COMPUTING FACILITY MONTHLY ACTIVITIES REPORT

May 1976

New Staff

G.W. Walters began 17 May as a programmer with the Data Analysis Group. S. Ladd, in addition to her half-time regular position, accepted the temporary half-time secretarial position for four months.

Paper Submitted

Swarztrauber, P.N. and R.A. Sweet: Efficient FORTRAN subprograms for the solution of elliptic partial differential equations. ACM Trans. Math. Software.

Remote Job Entry

See current list attached.

New Computer

Wednesday, 12 May, the contract for a new fifth generation computer was awarded to Cray Research, Inc., of Minneapolis, for delivery of a CRAY-1 computer to NCAR on 1 July 1977.

Seminars

An ATD/Computing Facility Seminar on Computer Graphics at NCAR through 1985 was given by T. Wright, 12 May.

D.Oye spent 14 May at a refresher course on interviewing job applicants and K. Penner and A. Trujillo attended a three-day seminar on supervisory skills. Both were presented by Mountain States Employers Council and held in Denver.

B. Chavez and C. Velie attended an American Management Association seminar on Self Improvement and Interpersonal Skills Development for Secretaries, 19-21 May in Denver.

Systems

The red system tape with the MSD and mods to use eight disks was installed 10 May. The disk subsystem was modified to allocate larger blocks of space. This was done to avoid a major revision of PPU code for handling space block numbers greater than a PPU word. It also would tend to reduce seeks on the files. The red system had a number of errors including two that caused gross system instability on 10-12 May. The first was a result of the PPU code revisions that prevented proper recognition of disk errors. The second caused the TLIB and job recoveries to malfunction. By the end of the week some less catastrophic TLIB problems remained, namely the backspace file which failed to operate properly and users of a large number of files on a single volume got diagnostics. By 18 May recovery of jobs and TLIB across system starts was repaired and disk errors are handled correctly. The backspace file has been fixed for some, but not all, cases. Revisions are underway to allow the system to accommodate large numbers of files and remember BK parameters initial values. Also, the dead start procedure is undergoing modification to allow easy removal of failing 819 disks.

In the Front End and Remote Job Entry area, Dave Robertson is working on the statement of work for a front end switch machine. The Incoterm terminal is scheduled to ship on 9 July. Greg Eitzen has held operator and University Liaison training on the technical control station. Greg has been cleaning up the MODCOMPII restart procedure. He has also made a number of changes in MODCOMPII software, including more site tables and password update modes to allow passwords for new sites.

A TMS-4 review was held on 25 May. The project is coming along slowly due to air compressor, channel interface, and staffing problems.

The high pressure air compressor uses two units. Each was to operate on an eight-hour duty cycle. In an effort to reduce noise, these units were enclosed in an insulated box that could not dissipate the heat, although very effectively silencing the operating unit. When one unit partially failed, the other could not operate full time while the first was repaired. The noise level has been measured with the side panels removed to allow better air circulation and this temporary solution is within OSHA specifications. Ampex is now redesigning the unit.

The channel interface hardware/software has undergone a large number of modifications to allow either system to fail to respond and then recover gracefully.

7600

The majority of the 7600 computer system was converted to purchase 14 May.

Data Analysis

During May we supported a number of NCAR projects and sent data to:

1. Grid sea level pressure data averaged by months to J. Ingraham, Marine Fisheries. Tape to Washington, D.C. will be used from Seattle.

2. Daily tropical grid data for U, V, and Temperature to W. Chiu, University of Hawaii for 1968-1976. Four tapes.

3. Print of NMC data in the Atlantic-US area for F. Sanders and N. Gordon, MIT, to study four hurricane cases, June-Oct 1975.

4. Copies of NCAR S. Hemisphere climatology tape and of a RAND climatology tape to L. Bengtsson, European Medium Range Forecast Center, England.

5. NMC grid analyses at 850 through 200 mb, N. Hem and tropics, 1 Oct 73 through 30 Sep 74, for S. Kao, University of Utah. One tape.

6. Five tapes of daily NMC analyses for selected periods 1965 through 1972. 1000 to 100 mb to G. Chen, Taiwan University.

7. Went through 20 tapes of US controlled rawinsonde data to extract data for three 7-day periods in 1962, 1966, 1971. For Lance Bosart, State University of New York, Albany. One tape.

8. CSU is using four tapes of our US time series raobs over the terminal. R. Rhea.

9. CSU is using N. Hem and S. Hem climatology tapes over the terminal. J. Ellis.

10. FSU is using our NMC daily global analysis grids and observed data for the GATE period.

Travel

S. Patterson traveled to Livermore, CA, 18-21 May, to sit on an Energy Research and Development Administration Review Panel for the National Controlled Thermonuclear Fusion Research (CTR) Computer Center.

S. Patterson, P. Rotar, and G. Schumacher traveled to Minneapolis, 26-28 May, to discuss hardware/software schedules and progress with Cray Research, Inc.

D. Fulker traveled to New York, 23 May, to attend a Control Data Advanced Technology Seminar on Effective Management of Data Processing Projects.

