Notes on NZ computing 1960-75 from various sources

Brian Carpenter, June 2025

Text in quotation marks is verbatim from the given source.

Plain text is my summary.

Text in [square brackets] is my commentary.

Where I could, I have **boldfaced** computing bureaus.

Some BibTex citations included.

The order is random. At the moment these notes are in “stream of consciousness” format...

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### Datamation March 1965

@article{HoneHeke,

author = {{Hone Heke (pseudonym)}},

title= {{Computing in New Zealand}},

journal = {{Datamation}},

year = "1965",

month = "March",

pages = {41-42},

volume = {11},

number = {3}

}

[The author may well have been Bruce Moon. Hōne Heke (c. 1807-1850) was a famous Māori chief and warrior.]

"Of those companies listed on the Stock Exchanges of New Zealand, there are approximately 50 with a capital in excess of $2.5-million. To these could be added perhaps 10 subsidiaries of large overseas companies..."

"In November 1960, an IBM 650 magnetic tape system, the first tape system in Australasia,was installed in the government Treasury. It was not until about two years later the Canterbury and Auckland Universities had IBM 1620 punched card systems installed"

[Interesting that he says “first tape system” not “first computer”. As far as I know, the Education ICT 1201 did not have tapes.]

"When the government recently announced the budget for the universities for the next quintenium ... there were no specific funds allocated for computing facilities for the universities, which leaves them to struggle on with inadequate equipment."

"Victoria University, in Wellington, appears to be in a better position than the rest, as it will have access to an Elliot 503 system operated on its campus by the government Department of Scientific and Industrial Research... Canterbury University, with an IBM 1620 system, teaches computer techniques for technical computation"

"By the end of this year there will be some 45 computers operating in New Zealand, about 25 percent of these being in government departments. The largest installation will be the IBM 360/40 tape and disc system ordered by the Treasury in December, 1964; on this system much of the government's work will be centralized. The list price of these 45 machines will be in the range of $250,000 to $400,000, with the majority of them being at the lower end of the range."

[presumably $US, as NZ still used £ in 1965]

"IBM and ICT, the usual leaders in a new market in a British Commonwealth Country, have captured most of the market with their usual sales techniques, with IBM taking the lion's share. Burroughs has sold some B200 series machines, Elliot Automation one machine, and **English-Electric-Leo has a service bureau**."

[Which service bureau was that? See KDF6 below.]

"Because salaries for professional computer personnel are low, ranging from about $2800 to $7000, very few experienced staff have been imported from the United Kingdom or Australia, where the cost of living is comparable. In Australia, the official government salary scale is in the vicinity of $3500 to $7500, with top salaries in industry close to $10,000."

### Colin Beardon’s book

@book{Beardon,

title = {{Computer Culture - The Information Revolution in New Zealand}},

author = {Beardon, Colin},

year = "1985",

place = {{Auckland, New Zealand}},

publisher = {{Reed Methuen}}

}

N.B. On 16 Jan 2025, Colin Beardon <cebeardon@gmail.com> stated by email that "I no longer have my notes" from writing the book.

p 7:

2nd Treasury machine by end 1961.

Canterbury Uni and Griffin acquired machines in 1961. [Canterbury got an IBM 1620, but Griffins only bought a BTM 555 calculator].

1962: NZ Railways, Dept of Education [actually their 2nd machine, ICT 1301], Dept of Statistics

1963: BALM paints (i.e. Dulux); Bond and Bond; Shell; Air NZ; Gough, Gough and Hamar; Tasman Pulp and Paper [probably an ICT 1301, but no record in the Fletcher archives]; the Broadcasting Council; Auckland Uni [IBM 1620].

1962 (Oct 19): Cabinet approved computer for DSIR at £150,000 to £200,00 [the Elliott 503 installed at VUW by 1965].

"By the end of the decade there were about 140 machines on about 130 different sites. Of these 42% were used by manufacturing or processing industries, 15% were used by banking and financial instituitions, and 15% by central and local government."

p 8:

Estimated number of Computers in NZ [no source given]:

1960 1

1964 50

1965 70

1968 120

1969 140

[Early data on bureau computing: see page 8.]

p 11:

Estimated data:

1969 140 computers on 120 sites, 2600 DP staff

1974 280 computers on 220 sites, 4000 DP staff

p 16:

Estimated data:

1969 81% of staff in N Island (41% in Wellington and 33% in Auckland)

1974 79% of staff in N Island (39% in Wellington and 31% in Auckland)

p 18-19:

Growth of government computing and of bureaucracy/privacy concerns

in the 70s - see photos.

p 20-22:

Wanganui Computer Centre and privacy - see photos

[also see https://en.wikipedia.org/wiki/Wanganui\_Computer\_Centre\_bombing]

p 22:

Estimated data:

1966: 81 computers

1971: 180 computers

1976: 400 computers

In later chapters, Beardon discusses the social impact of computerisation - concerns about privacy and intrusive bureaucracy (triggered largely by the Wanganui computer centre) and the observed correlation between computerisation and unemployment [which may of course be entirely coincidental]. In 1985, he wrote of "a second industrial revolution", caused by automation in general, not just by computing. [Also by 1985, microprocessors and desktop computers were available - the revolution had hardly started by 1975.]

For example, on p 72, between 1961 and 1971 there were only two substantial changes in employment by sector: Primary (agriculture etc.) declined from 15.2% to 12.0%, and banking & finance increased from 2.6% to 5.8%.

Beardon also discusses (pp 89-90) the computerisation of "women's work". The fraction of the "unemployed who are female" increased from 10.9% in 1961 to 18.0% in 1971 and 34.9% in 1975.

[In general, I don’t find these statistics very helpful. They don’t establish causality, and many things brought about social and economic change during 1960-1975.]

