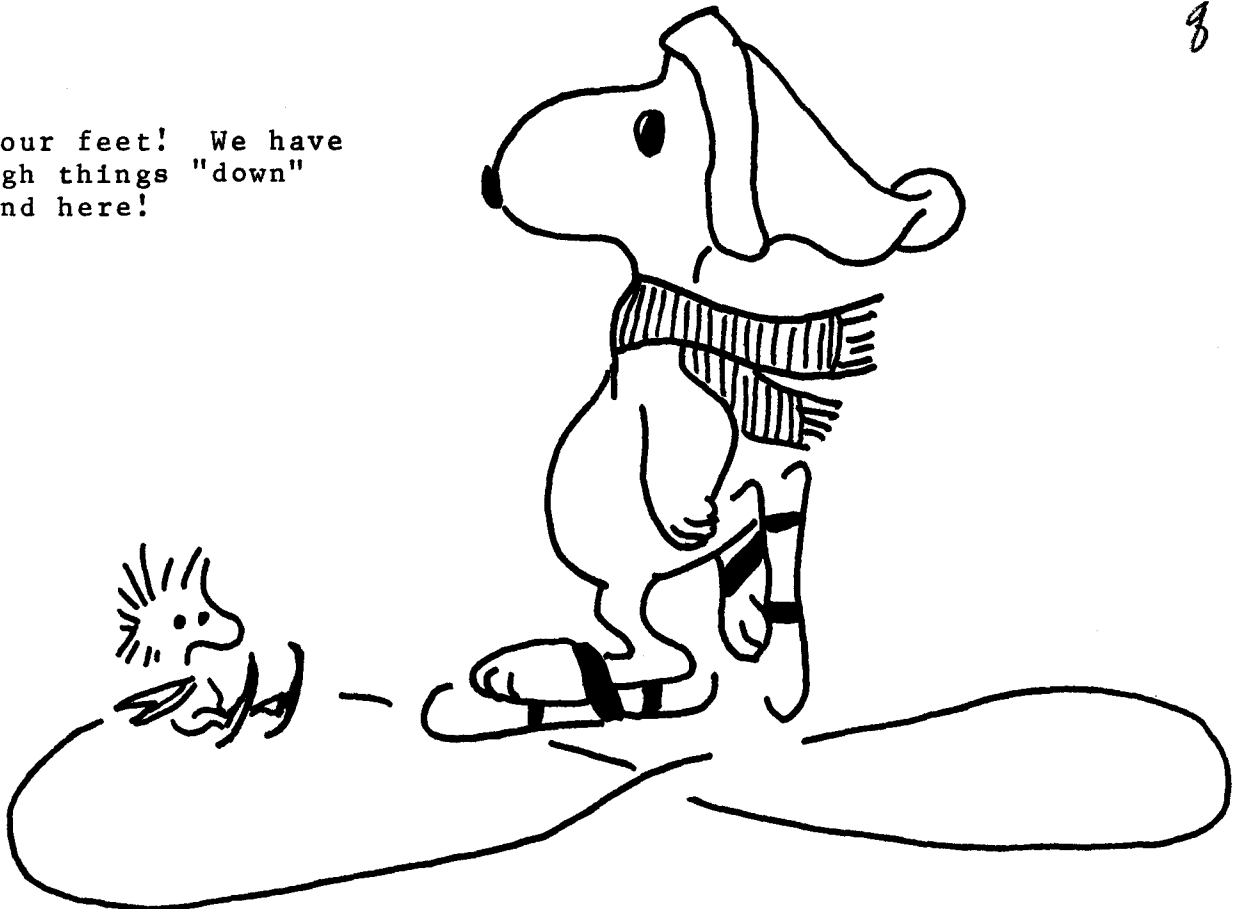


MIW
3 C739

On your feet! We have
enough things "down"
around here!



OPERATING
HOURS
FOR
CHRISTMAS

CLOSED 2:00 p.m. Saturday, December 23

OPEN Lauderdale: 6:00 p.m. Tuesday, December 26
All Facilities: 8:00 a.m. Wednesday, December 27

