



PRENTICE COMPUTER CENTRE

OPERATING REPORT 1983

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PRENTICE COMPUTER CENTRE OPERATING REPORT AND STATISTICS 1983

Preamble

The form of annual reporting has been changed in 1983 to reflect discussion of the Management Committee in previous years. An annual report has been prepared by the Director suitable for wide distribution. A separate report providing greater detail for the information of the Prentice Computer Centre Management and the Computing Policy Committees of the University of Queensland and Griffith University follows.

This report has been prepared by Mr Denis Antonellie, Manager of Finance and Administration within the Centre and this is consistent with the responsibilities envisaged for the position when it was established by the Management Committee. The Director, of course, continues to be responsible that the report and associated statistics reflect the operations of the Centre and accurately record the financial position of the Centre.

In this first report prepared by Mr Antonellie, it should be appreciated that he has had little chance to make changes in the established systems of the Centre which could be reflected in the 1983 year.

Alan W. Coulter
Director

Introduction

As indicated by the Director, this report must necessarily be constrained by the systems for data gathering and summarisation which now exist within the Prentice Computer Centre. These systems have grown over many years and are now not appropriate to the size of operations or the range of services offered.

The statistics of usage provide reasonable estimates of growth for user groups which have used the KL10 computer since 1978. The same level of confidence does not apply to the Teaching and Research Group of the University of Queensland where work is now performed over four computers and a variety of basic charge rates. When the IBM system comes into operation in 1984, the problems will be even more complex.

Although the Centre maintains detailed costing records providing labour and machine use costs over 300 different cost areas, there is difficulty in reconciling these figures to the formal accounts of the University (QUBAC). There is a need to restructure the Centre's costing system as well as the way the QUBAC system is applied to the Centre's accounting operation. There is also a need now to establish costing at the level of individual machines and systems operated by the Centre. The organisational structure of the Centre should be changed to reflect the major missions of the Centre. As a start, it is proposed in 1984 to consolidate the various activities associated with the support of departmental and other remote facilities into a single Distributed Systems Group. This will be budgeted and accounted for as a separate area. A similar plan was proposed for Central Computer Operations but the additional staff member required to enable the organisational change to be implemented was not approved in the 1984 Budget.

I should also bring to attention a difficulty which I believe has been with the Centre for many years. Whilst the problem of restructuring and improving the financial budgeting control and accounting procedures is complex, it is not outside my experience and capability. The difficulty is to allocate resources to develop programs which will enable new systems to be implemented in an atmosphere where there are ever increasing demands on professional staff to support new services and respond to user demands.

1. Operating Results

Operating costs in 1983 rose by \$237,000 over the 1982 total to an overall sum of \$1,860,000. These costs were offset by revenue of \$1,802,000, salary supplementation of \$44,000 (as calculated by the Bursar's Office) and a charge to reserves of \$14,000 which reflected the operating loss for the year.

Achieved revenue rose by 3.6% over 1983 budgeted revenue whilst costs were 1.7% lower than budgeted. The drop in costs was, once again, due to a high level of loss of good staff from the Centre, difficulties in filling vacant positions with professional replacements of the desired qualifications, and the savings which resulted from this situation. Overall the financial loss of \$14,000 was a large improvement on the approved budgeted loss of \$109,000.

Total costs of operation were 14.5% higher than the 1982 total, constituting a dollar rise of \$237,000. Rises in salary costs of \$191,000, mainly brought about by normal incremental creep, accounted for the majority of this large cost increase. Centre Staff labour hours worked rose from 105,476 in 1982 to 108,434 hours in 1983. The average hourly labour rate rose from \$12.49 in 1982 to \$13.91 in 1983. Maintenance costs have increased dramatically from \$129,000 in 1982 to \$173,000 in 1983 and this registered a rise of 30% over the 1983 budget for these costs. Major increase in general maintenance were due to the increasing costs and expanding range of spares replacements (both for central and departmental equipment) and the increasing charges for software licences. With the installation of the IBM 3083E system requiring the acquisition of more new licence agreements, it would seem safe to surmise that the 1984 costs will increase even more.

Growth in the cost of stationery continues despite the best efforts of the Centre to lower costs of computer paper by purchasing bulk quantities and thus reducing unit prices from suppliers. Electricity charges continue to rise steadily each year, mainly due to the increases in industry tariffs. Travel costs were \$3,000 over budget caused by further sharp rises in the costs of airfares, meals and accommodation. Once again, in 1983, it was necessary to send staff to training courses held interstate because of the unavailability of such courses in Brisbane and the need for Centre Staff to be skilled in the maintenance of such systems and to be aware of new systems and equipment.

Revenue earned from the provision of charged services was 16% higher than 1982 i.e. \$235,000 higher. Growth in revenue by user groups is shown in Appendix C and the following provides percentage variation:

	% Variation in Revenue Earned 1982/1983
<i>University of Queensland</i>	
Teaching and Research	5
Administration	31
Affiliated	42
<i>Griffith University</i>	
Schools	7
Administration	22
Affiliated	-60
<i>QTAC</i>	14
<i>Other Educational Institutions and External Users</i>	14
Total	16

Although usage of the Central Computers increased by 32%, the revenue earned from this source increased by only 19%. Charges on the KL10 system were reduced for primary memory (10%), file I/O (15%) and abolished for file transfers to remote computers. A reduction of 50% was made for use of the VAX 11/780 after 10pm for post-graduate and staff research.