### Prophets of Computing chapter

@incollection{Toland-2022,  
title = {{Big Brother in New Zealand: Anticipating the Computer}},  
booktitle = {{Prophets of Computing: Visions of Society Transformed by Computing}},  
editor = {van Lente, Dick},  
author = {Toland, Janet},  
chapter = “13”,  
pages = “421–456”,  
year = “2022”,  
isbn = {9781450398176},  
publisher = {Association for Computing Machinery},  
doi = “10.1145/3548585”  
}

Thorough discussion covering a longer period than our 1960-75 target. Lots to draw on, better for Janet to do that herself.

### Early usage at UoA

@article{Phillips-UoA,

author = {{Phillips, Peter C. B. and Hall, Viv B.}},

title= {{Early development of econometric software at the University of Auckland}},

journal = {{Journal of Economic and Social Measurement}},

year = "2004",

month = "March",

pages = {127-133},

volume = {29},

number = {1-3},

doi = {10.3233/JEM-2004-0216}

}

Dept of Physics acquired 1620 in 1963; 1130 acquired in 1967; that was all until a B6700 in 1973.

1620 was first installed in Old Choral Hall. The 1130 was in the "newly constructed chemistry building"; in 1968 the 1620 was moved to the same building. Main demand for both in the 1960s was from physics, engineering, maths and economics. Economics was "often the heaviest user" with simulations of econometric models in 1964-70. Dynamic linear models of the NZ economy, dynamics simultaneous equation models amd systems of linear stochastic differential equations. Fortran. Also the economics dept had desk calculating machines and "from 1967-1968 an electronic calculator" in high demand (type unspecified).

Econometrics users: Derek Ford, Hessel Baas, Viv Hall (viv.hall@vuw.ac.nz?), Keith Carpenter, Peter Phillips (peter.phillips@yale.edu?), all students of Prof. Rex Bergstrom. Lots of overnight batch runs on the 1130.

(Rex Bergstrom did his thesis in Cambridge in 1952-54 using EDSAC to simulate the NZ export economy.)

1130 had 8 kB of memory, so programs had to be split into multiple steps with intermediate values stored to disk. 1130 had tape, disk, line printer and card reader [and punch, TBC]. There were three card-punches, always heavily booked.

The o/s needed about 1 kB. "According to folklore" Brian Hicks and some system operators rewrote the 1130 operating system for enhanced performance.

### Progeni

@incollection{Harpham2010,

booktitle = {{Return to Tomorrow: 50 years of computing in New Zealand}},

editor = {Toland, Janet},

publisher = {{The New Zealand Computer Society}},

title = {{Progeni, 1968 to 1989 - Success and Failure}},

chapter="6",

author = {Harpham, Percy W.},

year = "2010",

url = "https://history.itp.nz/part-2/harpham.html"

}

"Progeni was the first software company in New Zealand. It started in 1968 as Systems & Programs Limited."

"The impetus for the start of the company was Britain’s announcement, in 1967, that it was joining the European Common Market. New Zealand’s privileged position as a supplier to ‘mother’ would disappear. There was gloom and despondency with dire predictions about the collapse of our economy."

"[In 1960] I found myself recommending installing a computer into Dulux New Zealand... 12k of memory and 4 meg of disc with 2 tons of air conditioning. It was the fourth computer in New Zealand." [What?]

[BALM Paints a.k.a. Dulux had a 360/30 in use in Wellington by February 1968. See Christchurch Press job ad published 19680203. Beardon wrote that they had a computer of some kind in 1963.]

[Harpham was also involved in the ‘Wanganui Law Enforcement Centre’ which we need to cover. Maybe it should be the last thing we cover, chronolgically (operational in 1976).]

### Databank

@ARTICLE{Toland-2021,

author={Toland, Janet},

journal={IEEE Annals of the History of Computing},

title={Consortium Computing and Time Slicing in the Banking Sector: Databank Systems Ltd New Zealand},

year={2021},

volume={43},

number={2},

pages={18-29},

doi={10.1109/MAHC.2020.3007065}}

"In December 1964, orders were placed [by BNZ] for two IBM 360s to be located in the two major cities, Wellington and Auckland... In October 1966, the first branch of the BNZ had its accounts converted to a computer system and by decimal currency day on July 10, 1967 100 branches were computerized... In late 1967, the banking consortium known as **Databank Systems Limited** was formed when NBNZ agreed to join up with BNZ and cancelled its own order for computers, instead ordering two further IBM 360s... In 1968, the other three trading banks in the country, Australia and New Zealand Banking Group (ANZ), The Bank of New South Wales (BNSW), and The Commercial Bank of Australia (CBA) made the decision to join Databank."

By 1969, Databank had systems in Auckland, Wellington, Christchurch, Palmerston North and Dunedin.

Clearing was done by paperwork couriers - by road or by air. Telecommunications via the NZ Post Office lines was too expensive.

"In 1972, Databank introduced time slicing, allowing nonbank customers to use spare capacity on the Databank system... The Databank computer system was offered to schools for free by the banks and enabled schools to use it as a computer bureau. As Databank couriers visited every branch of every bank at least once a day, even the remotest school could have a 24 h turnaround... By the early 1980s, nonbanking work accounted for around 8% of Databank’s total business and when the Company was eventually sold [to EDS] in 1994 it had reached 25%."

### UK Manufacturers Delivery Lists

BTM/ICT 1301 Delivery List: 1961 onwards, Computer Conservation Society, 2004,

https://www.ourcomputerheritage.org/Maincomp/Ict/ccs-t2x1.pdf

In 1961+, two ICT 1301s were listed in NZ:

1) Cadbury, Dunedin

2) Electronic Data Processing Ltd, Auckland, for "service work".