NEW YEARS

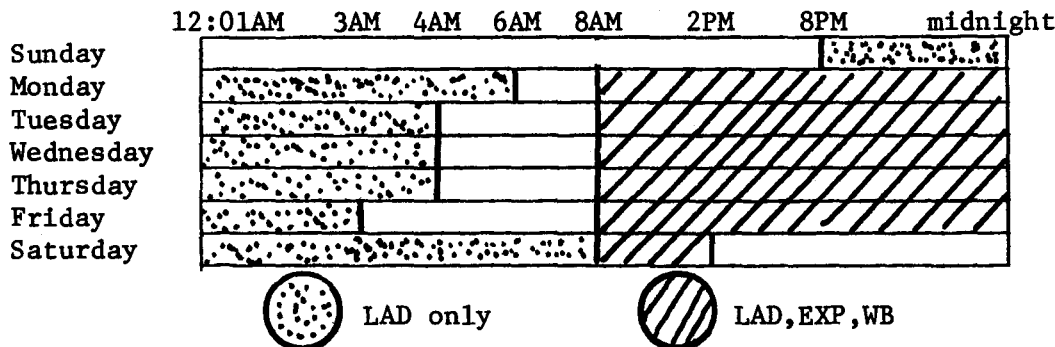
CLOSED 2:00 p.m. Saturday, December 30

OPEN 8:00 a.m. Tuesday, January 2

Notes & Comments
Volume 6, Number 12
December, 1972

University Computer Center
University of Minnesota
Minneapolis, Minnesota 55455

6600 OPERATING HOURS



<u>Medium Speed Remote Terminals</u>		<u>Local Supervisor(s)</u>	<u>telephone</u>
Room N640 EltH	(Mpls)	J. DeWitt	376-7377
		R. Swisher	376-3156
Room S191 KoltH	(Mpls)	T. Faulkner	376-7024
		J. Abdullah	373-2348
Room 321 MinMet	(Mpls)	C. Swanson	373-5475
		R. Lewis	373-2300
Room 38 ElectE	(Mpls)	C. Berg	373-5404
		M. Cook	373-3895
Room 384 HortS	(St P)	J. Heinen	373-1086
		M. Brenner	373-0949
Room 17 AgEng	(St P)	R. Vance Morey	373-0763
		N. Valentine	373-1059
Room 54 BA	(WB)	H. Smith	373-3608
Room 69 Physics	(Mpls)	B. Eaton	373-0242
		J. Blair	373-3340

Useful Telephone Numbers

- 373-4876 Manager, Operations (R. Folden)
- 373-4599 Manager, User Services (T. Hodge)
- 373-4548 Account Clerk, 6600
- 373-7753 Account Clerk, 6400
- 373-4995 EBR Operator
- 373-4596 ExpEng I/O
- 373-2521 Key punch Supervisor
- 373-4940 Lauderdale Shift Supervisor
- 373-4994 Recorded Message
- 373-7744 Reference Librarian
- 373-4995 Tape Librarian
- 373-4360 UCC Office
- 373-4921 Users' Room (Lauderdale)
- 373-3608 West Bank I/O

Locations of UCC Keypunches

<u>Mpls</u>		<u>StP</u>	<u>WB</u>	<u>Lauderdale</u>
N640 EltH	130 ExpEng	17 Ag Eng	90 Bleg H	Users' Rm
12A SmithH	321 MinMet	302 CofH		
38 ElectE	69 Phys	384 HortS		
208 ExpEng	125 SpaSci			
131 ExpEng				

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CHANGES TO MNF

The following are PSR11 Changes to MNF Which Will be Installed During the Christmas Holidays on the CDC 6600 and CDC 6400.

New Features or Control Card Options

1) Y Control Card Option

If a Y is present on the MNF control card then all DO (or FOR) loop code will be bypassed if the initial parameter is greater than (or less than) the terminal parameter. Thus for

```
N=0
DO 10 I=1,N
10 A(I)=B
```

A(I) will not be set to B as is current practice and for

```
PRINT 10,(ALPHA(I), I=1,MINO(16,J))
```

there will be no list item printed if J.LE.0. This feature had been a part of CDC 1604 Fortran-60, Fortran-63, CDC 3600 Fortran, and CDC 6000 Series RUN (FORTRAN VI option).

2) An IMPLICIT Statement will be Added to MNF FORTRAN

The IMPLICIT statement will allow the initial character of a name to specify its FORTRAN type. The statement should appear as the first statement after the subprogram or PROGRAM statement (if one exists) and that subprogram or PROGRAM is its range of definition. There should be only one IMPLICIT statement per PROGRAM or subprogram. Specific type declarations will override the IMPLICIT type. The syntactical form of the IMPLICIT statement is:

```
IMPLICIT typename (character bounds) [,...,typename (character bounds)]
```

where the typenames are INTEGER, REAL, DOUBLE [PRECISION], COMPLEX or LOGICAL and the character bounds are one or more single letters or letter₁-letter₂ groups each separated by commas. All names beginning with the given letters between letter₁ and letter₂ inclusive will have the type given by the typename. Thus, the normal implicit typing convention for FORTRAN

would be stated as

```
IMPLICIT REAL (A-H,O-Z), INTEGER(I-N)
```

To accommodate users transferring programs from IBM/360 or /370 systems, the form REAL*16 will be translated to DOUBLE PRECISION and all other *n are ignored and given a message: CAUTION - EXTRA CHARACTERS IGNORED BEFORE IMPLICIT PARENTHESIS GROUP.

Names whose first letters are not defined by an IMPLICIT statement have the implicit FORTRAN type. In character bounds of the form letter₁-letter₂, letter₁ must precede letter₂ in the alphabet. There must be no duplication or conflict among the various character bounds in the IMPLICIT statement. The IMPLICIT statement also applies to the PROGRAM or subprogram it follows (if any). As another example, in a subprogram containing:

```
IMPLICIT INTEGER (A-H), COMPLEX(I-K), LOGICAL(L,N)
```

names beginning with A through H and M are INTEGER, names beginning with I through K are COMPLEX, names beginning with L and N are LOGICAL, and all other names are REAL (unless they are explicitly and individually declared otherwise by type statements, e.g. REAL ABLE, BAKER).

