

**CAST 50
AUGUST 1972**



A Users Group For IBM Computers

Cast is provided by COMMON, essentially as a bulletin board for its members, to include communications its members, individually, want to disseminate among the other members. Although COMMON and its officials assume no responsibility whatsoever for items included that are not explicitly official, the Secretary may refuse, entirely in his own discretion, to include any item submitted.

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Newsletter to 1800 Users

Several items of interest have come up during the last six months which I want to share with the 1800 installations in COMMON.

1. Contribution Program Library. COMMON is looking for back issues of the PID Library Catalog and copies of program decks and documentation for programs that are not now in the PID library. If anyone can share these items with COMMON please send a copy of them to:

COMMON Library Project
Mike O'Heeron
Computer Center
University of South Dakota
Vermillion, South Dakota 57069

2. The 1800 project is performing a review of 1800 FORTRAN, with a preliminary report to be presented at the October meeting in Miami. If you have comments about the 1800 FORTRAN, features, implementation, etc. please send them to:

Philip Thompson
Chairman 1800 FORTRAN Review Committee
Princeton University
Plasma Physics Laboratories
Forrestal Campus C-Site
Princeton, New Jersey 09540

3. I have started a method of information interchange for the 1800 project. This will take the form of a series of TECH-NOTES on software or hardware items. The first group of these is included here. I plan to use cast and meeting proceedings as one method of publishing these notes. If you have any applicable information along this line send it to me. The only thing that I ask is that I be able to read it. I also request that you include a mailing address and phone number so that I can get in touch with you if I have any questions. (However, if you do not want this information published with the TECH-NOTE let me know and

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I will see that it is not included.)

4. I am running a survey of 1800 installations to find out what our hardware configurations are (see attached form). If your installation(s) have not filled out a copy of this form, I would appreciate it if you would send me the information referenced (I'll send you a copy of the form if you do not want to use the one out of this cast). My mailing address and phone number are:

John Wolfgang
Code 711
NASA/Goddard Space Flight Center
Greenbelt, Maryland 20771
Telephone: (301) 982-4449

What I plan to do with the information is to collate what type of hardware is commonly in use on 1800's so that we can present hardware and software sessions at COMMON which will be of interest to many users.

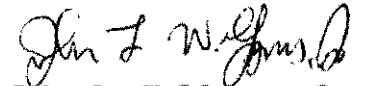
Also, I will not indiscriminately distribute your names, mailing addresses or phone numbers, to other users or outside sources.

5. Resolutions from 1800 project to IBM: We have presented three resolutions in behalf of System 7 installations to IBM. The first of these requested that an installation with multiple System 7 systems should not have to purchase a 5028 operators station for each System 7. The second dealt with the requirement that the 5028 operators station be purchased and not leased. Our last resolution is as follows:

"Be it resolved that IBM provides a FORTRAN IV computer for generation of System 7 compatible programs. Said compiler is to run on either 1800 or 1130 and S360/360 host systems. The minimum specifications for this

computer should be the 1800/1130 source FORTRAN language."

IBM's response to these resolutions is included herein.


John L. Wolfgang, Jr.
1800 Project Chairman

 *
 * 1800 TECH-NOTE INDEX *

| NUMBER | TITLE |
|----------|--|
| 1800- 1 | PATCH TO MPX V3 MDFIO TO AUGMENT ERROR MESSAGES |
| 1800- 2 | PATCH TO MPX V3 MFIO TO AUGMENT ERROR MESSAGES |
| 1800- 3 | PATCH TO MPX V3 COMGO TO PUT BAD I VALUE & LIMIT IN ERROR MESSAGE |
| 1800- 4 | PATCH TO UFIO TO AUGMENT ERROR MESSAGES AND PREVENT DEV. TIME OUT |
| 1800- 5 | PATCH TO MPX V3 REWIND/BACKSPACE/ENDFILE TO AUGMENT ERROR MESSAGES |
| 1800- 6 | PATCH TO MPX V3 YFIO TO AUGMENT ERROR MESSAGES AND CHECK WS OVERFLOW |
| 1800- 7 | PATCH TO MPX V3 ADRCK TO AUGMENT ERROR MESSAGES |
| 1800- 8 | PROGRAM TO BRING 1443 BACK ONLINE UNDER TSX |
| 1800- 9 | PROGRAM TO BRING 1053 BACK ONLINE UNDER TSX |
| 1800- 10 | PROGRAM TO ALLOW DRIVE 1 PACK TO BE SWAPPED UNDER TSX |
| 1800- 11 | PATCHES TO ENHANCE 1800 SPOOLING |
| 1800- 12 | PROGRAM TO LOCK IN TIMESHARING UNDER MPX |
| 1800- 13 | PROGRAM TO IGNORE EAC MESSAGES IF NO BUFFER IS FREE UNDER MPX |
| 1800- 14 | PATCH TO ELIMINATE A 100 WORD PATCH AREA IN MPX-V3 MDFIO |
| 1800- 15 | CORE SAVINGS IN MPX V3MO EXECUTIVE |
| 1800- 16 | PATCH TO ELIMINATE UNUSED AREA IN MPX V3MO IBT |
| 1800- 17 | PATCH TO ELIMINATE 8 WORDS IN BOM UNDER TIMESHARING |
| 1800- 18 | PATCH TO ALLOW BOM TO HANDLE STOPRO ERROR LIKE AN OPCODE ERROR |
| 1800- 19 | PATCH TO ELIMINATE SUPERFLUOUS PAGE SKIPS UNDER MPX |
| 1800- 20 | DISCUSSION OF SMALL VCORE CAUSED BY SYSTEM .GT. 32K UNDER MPX |
| 1800- 21 | ONE CARD PROGRAM TO REPRODUCE N COPIES OF A SINGLE CARD |
| 1800- 22 | ONE CARD PROGRAM TO DO AN 80-80 REPRODUCE |
| 1800- 23 | ONE CARD PROGRAM TO CLEAR ALL PISW GROUPS |
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| 1800- 25 | CORE DUMP TO MAGNETIC TAPE |