ICT/ICL 1900 series: 1964 onwards, Computer Conservation Society, 2004,

https://www.ourcomputerheritage.org/Maincomp/Ict/ccs-t3x1.pdf

No useful information

Elliott 800 series and 503: 1957 onwards, Delivery List, Computer Conservation Society, November 2011

https://www.ourcomputerheritage.org/Maincomp/Eli/ccs-e3x1.pdf

In 1965, one Elliott 503 listed in NZ:

Dept. of Scientific & Industrial Res. (N. Zealand) Meteorological analysis records & highway design.

### Electronic Data Processing Ltd

NZ Gazette No. 65, THURSDAY, 24 OCTOBER 1963, p 1662

“THE COMPANIES ACT 1955, SECTION 336 (3)

NOTICE is hereby given that at the expiration of three months from the date hereof the names of the under-mentioned companies will, unless cause is shown to the contrary, be struck off the Register, and the companies dissolved:

...

**Electronic Data Processing Ltd**. W. 1961/618.”

[This company is listed in UK records as buying an ICT 1301 for "Service work".]

### Lawyer’s view in 1971

@incollection{Auburn1971,

booktitle = {{New Zealand Legal Research Foundation Seminar Papers 6: Computers and the Law}},

publisher = {{New Zealand Legal Information Institute}},

title = {{Legal Problems of Storage and Processing of Electronic Data}},

chapter="5",

pages={108-121},

author = {Auburn, F. M.},

year = "1971",

url = "https://www.nzlii.org/nz/journals/NZLRFSP/1971/6.html"

}

"Computer Use in New Zealand.

Computers are already used very extensively in New Zealand. In Auckland, for instance, the following companies and institutions had computers in use or on order in 1969: Air New Zealand, Alex Harvey, Auckland City Council, Auckland Electric Power Board, Auckland Harbour Board, Auckland Savings Bank, Automobile Association, Berlei (N.z.), Bond and Bond, Burroughs (N.Z.), **Computer Activities**, **Computer Systems**, Consolidated Brick and Pipe, **Databank System**, **Electronic Data Systems**, **Fletcher Computer Bureau**, **I.C.L. Centre**, John W. Andrew, Johnson and Johnson, Joseph Lucas (N.z.), J. Steel, Manukau City Council, Motor Specialities, Naval Research Laboratory, N.Z. Newspapers, N.Z. Towel Supply, Plessey N.z., Pye, R & W Hellaby, Reckitt and Colman (N.Z.), Reid N.Z. Rubber, Smith and Brown, South British Insurance, University of Auckland, Wilson and Horton, Winstone and U.E.B. Industries. It may be noted that this list is not complete, as of 1971, nor does it show the large Government investment in computers which is based in Wellington."

[That adds up to 37 users]

"One of the most interesting New Zealand business applications is that of Databank Systems Ltd. Databank Systems process an extremely large amount of transactions (750,000 daily) and has 1,750,000 customer account records on master file, for the five trading banks."

### Janet’s notes from the National Archives

"Archives Machines Notes.docx":

[Government strongly restricted import licences because of acute concern about foreign exchange]

"Cabinet Committee on the Importation of Computers [late 1966]:

Acute shortage of trained personnel, 28 trained programmers left government for similar positions in commercial firms.

New installations already approved:

12 in 1966/67

21 in 1967/68

...

Applications for importation of computers for 1966.67 period totalled over 2 million pounds but funds available only amounted to 400,410 pounds. Additional funds made available by the Decimal Currency Board amounted to 138,715 for the machines the computers would replace that would have had to be changed anyway due to the switch to decimal... Priority given to companies who bring in substantial foreign exchange... Doubt expressed that sufficient trained staff to operate all computers proposed to be imported. 35 computers (22 originally approved, 13 now proposed) would require 200 programmers... More use might be made of bureaus by prospective users so that the more sophisticated computers could be shared by a number of users instead of each purchasing simpler equipment at a greater overall cost in overseas exchange. Particular concern was expressed at the prospect of local authorities (including the Power Boards) buying their own computers instead of sharing facilities."

...

"16 Dec 1966

To: Minister of Finance

From P N Waller, Secretary to the Treasury

Computer Usage in Government Services

Report on Computer capacity in the Public Service & the extent to which it is being used effectively

Treasury 360 - 24 hours a day, 650 due for return shortly, 1401 - 130 hours per month

Education 1301 - 200 hours per month

Statistics 1620 - 3 shifts on statistical & census work

DSIR 503 - 300 hours per month & growing rapidly, scientific & technical work

Railways 1401 - 180 hours per month on railway work, 80 hours per month on inland revenue (this will eventually be transferred to Treasury)

Post Office - Burroughs 200 rented for 88 hours per month used for 80-90% of time available.

Social Security - IBM 360/20 on order to be fully used for warrant preparation and allied work

Other Government users of computers are:

a) Reserve Bank

b) Bank of New Zealand

c) New Zealand Broadcasting Corporation

d) Apple & pear board

e) Dairy Board"

"29 Sept 1967

Inter-Departmental Committee on Computer Imports

Meeting held 9am Thursday 28 Sept

IBM offering to bring into NZ 10 x 1401 computers ex Australia, overhaul them & make available for NZ customers. ICT are offering a similar deal. Declined as unlikely to satisfy existing demand."

"3 Nov 1967

ICT (NZ) requesting clearance to import a fast core memory for their Wellington Computer Centre

8 Nov 1967

...

ICT request not supported. Noted that two new **bureau installations** have been approved in Wellington, **NCR & Burroughs** for 1968/69 import year. A further bureau, **Electronic Data Processing NZ Ltd** will shortly be commencing operations in Wellington."

[Not the same as Electronic Data Processing Ltd 1961-63 in Auckland]

"18 April 1968

Treasury noted in March issue of IBM Newsletter that National Airways corporation made decision to install two IBM 360/40. Concern that they already have ICT 1901 especially as one IBM is only a ‘spare’ as back up for the other... No assurance given to either IBM or National Airways Corporation that licences for importation will be issued."

"7 May 1969

...

Burroughs 4000 & 6000 series should be subject to import licence under item code for computers."