3) Cross Reference Listing Addition

An R mnemonic character will be added to the cross reference listing if the name is used as a parameter to a subprogram. This helps locate possible places where an external procedure may change the value of a particular name. Look for R's and S's in the listing to detect changed values.

4) Better Code

Better code will now be generated for the arithmetic IF case when the middle branch is the same as the next statement.

Example:

```
IF(X) 1,2,3
2 A=B
```

5) New Intrinsic (Built-in) Functions in MNF

A set of intrinsic functions will be added that allows the FORTRAN programmer to do machine language programming. They are listed below.

<u>Sample Call</u>	<u>Explanation</u>	<u>COMPASS Equivalent</u>
A=DAD(B,C)	A=B+C (lower precision)	DX6 X1+X2
A=DMU(B,C)	A=B*C (lower precision)	DX6 X1*X2 or IX6 X1*X2
A=DSB(B,C)	A=B-C (lower precision)	DX6 X1-X2
A=FAD(B,C)	A=B+C (unrounded upper precision)	FX6 X1+X2
A=FDV(B,C)	A=B/C (unrounded upper precision)	FX6 X1/X2
A=FMU(B,C)	A=B*C (unrounded upper precision)	FX6 X1*X2
A=FSB(B,C)	A=B-C (unrounded upper precision)	FX6 X1-X2
J=ICOUNT(B)	J=count of 1's in B	CX6 X1
A=NORM(B)		NX6 X1
X=PACK(I,J)	X=J*2**I	SB7 X1 \$ PX6 B7,X2

A=RAD(B,C)	A=B+C (rounded)	RX6 X1+X2
A=RDV(B,C)	A=B/C (rounded)	RX6 X1/X2
A=RMU(B,C)	A=B*C (rounded)	RX6 X1*X2
A=RSB(B,C)	A=B-C (rounded)	RX6 X1-X2
L=ICOEF(X)		UX6 X1
L=IUEXP(X)		UX6 B7,X1 § SX6 B7

Previous intrinsic functions that also were equivalent (Appendix F, MNF Manual) are listed below.

A=AND(B,C)	A=B.AND.C	BX6 X1*X2
A=EOR(B,C)	A=(B.OR.C).AND..NOT.(B.AND.C)	Bx6 X1-X2
A=EQV(B,C)	A=(B.AND.C).OR..NOT.(B.OR.C)	BX6 -X1-X2
A=IMP(B,C)	A=.NOT.B.OR.C	BX6 -X1+X2
A=COMPL(B)	A=.NOT.B	BX6 -X1
A=OR(B,C)	A=B.OR.C	BX6 X1+X2
A=XOR(B,C)	equivalent to EOR above	BX6 X1-X ²
IF(LEGVAR(X)) ^{sn}	.INDEF., ^{sn} OK, ^{sn} .INF.	IR,X1, ^{sn}
		OR,X1, ^{sn}
		DF,X1, ^{sn}
		ID,X1, ^{sn}
A=SHIFT(I,J) or K=LRSHFT(I,J)		SB7 X2 § LX6 B7,X1

This new PSR level of MNF incorporates a more general concept of "octal" (MNF manual, section 2.4.6). Previously only octal constants such as 11B or 20000 0000 0000 0000 0001B were considered typeless or neutral and they would take on the type of the operand occurring with them in a binary operation. These total quantities would store across an equal sign without any conversion (section 2.4.6) and would combine with another octal constant using INTEGER arithmetic. With this new version of MNF, all masking expressions (3.4 and 4.4) and certain intrinsic functions have a resulting octal type. These intrinsic functions are DAD, DMU, DSB, FAD, FDV, FMU, FSB, NORM, RAD, RDV, RMU, RSB, AND, EOR, EQV, IMP, OR, XOR, SHIFT, LRSHIFT, and COMPL.

New Error Messages in Correction Sets PSR10 and PSR11:

COMMENT - IMPLICIT STATEMENT PREVIOUSLY APPEARED IN SUBPROGRAM
 NOTE - CONTINUATION OF END STATEMENT IS NON STANDARD
 NOTE - IMPLICIT STATEMENT IS NON STANDARD
 NOTE - NON STANDARD DO OR FOR ENDING STATEMENT
 NOTE - NON STANDARD REPEATED FORMAT FIELD
 CAUTION - EXTRA CHARACTERS IGNORED BEFORE IMPLICIT PARENTHESIS GROUP
 CAUTION - NEW TYPE USED FOR DUPLICATE IMPLICIT CHARACTER - character
 CAUTION - name - SHOULD BE IN COMMON BLOCK IN BLOCK DATA SUBPROGRAM
 CAUTION - CONSTANT EXPRESSION IN LOGICAL IF
 WARNING - CHARACTER BOUNDS REVERSED IN IMPLICIT PARENTHESIS GROUP
 WARNING - ILLEGAL TYPE NAME - name PARENTHESIS GROUP IGNORED
 WARNING - IMPLICIT TYPE MISSPELLED AFTER FIRST FOUR CHARACTERS - name ASSUMED
 WARNING - IMPLICIT ERROR - FORM MUST BE - TYPE NAME (CHARACTER BOUNDS)
 ERROR IN BINARY ON FILE - name

Errors Corrected

- 1) The .NOT. operator will no longer produce an erroneous answer if applied to a relational expression with .LE. or .GE.

