

SUMMARY OF COMPUTER RESOURCE USAGE

April 17, 1971 - April 16, 1972

* Cor = Core Research and Development
 C = Collaborative
 S = Service
 T = Training

INVESTIGATOR	DEPARTMENT/ INSTITUTION	PROJECT TITLE	DIRECT GRANT OR CONTRACT SUPPORT		BRR Cate- gory*	AMOUNT OF USAGE - TIME SAVING COMPUTER		
			Identification Number	Agency		Terminal Hours	Page/minutes*(K)	Block Storage (K)
Category 4 (cont'd.)	Medical Students (FREE)							
Calvert, James	Student	TEXT. Solving the economic problem of medical research funds allocation; one criterion: change in mortality rate.			T	18.6	3.992	1.645
Cavalli, Luca	Genetics	HUMGEN. Classwork for course in human genetics.			T	124.1	36.797	0.519
Chester, Thomas	Student	PLAQUE. Anti-tumor immune responsive effects of <u>interferon</u> and <u>interferon inducers</u> .			T	79.1	29.607	1.775
Chiampì, Nona	Student	MEMBSTA. Calculation of enzyme activities and carbohydrate content of cell fractions.			T	2.9	0.768	0.096
Chu, Fred	Student	OMVI. Automatic recognition of cardiac arrhythmias on monitored patients.			T	1.9	0.507	2.155
Corby, James	Student	HURRY. Relationship between attention and enhancement of average evoked response (AER) magnitude.			T	20.4	6.130	2.229
Dimsdale, Joel	Student	GETFACE. Characterization of goals in psychiatric wards and ward pressures on patients and staff to conform to the goals.			T	83.6	25.430	3.749
Dubovy, Ronald	Student	TURTLE. Enzyme changes in the skeletal muscles of chronically exercised rats.			T	7.1	3.142	0.152
Enzmann, Dieter	Student	SWALLOW. Determination of secondary peristalsis of the <u>esophagus</u> .			T	137.6	54.299	7.958
Feldman, Gary	Student	ASTHMA. Monitoring of airway resistance values during sessions with <u>asthmatic</u> patients and normal subjects.			T	0.0	0.0	0.120
Filman, David	Student	NEURON. Neural network model: rotation of visual pattern in accordance with vestibular input.			T	1.4	0.300	0.039
Funk, Glenn	Student	RHINO. Study of <u>rhinoviruses</u> .			T	0.7	0.161	0.101
Gamel, John	Student	DOGLAB. Indicator dilution techniques for measuring pulmonary blood flow and lung transfer function.			T	0.1	0.019	4.728
Gelfand, Michael	Student	CARCAT. On-line analysis of <u>cardiac</u> catheterization data.			T	0.0	0.0	0.206
Gleason, Curtis	Student	CORTMEAS. Study of transmembrane currents as a function of depth of <u>brain</u> cortex.			T	0.0	0.0	0.120
Gordon, Louis	Student	COWTID. Monte Carlo study of the characteristics of the Hartigan subsampling method for generating confidence intervals.			T	7.0	4.044	0.202