"15 April 1970

...

Approvals for desk top computers should be given by SSC as office machines in the normal way. During year ended 31st March 1970 - 11 units authorised by Commission at cost of $54,490.96"

"3 May 1974

To Mr Shailes

From H G Lang

Surprised to find that Treasury supported the purchased of a Justice computer costing $9 million. Also been told there is a very large Post Office computer worth $17 million in the pipeline."

"Machines 1949-1974.docx":

---> see the long list of import licence applications between 18/8/1965 and 9/5/1966.

Approximately 32 IBM, 6 ICT, 7 NCR, 6 Burroughs.

Of the IBM applications, 23 were for various 360 models (360/20, 360/30, 360/40).

ICT: all 1901 or 1902.

NCR: all Series 500 (programmable, but specialised for accounting ledgers)

Burroughs: all E2000 (not a general-purpose computer, but an "Electronic Accounting Desk Calculator")

Customers for IBM/ICT:

Central Government: none in this period

Local government: 3

Finance/Business/Industry/Agriculture: 30

Uni: 3

### The Education ICT 1301

@ARTICLE{NatEd-1963,

journal={National Education},

publisher={New Zealand Educational Institute},

title={{Computer will process School Cert. results}},

year={1963},

volume={45},

number={494},

pages={506}

}

Picture of Minister of Education Blair Tennent (1898-1976) switching on the ICT 1301 in Shell House in 1963, thereby opening "**New Zealand's first computer bureau**". [which was entirely bogus; it was 100% used by Education]

### The Fletcher archives

https://collection.fletcherarchives.co.nz/objects/59502/fletcher-holdings-ltd-computer-bureau-1966-the-chairman-of-directors-of-international-computers-tabulators-nz-ltd-b-r-law-and-the-managing-director-of-fletcher-holdings-ltd-sir-james-jc-fletcher-ii-sign-the-agreement-for-the-supplying-of-fletchers-comput

https://collection.fletcherarchives.co.nz/objects/73540/winstone-ltd-head-office-69-queen-st-auckland-1970-new-computer-system-women-sitting-in-front-of-computer-screens-in-computer-room

https://collection.fletcherarchives.co.nz/objects/2178/winstone-ltd-head-office-queen-st-auckland-installation-of-new-computer-system

[ICT Ltd 1900 computer was commissioned on 21 Sep 1966 at the Queen St Head Office of Winstone Ltd... various photos]

https://collection.fletcherarchives.co.nz/objects/2545/fletcher-holdings-ltd-computer-bureau-operations-staff-and-facilities

[photos from 1966...]

https://collection.fletcherarchives.co.nz/objects/59499/fletcher-holdings-ltd-computer-bureau-1966-ict-series-1902-computer

https://collection.fletcherarchives.co.nz/objects/59500/fletcher-holdings-ltd-computer-bureau-1966-ict-series-1902-computer-on-far-right-the-central-processor

https://collection.fletcherarchives.co.nz/objects/824/fletcher-holdings-ltd-computer-bureau-newsletters-reports-manuals-and-other-material

"K O Stewart, who was seconded from Fletcher Construction and trained as a computer analyst to help run the computer bureau for Fletcher Holdings Ltd. This was set up in 1966 to serve the operations of Fletcher Holdings Ltd. " [Not a general-purpose bureau]

https://collection.fletcherarchives.co.nz/objects/87982/winstone-ltd-board-of-directors-1966-directors-attending-the-commissioning-of-the-computer-system

https://collection.fletcherarchives.co.nz/objects/59508/fletcher-holdings-ltd-computer-bureau-1966-punch-tape-operators

https://collection.fletcherarchives.co.nz/objects/92359/winstone-publication-1969-motor-specialities-ltd-winstone-specialist-removals-division-hoist-the-new-ici-central-processor-1902a-computer-by-crane-to-second-storey-window

[Presumably this was Motorspec's third computer, an ICT 1902A, after the original ICT 1201, and the ICT 1301 nominally bought for EDP Ltd.]

https://collection.fletcherarchives.co.nz/objects/92113/winstone-publication-1971-computer-equipment-being-unloaded-from-winstone-ltd-removal-van-to-the-computer-bureau-waikato-ltd-in-hamilton

https://collection.fletcherarchives.co.nz/objects/96411/southland-frozen-meat-co-ltd-head-office-invercargill-1970-computer-room

[Shows unspecified Burroughs equipment]

### University of Canterbury

@techreport{Dale-Canty1,

author = {Dale, Tony},

title = {{Early Computing at the University of Canterbury}},

institution = "University of Canterbury",

year = {2015},

month = {December}

}

@techreport{Dale-Canty2,

editor = {Dale, Tony},

title = {{History of the Computer Services Centre}},

institution = "University of Canterbury",

year = {2015}

}

"The first digital computer installed in a New Zealand university was an IBM 1620, purchased in 1962 by the University of Canterbury. It weighed about 800 Kg... The University replaced the IBM 1620 with an IBM 360/44 ... in 1967, and the 1620 was eventually sold... From 1973 until 1980 the University used a Burroughs B6700 computer; the particular model was a highly configured single processor B6714, known locally as a B6718, and it cost about a million dollars... "

### Bob Doran’s ICT notes and the Kawerau computer

@techreport{Doran-ICT-notes,

author = {Doran, Robert W.},

title = {{The First ICT Computers in NZ}},

institution = "University of Auckland",

year = {2012},

month = {November}

}

"5. From Jack Morgan

7 July 2011: Talked to Alan Rosling. He joined Treasury as a clerk in 1957, worked as a programmer with Brian Frankpitt and Bill Neale on the IBM 650 using SOAP (Symbolic Optimising Assember Program) before joining ICT in 1961. ICT was just about to announce their 1201 and then sell the ICT 1201 to the Dept of Education. Alan did not work on the MinEd system - he spent a year at Kawerau helping install Tasman Pulp's ICT 1201."