Revenue to the Centre originates from a variety of fund sources. The amount flowing from the General Funds of the University of Queensland was 55% of total operating costs. This represented 1% of the total General Funds of the University of Queensland.

Usage of Central Computer Time

Proportion of usage 1983 and variations in usage of central computer time for 1983 over 1982 is shown below:

	Proportions of Use	% Variation 1982/1983
<i>University of Queensland</i>		
Teaching and Research		
Departments	29	+ 6
Administration	43	+ 46
Academic Support and Affiliated Groups	6	- 5*
<i>Griffith University</i>		
Schools	6	+ 34
Administration	7	+ 122
Affiliated	4	+ 1465*
<i>Other Educational Institutions and External Users</i>	5	+ 28
Total	100	+ 32

* QTAC transferred from University of Queensland Affiliated Group to Griffith University Affiliated Group.

The increased usage of 6% in University of Queensland Teaching and Research Departments was not consistent with an increase in usage revenue of 8% from this same area. This was brought about by a significant increase in high priority use and a reduction of low priority usage for batch work which overall increased by 2%. Terminal work once again in 1983 represented 80% of total teaching and research usage and showed a 6% increase over terminal work for 1982.

Usage of central computing time by University of Queensland Administration continued to grow in 1983 by 46% on 1982 usage, although the charge to Administration increased by only 28%. This year saw a significant growth in terminal work of 74% whilst batch work increased by 40%. Once again, in 1983, the low priority one-quarter rate batch work showed an increase of 74% whilst one-half rate batch work only increased slightly (13%).

In 1982, University of Queensland Teaching and Research Departments represented 37% and Administration 39% of total usage. For 1983, University of Queensland Teaching and Research Departments usage had fallen to 29% and Administration had risen to 43% of total usage. It is relevant that, during 1983, the expansion of departmental mini-computer and micro-computer facilities continued including a few relatively large installations in some departments. Work performed during prime shift (i.e. both batch and terminal work) represented 60% of University of Queensland Teaching and Research usage and 26% of Administration usage. Taken together, these two sections of the University of Queensland represent 72% of the total usage of the Centre.

There was a drop of 3% to 6% usage by the U.Q. Affiliated Users in 1983. This is explained by the exclusion of QTAC which is now included with the Griffith University Affiliated Users, and is consistent with the drop of 5% (on 1982 usage) for this group.

Usage by Griffith University increased by 112%. Academic use by Griffith Schools increased by 34%, Griffith Administration usage increased by 122%.

The decline in usage by Other Educational Institutions evident over past years was arrested in 1983 when this group achieved an increase in usage of 61% (mainly due to increased usage by QIMR). It should be stressed that the total overall usage by this group is only .4% in 1983 and therefore any significant usage increase/decrease in a particular year will achieve large usage variations over the previous year. As in recent past years, the External Users usage continued to increase (28%) and in 1983 represented 5% of total usage.

Within the Centre, the total workload is spread over the three shifts in the following percentage: Prime Shift — 40%; Second Shift — 30%; Third Shift — 30%.

2. Systems Statistics

Prentice Computer Centre during 1983 operated three major host systems, an extensive network through a MICOM Circuit Switch supporting 1240 lines/ports, and a Computervision CAD/CAM system. The three host systems are — a DEC dual processor KA10, a DEC dual processor KL10 and a DEC VAX 11/780.

At the end of 1983, after extensive tender evaluation taking some 6 months, a decision was reached to purchase an IBM 3083E system to replace the KA10 mainframe. This new IBM is scheduled for delivery in March 1984 and it is proposed that the KA10, purchased in 1968, will be retired at the end of 1984.

System performance statistics for the three existing major host systems are shown in Appendix K. These statistics highlight the fact that the KL10 was the only system to fall below 99% effective user uptime. It is hoped that, in 1984, the effective user uptime on the KL10 will also exceed 99%.

3. User Education

The range and number of general courses offered by the Prentice Computer Centre for staff and post-graduate students in 1983 have both increased from 1982, together with a corresponding increase in the total number of people attending, i.e. 83 courses and 899 participants in 1983 compared with 59 courses and 770 participants in 1982.

The mix of those attending is still well-spread with respect to academic staff and post-graduate students, with a gradual growth in the number of general staff members whose departments are introducing computer-based methods into administrative and teaching areas.

The increase in the overall number of courses given was made possible only by the allocation of a second member of staff to teaching duties, along with attendant consultative responsibilities.

The growth in the area of instruction was accompanied by a relocation of the teaching area into a room dedicated to this purpose. (Previously, classes competed with other users for available terminals in the general "Clients Area".) Despite this move, projections for 1984 (based on the regular increases in classes and attendances of the past few years and the installation of a new mainframe, with associated software changes and additions) indicate that a single-room facility will be exhausted during 1984. An increase in both space and terminal facilities will be necessary to meet the growing demand.