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Category 4 (cont'd)	Medical Students (FREE)									
Hahn, Peter	Student	OXYTOX. Interpretation, quantification, and systematic retrieval of information from gel electrophoreses.				T	6.8	4,073	0.418	
Harris, Robert	Student	PNP. Correlation of subjects' emotions with their appraisals of certain aspects of their environments.				T	0.0	0.0	2.552	
Hellkson, Mary	Student	LEF. Measure of liver blood flow in dogs by radioisotope disappearance and electromagnetic flow meter determination				T	36.8	22,880	0.946	
Jacobs, Beverly	Student	COMPUTE. Thesis research project on mechanism of insulin action.				T	44.6	13,792	0.668	
Jan, Wesley	Student	NOMAN. Information processing, storage, retrieval and display for students' research on enumerating a minor cell population by fluorescent techniques.				T	142.4	51,848	2.405	
Lenssen, Barbara	Student	INFANTS. Analysis of data for doctoral dissertation on infants' fear of strangers.				T	15.8	3,632	0.030	
Levine, Rodney	Student	CPS. Clarification of mechanisms of pyrimidine synthesis in mammals and the relationship of that synthesis to the control of cellular proliferation.				T	48.1	26,509	3.926	
Lipp, Martin	Student	MEDEPOT. Survey of marijuana use among medical personnel.				T	19.9	6,382	17.968	
Mesover, Gerald	Student	MYCOPLAS. Amino acid analysis of media used for growth of mycoplasma and tissue culture cells.				T	12.7	3,450	0.023	
Miller, Craig	Student	CAB. Development of risk/benefit guidelines for saphenous vein - coronary artery bypass surgery.				T	26.1	17,646	0.366	
Miller, Stephen	Student	LEARN. Analysis of data from an ANGER scintillation camera in connection with kidney blood flow studies; computer diagnosis of liver and cardiac disease.				T	53.9	29,779	7.467	
Mischak, Ronald	Student	HISTOCOM. Evaluation of data from gamma counter on per cent cytotoxicity in cell suspensions exposed to a variety of developed antisera against thymus and brain determinants.				T	0.1	0.023	0.016	
Mobley, William	Student	NEOCOMED. Statistical analysis for thesis project on proteins; storage of research notes and data, edited class notes and references.				T	0.2	0.048	0.004	

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INVESTIGATOR	DEPARTMENT/ INSTITUTION	PROJECT TITLE	DIRECT GRANT OR CONTRACT SUPPORT		BRR Cate- gory*	AMOUNT OF USAGE - TIME SHARING CENTER	
			Identification Number	Agency		Terminal Access Hours	Page-minutes/K* (Blocks=24 Bytes)
Category 4 (cont'd.)	Medical Students (FREE)						
Keff, Nicola	Student	POLYRIBO. Extraction of polyribosomes and ribosomes from human fibroblast cells in culture to determine relative proportions and quantify throughout cell life culture.			T	19.5	@ \$.01 per page-minute 10.027 @ \$.10 per block 0.358
Hestor, Larry	Student	DIFFDX. Establishment of computer program to aid in differential diagnosis.			T	66.3	33.686 1.545
Nela, Gaston	Student	DIGMT. Effects of several drugs on hemodynamic parameters in dogs.			T	23.4	6.048 1.032
Huwer, Marc	Student	NEJRON. Modeling of interactions of groups of neurons.			T	0.1	0.016 0.027
Ocell, Robert	Student	CIS. Inactive			T	0.0	0.0 0.024
Peters, John	Student	BIOSTAT. Evaluation of residuals and outliers in parallel line assays and their effect on statistical analysis of clinical data.			T	1.2	0.245 0.006
Peterson, Daniel	Student	MODELIN. Formulation of comprehensive model for insulin metabolism in the human body.			T	71.2	44.729 1.425
Pope, Stephen	Student	AVZ1011. Cardiovascular function parameters of various pharmacologic agents.			T	0.3	0.053 0.332
Propper, Richard	Student	TESTL. Study of inter-relationship of angiogenesis and glucomedogenesis in the perfused rat kidney.			T	0.0	0.0 0.040
Raybin, Daniel	Student	ASSAYS. Calculation of enzyme assays and enzyme kinetics.			T	82.6	24.074 0.599
Posenfeld, Ron	Student	CCJPSYCA. Study of psychophysiological adaptation of male patients to the Coronary Care Unit.			T	0.0	0.0 0.024
Posenthal, William	Student	RESEARCH. Auditory processing in language deviant children; longitudinal study and follow-up of language deviant children.			T	20.2	5.516 0.744
Sachs, David	Student	POPCIT. Statistical analysis of questionnaires completed by newspaper reporters and editors on their attitudes and orientations toward environmental health issues.			T	197.4	80.769 13.766
Sack, Robert	Student	MASOCH. Item analysis of questionnaire to determine which questions best discriminate between normals and psychiatric patients; also cluster analysis for internally correlative items.			T	5.4	1.147 0.019
Saffir, Arthur	Histochemistry	ORALBIOL. Computer instruction in biostatistics for dental students.			T	40.6	14.492 0.454

