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OENVER WATER DEPARTMENT SCIENTIFIC COMPUTER USERS NEWSLETTER

APR., 1978

UNIVAC LLUG/EL AVAILABILITY

EFFCCTIVE MONDAY, APRIL 17, THE AVAILABILITY OF THE UNIVAC 1100/21 WILL BE EXTENDED TO ACCOMBDATE COMPUTER USERS WHO BEGIN WORK AND 7:00 AM. THE NEW SCHEDULE IS:

MUN, WED-FRI 7:00 AN TO 7:00 PM TUESDAY 8:00 AM TO 7:00 PM

REQUESTS FOR WEEKEND COMPUTER SERVICE MUST BE MADE. BY WEUNESDAY, 4:00 PM., TO NORM RINEY AT EXT. 290. REQUESTS FOR COMPUTER USE AFTER 7:00 PM MUST BE MADE BY 3:30 THE SAME DAY.

SCUG MEETING

AT THE APRIL SCUG MEETING, MIKE POTHBERG PRESENTED PLANNING'S SLIDE PROGRAM ON POTABLE WATER REUSE. HE POINTED OUT THAT WATER REUSE IN DENVER CAN ONLY TRANS MOUNTAIN WATER WHICH CREATES AN JUNTING PROBLEM WHICH WILL PROBABLY BE HANDLED ATTH COMPUTER PROGRAMS. ANOTHER COMPUTER APPLICATION WILL BE PROCESS CONTROL. MIKE FEELS THAT ADVANCES IN SENSOR TECHNOLOGY ARE NECESSARY FOR EFFECTIVE CLOSED-LOOP PROCESS CONTROL. ALSO, NOPM RINEY EXPLAINED THAT THE DCT-500 TERMINALS WILL BE OPERATIONAL AS SOON AS DATA SETS AND SOME SPECIAL LOUIPMENT FROM UNIVAC ARRIVE AND ARE INSTALLED. A POLL OF THE SCUG REPRESENTATIVES INDICATED THAT BI-MONTHLY MEETINGS ARE IN ORDER THEREFORE, THE NEXT MEETING WILL BE JUNE 8, 1978.

SIGSCI

THE SECOND MEETING OF SIGSCI WAS HELD IN FEBRUARY. THE SPEAKER WAS DR. BURTON SMITH FROM THE UNIVERSITY OF COLORADO AT DENVER. HE SPOKE ON A FAST COMPUTER CALLED "PARALLEL PROCESSOR."

THE NEXT MEETING WILL BE APRIL 27TH RIGHT NEXT DOOR AT THE SPA MOTOR INN. JIM HARGIS, FORMERLY OF COMPUTER GRAPHICS COMPANY, WILL SPEAK ON COMPUTER GRAPHICS HARDWARE FROM THE USER'S VIE*POINT. ANNOUNCEMENTS WILL BE POSTED.

FAST RE-LOAD OF UNLOADED FILES

TO RE-LOAD AN UNLOADED (ROLLED-OUT) FILE, THE USUAL PROCEDURE IS:

das L.A FN.

IF TWO OR MOPE FILES NEED TO BE PE-LOADED, THE USE THE FOLLOWING PROCEDURE IS FASTER AND MORE FICTENT.

GPRI,T FNL., FNE., FNE.

THIS MAY REQUIRE THE OPERATOR TO HANG THE TAPE ONTO THE TAPE DRIVE LESS NUMBER OF TIMES.

SCIENTIFIC COMPUTER USAGE

DURING THE FIRST QUARTER OF 1978, 32 SCIENTIFIC USERS USED 12 TERMINALS (CRT'S) AND RAN 120 SIGNIFICANT PROGRAMS IN ADDITION TO TEXT EDITING AND OTHER SYSTEM OPERATIONS. AT THE END OF THE QUARTER, SCIENTIFIC USERS HAD ABOUT 200 MILLION CHARACTERS OF DATA AND PROGRAMS RESIDING ON DISK. THIS REPRESENTS ONE-SIXTH OF THE TOTAL SYSTEM DISK CAPACITY.

FILES

IF YOU HAVE LARGE AMOUNTS OF DATA STORED AS AN ELEMENT OF A FILE THAT YOU USE MORE THAN ONCE A MONTH, THE WHOLE FILE WILL RESIDE ON DISK TAKING UP ROOM. TO SAVE THE DATA PERMANENTLY WITHOUT COPYING TO TAPE, PUT IT IN A DATA FILE:

THE DATA FILE WILL BE AVAILABLE FOR 30 DAYS AFTER EACH REFERENCE. AFTER THAT YOU MUST ASSIGN IT AND WAIT FOR IT TO BE RE-LOADED FROM A SYSTEM TAPE.