[Although this statement recorded by Bob Doran seems definitive, it is wrong. The ICT 1201 was announced years earlier than 1961 (originally sold as the HEC-4 or the BTM 1201, it was renamed as the ICT 1201 in 1959). The ICT 1301 was announced in May 1960 (possibly not in NZ until later. ) The Dept of Education had received its 1201 in 1960, and received its 1301 in 1963. (Both machines were initially installed on ICT premises in Shell House, The Terrace, Wellington.) All this is well documented.

I, and the Fletcher archivist (Fletcher took over Tasman Pulp and Paper), have searched the Fletcher archives for any mention of a computer at Kawerau in the early 1960s and found no trace. Also, the ICT records show only one 1201 sold to New Zealand. However, it's documented that T P&P installed an ICT 1301, which was replaced by a 1900 in 1966:]

@article{RafDua,

author = {{Dua, Raf}},

title= {{Working with CPM & PERT: via BTM to ICL}},

journal = {{ICL AllStars Magazine}},

year = "2020",

month = "Spring",

number = {69},

pages = {4-7}

}

"It’s fair to say that ICT 1900 PERT was the most advanced application of its kind on the market at the time when it was launched in November 1965 in the UK and overseas (Australia and New Zealand) in January 1966.

Internationally, I was transferred to ICT New Zealand to the brand new 1900 computer centre which was being built in Auckland at Caltex House. From there, we had great views of the Waitemata Harbour.”

[Caltex House was 7-9 Fanshawe St, was later refurbished as Microsoft House, site now occupied by Clearpoint House:

https://kura.aucklandlibraries.govt.nz/digital/collection/photos/id/96132/

There's a Babbage connection :-) https://www.babbage.co.nz/search/image?giid=86]

“Here I was responsible for the support of 1900 PERT for the first five 1900’s which had been sold by the inimitable Basie Du Toit in 1965. I also supported a couple of 1300s, including one for the Apple and Pear Board in Wellington and another for Cadbury Fry Pascal Hudson in Dunedin.

“It was then off to Kawerau (which is opposite White Island) to set up a 1900 PERT service for Tasman Pulp and Paper Company, who were converting from a 1301. ICT had about 20 or so PERT clients on the bureau and 10 installation on user hardware. It was a remarkably busy two years.

The EELM/ICT merger had taken place in UK and in June 1968, I was transferred to the company’s Melbourne bureau operations."

[Thus, T P&P had a 1301 before 1966, and then replaced it with some model of 1900. But it is highly unlikely that they ever had a 1201. Exactly when T P&P installed their 1301 remains unknown.

(Note that there is no trace in the records available from ICT archives in the UK, but that list is known to be incomplete.)]

### Lincoln College

@book{Lincoln,

title = {{The Seed They Sowed - Centennial Story of Lincoln College}},

author = {Blair, I. D.},

year = "1978",

place = {{Christchurch, New Zealand}},

publisher = {{Lincoln College}}

}

"In 1965... N. S. Mountier\* was appointed senior lecturer in biometrics... As the computer at Ilam became overloaded, use by Lincoln staff was curtailed. Clearly a computer was required at Lincoln, and an I.B.M. 1130 was installed in 1967, initially on hire, later purchased... Mountier accepted the additional role of director, computer laboratory, staffed with programme operators... the computer was utilised in education courses being given in computer usage, in research (the A.E.R.U. being the heaviest user), and in administration (processing examination results, class rolls). In addition to full use of the Lincoln computer the college arranged for a terminal link (DC 1200) with the Burroughs B. 6700 at Ilam, sharing in maintenance and operating costs. This arrangement did not prove fully satisfactory and in 1976 the college bought a PDP 11/40 system. The annual total cost of computer operation amounted to $52,000 in 1976..."

[The 1978 staff list included Mountier and five other computer staff: 3 male and 3 female in total.]

### Annals Oceania issue

@ARTICLE{Oceania,

author={Boell, Sebastian K. and Toland, Janet M.},

journal={IEEE Annals of the History of Computing},

title={{Histories of Computing in Oceania}},

year={2023},

volume={45},

number={4},

pages={6-10},

doi={10.1109/MAHC.2023.3324242}}

[Possibly cite this for background but it isn't much direct help]

### The DSIR Elliott 503

@incollection{Gibson,

booktitle = {{A History of Statistics in New Zealand}},

editor = {Roberts, H. S.},

publisher = {{New Zealand Statistical Association}},

title = {{Computing at AMD, 1965-1982: the ELLIOTT 503}},

pages = {70-72},

note = {Pages disordered in the original},

author = {Gibson, Brian},

year = "2018",

url = "https://www.stats.org.nz/wp-content/uploads/2018/07/A-History-of-Statistics-in-New-Zealand-1.pdf"

}

[Best discussion found of the 503 story.]

### Dunedin

@misc{McMillan-2013,

title = {{An Account of Early Data Processing in Dunedin}},

author = {McMillan, Bruce},

year = "2013",

pages = {1-47}

}

@article{OSN-101,

title={{Early Dunedin Computers}},

journal={{Otago Settlers News}},

publisher={{Otago Settlers Association}},

number="101",

year="2009",

month="June"

}

"Bruce McMillan joined Powers-Samas mid 1958 as Trainee Punch Card Maintenance Engineer, later Otago/Southland engineering Manager, left ICL in November 1977."

"Dunedin City Corporation [DCC] Electricity and Gas Account.This Invoice was produced on a International Computers and Tabulators (ICT) 1300 Computer in 1971" [installed 1964]

Cadbury 1301 [1963-1975, https://www.odt.co.nz/news/dunedin/installing-computer-second-time]

DCC 1902A [installed 1969]

Williamson Jeffery's 2903 [not before 1974]

[Williamson Jeffery Ltd, Stationers business in Dunedin and Wellington.]