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							Terminal Hours	Block Storage (Blocks) x bytes	@ \$.10 per block
Category 4 (cont'd.)	Medical Students (FREE)						@ \$.01 per page/minute	@ \$.10 per block	
Scandella, Carl	Student	GREASBAL. Study of modifications in the chemical structure of the cytoplasmic membrane of bacteria induced by viral infection.				T	0.034	0.735	
Schwartz, Barry	Student	CELLCOUN. Analysis of Coulter Counter data for study of aging process at cellular level.				T	0.786	0.005	
Sethi, Sarvan	Student	ISOTOPE. Replication of rhinoviruses in cell cultures.				T	0.086	0.634	
Siever, Larry	Student	GRADIENT. Study of gradients of biogenic amines in the spinal cord cerebrospinal fluid.				T	4.182	0.012	
Sinclair, Allen	Student	HEARTCEL. Measurement of intervals between beats of individual heart cells and administration of drugs to cells to change environmental conditions.				T	0.801	0.410	
Spinelli, Nico	Psychiatry	COMBIOL. Class account for "Computers in Biology and Medicine."				T	7.431	0.027	
Sproul, Myrna	Student	FETAL. Data analysis for thesis project on relationship of maternal corticosteroids to the development of the fetal hypothalamic-pituitary-adrenal axis.				T	0.063	0.004	
Swanston, George	Student	THESIS. Interpretation of therapeutic drug action on respiratory control.				C	394.999	17.322	
Thomas, Hank	Student	AC DISP. Real time game putting players under pressure to make operational and economic decisions under a time constraint.				T	0.280	0.192	
Wiskocil, Robert	Student	ULTRA. Study of enzyme mechanism of tryptophan synthesis using equilibrium dialysis technique.				T	0.0	0.012	
Unknown Users	Mostly Students	SCRATCH. Minor use of the system without data storage.				T	298.525	0.285	
					SUB-TOTAL		1437.332	128.300	
Category 5 Realtime (FREE)	Core Research (FREE)						@ \$.005 per page/minute	@ \$.10 per block	
Reynolds, Walter	Genetics	DREAMS. DENDRAL: Mass spectra analysis and interpretation.				Cor	3.398	11.505	
Ross, Robert	Chemistry	CHEM. DENDRAL: Mass spectra analysis and interpretation.				Cor	1.646	9.885	
Sere, Hiram	SUH - Pharmacy	ALERT. Drug Interaction project, hospital pharmacy service.				Cor	0.0	0.002	

