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The First Fifteen Years of Computing in Aotearoa New Zealand

Brian E. Carpenter, *University of Auckland, New Zealand*
Sathiamoorthy Manoharan, *University of Auckland, New Zealand*
Janet Toland, *Victoria University of Wellington, New Zealand*

Abstract—This article outlines the first fifteen years of modern computing in New Zealand ...

Modern computers arrived in Aotearoa New Zealand in 1960, little over a century after the first discernable information technology [4]. New Zealand was then a relatively isolated and small (2.5 million people) economy, so it is feasible to track the dissemination and socio-economic influence of computing for the following period; this study runs from 1960 to about 1975. Two events in the mid-1970s signaled the end of the economic and social era that began after World War II, and act as the end of our study: Britain joined the European Common Market in 1973, with major economic consequences, and New Zealand switched on a national Police Computer in 1976, with significant social impact.

In 1960, New Zealand had a rather centrally managed economy. Indeed, its currency did not float until as late as 1985. The details are complex [6], but the result was that during the period of our study the Treasury was constantly concerned about the foreign exchange impact of computer imports, and this necessitated a system of import licensing. This was a constant background for trends in computing, especially since the Treasury initially favored computing service bureaus to ensure maximum usage of what they considered a scarce resource. Of course, many companies much preferred to have their own systems.

Several themes are used to organize this article:

- growth in numbers of computers and vendors
- growth in employees (and male dominance?) (and Pākehā/Māori?)
- types of usage, including service bureaus
- key areas where the technology was used
- local contributions to the technology
- start of computing services and teaching in universities, technical colleges (and maybe schools?)
- professionalization (NZCS)
- commercial impact
- social impact

GROWTH IN NUMBERS AND EMPLOYMENT

The following table shows the estimated number of electronic digital computers installed in New Zealand over the years in question.

Year	Computers	Source	Notes
1960	2	[3]	
1965	70	[2]	[5] gives 45
1966	81	[2]	
1968	120	[2]	[1] gives 87
1969	140	[2]	
1971	180	[2]	
1972	200	[1]	
1974	280	[2]	
1976	400	[2]	

Although there are some discrepancies in the available data, the trend is one of rapid growth, from one computer for every 1.2 million people to one for every 8000. Similarly, the number of programmers in public services rose from a handful (maybe 4) in 1960 to 115 (84 men and 31 women) by 1974 [1]. Overall, 4000 data processing staff were then employed at 220 sites – 39% in Wellington, 31% in Auckland, 9% elsewhere in the North Island, and 21% in the South Island [2].

[discuss active companies (IBM, ICT/ICL and the rest), and popular models]

Throughout the period under study, most computers remained large and comparatively heavy, even as they moved from “first generation” (vacuum tubes) through “second generation” (discrete transistors) and “third generation” (integrated circuits) to the “fourth generation” (very large scale integration). As the tech-

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FIGURE 1. ICL 1902A Delivery in 1969. Courtesy Fletcher Archives, NZ.

nology got smaller, mainframe computers became more powerful rather than more compact. For example, the third computer installed in 1969 by Motor Specialties in Auckland, an ICL 1902A, needed to be lifted to the top floor by crane, like its predecessors , an ICT 1201 and an ICT 1301 (Figure 1).

TBD

CONCLUSION

TBD

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Brian E. Carpenter is an Honorary Professor in the School of Computer Science, University of Auckland, New Zealand. He is interested in Internet protocol design and in computing history. He received a Ph.D. from the University of Manchester, U.K. and is a past Chair of the Internet Engineering Task Force. Contact: brian@cs.auckland.ac.nz

Sathiamoorthy Manoharan is a Senior Lecturer in the School of Computer Science, University of Auckland, New Zealand. He is a senior member of IEEE. He is interested in computer systems, particularly with respect to performance and security. Contact: mano.manoharan@auckland.ac.nz.

Janet Toland is currently an Associate Professor in the School of Information Management, Te Herenga Waka, Victoria University of Wellington, Wellington, New Zealand. Her research work is in the history of information systems. She has a particular interest in social and ethical issues. She is currently the Historian for the Association of Information Systems. Contact her at Janet.Toland@vuw.ac.nz.