@article{OSN-101,

title={{Early Dunedin Computers}},

author={Hyland, Tim},

journal={{Otago Settlers News}},

publisher={{Otago Settlers Association}},

number="101",

year="2009",

month="June",

pages="1-3"

}

"Dunedin was the first place in Australasia to issue computerised electricity and gas bills, on average 1,000 a day from 1965.

"The banks ... set up a joint venture company in 1969 to process transactions, Databank Systems Limited. Its branch in Anderson’s Bay Road housed an IBM 360/40... A fleet of customised Ford Cortinas travelled around the region picking up cheques from various branches and delivering them to the Databank in Dunedin.

"Another joint venture company ... was **Allied Computer Processors**. Founded in 1966, it carried out processing work for a variety of businesses, including the Otago Savings Bank. Its Burroughs B-500 computer arrived by ship and was so large and heavy it had to be hauled into the second floor of Plunket House in George Street by crane. This machine was decommissioned in the 1970s...

"the National Insurance Company ... [installed] an IBM 360/30 electronic computer in 1965... in 1968 ... the NMA [National Mortgage and Agency Company] upgraded to a Burroughs electronic computer."

### Smithies article

@article{smithies2014connecting,  
 title={Connecting the Periphery: The History of Computing in New Zealand 1950-2000},  
 author={Smithies, J. D.},  
 year={2014},  
 publisher={University of Canterbury. School of Humanities and Creative Arts},  
 note="Proc. Soc. Hist. Technol. Annu. Conf., 2014",  
url="https://ir.canterbury.ac.nz/bitstream/handle/10092/10609/12651793\_ConnectingPeriphery\_smithies\_1.1.pdf?sequence=1"  
}

[The document is rather superficial]

"Several major gas and hydroelectric projects were initiated in the 1970s, and required significant compute power. This led to the state controlled implementation of four national mainframes, all located in Wellington, New

Zealand’s capital city. They consisted of an IBM 360 used for the Health sector, another IBM machine used for scientific research and payroll, a Sperry-Rand UNIVAC 1110 used for law enforcement, and an ICL2890 that was plagued by problems and used for general computing services. The machines were run by a central Government Computing Service, which developed into the current Government Communications Security Bureau (GCSB)... in 1977"

[I believe the statement about GCSB is completely wrong.]

### ICL Anthology

@misc{Another-ICL,

title = {{Another ICL Anthology}},

editor = {Hall, Peter},

year = "2005",

pages = {1-190},

url = "http://www.bitsandbytes.shedlandz.co.uk/anotherICL\_anthology.pdf",

note = "Provenance unknown"

}

"Indeed, it [the 1301] had originally been installed at Cadbury's in Hobart in 1963, before being shifted to New Zealand."

[This seems unlikely, as the machine was installed in Dunedin in 1963. There was one at Hobart, however.]

### English Electric KDF6 machines in NZ

Summary – There were 3 or possibly 4 KDF6s in NZ. There is no solid evidence, but hints that they were imported 2nd hand from Australia.

1) 1968 at Wright Stephenson, Challenge House, The Terrace, Wgtn. (Photograph of delivery at URL below.)

2) by 1969, EDS in Wellington

3) by 1970, EDS on Princes St, Auckland (replaced by a Burroughs B2500 late 1971)

4) unconfirmed: a machine in Christchurch (n.d.) [EDS had a ChCh bureau]

**EDS (Electronic Data Systems Ltd)** was originally 50% owned by EELM, 50% by NZ Truth.

Incorporated 12 Sep 1963; renamed and liquidated in 1994.

https://app.companiesoffice.govt.nz/companies/app/ui/pages/companies/15562

Challenge House was 105-109 The Terrace, later renamed as Marac House then Morrison Morpeth House, also accessible from Lambton Quay.

https://collection.fletcherarchives.co.nz/objects/1971/wright-stephenson-co-ltd-head-office-challenge-house-105-109-the-terracelambton-quay-wellington

https://collection.fletcherarchives.co.nz/objects/52399/wright-stephenson-co-ltd-jul1968-challenge-house-105-109-the-terracelambton-quay-wellington-transportation-of-computer-to-the-terrace-entrance

KDN2, KDF6, KDF7: 1962 onwards, Delivery List, Computer Conservation Society, 2022

https://www.ourcomputerheritage.org/Maincomp/Eel/ccs-n2x1.pdf

"Probably one KDF6 installed in New Zealand – See ref. 4]."

Ref 4 is:

"4. This site: https://bozmuse.wordpress.com/2014/01/18/english-electric-leo-kdf6/

contains informal anecdotes from various operators and programmers who worked

on KDF6 computers in London, Australia and New Zealand."

This person was working on ICL System 4 machines in NZ:

"Roy Bowman | March 1, 2023 at 4:53 am

Great comment here that have taken me back some years. I joined English Electric Leo in early 1964 as a computer engineer. After training at Kidsgrove in Staffordshire UK I brought the KDF6 that I helped build in Systems Test down to the London Borough of Harrow. I spent a couple of years there before moving into System 4 training – 4-30 and 4-50 systems. I spent a couple of years with a 4-30 at RCA at Sunbury on Thames before being sent to NZ to support and train NZ based engineers in Wellington. The hardware team was at that time Syd Greene, Tom Denyer, Dave Plimmer, Fred Bonette and me Roy Bowman. Sadly Syd, Tom and Fred have passed away so of that team only Dave and I remain. We actually live in the same retirement village in Porirua and I see Dave frequently. At that time early 1969 we worked for EDS based in what is now Victoria. The building has long since gone but is where NZ Truth was produced. Later that year English Electric and ICT merged to create ICL But several of us were disenchanted by our new masters and left. I joined Control Data in their Plug compatible division. We built and supplied Peripherals that plugged directly into IBM 360 and 370 mainframes. We had some pretty large sites to look after Data Bank Government Computing services and more."