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INVESTIGATOR	DEPARTMENT/ INSTITUTION	PROJECT TITLE	DIRECT GRANT OR CONTRACT SUPPORT		BRR Cate- gory*	AMOUNT OF USAGE - TIME SHARING COMPUTER			
			Identification Number	Agency		Current Annual Amt.	Terminal Access Hours	Pageminutes/(K) (Block Storage (K) Block Storage (K))	@ \$.10 per block
<u>Category 5 (cont'd. Realtime, Core Research (FREE))</u>									
Stillman, Robert	Chemistry	DREAMS. DENDRAL: Mass spectra analysis and interpretation.			Cor		39.3	18,333	6.292
				SUB-TOTAL			56.7	23,377	26.684
<u>Category 6 Non-Realtime, Core Research (FREE)</u>									
Cohen, Stan	Clinical Pharmacology	DRUGALERT. Computerized system to warn of interactions of drugs administered to patients.			Cor		972.5	786,461	68,211
Lederberg, Joshua	Genetics	PILOT1. Demonstration programs.			Cor		313.2	145,141	24,613
Lederberg, Joshua	Genetics	PILOT2. System testing and monitoring.			Cor		139.9	64,494	9,031
Reynolds, Walter	Genetics	DENDRAL: Mass spectra analysis and interpretation.			Cor		80.9	103,498	1,496
Koss, Robert	Chemistry	DENDRAL: Mass spectra analysis and interpretation.			Cor		146.2	181,503	2,783
Stefik, Mark	Genetics	DENDRAL: Mass spectra analysis and interpretation.			Cor		130.1	69,335	1,919
Stillman, Robert	Chemistry	DENDRAL: Mass spectra analysis and interpretation.			Cor		106.8	95,493	0,998
				SUB-TOTAL			1889.6	1445,925	109,051
<u>Category 7 Staff (FREE)</u>									
Bassett, Robert	ACME	ACMECONS. Applications program development; user consultation.			Cor		600.3	198,308	6,391
Baxter, Erica	ACME	NOTES. Maintenance of ACME Note index and list of user publications.			Cor		45.0	17,416	6,169
Baxter, Erica	ACME	TRAINING. ACME user accounting records.			Cor		32.0	9,627	1,823
Becker, Sheldon	Computation Center	ACME. System development and testing.			Cor		0.8	0,470	0,018
Beebe, Robert	Computation Center	OS. System development and testing.			Cor		0.7	0,300	0,018
Berman, Joseph	ACME	RACME. System development and testing.			Cor		133.0	63,488	11,716
Berns, Robert	ACME	LISP. System development and testing.			Cor		30.5	45,675	3,717
Berns, Robert	ACME	DENDRAL. System development and testing.			Cor		75.4	136,881	14,392

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							Terminal Access Hours	Block Storage (5.662500 Bytes)	
Category 7 (cont'd.)	Staff (FREE)						@ \$.01 per page/minute	@ \$.10 per block	
Briggs, Russell	ACME	RBPPELL. Disc monitor for PDP-11.				Cor	178.4	84.837	9.353
Briggs, Russell	ACME	ACME. System development and testing.				Cor	13.1	3.645	4.565
Brown, Byron	Biostatistics	INTRO. Special course for students to learn to use ACME.				T	59.9	14.364	0.850
Carr, Richard	Computation Center	ACME. System development and testing.				Cor	1.4	0.750	0.002
Class, Charles	ACME	ACME. Operations management; system testing and demonstration.				Cor	5523.5	3061.554	27.943
Copeland, Art	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.040
Cower, Rich	ACME	FLOWERED. Daily operations.				Cor	297.5	110.979	2.816
Crouse, Linda	ACME	CATH LAB. Development of real-time medical applications.				Cor	33.7	8.980	35.572
Feigenbaum, Edward	Computation Center	TOCTEST. System demonstrations.				Cor	0.0	0.0	0.024
Feigenbaum, Edward	Computation Center	DEMOS. System demonstrations.				Cor	0.0	0.0	0.132
Freret, Payne	ACME	LOMA. Development of graphics software.				Cor	193.5	71.457	1.862
Frey, Regina	ACME	ACME. File system testing; consulting programs.				Cor	92.1	42.976	14.944
George, Denise	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.024
Gold, Don	Computation Center	ACME. System development and testing.				Cor	0.4	0.079	0.227
Grauer, Chuck	ACME	ACME. System development and testing.				Cor	86.4	30.889	1.506
Hale, Robert	ACME	TPKG. System development and testing.				Cor	47.2	19.885	1.109
Hu, Jean	ACME	ACME. System development and testing.				Cor	370.0	367.851	9.347
Hurdley, Lee	ACME	ACME. System development and testing; emphasis on real-time data acquisition.				Cor	318.1	122.221	10.817
Jantgaard, Ron	ACME	GOAL. Director's office projects.				Cor	65.0	25.275	4.806
Jantgaard, Ron	ACME	MIJOB. Task management.				Cor	0.0	0.0	0.360
Lederberg, Joshua	Genetics	MEMOPAD. Text editing.				Cor	0.0	0.0	0.861
Lederberg, Joshua	Genetics	MISC. Program development.				Cor	8.2	3.273	6.944
Lederberg, Joshua	Genetics	TESTS. Systems tests.				Cor	45.7	14.086	2.689
Leong, Leon	ACME	WORK. Development of applications program.				Cor	36.1	24.787	0.029
Lev, Ying	ACME	SUMMER. System development and testing.				Cor	104.8	35.532	2.549
Martin, Charles	Computation Center	ACME. System development and testing				Cor	0.3	0.059	0.024
Matheson, Russ	ACME	PI. System development and testing.				Cor	231.0	181.282	2.250