4. Staffing

1983 commenced with some staff vacancies existing in the Centre and for a large part of the year, the number of staff on strength remained several below the number of approved positions.

As the year progressed, it was noticeable in the professional and technical areas that recruitment of staff with suitable experience increasingly became a problem, and that those with suitable experience were demanding a much higher salary structure to commence duties.

The basic difficulty during 1983 was that there were insufficient staff resources to meet growth, attend to user problems and, at the same time, provide new facilities.

Staff Resources

A table reflecting the labour hours, worked in the Centre, by section appears below. Another summary depicting labour hours worked by major categories is contained in Appendix J.

Labour Hours by Section

	<i>Labour Hours</i>			<i>% of Total</i>		
	1981	1982	1983	1981	1982	1983
Executive, Common Services and Overheads	33222	33117	34588	31	32	32
Operations	22839	24026	25345	22	23	23
User Services	21648	17058	15813	20	16	15
Software Maintenance and Development	12869	12933	16120	12	12	15
Engineering Services	15444	18342	16568	15	17	15
Total	106022	105476	108434	100	100	100

This table reflects the increase of 2958 hours worked which has occurred between 1982 and 1983. Many of the Staff were actively engaged for 6 to 9 months in the evaluation of tenders for the purchase of a new large mainframe for use by both Universities.

5. Accommodation

The Centre entered 1983 suffering from a lack of adequate accommodation. This situation became steadily worse as the year progressed but was relieved slightly by the acquisition of space in the western end of the Hawken Building and of three offices on the first floor of the Hawken Building.

The space situation, however, became critical immediately before Christmas when 8 offices and a corridor on the basement level were taken over to form one large computer room to house the new IBM 3083E system and associated equipment. This process meant the loss to the Centre of 125m of office and workshop space including the loss of the common/tea room.

The outcome of these moves was the emergence of cramped accommodation where some staff are sharing office space of 15 square metres and less, and one Technician is housed in the storeroom. Eventually the common/tea room for some 70 staff was relocated in a ground floor office of 19 square metres. Cramped accommodation has also meant a lack of morale and, more seriously, has led to a situation which does not always allow normal safe working conditions.

It is to be hoped that the 1984 allocation of space to the Centre, from the Computer Science shift to Priestley II, will be large enough in area to alleviate all immediate problems and also allow for future expansion.

6. Campus Data Communications Network

Funds were borrowed from the University to install a data communications network on the St. Lucia Campus to replace the Telecom Australia facilities. A primary objective was to provide higher transmission speeds at lower cost to users. By December 1983, 572 lines were converted from Telecom Australia or installed as new lines. Rental is charged for the lines and after allowing for costs, the surplus of \$50,620 will reduce the outstanding debt to the University from \$203,895 to \$153,275.

Denis S. Antonellie
Manager, Finance and Administration



FINANCIAL STATEMENT

PRENTICE COMPUTER CENTRE OPERATIONS ACCOUNT SUMMARY - 1983

REVENUE	EXPENDITURE	Budget 1983	Actual 1983	Budget 1983	Actual 1983
(\$000's)	(\$000's)				
Computer Use	Salaries (1)			1536	1464
Internal University of Qld	(actual salary costs \$1,508,000 less Salary Supplementation \$44,000)	815	896		
Internal Griffith University	Maintenance (2)	105	145	113	141
Other Educational Institutions	Software Charges	5	10	20	32
External	Stationery	240	265	40	51
CAD/CAM System Use	Electricity			70	73
Mechanical Engineering	Insurance	15	-	14	12
Others	Air Conditioning & Maintenance	5	-	17	10
Programming & Hardware Services	Travel	385	336	7	10
Sale of Software	Publications	6	-	20	20
Cash Sales	Rentals	8	7	3	-
Charge to General Fund for approved services rather than charges to individual users - University of Queensland	Magnetic Tapes & Packs			5	1
Griffith University	Furniture & Fittings	116	116	3	2
Network Development charged to CDN		14	14		
Expected loss transfer to Reserve Fund (3)	Transfer to Reserve Fund	25	13	-	-
		109	14		
		1848	1816	1848	1816

(1) Budget estimates are based on expected December 1982 rates - Award & CPI increases being covered by Salary Supplementation. Salary supplementation of \$43,390 calculated by Bursar's Office.

(2) The Salary Supplementation of \$44,000 has been brought to account regardless of the fact that the transfer normally performed by Business Services to clear the QUBAC Salaries Account was not processed at the end of 1983.

(3) Charge reductions in 1983 - see Appendix B.