GASG, A DATAFILENAME.

SEE ALSO "FAST RE-LOAD".

COPYING ELEMENTS

COPYING ELEMENTS FROM ONE PROGRAM FILE TO ANOTHER SHOULD BE DONE WITH CARE IN ORDER NOT TO DESTROY THE CONTENTS OF THE FILE THAT IS BEING COPIED INTO.

USING THE FORMAT:

ACOPY,S FN1.,FN2.

A

0

THE PREVIOUS CONTENTS OF FILE FN2. WILL BE KEPT INTACT.

S - FOR SOURCE LANGUAGE ELEMENTS

R - FOR RELOCATABLE ELEMENTS

A - FOR ABSOLUTE ELEMENTS

P - FOR S. R AND A AT THE SAME TIME.

KEEP IN MIND THAT IF AN ELEMENT IN FNI. HAS SAME EXACT NAME AS AN ELEMENT IN FNI., AND THEY BOTH ARE OF SAME TYPE (S,R OR A), THEN THE ELEMENT IN FNI. WILL BE OVERLAYED BY THE NEW ELEMENT FROM FNI.

USING THE FORMAT:

GCOPY FNL . FN2 .

ALL THE CONTENTS OF FNS. WILL BE COPIED INTO FNS. ALL THE CONTENTS OF FNS., BEFORE THE "ACOPY", WILL BE DESTROYED.

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REVISED SCIENTIFIC PROGRAM/SUBPROGRAM LIBRARY DOCUMENTATION ISSUED

A REVISED EDITION OF THE "SCIENTIFIC PROGRAM LIBRARY DOCUMENTATION" HAS BEEN DISTRIBUTED. IT CONTAINS REVISED DOCUMENTATION AS WELL AS SEVEN NEW SUBPROGRAMS:

SYMINY - INVERTS SYMMETRIC MATRICES.

DSYMIN- DOUBLE PRECISION VERSION OF SYMINV.

PTYPE- DETERMINES TYPE OF A RUN, DEMAND OR BATCH (SEE SEPARATE ARTICLE).

SDATES - CALCULATES THE NUMBER OF DAYS BETWEEN TWO DATES.

LINREG- PERFORMS STANDARD LINEAR REGRESSION.

CLABEL- PREPARES OUTPUT LABELS FOR USE IN

OTHER SUBPROGRAMS SUCH AS PPLOT AND

LABEL.

ADJUST - ADJUSTS MAXIMUM AND MINIMUM SCALE VALUES FOR PLOTTING SUBROUTINES. SCALE (LEFT OUT OF LAST EDITION).

PROGRAMS BERTSI AND BERTRI SORT SEVERAL SETS OF DATA AT ONCE. THEY HAVE BEEN REVISED TO FIX THE BUG REPORTED IN FEBRUARY'S SPARKS. THE NEW VERSIONS REQUIRE ANOTHER PARAMETER IN THEIR ARGUMENTS .

ALL SCIENTIFIC USERS ARE ENCOURAGED TO LOOK OVER THIS LATEST EDITION. THE PROGRAMS ARE FOR GENERAL USE AND ARE EASY TO USE. THE SUBPROGRAMS COVER A WIDE RANGE OF APPLICATIONS AND ARE DESIGNED TO BE EASILY USED IN FORTRAN PROGRAMS. USERS ARE ALSO ENCOURAGED TO SUBMIT GENERAL PROGRAMS AND SUBPROGRAMS FOR INCLUSION IN THE SCIENTIFIC PROGRAM LIBRARY.

SIGSCI

THE NEXT MEETING OF THE SPECIAL INTEREST GROUP ON SCIENTIFIC COMPUTING (SIGSCI) WILL BE JUNE 29TH AT THE SPA MOTOR INN. THE SPEAKER WILL BE 50B LEWIS OF MARTIN-MARIETTA. HIS TOPIC WILL BE "STRUCTURED SOFTWARE ENGINEERING . THE LAST MEETING (APRIL) HAD A LARGE ATTENDANCE. JIM HARGIS, FORMERLY OF COMPUTER GRAPHICS COMPANY, SPOKE ON GRAPHICS HARDWARE AND PASSED OUT SOME VERY GOOD HANDOUTS. SIGSCI NOW HAS 37 MEMBERS, \$100 IN THE TREASURY, AND USUALLY 40-50 PEOPLE IN ATTENDANCE AT MEETINGS.