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							Terminal Access Hours	Page/minutes/Block Storage (Block/Block)		
Category 7 (cont'd.)	Staff (FREE)									
Matous, James	ACME	GET. Daily operations.				Cor	8.2	3.618	0.603	
Miller, Stu	ACME	ACME. System development and testing.				Cor	199.0	82.841	2.227	
Montgomery, Richard	Computation Center	KP. Text editing.				Cor	0.0	0.0	0.024	
Moore, James	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.020	
Mozaki, Tom	ACME	ENGINEER. Engineering applications.				Cor	15.9	5.809	1.651	
Csborne, De Wayne	ACME	ENGINEER. Engineering applications.				Cor	18.6	4.715	0.473	
Pearson, Joan	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.020	
Reynolds, Walter	Genetics	HIQ. System development and testing.				Cor	62.1	34.804	3.213	
Richardson, Ruth	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.020	
Rieman, James	ACME	VAT. Daily operations.				Cor	50.6	18.191	0.267	
Sanders, Bill	ACME	ASDDG. Hardware and software development.				Cor	0.7	0.507	2.671	
Sanders, Gary	ACME	CONSULT. User consultation.				Cor	20.2	7.235	1.315	
Sandoval, Charles	ACME	ACME. Daily operations.				Cor	0.8	0.213	0.696	
Scharf, Guy	Computation Center	OS. System development and testing.				Cor	0.0	0.0	0.020	
Stainton, Robert	ACME	SCC. System development and testing.				Cor	23.1	5.229	0.108	
Stubbs, Bert	Computation Center	ENGINEER. Engineering applications.				Cor	0.0	0.0	0.024	
Sutter, Jan	ACME	ACME. Daily operations.				Cor	95.9	21.643	8.509	
Tice, Bernie	Computation Center	ACME. System development and testing.				Cor	0.0	0.0	0.020	
Tribolet, Chuck	ACME	CAL. Development of computer-aided instruction for teaching PL/ACME.				Cor	110.0	43.776	0.793	
Vallee, Jacques	Computation Center	DIRAC2. Automation of Stanford Blood Bank.				Cor	0.0	0.0	0.008	
Vantassel, James	ACME	TEST. Daily operations.				Cor	12.7	3.080	0.120	
Weyl, Steve	ACME	SWEYL. Applications program development.				Cor	40.3	24.094	0.046	
Whitner, Jane	ACME	STATISTI. Statistical program development.				Cor	493.4	217.913	6.854	
Whitner, Jane	ACME	STATTEST. Statistical program development.				Cor	0.0	0.0	0.732	
Wholey, Anna	ACME	ACME. Development of applications programs.				Cor	0.0	0.0	0.012	
Wiederhold, Gio	ACME	TEST. System testing.				Cor	175.0	83.978	9.031	
Wiederhold, Gio	ACME	USAGE. Usage statistics, accounting and yearly reports.				Cor	0.4	0.093	8.724	