Example:

```

LOGICAL L
I=J=2
L=.NOT.I.GE.J

```

previously gave L=.TRUE.

- 2) Correct code will now be generated in one-statement DO loops for the following examples:

```

a)   DIMENSION IARRAY(10)      b)   DIMENSION A(10,10)
      DO 10 I=1,N                K=I=2
      10 L=IARRAY(L)             DO 20 J=1,N
                                   20 A(K,I)=A(K,I)+A(J,I)

```

In example a), a subscript (here, L) will no longer be preloaded if it depends on the left-hand-side (LHS) variable. In example b), a loop will no longer be considered a product or summation loop if the LHS is subscripted unless each appearance of the LHS array (here, A) on the right-hand-side has the same subscript.

- 3) The message CAUTION - DATA VARIABLE LIST TOO LONG - EXTRA IGNORED will now be eliminated for cases such as

```

DIMENSION A(10)
DATA A(3)/7.2/

```

It still will occur for the statements

```

DIMENSION B(10)
DATA B(4)/2.0,3.0/

```

- 4) All cross references for file names will now be printed.
- 5) Extraneous occurrences of the error message CAUTION - ENTRY SAME TYPE AS FUNCTION will now be suppressed so that it will come out only if the FUNCTION name and ENTRY name types differ, e.g.

```

FUNCTION I(J)
ENTRY R

```

- 6) When there is a missing unit number after the form .ERR.=sn in an I/O statement an error message will be given rather than a Mode 1 exit occurring.
Error example:

```

READ(.ERR.=100,)

```

- 7) Correct code will now be generated to normalize the result of a DOUBLE PRECISION add or subtract where one of the operands is an integer valued double precision number and the un-normalized result contained significant bits only in the lower precision part.

- 8) Octal dimensions will now be allowed; e.g. DIMENSION A(2000B)
- 9) Octal or Hollerith subscripts will now be allowed and better code will be produced for constant-expression subscripts.
Example: A(14B-1) or C(1RB+3)
- 10) Comments on the MNF control card after the period or right parenthesis will now be allowed rather than interpreting the comments as parameters.
- 11) The RANF function will now work correctly when it follows a store into a subscripted variable.
Example:
$$A(I,J) = B$$
$$C = RANF(D)$$
- 12) The message DUPLICATE STATEMENT NUMBER will now be given if there are duplicate FORMAT numbers.
- 13) NAMELIST input data for arrays will now enter properly.
- 14) Identical names will no longer appear in the loader map.
- 15) Correct code will be generated for .NOT. followed by a logical constant, e.g. .NOT..FALSE.
- 16) The intrinsic function DIM will now produce a normalized result. The DMAX and DMIN intrinsic functions will now correctly distinguish between two values if one is a power of 2 and the other is smaller and differs from that power of 2 only in the lower word of the double precision value.
- 17) For integer**integer, a result of zero will now be generated if the base is zero and the exponent is negative (previously, the result was one).
- 18) Masking results will be changed to have a resultant octal type rather than the dominant type of the operands. For example, currently in (I.OR.2040 0000 0000 0000B) + 0.0, the result of the masking expression is INTEGER and thus it is changed to REAL before adding 0.0. The new version of MNF will now consider the parenthesized result to be octal and will not convert it to REAL before adding 0.0.
- 19) The CONTINUE and FORMAT statements will now have their first four identifying characters on more than the first line, e.g.
$$10 \text{ CON}$$
$$*TINUE$$
- 20) A spurious error message following a proper error message will be eliminated if an operand follows characters enclosed by quotation marks (\neq signs on the line printer).
Error example:
$$A = \neq ABC \neq D + 1$$

- 21) The message NOTE - NON STANDARD OPERATOR will not be suppressed when characters enclosed by quotation marks are encountered.
Example: #ABC#
- 22) The message UNDEFINED VARIABLE will no longer be given for an item in a DECODE list.
- 23) COMMON block length messages will be correctly put out.
- 24) A Mode 1 exit will no longer occur with an EQUIVALENCE involving intrinsic function names.
Example:
COMMON FLOAT
EQUIVALENCE(FLOAT,X)
- 25) A TRACE of an intrinsic function in a DIMENSION statement will now be correct.
Example:
TRACE SIGN
DIMENSION SIGN(10)
- 26) An intrinsic function name used on the left-hand-side of the equal sign [e.g. ABS=A+B] will no longer get a spurious error message.
- 27) A loader problem which caused loops in the BATCH mode of the compiler and wasted time in the NORMAL mode will now be corrected.

Errors Detected

An error message will now be given for the following cases.