Outstanding Debtors 31.12.83 = \$46,331

Outstanding Orders 31.12.83 = \$34,455

PRENTICE COMPUTER CENTRE OPERATIONS ACCOUNT SUMMARIES - 1979-1983

<u>REVENUE</u>	(\$000's)	<u>EXPENDITURE</u>						(\$000's)					
		<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>		<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	
Computer Usage (1)													
Internal University of Qld.	519	622	660	785	896		Salaries (2)	855	1006	1173	1317	1508	
Internal Griffith University	49	59	67	100	145		Maintenance	66	86	89	129	173	
Other Educational Instit.	14	15	13	8	10		Stationery	37	45	30	46	51	
External	142	164	170	226	265		Electricity	32	38	62	64	73	
							Insurance	9	10	11	11	12	
Contracts - User Services & Equipment Maintenance	174	256	319	315	336		Furniture & Fittings	-	1	2	2	2	
Sales of Software	-	-	5	-	-		Air Conditioning & Maint.	10	12	11	18	10	
Cash Sales	8	8	8	7	7		Travel	3	6	2	10	10	
Salary Supplementation	76	59	138	125	44		Publications	14	11	30	22	20	
Charge to General Fund for Approved Services - Univ. of Qld.	31	41	60	105	116		Rentals	12	13	6	3	-	
- Griffith Univ.	-	5	7	10	14		Magnetic Tapes & Packs	1	1	1	1	1	
Network Development - CDN	-	-	-	-	13								
Transfer from Reserve Fund	26	-	-	-	14		Transfer to Reserve Fund	-	-	30	58	-	
		1039	1229	1447	1681	1860		1039	1229	1447	1681	1860	

(1) Internal charge rates were reduced by 12.5% from 1.4.79. The low priority terminal use rate from 6pm to 7.30pm was reduced from 70% to 50% from 1.1.79; Sunday operation at 1/4-rate introduced from 15.4.79; Student Low Overhead Time Sharing Service at 1/3rd charge rate over all shifts introduced start of second semester 1979; low priority terminal rate reduced from 50% to 40% of prime rate from 1.5.80; VAX 11/780 system introduced at 3/4 KL10 charge rates on 17.8.81; KL10 primary memory charges reduced by 15% from 1.2.82; VAX 11/780 charge rates reduced to 1/3rd of KL10 equivalent charges; KL10 primary memory charges reduced by 10% and charge for file I/O reduced by 15% from 1.3.83.

(2) Actual staff costs including payroll tax, overtime, penalty payments and other staff costs.

REVENUE EARNED 1979 TO 1983
(\$'000's)

	UNIVERSITY OF QLD				GRIFFITH UNIVERSITY				OTHER EDUC. INSTITUTIONS		CASH SALES		TOTAL
	YEAR	ACADEMIC	ADMIN	AFFILIATED	ACADEMIC	ADMIN	AFFILIATED		INSTITUTIONS	EXTERNAL	SALES	HARDWARE SUPPORT	
COMPUTING AND CASH SALES	1979	224	233	62	30	19	-	14	148	8	-	-	738
	1980	291	257	74	37	20	2	15	172	8	-	-	876
	1981	306	269	85	48	22	9	13	173	8	-	-	933
	1982	335	351	99	56	39	4	8	226	7	-	-	1125
	1983	361	450	87	60	72	26	10	265	7	-	-	1338
CONTRACTS	1979	35	12	37	-	27	-	2	5	-	-	-	118
	1980	38	9	88	1	31	2	-	2	-	-	-	171
	1981	66	3	55	1	34	-	-	46	-	-	-	205
	1982	60	2	32	2	64	1	1	15	-	-	-	177
	1983	55	12	8	2	54	49	2	9	-	-	-	191
HARDWARE SUPPORT	1979	-	-	-	-	-	-	-	-	-	-	56	56
	1980	-	-	-	-	-	-	-	-	-	-	85	85
	1981	-	-	-	-	-	-	-	-	-	-	114	114
	1982	-	-	-	-	-	-	-	-	-	-	138	138
	1983	-	-	-	-	-	-	-	-	-	-	146	146
TOTAL	1979	259	245	99	30	46	-	16	153	8	56	912	912
	1980	329	266	162	38	51	4	15	174	8	85	1132	1132
	1981	372	272	140	49	56	9	13	219	8	114	1252	1252
	1982	395	353	131	58	103	5	9	241	7	138	1440	1440
	1983	416	462	95	62	126	75	12	274	7	146	1675	1675

- Notes: 1. Figures refer to revenue earned during the year. There may be variations between these and revenue brought to account in expenditure and revenue statements.
2. Figures do not represent relative work load on computers due to variations in use of priorities, changes to charge rates and charge factors for different classes of users. External users are charged at 3.6 times the internal rate and other educational institutions at 1.7 times the internal rate.
3. UQ Affiliated figures for 1982 includes \$64,000 for QTAC, whilst QTAC revenue of \$73,000 for 1983 is included with Griffith University Affiliated figures.

PRENTICE COMPUTER CENTRE

REVENUE EARNED 1983 BY SOURCE OF FUNDS

<u>UNIVERSITY OF QUEENSLAND</u>	<u>\$000's</u>	<u>\$000's</u>
<u>Teaching and Research</u>		
Maintenance	140	
U.R.G.	53	
U.C.	113	
Research Grants & Scholarships	49	
Other	<u>61</u>	416
<u>Academic Support</u>		
Maintenance	14	
Other	<u>1</u>	15
<u>Administration</u>		
Maintenance		467
<u>Affiliated</u>		82
<u>Charges to the General Fund for Approved Services</u>		116
<u>Charge to CDN</u>		13
<u>GRIFFITH UNIVERSITY</u>		
Schools	62	
Administration	126	
Affiliated	2	
Charges for Approved Services	<u>14</u>	204
<u>QTAC</u>		73
<u>OTHER EDUCATIONAL INSTITUTIONS</u> (1)		12
<u>OTHER USERS</u> (2)		<u>274</u>
<u>TOTAL</u>		<u>1672</u>

(1) Charged at 1.7 times internal rate

(2) Charged at 3.3 times internal rate (3.6 times from 1.3.83)

Note: Excludes hardware maintenance services (\$146,000) and Cash Sales (\$7,000) as existing accounting procedures do not allow for a division by source of funds.