R. Jenne attended meetings in Washington, D.C., 3-4 May, to discuss U.S. positions and other problems of concern to the FGGE data management meeting in Geneva. He then attended the Geneva meetings on 13-18 May as a member of the United States delegation. Plans were written that describe the data flow and processing during FGGE.

Visitors

L.C. Just and J. Dongarra from Argonne National Laboratory, Chicago,
visited the Computing Facility, 24 May.

M. Telian, Advanced Technology Department Manager of Ampex Corporation,
visited the Computing Facility, 25 May.

	TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
12	HAO	Boulder, Colorado	Ben Domenico	Mode: Multiple Line: Leased 4800 baud Protocol: 200UT Hardware: UT/200 CDC	Bill Curtis 303-494-5151, x381
13	CSU (Leased)	Fort Collins, CO	Marie Working	Mode: Single Line: Leased 4800 baud Protocol: 200UT Hardware: UT/200 CDC	T.H. Vonder Haar 8-0-491-8566
14	TWERLE		Marie Working	Mode: Multiple Line: Leased 7200 baud Protocol: Special-one way data Hardware: CDC 160A	
15	NMC		Marie Working	Mode: Multiple Line: Leased 2400 baud Protocol: Special-one way data Hardware: IBM 360/40	
16	Internal Site for Test Jobs and Dumps			Mode: Multiple Line: Dial 2000 baud Protocol: BSC 2780 Hardware: None	
20	CSU (Dial)	Fort Collins, CO	Marie Working	Mode: Multiple Line: Dial 2000 baud Protocol: synch. U200 Hardware: UT/200 CDC	T.H. Vonder Haar 8-0-491-8566
21	MIT	Cambridge, Mass.	Russell Rew	Mode: Single Line: Dial 2000 baud Protocol: synch. U200 Hardware: DEC PDP-11	Steve Orszag 8-835-4987
22	Scripps	La Jolla, Calif.	Jeanne Adams	Mode: Single Line: Dial 2000 baud Protocol: synch. U200 Hardware: UT/200 (old) and COPE 1200	Myrl Hendershott 8-895-5000 (FTS) 452-2230

	TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
23	Johns Hopkins	Baltimore, MD.	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: synch. U200 Hardware: Data 100	Mike Karweit 8-920-3311 (FTS) 366-3300, x619
24	U. of MIchigan	Ann Arbor, Mich.	Ben Domenico	Mode: Single Line: Dial 2000 baud Protocol: synch. U200 Hardware: DEC PDP-8	Roland Drayson 8-764-7210
25	University of Miami	Miami, Florida	Marie Working	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: COPE 1200	Hank Poor 305-284-2335
26	Harvard Univ.	Wm. James Hall Cambridge, MA	Russell Rew	Mode: Single Line: Dial 2000 baud Protocol: 200UT Hardware: COPE 1200, REMCON	Joel Hirsh 8-830-2899
27	Nova University	Dania, Florida	Marie Working	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: IBM 1130	Alex Brincko 8-350-5011 (FTS) 927-1621
28	Various Vendors			Mode: Single Line: Dial 300 baud Protocol: async- 80 col. Hardware:	
29	U. of Washington	Seattle, WAsh.	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: UT/200 CDC	Peter HObbs 8-392-6026 (FTS)
30	Florida State Univ.	Tallahassee, FL	Marie Working	Mode: Single Line: Dial 2000 baud Protocol: 200UT Hardware: UT/200 (later MODCOMPII on CDC 6500)	Steve Blumsack 8-946-2011 (FTS) 644-2580

TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
31 Texas A&M Univ. #1	College Station, TX	Jeanne Adams	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: DEC PDP-11	Steven Rountree 8-522-2520
32 NCAR #1		Jeanne Adams	Mode: Single Line: Dial 300 baud Protocol: async-80 column Hardware: TI Silent 700	
33 U. of Chicago	Chicago, Illinois	Ben Domenico	Mode: Single Line: Dial 1200 baud Protocol: async-80 column Hardware: GE Telenet	George Platzman 8-383-8121
34 U. of Virginia	Charlottesville, VA	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: Unitech UT-1	Roger Pielke 8-925-2011 295-6709
35 INACTIVE			Mode: Line: Protocol: Hardware:	
36 Penn State	University Park, PA	Gary Aitken	Mode: Single Line: Dial 2000 baud Protocol: 200UT Hardware: Data 100	Thomas T. Warner 8-455-0478
37 INACTIVE			Mode: Line: Protocol: Hardware:	
38 Cornell Univ.	Ithaca, New York	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: synch. 200UT Hardware: Unitech Computer	Dr. R.L. Ferch 8-882-5050 (FTS)

TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
39 U. of Wisconsin	Madison, Wisc.	Marie Working	Mode: Multiple Line: Dial 201A 2000 baud Protocol: sync-UT 200 Hardware: Data 100	Bill Massman 8-262-1023
40 Stanford Univ.	Stanford, Calif.	Russell Rew	Mode: Single Line: Dial 1200 baud Protocol: async-80 column Hardware: HP2115 (8K core)	Robert Helliwell 8-905-497-3582
41 Woods Hole Inst.	Woods Hole, Mass.	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: sync-U200 Hardware: HP2100	Peter Rhines 8-223-2100 548-1400
42 Jeffco	Boulder, Colo.	Ben Domenico	Mode: Single Line: Dial 300 baud Protocol: async-80 column Hardware: TI Silent 700	Carl Beck 8-303-494-5151, x7832
43 Atlanta Univ.	Atlanta, Georgia	Jeanne Adams	Mode: Multiple Line: Dial 2000 baud Protocol: 200UT Hardware: IBM 1130	Louise Morrison 8-285-0111 (FTS) 404-525-1501
44 Univ. of Illinois	Urbana, Ill.	Ben Domenico	Mode: Single Line: Dial 2000 baud Protocol: bisync. 3780 Hardware: IBM 3780	Harry T. Ochs, III 217-333-7383
45 Inactive			Mode: Line: Protocol: Hardware:	
46 NASA Ames Research Center	Moffett Field, CA	Jeanne Adams	Mode: Single Line: Dial 2000 baud Protocol: 200UT Hardware: Westinghouse 2550	Richard E. Young 8-448-5593

TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
47 Texas A&M Univ. #2	College Station, TX	Jeanne Adams	Mode: Single Line: Dial 2000 baud Protocol: 200UT Hardware: DEC PDP-11	Andrew Vastano 8-522-7432
48 South Dakota School of Mines	Rapid City, S.D.	Ben Domenico	Mode: Single Line: Dial 300 baud Protocol: async.-80 column Hardware: Techtran 4100 w/ TI Silent 700	Harold Orville 605-394-2291
49 Univ. of Texas	Austin, Texas	Jeanne Adams	Mode: Single Line: Dial 300 baud Protocol: async. 80 column Hardware: TI Silent 700	Alan Cline 512-471-3712
50 Bureau of Reclamation	Denver, Colorado		Mode: Single Line: Dial 300 baud Protocol: async- 80 column Hardware:	Loren Nelson 234-3127
51 NCAR #2	30th St., Rm. 243	Ben Domenico	Mode: Single Line: Dial 2000 baud Protocol: BSC 2780 Hardware: NOVA	Vic Borgogno 494-5151, x77-722
52 Columbia University	Palisades, N.Y.	Gary Aitken	Mode: Multiple Line: Dial 2000 baud Protocol: 200 UT Hardware: IBM 1130	Ted Baker 914/359-2900, x329
53 Utah State Univ.	Logan, Utah	Ben Domenico	Mode: Single Line: Dial 300 baud Protocol: async-80 column Hardware:	Ronney Harris 801/752-4100, x7879, 7870
54 Argonne Nat'l Lab	Argonne, Illinois	Russell Rew	Mode: Single Line: Dial 2000 baud Protocol: 200 UT Hardware: Varian 73	Louis C. Just 8-388-4248

TERMINAL SITE	LOCATION	UL CONTACT	EQUIPMENT	TERMINAL SCIENTIST
55 NCAR #3	30th St.	Ben Domenico	Mode: Single Line: Dial 300 baud Protocol: Async-80 column Hardware: TI Silent 700	

COMPUTER RESOURCES GRANTED DURING MAY

Scientist	*Title*	*CRU Approved*
Wayne H. Schubert CSU	Parameterization of tropical and subtropical convection	5,000
Ralph J. Cicerone University of Michigan	Stratospheric photochemistry and transport	9,000[1]
Ronney D. Harris Utah State University	Tropical F-Region nightglow enhancement	4,000[1]
Larry W. Esposito University of Massachusetts	Markov chain radiative transfer calculation	7,800
Steven Langer Stanford University	X-ray scattering in solar flares	700[1]

[1]*Extension to previously approved project.*

APPLICATIONS RECEIVED IN MAY 1976

Scientist	*Title*	*CRU Requested*
Larry W. Esposito University of Massachusetts	Markov Chain radiative transfer calculation	7,800
Lance W. Jayne MIT	Stratified flow past cylinder	20,000
Yoshi K. Sasaki University of Oklahoma	Variational data assimilation	15,000[1]
Cha-Mei Tang Hui MIT	Numerical simulation of fluid flows in spherical geometry	24,000
Jerome Namias/Tim Barnett Scripps Institute	Short term climate prediction and associated research	9,000
Bernice Ackerman Illinois State Water Survey	Urban boundary layer experiment	20,000
_onney D. Harris Utah State University	Tropical F-Region nightglow enhancement	4,000
Ralph J. Cicerone University of Michigan	Stratospheric photochemistry and transport	9,000[1]
A.C. Vastano/E.N. Barnard Texas A&M	Investigation of Tsunami response spectra in the Hawaiian Islands	54,000
Steven Langer Stanford University	X-ray scattering in solar flares	700[1]
Edward Ott Cornell University	Simulation of Type I ionospheric turbulence	6,000
Jean-Louis Fournier (with S. Corrsin) Johns Hopkins University	Cellular motion in shear flow	16,000

[1] *Extension to previously approved project.*