- 1) In standard FORTRAN, the characters END must appear on a single line image. The following message is given when this does not occur: NOTE - CONTINUATION OF END STATEMENT IS NON STANDARD.
Example: Columns 6,7
 E
 1 N
 2 D
- 2) In standard FORTRAN, a variable format must be an array, not a simple variable. The following message is given when this does not occur: NOTE - STANDARD VARIABLE FORMAT IS ARRAY NAME.
Example:
FMT = 8H(8F10.2)
READ(1,FMT) A
- 3) A statement number appearing on an otherwise blank statement is non-standard and when it occurs, the following message is given: WARNING -

STATEMENT NUMBER ON BLANK STATEMENT IGNORED.

Error example:

200

- 4) An attempt to store into the implied DO loop control variable will now be detected as an error.
Error examples: READ(1,10) (I,I=1,M) or DECODE (10,20,A) (I,I=1,N)
- 5) A logical expression ending on a comma in a logical IF statement will now be detected.
Error example: IF (A.LT.B,CC) GO TO 5
- 6) Empty or illegal system or user library files will now be detected and the following message given: CAUTION - EMPTY OR ILLEGAL FILE - name.
- 7) Bad binary files found when the control card MNF(B=binary file) is used will be detected. Previously, a POSSIBLE MACHINE ERROR message had been given.
- 8) A Hollerith constant which is too long for the stated length will now be detected as an error and the following message given: WARNING - INCORRECT LENGTH FOR HOLLERITH CONSTANT - TRAILING CHARACTERS IGNORED.
Error example: A = 2HYES
- 9) The message NOTE - NON STANDARD INPUT OUTPUT STATEMENT will be given if either of the forms .ERR.= or .END.= appear in an I/O statement.
Previously, the message NOTE - NON STANDARD OPERATOR was given.
- 10) The message NOTE - BLOCK DATA NAME IS NON STANDARD will be given when there is a name on the BLOCK DATA statement since this non-standard.

Errors Corrected in KRONOS MNF

- 1) The .NOT. operator followed by a constant will be correctly handled in the time-sharing version of MNF.
- 2) The final constant in a DATA list will no longer be lost in the time-sharing version as sometimes happened before.
- 3) COMMON blocks in MNF-compiled program units will now agree in addresses with those in program units compiled by other compilers. Previously, the addresses were each incorrectly aligned by one word.
- 4) If there is a KRONOS Control Language label on the MNF control card before the characters "MNF...", it will be skipped and ignored so that the control card can be processed by MNF.
- 5) The NORMAL mode of MNF will satisfy externals correctly from the KRONOS library (this does not affect users at the University of Minnesota).

HARDWARE PROBLEMS

In a previous newsletter we promised to let you know of major hardware failures and remedies taken to avoid future problems.

- 1) On Friday, Morning, November 17, 1972 at 2:00 a.m. a single phase wire of the three phase power source from the exterior pole to the Lauderdale building grounded out. The equipment is designed to handle a complete power cutout with breakers but losing only one phase created current surges in the entire system causing circuit breakers and circuits to burn out and control relays to freeze open. Due to excellent work by the CDC maintenance engineers the equipment was operational by 2:00 p.m. Saturday, November 18.
- 2) During the week, November 6th through 11th, there were periodic failures in the CDC 6000 link to the PDP11 resulting in a shut down of all medium speed ports. This failure was due to the intermittent operation of a cable driver which caused the 6000 software to malfunction. To eliminate this problem we are building a second link to serve as a standby and are generating improved diagnostic programs.
- 3) During October there were a number of disk pack problems, especially on UCC002. These were caused when the CDC maintenance engineers adjusted all of the 841 disk pack drives to "standard specifications." Some of the information on the packs which had been written prior to this adjustment were at the marginal ends of allowable tolerances and thus gave parity errors and in some cases caused outright failure to recover the information. Also during this time one of the read/write head mechanisms was a marginal unit and this in combination with the tuneup caused the October problems with the UCC002. To avoid further problems the engineers are checking the tolerances more often.

WINTER QUARTER SHORT COURSES

The following short courses will be offered by UCC during Winter Quarter. All classes will be from 3:15 to 4:00 PM. You need not register for the courses and no fees are charged. You'll find the short courses easier to understand if you do some preliminary reading before the course begins.

INTRODUCTION TO FORTRAN (10 hours)

Dates : January 8th through 19th (M-F)
Instructor : R. Franta
Manuals : MNF reference manual, CDC 6000/7000 Fortran reference manual and/or any beginning Fortran primer
Room : 212 Mechanical Engineering

SNØBØL (5 hours)

Dates : January 22nd through 26th (M-F)
Instructor : J. Eikum
Manuals : Griswold, et al. The Snobol 4 Programming Language (Prentice-Hall, 1971) and materials from the instructor.
Room : 212 Mechanical Engineering

DUMP READING (2 hours)

Dates : January 29th and 30th (M,Tu)
Instructor : R. Franta
Manuals : Materials from instructor
Room : 212 Mechanical Engineering

MODIFY (3 hours)