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							Terminal Access Hours	Page/minute(K) Block Storage(K)	Block Storage(K) Block Storage(K)
<u>Category 7 (cont'd.) Staff (FREE)</u>									
Wiederhold, Gio	ACME	CSMP. Continuous system modeling program development.				Cor	0.4	0.081	4.163
Wiederhold, Gio	ACME	DEMO. Demonstration for ACME visitors.				Cor	65.6	17.539	4.164
Wiederhold, Voy	ACME	MANUAL. Maintenance of PL/ACME Manual.				Cor	97.9	43.985	20.369
Wilson, Don	ACME	ACME. Development of real-time medical applications.				Cor	0.0	0.0	1.964
ACME Staff	ACME	J&PUBLIC. Development and storage of PUBLIC files.				Cor	51.7	15.821	9.107
ACME Staff	ACME	I GRAPH OPS. Graphics development.				Cor	0.5	0.182	0.845
ACME Systems Staff	ACME	PROGRAMS. Collection of systems programs.				Cor	23.3	9.815	0.516
IBM Customer Engineers	IBM	I CE TERMDIAG. Terminal testing and diagnosis.				Cor	112.0	30.590	0.830
PL/ACME Classes	ACME	PLACME. Practice programming for PL/ACME classes.				T	315.7	114.172	1.764
							10618.0	5486.790	277.832
<u>Category 8 Hospital Data Processing (CHARGEABLE)</u>									
Barber, Vic	SUH - Data Processing	SUHDP. Accounting.		Hosp. Funds		S	1.8	0.523	0.036
Boyle, James	SUH - Clinics	CBO. Accounting.		Clinic Budget		S	344.9	294.220	18.556
							346.7	294.743	18.592
<u>Category 10 Realtime, Pilot and Pending Proposal (FREE)</u>									
Borison, Scott	Cardiovascular Surgery	FLOW. Simulation of physiological properties.				S	0.2	0.104	0.048
Bunnenberg, Edward	Chemistry	CHEM. Development of a magnetic circular dichroism biotechnology resource.				S	178.7	205.367	3.421
Kadis, Leslie	Anesthesia	VISAEP. Visual average evoked potential to graded light intensity as a correlate of pain threshold.				C	67.5	56.045	0.280
Roth, Walton	Psychiatry	AER. Research into computer processing of EEG data.				S	29.4	18.831	0.662

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Category 10 (cont'd.) Realtime, Pilot and Pending Proposal (FREE)									
Sussman, Howard	SUR - Clin. Lab. Pathology	LABENG. Connection of a large analysis instrument in the Clinical Laboratory to the 1800 for data collection.				S	60.9	15,404	0.159
							SUB-TOTAL	295,751	4,570
Category 11 Non-Realtime, Pilot and Pending Proposal (FREE)									
Belt, Donald	Otolaryngology	HEAR. Collection and processing of hearing loss data.				S	2.4	0.539	0.036
Bunnenberg, Edward	Chemistry	CHEM. Development of a magnetic circular dichroism biotechnology resource.				S	52.3	27,754	4.185
Butler, Edmund	Urology	UROSTATS. Urology operative statistics information and retrieval program.				S	9.6	7,254	0.833
Cavalli, Luca	Genetics	PAVIA. Population genetics: evolutionary rate, patterns of inheritance in behavioral traits, analysis of record linkage and pedigree information.				S	126.4	64,750	2.467
Costell, Ronald	Psychiatry	AHSSO. Analysis and statistical testing of factors of significance in the sexual histories of sex offenders.				S	14.0	3,688	0.383
Eddy, David	Engineering	NIFFTY. Use of a Markov model of coronary artery disease for optimum treatment decision.				S	12.0	4,854	0.046
Goldstein, Avram	Pharmacology	OFFETUFF. Study of methadone maintenance program for heroin addicts.				S	38.4	53,662	1.137
Leideman, P. Herbert	Psychiatry	KENYA. Analysis of data collected in Kenya, relating the effect of social structure of primary family on infants' social attachments in the first year of life.				S	57.7	20,818	1.231
							SUB-TOTAL	183,319	10,378
Category 12 Realtime Extended Non-Funded (FREE)									
Cañy, Paxton	Psychiatry	THYROID. Study of the relationship between stress and a partial genetic defect in thyroloid function.				S	0.0	0.0	12.212
Constantinou, Christos	Urology	UROL. Investigation of upper urinary tract physiology.				C	394.1	237,597	2.537
Govan, Lucian	Urology	PARAGUAD. Urologic evaluation management and clinical follow-up of patients with spinal cord injury or disease.				S	0.0	0.0	0.281
							SUB-TOTAL	237,597	15,030