REVENUE UNIVERSITY OF QUEENSLAND BY DEPARTMENTS - 1980, 1981, 1982, 1983

	1980 \$	1981 \$	1982 \$	1983 \$
A. <u>TEACHING & RESEARCH DEPARTMENTS</u>				
Agriculture	12007	14966	19037	22575
Anatomy	2894	2271	5324	2638
Anthropology & Sociology	13355	8587	14031	13558
Architecture	2405	1368	448	602
Arts Faculty	491	353	422	621
Biochemistry	1345	1449	2509	2484
Botany	843	1729	5821	7041
Chemistry	7383	3417	2800	4115
Child Health	2643	3033	2227	3224
Classics & Ancient History	-	-	-	123
Commerce	3823	5043	3566	4953
Computer Science	67848	84584	66285	54187
Dentistry	11791	2336	3044	7202
Economics	6745	7158	4255	9259
Education	11406	25461	9462	8330
Education & Computer Centre Project	-	21937	16627	-
Engineering - Chemical	183	351	3676	2943
- Civil	17247	17050	12051	16963
- Electrical	9862	17270	20331	11336
- Mechanical	4074	6690	21924	25710
- Mining & Metallurgy	5563	5297	5128	5896
- Faculty	-	-	196	165
English	701	1740	1499	4215
Entomology	1332	3094	3788	2609
External Studies	7620	8891	12829	38439
Faculty of Commerce & Economics	17	56	128	310
Faculty of Education	-	3153	-	-
Faculty of Medicine	110	1050	5306	477
Faculty of Science	66	242	801	936
Fine Arts	140	363	204	1238
French	94	10	39	13
Geography	6237	4471	4743	6562
Geology & Mineralogy	7313	3970	5347	7387
Government	732	7404	3498	6800
History	3089	928	1123	1609
Human Movement Studies	2799	865	2208	11871

			E	contd
	1980	1981	1982	1983
	\$	\$	\$	\$
<u>A. TEACHING & RESEARCH DEPARTMENTS (cont)</u>				
Law	468	1564	935	1139
- Faculty	-	-	35	175
Management	24676	1098	2249	3242
Mathematics	14336	16034	15844	15161
Medicine	1923	390	-	-
- Greenslopes	-	678	472	405
- P.A. Hospital	1655	1579	335	330
- R.B.H.	-	1138	461	537
Microbiology	3648	3884	9989	7036
Music	-	329	331	3012
Obstetrics & Gynaecology	2941	5714	9264	14857
Occupational Therapy	272	822	2444	2790
Parasitology	14	2	31	281
Pathology	85	845	559	234
Pharmacy	506	206	212	1322
Philosophy	868	1363	1030	1407
Physics	12374	9568	23121	30535
Physiology & Pharmacology	776	863	2359	1588
Physiotherapy	2244	418	1484	1608
Psychiatry	262	316	861	560
Psychology	14209	23019	18785	8401
Radiology	616	768	91	-
Regional & Town Planning	1217	996	1905	2879
Russian	-	-	-	47
Schonell Educational Research Centre	2667	2077	2117	1764
Social & Preventive Medicine	8639	7488	7622	7345
Social Work	141	1011	1900	2055
Speech & Hearing	100	119	565	978
Studies in Religion	396	3078	13554	4650
Surgery	666	874	709	639
Surveying	653	1994	694	477
Veterinary Science - Anatomy	8	41	-	-
-Animal Production	3239	2179	2662	3721
- Medicine	1785	1673	1508	1949
- Path & Public Hlth	-	39	255	342
- Surgery	-	-	74	26
- Faculty	79	298	740	260
Zoology	4347	7197	8485	7886
URG Special Computing Grants	6333	-	-	-
Other	694	-	-	-
	<u>324995</u>	<u>366249</u>	<u>394359</u>	<u>416029</u>