Dates : January 31st through February 2nd (W,Th,F)
Instructor : K. Matthews
Manuals : CDC KRONOS Modify Reference Manual
Room : 212 Mechanical Engineering

FILE STRUCTURES (2 hours)

Dates : February 5th and 6th (M,Tu)
Instructor : R. Franta
Manuals : Materials from instructor
Room : 212 Mechanical Engineering

ALGOL

Dates : February 12th through 16th (M-F)
Instructor : P. Houle
Manuals : Materials from instructor
Room : 212 Mechanical Engineering

COBOL

Dates : February 19th through March 2nd (10 hours)
Instructor : K. Matthews
Manuals : McCracken and Garbassi, A Guide to COBOL Programming,
Wiley, 1970.
Background : Some knowledge of another language would be helpful;
perhaps FORTRAN
Room : 212 Mechanical Engineering

BMD (4 hours)

Dates : January 15th through 18th (M,Tu, W,Th)
Instructor : D. Anderson
Manual : BMD Computer Programs (W. J. Dixon (ed), U California Press)
Background : No computing experience necessary
Room : 193 Experimental Engineering

SPSS (4 hours)

Dates : January 22nd through 25th (M,Tu,W,Th)
Instructor : D. Anderson
Manual : SPSS (Nie, Bent & Hull, McGraw-Hill, 1970)
Background : No computing experience necessary
Room : 193 Experimental Engineering

OMNITAB (4 hours)

Dates : January 29th through February 1st (M,Tu,W,Th)
Instructor : D. Anderson
Manual : OMNITAB2 Users Manual (NBS, US Gov. Printing Office)
Background : No experience necessary
Room : 193 Experimental Engineering

1700-6600 LINK

The Hybrid Computer Laboratory in the Space Science Center has recently completed development of a link between their CDC 1700 computer and the CDC 6600. Thus, the Hybrid Lab can now act as a remote station for the 6600.

Programs have been written which allow the 1700-6600 connection to be made and 6600 programs to be run from a 1700 job. This means the user can run a 1700 graphics or hybrid job that simultaneously runs a 6600 job. The 1700 High Speed Import appears to be running smoothly at the present time. For details call: Doug Kellogg 3-7904 or Steve Savitt 6-7787

CDC 6000 USE FOR NOVEMBER

Total Jobs: 57,579
 From Exp Eng 40.2%
 Lauderdale 19.4%
 West Bank 17.9%
 Other Remote Terminals 18.3%
 Maintenance 4.2%

Average Times
 On input queue 14.1 minutes
 At control point 6.2 minutes
 On output queue 4.7 minutes
 On printing 1.9 minutes

BMD MANUAL CHANGES

Due to our system, some of the limitations of the problems should be changed as follows:

FOR	PROGRAM	PAGE	LINE	IN MANUAL	CHANGE TO
	BMD02D	49	28	(6) m, (0<m<150)	(6) m, (0<m<135)
		52	19	m (0<m<150)	m, (0<m<135)
	BMD03D	60	14	(1) P, (1<p<90)	(1) P, (1<p<80)
		61	Last	Col. 13, (1<p<90)	Col. 13, (1<p<80)
		62	6	(-89<q<89) and (2<p+q<90)	(-79<q<79) and (2<p+q<80)
	BMD04D	66	14	(2) P, (1<p<400)	(2) P, (1<p<300)
		68	1	Col. 17- (1<p<400)	Col. 17- (1<p<300)
	BMD07D	98	31	and [n(p+q)]<16,000	and [n(p+q)]<11,000
	BMD08D	109	21	(4) (4<(p+q)N<19000)	(4) (4<(p+q)N<10,000)
		113	9	NOTE: N(p+q)<19,000,	NOTE: N(p+q)<10,000,
	BMD09D	122	Last	.... (-99<q<99)	.... (-99<q<99) (1<p+q<100)
	BMD03M	169	28	(1) P, (2<p<80)	(1) P, (2<p<74)
		171	22	..... (2<p<80)	..... (2<p<74)
			24	..... (2<p<80)	..... (2<p<74)
			26	..... (2<p<80)	..... (2<p<74)
	BMD07M	214b	17	(1) P, (1<p<80)	(1) P, (1<p<69)
			18	(2) t, (2<t<80)	(2) t, (2<t<69)
			19	(3) j, (1<j<16)	(3) j, (1<j<15)
		214c	26	Col. 13, (1<p<80)	Col. 13, (1<p<69)
			27	Col. 15, (2<t<80)	Col. 15, (2<t<69)
			29	Col. 19, (1<j<16)	Col. 19, (1<j<15)
	BMD01R	218	24	(3) s, (0<s<500)	(3) s, (0<s<300)
		222	16	Col. 17- (0<s<500)	Col. 17- (0<s<300)
	BMD10S	430	16	.... (1<r<20,000, 1<c<20,000)	.... (1<r<15,000, 1<c<15,000)
			19	(1<f1<50, 1<f2<50)	(1<f1<10, 1<f2<10)
			28	(1<r'<20,000/c)	(1<r'<15,000/c)