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Category 13	Non-Realtime, Extended Non-Funded (FREE)								@ \$.10 per block
Cann, Howard	Pediatrics	DTS/GUAT. Population genetics studies of Mayan Indians of Guatemala.			SUB-TOTAL	S	2.8	0.701	1.603
							2.8	0.701	1.603
Category 16	Combination of Core Research and Application (CHARGEABLE)								@ \$.10 per block
Sera, Hiram	SUH - Pharmacy	ALERT. Drug Interaction Project, hospital pharmacy service.	--	Hosp. Funds	--	S	1876.1	3077.508	30.317
					SUB-TOTAL		1876.1	3077.508	30.317
Category 2	Non-Health-Related Users (CHARGEABLE)								@ \$.10 per block
					SUB-TOTAL		1374.8	564.419	26.803
					GRAND TOTAL		40391.5	25317.306	1349.403
					Number of Projects				
		Core Research and Development			80		12188.7	6827.556	410.953
		Collaborative			20		7873.9	5578.912	253.218
		Service			165		15395.0	10994.833	541.002
		Training			72		3559.1	1351.586	117.427
		SUB-TOTAL			337		39016.7	24752.887	1322.600
		Non Health-Related Research			32		1374.8	564.419	26.803
		GRAND TOTAL			369		40391.5	25317.306	1349.403

Time scheduled for users 6595 hrs.
 Time not available to users due to failures 112.3 hrs.
 Percentage of scheduled time not available to users 1.7 %

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HHOG-1 Cable Voltage Levels for the Sanders (Cower)
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HWEA-1 Summary of Western Electric (Telephone Company)
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NOV 5, 1971
- J37 User Note: Performance Tests on New Bulk Core, New
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NOV 18, 1971
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DEC 21, 1971
- J39 User note: Seminar on Time-Oriented Medical Records,
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Printing and Punching Services, Double Precision
Argument Bug, New Show Command: SHOW DSOPEN (Staff)
FEB 7, 1972
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CATALOG PUBLIC, Fast Fourier Transforms,
Antilogs (Staff) FEB 28, 1972
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Reassignment of Gio Wiederhold, New ACME Note Index,
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WPDP-1 Disk Monitor for the PDP-11 (Briggs) JUN 21, 1971

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WPDPB-1 Using the Litton Printer On ACME Through the PDP-11 (Briggs) AUG 13, 1971

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XPL-1 Inferred Syntax and Semantics of PL/S (Wiederhold/Ehrman) OCT 15, 1971

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ZM-1 Flow Chart for ACME System Program MODIFY (Berman) JAN 10, 1972

ZPICK-2 PICK Flowchart and Tables (Berman) JAN 10, 1972

ZYL-1 Flow of Light Logic in YIELD (Wiederhold) DEC 15, 1971

APPENDIX A

Summary of Campus/ACME Merger Study

The study of this potential merger has been limited to five specific areas:

- The capacity of the 360/67 to absorb the ACME load;
- An overview of services and cost considerations;
- A brief statement of the planned changes to the Campus Facility;
- A list of relative advantages and disadvantages of such a merger; and
- Comments on cost comparisons.

There follows a summary of considerations in these five areas.