But there \*was\* a KDF6 in Auckland:

"Neil | April 14, 2022 at 8:59 am

The Auckland KDF6 was in Princess Street, a short walk down the road from Auckland University. I worked there from 1970 till mid 1971 when I began my OE. I believe that the KDF6 was replaced by a Burroughs B2500 later that year."

"Michael Canton | October 17, 2021 at 1:23 pm

Hi Roger, remember me?

I ran the service bureau operation at Electronic Data Services which was 50% owned by EELM and 50% by a NZ newspaper, from 1966 to 1969. I was supposed to be on secondment from EELM in the UK, with the option of staying on after 3 years or returning to the parent company. But during my tour ICT bought EELM and ICT already had their own subsidiary in NZ and the NZ subsidiary was split in two with the computer sales side merging with ICT and the bureau side was 100% taken over by the NZ company. So without my doing anything I stopped being employed by a UK computer firm and became employed by a NZ newspaper – one with a rather dubious reputation at that."

"Neil Harsant | December 7, 2021 at 6:13 am

I worked for Tony Vial in EDS’s Auckland Princess Street office during 1970-1971. All KDF6 programming was done in PAIR3 assembler. Usually programs were assembled once and then patched until working. We became adept at machine level octal coding writing “Instants” that could load and run direct from paper tape.

I think that the machine was 18 bit based, not 16 bits. I still have a reel of 3/4 Inch mag tape from that system. The Auckland system was originally from the Australian Egg Marketing board in Melbourne. Never did get to see the Wellington’s KDF6. My time on the KDF6 was a fantastic preparation for my career as a programmer.

I hope that somewhere there is a museum with a working KDF6. It was a grand machine. I have some photos of the Auckland system if anyone is interested."

[I have those photos.]

"Dave Brown | February 24, 2021 at 6:58 am

Had a hand in scrapping a KDF6 here in NZ many years back- cant recall where exactly it was located though. Must have been either Wellington or Christchurch. More probably the latter."

"Simon | November 6, 2020 at 12:10 pm

Hi Dave. Do you have any details of the KDF6 in New Zealand – eg name/location of site, approx. dates of delivery and/or final switch-off?

Reply

Dave's avatar Dave | January 21, 2021 at 1:36 am

Hi Simon, late reply sorry. I only recall the one KDF6. We arrived in 1964 and I believe my father was responsible for installation of the system for the Wright Stevenson company in Challenge House on the Terrace, Wellington. I don’t know when it was retired."

"Roger M Morrell | September 11, 2021 at 3:55 am

The one in NZ was probably delivered in late 63 or 64 . It was there when I started working there in 65. And i think it was still there when I went on an OE in 69 event though I was not working for them at that time. At about that EELM in the UK merged with ICL in the so what was ICL in NZ took over sales of new systems. Don’t know what happened to the service bureau business on the KDF6. The office was somewhere between Guzznee St and Able Smith St but the street layout has changed a bit since then."

"Dave Green | September 11, 2021 at 9:21 am

Hi Roger, Syd Green was my father’s name. I might be wrong with the details but I thought the KDF6 he worked on was in Challenge House on The Terrace, but I also remember there was an office in Cumberland Place which might be where you mention. I remember visiting the Foodstuffs site when they had the Spectra System.

Roger M Morrell's avatar Roger M Morrell | September 11, 2021 at 10:25 am

Dave, I remember your father. Wright Stephenson was also a customer, that will be the Challenge House. , I think we did wool sale processing for them. . It is possible that they got their own computer at some point and he would have supervised. It comes back to me, I think they might have had their own programmers, I think his first name was Ernie. . Yes I mainly worked in the Cumberland Place office, that where the KDF6 was when I worked on it. . I always wondered what happened to everyone after I left NZ because I did not come back for quite some time . There was another engineer that worked with your father but I’m not sure if I remember his name.

daveymg's avatar daveymg | September 11, 2021 at 5:27 pm

Roger, yes two KDF6’s would make sense. I have pics of dad supervising the unloading of crates on the steps of Challenge House. John Denyer is the only name I recall of the engineers and there was a programmer named Martin Gregory. After the EE and ICT merger, dad stuck with ICL for a while then moved on to servicing phototypesetting equipment."

### NZCS/ITPNZ Histories

@book{NZCS85,

title = {{Looking Back to Tomorrow}},

editor = {Williams, W. R.},

publisher = {{The New Zealand Computer Society}},

year = "1985",

url = "https://history.itp.nz/part-3/foreword.html"

}

This NZCS retrospective from 1985 contains several articles that cover events in 1960-75. Especially:

@incollection{Shailes85,

booktitle = {{Looking Back to Tomorrow}},

editor = {Williams, W. R.},

publisher = {{The New Zealand Computer Society}},

title = {{The Impact of Computers on the Public Sector}},

chapter = "3",

pages = {35-52},

author = {Shailes, A. C.},

year = "1985",

url = "https://history.itp.nz/part-3/shailes.html"

}

“By 1969 nine departments had computers, with Treasury, the Departments of Education and DSIR acting as bureaux for other departments. In 1970 it was decided to centralise the two bureaux operations, together with the Statistics Departments data-processing staff, into a government computer centre. This was initially set up as part of the Department of Internal Affairs with the State Services Commission handling the management and policy functions. In 1972 the operating and policy functions were merged to form the Computer Service Division of the State Services Commission...

The development of computer support in the Ministry [of Works] was vested in a Computer Services Section set up in 1966 from the Systems Laboratory, Central Laboratories and the Machine Accounting Section from the Accounts Division. Program development was started and in the late 1960s a new computer installation was established in the Vogel Building. This machine was initially shared with engineers from the then New Zealand Electricity Department.”

[The shared govt Trentham computer centre was built in ~1970, see Fletcher Archives photo.]