	30	(1<c'<20,000/r)	(1<c'<15,000/r)
432	8	Col. 13- (1<r<20,000)	Col. 13- (1<r<15,000)
	9	Col. 18- (1<c<20,000)	Col. 18- (1<c<15,000)
	11	format (1<r'<20,000/c)	format (1<r'<15,000/c)
	16	format (1<c'<20,000/r)	format (1<c'<15,000/r)
	18	cards (1<f1<50)	cards (1<f1<10)
	20	cards (1<f2<50)	cards (1<f2<10)

MISCELLANEOUS NOTES

To Users of OMNITAB and SPSS

On January 1, 1973 OMNITAB will be accessible on the CDC 6600 via the single control card OMNITAB(parameters) or OMNITAB. The 100-variable version of SPSS will be accessible via the single control card SPSS100(parameters) or SPSS100. All previous control card sequences for these two systems will be invalid.

Lost

Three boxes of cards missing from 225 Exp. Eng. If anyone picked them up by mistake, please return to Ted Patterson.

One box of cards and Greek text of Sophocles missing from 208 Exp. Eng. Please return to Dorothy Swanson (phone 698-9121 or 373-3889).

Tours

Instructors are invited to contact Thea Hodge if they wish to organize a tour of the computer facilities for their students. Consultants are also available to hold informal classes introducing the computer facilities to students.

Users Manual

A revision to the UCC Users Manual is available from the Reference Librarian, 227 Exp. Eng.

Eliminating FTN Version 2

As FT3 has become more reliable with implementation of the latest PSR level, most users have switched to it (in November there were 1900 runs using FT3 and 100 using FTN). Since the systems group would like to drop FTN, please contact L. Liddiard at 373-5239 or 235 Exp. Eng. if your program will not run on FT3. At the time this change (about February 1, 1973), the name FT3 will revert to FTN in order to be compatible with other CDC installations.

MARS VI

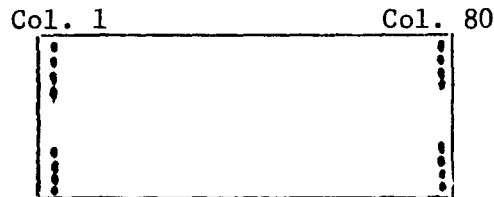
For the next three months UCC will make available Ver. 2 of MARS VI on an experimental, non-commercial basis. Contact Richard Hotchkiss (Exp. Eng.).

THE SUGGESTION BOX

- Q. Are we charged for disk storage time when the system is unavailable?
(down time, holidays, week-ends, etc.)
- A. No.
- Q. Keep doors open on week-ends.
- A1. Lauderdale is open only when sufficient operations people are present. The door is locked at midnight (when staffing is reduced) and secured when all operations people leave.
- A2. All user areas at Exp. Eng. are left open 24 hours. Although there is no official University policy on locking buildings we cannot leave the outside doors open without the agreement of the other departments sharing this building; they also need security for their workrooms and laboratories.
- A3. Access to Blegen Hall is controlled by the resident departments. Contact the WB Computer Center Manager (Hugh Smith) if you have any problems.
- Q. Post the Lauderdale operating hours at the Exp. Eng. terminal.
- A. Hours are printed each month in this newsletter; a newsletter can be found tacked to the bulletin board outside Room 130.
- Q. Have the operators (at Exp. Eng.) bring out programs after they have been run? The turnaround is slow after 5:00 p.m.
- A. Staffing is reduced after 5:00 p.m. and the operators at Exp. Eng. also have other duties which may not be immediately apparent to you. Operators have been instructed to work as efficiently as possible and the immediate return of your job may mean that other jobs get done more slowly.
- Q. Add a "rewind" option to the REQUEST control card.
- A. All tapes assigned by the operator (for a tape REQUEST) are at the load point, i.e., rewound. Therefore the option to rewind would have to be not to rewind -- which is not meaningful.
- Q. The carriage control LH- works the same as lHO on the 1004 terminal. Why?
- A. The 1004 terminals recognize these carriage control characters:
- | | |
|-------|--------------|
| 1 | page eject |
| 0 | double space |
| + | no line skip |
| blank | single space |
- Any other character is treated as a blank. Therefore, LH- is treated as lH , not as lHO.
- Q. Why not make the default error parameter in MNF 2 rather than 0? This would make jobs look cleaner by eliminating unnecessary error messages and would save paper.