360/67 Capacity:

In July a test was conducted to determine whether the 360/67 timesharing monitor called ORVYL could handle its current load plus ACME's current load plus the anticipated load associated with the new information retrieval system called SPIRES. The test indicated that the 360/67 had adequate cycles and performance capability to handle the anticipated SPIRES load plus a substantial ACME load based on current ACME usage levels. The 360/67 has considerable unused capacity today. The test of ORVYL capacity demonstrated that a considerably heavier load could be handled with acceptable degradation and response times to the user. The test did tax the capability of the system with respect to its paging system on the drums; but this was fully expected. The ACME portion of the test appeared to consume approximately 29 per cent of the 360/67 cycles. The simulation of the ACME load consisted of a series of FORTRAN routines which would require cycles corresponding to approximately 15 users in execution on the current ACME hardware (360/50 with 2 megabytes of 8 micro-second bulk core).

Overview of Service and Cost Considerations:

The Campus Facility provides the following services: production batch service, quick partition batch service, timesharing in at least three languages, text editing, (one of the best found anywhere), plotting, and remote job entry. Many languages are supported in the production batch partition. Rates for use of the system have been designed to remove administrative fiat with respect to scheduling of resource utilization. Thus, priority can be obtained by any user who is willing to pay a fee. No realtime support services are offered at the present time, although there is limited small machine support through the PDP-9.

Card readers are handled by both computer operators and users. Fast printing service is available and normally the turn around time is extremely good (a few minutes). Terminal services are normally offered between 8 a.m. and 1:00 a.m. except for brief periods of system staff time from 5 to 8 p.m. three days per week, plus some system time on weekends.

Comments On Planned Changes:

The Campus Facility is likely to acquire some new hardware by January 1973. The new hardware could either replace existing systems or could supplement them. For example, a fast batch engine could be acquired to support the current 360/67 services. It is essential that any potential hardware changes in the Campus Facility be capable of demonstrating cost effectiveness. Operations over the past 4 years have led to an approximate \$600,000 deficit. It is hoped that user fees and cost reductions over the next couple of years can remove the deficit. The Campus Facility anticipates having the SPIRES Information Retrieval System operating for users within the next year. This new service will fill a major need. The library automation system BALLOTS developed in the environment provided by SPIRES and ORVYL is being developed and has the University Large Library Commitment. Some of the planned changes on the 360/67 entail optimizing the systems which are presently run there. A major new service to be offered by the Campus Facility will be an interactive version of a subset of the PL/1 language. This will be especially interesting to users of the current ACME system.

Advantages of Potential Merger:

- 1) Availability of an increased range of services to the Medical School users, including batch service and additional languages;
- 2) Participation in the system which the University is committed to support would increase the financial support available for computing. The University Computing Fund used for unsponsored research and student computing has been running approximately \$700,000 per year. The Medical School use of such funding has been limited to approximately \$15,000 per year, primarily due to the availability of ACME. The University's Computing funds have been declared to be unavailable for use on the ACME system since the primary focus of the University must rest with the support of a central system;
- 3) Data bases could be easily shared among various disciplines within the University;
- 4) The new SPIRES Information Retrieval facility would be available to medical users;
- 5) The service center would not be totally dependent upon one source of funding such as NIH with respect to medical funding. Thus it would be less sensitive to use by a single group of users;
- 6) There may be long term advantages associated with economy of scale with respect to hardware, staffing, and physical plant;
- 7) The Medical School would not have to assume full financial responsibility for a sizable computing facility such as ACME; the risk would be shared among all schools within the University for a central facility.

Disadvantages of the Potential Merger:

- 1) The realtime services which already exist on the ACME system do not exist on the Campus Facility. ACME is currently attempting to develop a real time support system which would be host-machine independent. Campus Facility may add it as a service.
- 2) ACME type service has a strong personal relationship quality which may be more difficult to attain in a system shared by several thousand users;