AIR CONDITIONING PROBLEMS

' HONDAY, HAY 15TH, OUR UNIVAC 1100/21 WENT DOWN TO A MEMORY FAILURE. THIS WAS DUE TO INADEQUATE COMPUTER ROOM AIR CONDITIONING WHEN THE OUTSIDE TEMPERATURE WAS IN THE HIGH &@ S. TO TRY AND ALLEVIATE THE LOAD ON THE PRESENT AIR CONDITIONING SYSTEM, EDP SHUT DOWN THE DRUM STORAGE DEVICE. THE NET EFFECT TO THE USER IS

DEGRADED RESPONSE ON THE SCOPES AND SOME PRINTOUT DELAY. PLANS ARE TO HAVE MORE AIR CONDITIONING IN AS SOON AS IT IS RECEIVED AND INSTALLED. YOUR COOPERATION AND TOLERANCE UNTIL THE DEFICIENCIES CAN BE CORRECTED IS APPRECIATED.

UPDATED SIR

WHEN AN OPRT, S IS ATTEMPTED FOR AN OLD ELEMENT, YOU MAY ENCOUNTER THE FOLLOWING MESSAGE:

ELEMENT IS NOT SIR TYPE SOF.

THIS IS BECAUSE THAT ELEMENT WAS CREATED BY AN OLD VERSION OF SIR. SIR STANDS FOR "SOURCE INPUT ROUTINE" AND IS USED BY OUR UNIVAC SYSTEM FOR DATA INPUTS. WE HAVE A NEW VERSION OF SIR ON THE SYSTEM. ALTHOUGH THE ABOVE PROBLEM IS NOT PRESENTLY FATAL, IT IS BEST TO CORRECT THE PROBLEM NOW. IF THE MESSAGE IS ENCOUNTERED, CALL KENT OR TIM TO FIND OUT HOW TO CORRECT THE PROBLEM.

SCIENTIFIC CONSULTING QUESTIONNAIRE

RESULTS OF THE SCIENTIFIC CONSULTING QUESTIONNAIRE ARE IN. THERE IS A GOOD INTEREST IN THE INTRODUCTORY TRAINING CLASSES FROM FALL 1976 ("INTRODUCTION TO THE WATER DEPARTMENT COMPUTER SYSTEM" THROUGH "FLOWCHARTING"), THE FORTRAN COURSES, AND A CLASS ON THE LATEST EDITOR COMMANDS AND TECHNIQUES. THEREFORE, PLANS ARE BEING MADE TO START THE INTRODUCTORY CLASSES THIS FALL .

THERE WAS SOME FEEDBACK THAT SCUG MEETINGS WERE TOO FREQUENT, SO THE MEETINGS ARE BEING HELD BI-MONTHLY. IN ADDITION, THIS NEWSLETTER WILL PROBABLY ONLY BE PUBLISHED BI-MONTHLY. HOWEVER, THERE MAY BE SPECIAL SCUG MEETINGS AND SPECIAL ISSUES OF SPARKS.

SCUG MEETING

THE JUNE SCUG MEETING WAS HELD AT MOFFAT TREATMENT PLANT. PAT SPARKS MADE A PRESENTATION ON MOFFAT'S POP 11/45 PROCESS CONTROL COMPUTER, ITS RELATIONSHIP TO MOFFAT, AND ITS ROLE AT FOOTHILLS. PDP 11/45 NOW OPERATES THE NEW EDITION THE TREATMENT FILTERS AND ALL THE CHEMICAL FEEDERS. THE SYSTEM IS NOT AUTOMATIC -- IT IS UNDER OPERATOR CONTROL. THE OLD TREATMENT FILTERS ARE NOT UNDER COMPUTER CONTROL. AT FOOTHILLS, A SIMILAR COMPUTER WILL CONTROL ALL FILTERS, CHEMICALS, LINE VALVES. AND SETTLING BASIN CLEANERS. THE DEVELOPMENT WORK FOR FOOTHILLS IS BEING DONE ON THE COMPUTER AT MOFFAT. PAT FOLLOWED THE PRESENTATION WITH A TOUR. THE NEXT SCUG MEETING WILL BE AUGUST 10TH.