	1980 \$	1981 \$	1982 \$	1983 \$
<u>B. ACADEMIC SUPPORT</u>				
Audio-Visual Services	-	-	-	2170
Library	49761	21044	4715	3588
Counselling Services	833	597	2188	3464
T.E.D.I.	4888	5459	3838	5313
Printery	-	-	-	33
	<u>55482</u>	<u>26200</u>	<u>10741</u>	<u>14568</u>
<u>C. ADMINISTRATION</u>				
Buildings & Grounds	-	411	2675	7275
Business Services	128542	102095	141683	217835
Ceremonies Office	-	-	-	627
Student Services	136189	167140	206153	232544
Enrolments	1774	2408	3039	5373
Information Office	-	366	418	3264
Staff Section	-	-	93	267
	<u>266505</u>	<u>272420</u>	<u>354061</u>	<u>467185</u>
<u>D. AFFILIATED (Internal Rates)</u>				
ACCOM I.Y.D.P.	-	-	452	-
Alumni Office	450	444	1050	1770
Anthropology Museum	-	255	6	-
AUSTA	-	-	85	332
Australian Mathematical Society	794	528	316	327
C.A.B.H.	-	-	13	139
Emmanual College	-	-	-	282
Cromwell College	78	34	2	-
Geological Society of Aust.	56	30	5	-
Kings College	106	154	221	551
Melanoma Project	-	-	-	859
QTAC	39423	74510	64222	-
P.A. Hospital	-	148	504	301
S.E.R.C.	-	-	754	1362
Staff Club	566	540	1306	896
St. John's College	-	-	168	139
Student Computer Club	9223	4866	2597	5552
UNIQUEST	-	-	-	46
Universities Credit Union	98	87	31	30
University Foundation	-	-	-	40
University Press	62921	35657	50129	51247

	1980	1981	1982	E — 1983
	\$	\$	\$	\$
D. <u>AFFILIATED</u> (contd)				
U.Q.Staff Association	400	376	367	381
Union College	1530	1516	1634	1373
UQLTC	254	163	190	187
U.Q. Union	673	207	67	23
University Bookshop	-	-	1850	15874
Women's College	-	-	-	131
	<u>116572</u>	<u>119515</u>	<u>125970</u>	<u>81842</u>
 <u>TOTAL</u>	 <u>\$ 763554</u>	 <u>\$ 784384</u>	 <u>\$ 885131</u>	 <u>\$ 979624</u>

REVENUE FROM EXTERNAL ORGANIZATIONS - 1980, 1981, 1982, 1983

	1980 \$	1981 \$	1982 \$	1983 \$
<u>A. GRIFFITH UNIVERSITY</u>				
<u>Administration</u>				
Secretariat	1225	4318	21117	21096
Business Management	34230	36100	70527	92004
Site & Buildings	53	1	3	-
Student Affairs	15768	15646	10337	12926
	<u>51276</u>	<u>56065</u>	<u>101984</u>	<u>126026</u>
<u>Affiliated</u>				
QTAC	-	-	-	72804
Careers Office	15	1	-	-
Faculty Staff Association	184	212	88	131
Library	3877	8567	4093	2106
Community Services	-	-	275	359
	<u>4076</u>	<u>8780</u>	<u>4456</u>	<u>75400</u>
<u>Schools</u>				
CALT	653	263	745	1156
Modern Asian Studies	244	857	2266	2106
Australian Environmental Studies	30665	37537	40176	39936
Science	3247	4719	4162	7515
Humanities	4	1004	2564	2669
Social & Industrial Administration	2584	5033	8524	8639
Continuing Studies	-	-	-	6
	<u>37397</u>	<u>49413</u>	<u>58437</u>	<u>62027</u>
<u>TOTAL</u>	<u>\$ 92749</u>	<u>\$ 114258</u>	<u>\$ 164866</u>	<u>\$ 263453</u>

	1980 \$	1981 \$	1982 \$	1983 \$
<u>B. OTHER EDUCATIONAL INSTITUTIONS</u>				
Brisbane CAE	-	-	2303	1676
Capricornia CAE	-	69	318	738
Darling Downs CAE	-	420	412	734
Darwin Community College	489	256	-	-
James Cook University	90	2	147	979
Catholic Centre	1760	4154	1458	2080
North Brisbane CAE	346	395	-	-
Mt. Gravatt CAE	534	296	-	-
Qld. Agricultural College	183	654	383	720
High Schools & Others	1000	708	1333	1529
Q.I.T.	6641	1056	427	365
Kelvin Grove CAE	2613	3088	-	-
Qld. Institute of Medical Research	322	668	400	2511
Secondary Education Branch	739	962	348	293
Townsville CAE	-	1	41	-
	<u>14717</u>	<u>12729</u>	<u>7570</u>	<u>11625</u>
<u>C. OTHER EXTERNAL USERS</u>				
ABC	-	115	40	-
CSIRO	61	2750	1047	2601
Dept. of Primary Industries	40	-	521	1032
S.E.C.Q.	26416	25115	16684	6539
Qld. Water Resources Commission	92770	92435	123044	157805
Telecom Australia	-	-	27	-
Main Roads Department	11873	5868	7213	9027
Education Department	14698	9518	16094	20849
Health Department	-	51555	41531	36757
Q.E.G.B.	1918	2236	2857	811
Chief Government Geologist	3486	2468	1548	1146
State Mines Department	5862	5090	4652	11252
Other Commonwealth & State Departments	697	4706	394	915
Consulting Engineers & Others	7150	5875	4679	7591
S.E.G.E.B.	955	1532	25	-
S.W.Q.E.B.	-	1593	-	-
Metropolitan Transit Authority	825	255	45	-
Aust. Institute Medical Lab. Sci.	4118	2955	5227	5371
Houston Oil & Mineral Inc.	14	-	-	-

