications World*, p. 16 (February 1987). https://archive.org/details/communications_world/communications_world_87_02/page/16/mode/2up.
- 34. CSIRONET, Annual Report, p. 15 (1985-1986).
- 35. Norman Kemp, "A New Wizard in Oz," *Datamation* **23**(21), pp. 75-78 (November 1987). https://archive.org/details/bitsavers_Datamation71101_109532575/page/n73/mode/2up.
- 36. CSIRO DCR, Annual Report, p. 17 (1981-1982).
- 37. "Library link made," *CoResearch*(273), p. 6 (Oct/Sep 1984). https://csiropedia.csiro.au/wp-content/uploads/2018/09/coresearch 1984.pdf.
- 38. "New joint venture," *CoResearch*(299), p. 3 (February 1987). https://csiropedia.csiro.au/wp-content/uploads/2018/09/coresearch_1987.pdf.
- 39. "Notice of application relating to NETWORK AUTOMATION PTY LTD," *Government Gazette of the State of New South Wales*(21), p. 977 (March 1993). http://nla.gov.au/nla.news-article231935979.
- 40. Adrian Booth and Greg Rose, "The Electronic Interviews," AUUGN 14(4), pp. 38-44 (August 1993).
- 41. "NEOLOGY A Local Hero," *Your Computer*, p. 47 (July 1985). https://archive.org/details/yc198507/page/46/mode/2up.
- 42. Greg Rose, "fmake A Tool in Support of a Policy for Management of Things," *Proc. AUUG Conference* (September 1992).
- 43. CSIRONET, Annual Report, pp. 20-21 (1984-1985).
- 44. "Staking their claims," *Datamation* **30**(16), p. 96 (October 1984). https://archive.org/details/bitsavers_datamation_44192572/page/n97/mode/2up.
- 45. "New Neat system sells exceptionally well," *The Canberra Times*, p. 17 (December 1985). http://nla.gov.au/nla.news-article118177501.
- 46. Whitesmiths Australia, *About Us* (January 1999). https://web.archive.org/web/19990128141441/http://www.wsa.com.au/aboutus.htm.
- 47. Whitesmiths, *Company Overview* (May 2004). https://web.archive.org/web/20040505182407/http://www.whitesmiths.com.au/overview.shtml.
- 48. "Techway sells stake in Softway," Australian Financial Review (September 1991).
- 49. "Softway now known as Aurema," *AUUGN* **20**(2), p. 3 (June 1999).
- 50. Tim Lohman, *Citrix acquires Sydney-based Aurema* (February 2007). https://www.itnews.com.au/news/citrix-acquires-sydney-based-aurema-73370.