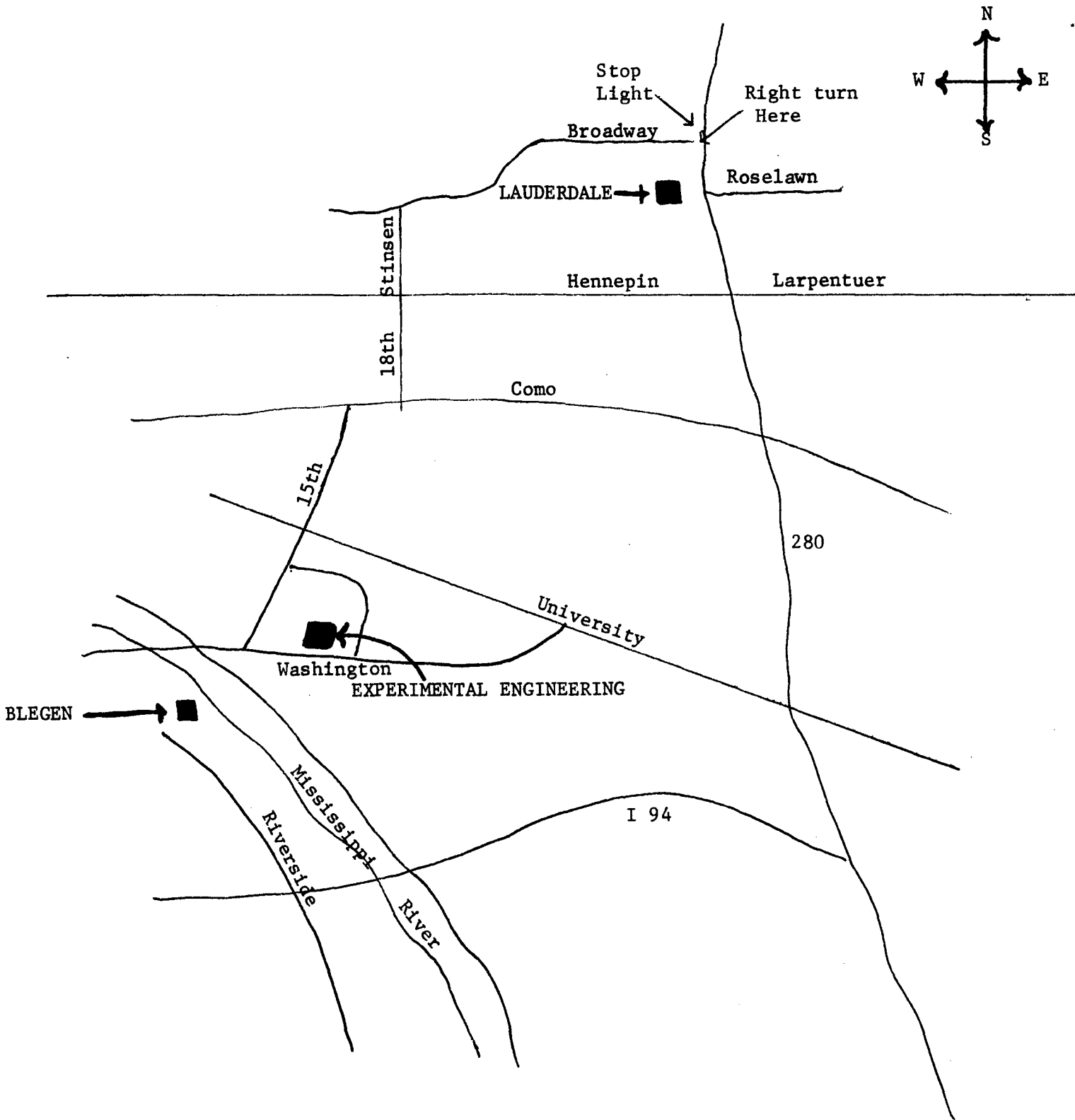
A. The main design criterion for the MNF compiler was to find syntax, style, and possible errors in a FORTRAN source deck. The control card allows easy suppression of entire levels of error messages by using the E = n option. Using a default value of E = 2 would eliminate the COMMENT and NOTE NON-STANDARD levels of error messages. The basic purpose of ANSI standard FORTRAN was to promote program interchange. Programs that meet these standards are indeed easier to use on various FORTRAN compilers and different manufacturers' computers. Note that various industrial members of the computing community have strongly criticized universities that only teach experimental programming languages and/or FORTRAN compilers that bear little resemblance to the standards since these do not train persons for the normal programming positions of industry. The FORTRAN standards are being revised and when this expanded and more relaxed version is published, MNF will be changed to conform to the new standards and thus many of the current non-standard messages will be eliminated. In addition a number of users have requested The default cross reference parameter on the control card be set to R=0 rather than R=3. This defeats the main secondary design criterion which was "To give the maximum information per computer run". Student computing has split into two main courses: BATCH vs TIME-SHARING. If BATCH compiling is to remain on an equivalent time basis with TIME-SHARING where the turnaround is in terms of seconds as opposed to minutes, then BATCH compiling must find all the possible errors with one run and give additional information such as the cross reference listing so that the person using a BATCH system is competitive time wise with those using a time-sharing system. To save paper please put it into the recycle bins available at every computer I/O site.

Q. Permit (and supply) End-Of-File cards punched as follows:



To eliminate the problem of inserting the card incorrectly in the deck.

A. This suggestion has been considered (and rejected) in the past. We are trying to keep deck setups as uniform as possible. Since the CDC UT200 terminals and the Univac 1004 terminals are hardware constrained to the present EOF card, we will also maintain this standard EOF at Lauderdale and at Exp. Eng.



Getting to Lauderdale without turning left off 280.

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