	1980 \$	1981 \$	1982 \$	1983 \$
C. <u>OTHER EXTERNAL USERS</u> (contd)				
Mater Mothers Hospital	-	298	306	444
National Parks & Wildlife Service	208	250	40	383
Consolidated Fertilizers	1754	1149	456	135
MIM Holdings	664	160	-	-
Qld. Cancer Fund	322	322	217	314
Qld. Cane Growers Council	120	240	40	-
Qld. Spastic Welfare League	-	885	12867	9762
Soils Survey & Exploration Pty.Ltd.	407	274	51	-
Qld. Nickel Pty. Ltd.	-	36	-	-
Youth Hostels Association	406	1142	-	-
Wildlife Preservation Society	-	-	847	1311
	<u>174764</u>	<u>218822</u>	<u>240452</u>	<u>274045</u>

Computing Units and Jobs by User Category and Priority for Batch and Terminal Work 1983

University of Queensland Griffith University

	Depts		Admin		Affil.		Schools		Admin		Affil.		Other Educ.		External		Total	
	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs
B .25	81156	3219	413668	4994	8352	218	13952	658	30892	1092	2656	39	1197	64	58721	1823	610594	12107
a .50	7228	1012	352296	1869	50276	2693	50	4	59232	796	66110	547	31	5	3079	292	538352	7218
t .70	51	8	0	0	0	1	10	1	5	1	0	0	0	0	822	775	898	786
c 1.0	40854	3466	79627	2489	3096	255	3361	244	10861	1077	3246	94	160	34	592	369	141897	8029
h >1	48	15	222	10	0	1	0	0	0	0	0	0	0	0	11	7	281	33
Tot.B	129337	7720	845613	9352	61724	3168	17373	917	101040	2966	72012	680	1388	103	63325	32661	1292012	28172
T .25	58228	3954	9204	188	4592	955	29896	1697	1996	87	1076	109	541	19	1663	142	107196	7161
e .50	63372	19865	2930	214	4292	1809	17070	4462	2938	193	2074	132	1404	66	643	108	94833	26849
r .70	57985	14796	6032	212	5017	1536	12142	2912	5535	513	553	59	3294	28	3192	149	93905	20215
m 1.0	363677	149225	201673	21253	72913	11545	65822	29199	50070	9149	10687	1964	2934	740	50790	19149	818566	242224
Tot.T	543262	187840	219939	21857	86814	15845	124930	38270	50599	9942	14495	2274	8173	863	56283	195481	114500	296449
G.Tot	672599	1955601	65752	31219	148538	19013	142303	39187	161639	12908	86507	2954	9561	966	119613	228142	406512	324621

* 724870

* 2458783

* Adjusted for Innovative Teaching Research

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Usage by User Category and Priority as a Proportion of Total Usage 1983

University of Queensland Griffith University

	University of Queensland				Griffith University				Affil.				Other Educ.				External				Total			
	Depts		Admin		Affil.		Schools		Admin		Affil.		Other Educ.		External		Total		Total		Total		Total	
	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs	Units	Jobs
B.25	3.37	0.99	17.19	1.54	0.35	0.37	0.58	0.21	1.28	0.34	0.11	0.01	0.05	0.02	2.44	0.56	25.37	3.73						
a.50	0.30	0.31	14.64	0.58	2.09	0.83	0.00	0.00	2.46	0.25	2.75	0.17	0.00	0.00	0.13	0.09	22.37	2.22						
t.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.24	0.04	0.24						
c.1.0	1.70	1.07	3.31	0.77	0.13	0.08	0.14	0.08	0.45	0.33	0.13	0.03	0.01	0.01	0.03	0.11	5.90	2.47						
h>1	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01						
Tot.8	5.37	2.36	35.15	2.38	2.56	0.98	0.72	0.28	4.20	0.91	2.99	0.21	0.06	0.03	2.63	1.01	53.69	8.68						
T.25	2.42	1.22	0.38	0.06	0.19	0.29	1.24	0.52	0.08	0.03	0.04	0.03	0.02	0.01	0.07	0.04	4.45	2.21						
e.50	2.63	6.12	0.12	0.07	0.18	0.56	0.71	1.37	0.12	0.06	0.09	0.04	0.06	0.02	0.03	0.03	3.94	8.27						
r.70	2.41	4.56	0.25	0.07	0.21	0.47	0.50	0.90	0.23	0.16	0.03	0.02	0.14	0.01	0.13	0.05	3.90	6.23						
m.1.0	15.11	45.97	8.38	6.55	3.03	3.56	2.74	8.99	2.08	2.82	0.44	0.61	0.12	0.23	2.11	5.90	34.01	14.62						
Tot.1	22.57	57.86	9.14	6.74	3.61	4.88	5.19	11.79	2.52	3.06	0.60	0.70	0.34	0.27	2.34	6.02	46.31	91.32						
G.Tot	27.95	60.24	44.29	9.62	6.17	5.86	5.91	12.07	6.72	3.98	3.59	0.91	0.40	0.30	4.97	7.03	100.00	100.00						
(29)			(43)		(6)		(6)		(7)		(4)		(-)		(5)		(100)							