And he quotes an example benefit described in a press release in the early 1970s:

“Delays in construction programmes usually mean vastly increased costs but in the case of the Mangaweka road-rail deviation it has meant the saving of millions of dollars. If a planned deviation had gone ahead in 1967 it would have cost about $9 million and about $11 million at the present day costs. But thanks to the Ministry of Works computer a comparable route has been found that will cost only between $6–$6.5 million.”

@incollection{Archibald85,

booktitle = {{Looking Back to Tomorrow}},

editor = {Williams, W. R.},

publisher = {{The New Zealand Computer Society}},

title = {{Computers and banking}},

chapter = "4",

pages = {53-75},

author = {Archibald, Ian H.},

year = "1985",

url = "https://history.itp.nz/part-3/archibald.html"

}

At the BNZ: “To spend vast sums as a matter of course on computer systems had certainly not emerged as an acceptable trend in the mid-1960s... Decimal currency conversion was due to take place in July 1967, and this proved to be the decisive factor... By mid-1964 permission had been given to go out to tender for two computers, one to be located in Wellington and the other in Auckland. The objective was to use these machines to process the accounts of 100 branches of the bank before July 1967... By December 1964 orders had been placed for two 360/30s... There was no equipment in New Zealand capable of magnetic ink printing to the exacting specifications necessary... An Auckland publishing firm, Wilson & Horton Limited, bravely undertook the hazardous task... the impossible was achieved with 100 branches of the bank up and running comfortably on computer by Decimal Currency Day on 10 July 1967... Fortunately the Government Computer Centre, further ahead with their development on a much larger 360/40, had enough trouble running Cobol to alert bank programmers to the dangers, and force a decision to use Assembler... in mid-1967, only the Bank of New Zealand was involved. At a time when nine out of ten computer projects worldwide were in trouble it had a highly efficient computerised banking system which was attracting considerable overseas attention... Late in 1967 the banking consortium to become known as Databank Systems Limited was formed... By the end of 1969 every branch of every trading bank in the country was operating under a jointly owned computer system supported by computer centres in Wellington, Auckland, Hamilton, Palmerston North, Christchurch and Dunedin... In 1969 all the accounts of the trading banks were being processed by six centres equipped with 360/40s having 128 K of core, a 2314 with eight removable disks, three slow tapes, card readers, printers and the ubiquitous MICR cheque readers... The provision of new computer centres at Tauranga, Ellerslie and Hastings helped to allay the processing pressures developing... Towards the end of 1974 the decision was made to centralise update processing on large machines at Auckland and Wellington, while distributing input and output functions to what became known as the network centres.” [which didn’t happen until 1976]

@incollection{Potter85,

booktitle = {{Looking Back to Tomorrow}},

editor = {Williams, W. R.},

publisher = {{The New Zealand Computer Society}},

title = {{Computers in education}},

chapter = "8",

pages = {124-139},

author = {Potter, Chris J.},

year = "1985",

url = "https://history.itp.nz/part-3/potter.html"

}

“Universities recognised the need for computers in their teaching and research in the mid-1960s. Initially, their use of computers was mainly in the heavy application areas such as Engineering, Chemistry and Mathematics. In the early 1970s, computer science departments were established... At the outset, computing teaching in New Zealand tended to be divided into service teaching (often subdivided into two groups; science and commerce) and Computer Science per se... the computer hardware installed in the universities, this has been dominated by the traditionally ‘heavy’ computing departments of Mathematics, Science and Engineering...

Technical institutes have also been responding to the new technology. The first courses, evening classes covering mainly introductory topics, started as early as 1966, and a 1967 prospectus made the tentative statement; ‘It is probable that simple programs will be written and that an opportunity will be given for these programs to be used on a computer.’ In the following year the same prospectus made first mention of COBOL and FORTRAN... training was to he provided for identified vocational occupations in the business and commercial community... it was not until 1972 that the NZ Certificate in Data Processing was established, providing a national standard... The first processor supplied to a technical institute by a government grant was installed in 1978 in the Auckland Technical Institute, and it remained the only one until a block purchase in 1982...

schools have been somewhat slower in getting off the mark. Very few secondary schools were able to afford their own computers until the advent of the microcomputer in the late 1970s.

Publication in 1978 of ‘Computer Education in NZ’, an exhaustive survey of courses offered by education and training organisations throughout the country.”

@incollection{Pioneers85,

booktitle = {{Looking Back to Tomorrow}},

editor = {Williams, W. R.},

publisher = {{The New Zealand Computer Society}},

title = {{A few of the first}},

year = "1985",

url = "https://history.itp.nz/part-3/a-few-of-the-first.html"}

[G Bernard Battersby bio] “**Computer Bureau Limited (now Datacom)** [Christchurch] in association with Mr PM Hargreaves was ahead of its time — many businessmen were cynical, and the company had its teething troubles: begun in 1965, it did not make its first profit till 1969. The enthusiastic staff of seven often worked round the clock; nobody got rich out of it, but ‘at least they enjoyed it … they found it an intellectual challenge’. Today [1985] over 300 people are employed throughout New Zealand.”

“In 1970 Paul Walker left Treasury to set up **Data Enterprises Limited**.”

[Lots of other bio snippets in that chapter, relevant to the origins of NZCS.]

@incollection{Moon2010,

booktitle = {{Return to Tomorrow: 50 Years of Computing in New Zealand}},

editor = {Toland, Janet},

publisher = {{The New Zealand Computer Society}},

title = {{Memories of the early days - NZCS: Why and how it was so}},

author = {Moon, Bruce},

year = "2010",

url = "https://history.itp.nz/part-2/moon.html"}

This covers the foundation of NZCS.

### Still to be studied

In Bob’s book collection on floor 5 of 303S:

1966, MOON B. A. M., Computer Programming for Science and Engineering, First NZ text on programming.

1968, W. D. Scott & Co., New Zealand Computer Processing Second annual survey of New Zealand Electronic Data Processing.