() Percentages adjusted for Innovative Teaching Research

I H

PRENTICE COMPUTER CENTREPROPORTION OF USAGE CENTRAL COMPUTING FACILITIES

	1980		1981		1982		1983	
	<u>USAGE</u>	<u>JOBS</u>	<u>USAGE</u>	<u>JOBS</u>	<u>USAGE</u>	<u>JOBS</u>	<u>USAGE</u>	<u>JOBS</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
UNIVERSITY OF QUEENSLAND								
Teaching & Research Depts.	41	66	41	65	37	64	29	60
Administration	34	7	32	8	39	9	43	10
* Affiliated	10	8	10	5	9	4	6	6
GRIFFITH UNIVERSITY								
Schools	4	8	6	12	6	12	6	12
Administration	4	2	4	2	4	3	7	4
* QTAC							4	1
OTHER APPROVED USERS								
	7	7	6	7	5	8	5	7
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

(Note - Usage refers to central computing only and does not include mini-computers established in Departments of the Universities)

* QTAC included with the University of Queensland Affiliated Group prior to 1983

PRENTICE COMPUTER CENTRE - LABOUR HOURS BY SECTION & MAJOR FUNCTIONS 1983

<u>SECTION/FUNCTION</u>	<u>LABOUR HOURS</u>	<u>% OF TOTAL HOURS</u>
EXECUTIVE, COMMON SERVICES & OVERHEADS		
Leave	12266	11
Admin (Purchasing, Spare Parts, General)	13227	12
Cleaning	2173	2
Executive	3371	3
Staff Education & Conferences	968	1
Attendance at Meetings, etc.	460	-
Tender Evaluations	2123	2
OPERATIONS	25345	24
USER SERVICES		
Management	2054	2
Charged Contracts	5945	6
Non-Charged Work		
Consulting, General Assistance & PDP11 Support	4094	
Courses	3153	
Manuals & Mewsletters	567	
	7814	7
SOFTWARE MAINTENANCE & DEVELOPMENT		
Software Maintenance		
Management	1659	
Monitor & Cusps	4168	
Packages & Compilers	411	
Program Library	1477	
Operations Housekeeping	29	
Communications	1	
Other	10	
	7755	7
Software Development		
Management	67	
Communications & Network	2076	
Typesetting	1772	
Editors, Spoolers, Files	799	
Mini/Micro	5	
LABPAK	287	
CAD/CAM	3241	
IBM Installation	118	
	8365	8
ENGINEERING SERVICES		
Central Maintenance & Development	9230	9
Dept. Computer Maintenance	3405	3
Dept. Terminal Maintenance	1427	1
Dept. Development Contracts	1101	1
Dept. Non-Charged	1405	1
	108434	100

SYSTEM PERFORMANCE REPORT - 1/1/83 to 31/12/83

	KL10		KA10		VAX	
	HH:MM	%	HH:MM	%	HH:MM	%
1. Attended system running time	5314:52		4971:36		5153:49	
2. Plus unattended system running time	3084:39		3057:14		3127:28	
3. Equals total system running time	8399:31	100.0	8028:50	100.0	8281:17	100.0
less time used for:						
4. Scheduled maintenance	245:11	2.9	234:51	2.9	222:29	2.7
5. Dedicated operations tasks	95:50	1.1	50:17	0.6	135:16	1.6
6. Dedicated systems development	36:38	0.5	0:00	0.0	22:44	0.3
7. Equals time scheduled for use	8021:52	95.5	7743:42	96.5	7900:48	95.4
less lost time due to:						
8. Unscheduled maintenance	78:40	1.0	43:45	0.6	43:37	0.6
9. Hardware faults	28:03	0.3	7:11	0.1	2:28	0.0
10. Software faults	24:05	0.3	0:16	0.0	3:04	0.1
11. Unresolved	6:10	0.1	6:46	0.1	2:26	0.0
12. Environmental conditions	2:10	0.0	1:28	0.0	0:49	0.0
13. Equals time available to users	7882:14	93.8	7684:16	95.7	7848:24	94.7
14. Effective user uptime (13./7.)		98.3		99.2		99.3

SYSTEM PERFORMANCE REPORT - 1/1/83 to 31/12/83

GRIFFITH

	HH:MM	%
1. Attended system running time	1900:31	
2. Plus unattended system running time	5870:29	
3. Equals total system running time	7771:00	100.0
less time used for:		
4. Scheduled maintenance	0:00	0.0
5. Dedicated operations tasks	2:48	0.0
6. Dedicated systems development	0:00	0.0
7. Equals time scheduled for use	7768:12	100.0
less lost time due to:		
8. Unscheduled maintenance	0:00	0.0
9. Hardware faults	0:31	0.0
10. Software faults	4:12	0.1
11. Unresolved	21:59	0.3
12. Environmental conditions	0:20	0.0
13. Equals time available to users	7741:10	99.6
14. Effective user uptime (13./7.)		99.6

FINANCIAL STATEMENT

CAMPUS DATA NETWORK (CDN) OPERATIONS SUMMARY - 1983

<u>REVENUE</u>	(\$'s)	<u>EXPENDITURE</u>	(\$'s)
Rentals & New Installations	96553	Salaries	25084
		Materials	20484
		Vehicle Running Costs	365
		Transfer Surplus to A/c. 105622 as repayment	50620
	<u>\$ 96553</u>		<u>\$ 96553</u>