COMMON

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A USERS GROUP FOR IBM COMPUTERS 00000

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(314) 889-2450

MEMO TO: COMMON Membership

FROM: W. L. Hogan

SUBJECT: HOT-LINE

At the Detroit meeting there were many requests to republish the HOT-LINE phone numbers. The HOT-LINE service is designed to give you access to another resource of people who may be able to answer your question. If they can't, they will tell you. HOT-LINE personnel will not design new systems for you or write programs. However, they may be able to help you get by an impasse in program or system testing or give you a valuable reference which will help you solve your own problem.

HOT-LINE PHONE NUMBERS

| <u>Area of Concern</u> | <u>Individual</u> | <u>Phone</u> |
|------------------------|-------------------|----------------|
| 1130 | Bill Cotton | (817) 488-8511 |
| 1800 | John Wolfgang | (301) 982-4449 |
| D.O.S. | Brian Maron | (608) 255-7201 |
| O.S. | Tom Kelly | (212) 578-6362 |
| SYS/3 | Ed Lamb | (305) 842-5261 |
| SYS/7 | Sonya Anderson | (714) 624-5071 |

If you need help and can't contact a man in your area of concern call:

Jim Deck
(219) 392-5613

a not-for-profit corporation

ALUMINUM COMPANY OF AMERICA

ALCOA CENTER, PA 15069

ALCOA TECHNICAL CENTER



March 27, 1973

Mr. William L. Hogan
COMMON
Room 1717, Tribune Tower
435 North Michigan Avenue
Chicago, Illinois 60611

Dear Mr. Hogan:

The report of the IBM 1800 FORTRAN Review Project refers to the "Purdue Extensions." The Purdue Extensions have become ISA Standard S61.1, "Industrial Computer System FORTRAN Procedures for Executive Functions and Process Input-Output." People who require copies of the copyrighted standard may obtain them for \$3 each from:

Instrument Society of America
400 Stanwix Street
Pittsburgh, Pa. 15222

The Purdue Extensions are divided into Executive Interface Calls, Logical Operations, Shift Operations, and Process Input-Output Standard Calls. Two forms of the Process Input-Output Calls are provided. One form permits continuation of the execution of the calling program, while the process input or output is being performed. The second form suspends the execution of the calling program until the process input or output is completed. The second form is indicated by the addition of a "W" as the last letter in the subprogram name. For example, AISQW is the waiting form of AISQ, the subprogram to read analog input sequential.

In the attached table, the Purdue Extensions are compared with their equivalent IBM 1800 MPX and TSX operating system subprogram calls. Most of the functions of the Purdue Extensions can be performed under MPX and TSX, by different names or with two or three statements. The waiting form of a process input or output call can be duplicated under both operating systems, by following the appropriate CALL statement with a busy test loop, or by using a type 3 subprogram exit under MPX. The NOT function is equivalent to subtracting the argument from -1. The WAIT subprogram operation could be handled under TSX by a timer call to a dummy subprogram, followed by a busy test loop on the timer. Coding to perform equivalent operations

Mr. William L. Hogan
March 27, 1973
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on the 1800 has not been shown in the table, if more than a subprogram call is required.

P. E. Schilling/jst
P. E. SCHILLING

PES:jst

Attachment

John L. Wolfgang, Jr.
NASA/Goddard Space Flight Center (1923)

Mr. Wolfgang graduated from The George Washington University with a BS in Electrical Engineering in 1962 and an MS in Engineering in 1967. He has been with NASA since 1962 and is currently Head of the Computer Systems Analysis Section, Code 711, with responsibilities for hardware and software computer systems design.

Mr. Wolfgang is also currently teaching computer science courses in the School of Engineering and Applied Science at The George Washington University.

He has been actively engaged in COMMON for the past six years, has presented several papers and editorials, and is currently 1800 project chairman.

MEMO TO: 1800 Project Membership
FROM: John Wolfgang
1800 Project Manager

Subject: IBM maintenance of software and response to APARS.

A great deal of discussion was generated at the last COMMON meeting with regards to the capability of IBM in the area of field support for the 1800 software systems. It has been many users experience that those IBM personnel trained in the 1800 system are no longer available to the user for system support, even on a billable basis. Also I have had several calls via the "hotline" with regards to extremely poor response to APARS such as, long delays in response, totally nonsensical responses to the original problem, etc.

I would like to present what information we can assemble in this area to the proper people at IBM. To do this; I will need information from you about how your IBM software maintenance is being handled. Specifically I would like to know of the type of problems IBM is refusing to handle, their response time to APARS and the incidence of pure garbage in response to a submitted problem. Please call me or write to me and give me any inputs you feel should be brought to IBM's attention. My phone number and address are as follows:

John Wolfgang
Code 711
NASA Goddard Space Flight Center
Greenbelt, Maryland 20771

(301) 982-4449



John Wolfgang
1800 Project Manager

1800 FORTRAN INPUT/OUTPUT WORKSHOP

On thursday September 27th, the day following the COMMON meeting, the 1800 Project Education Committee will sponsor the first of a series of workshops, to be held in conjunction with the COMMON meetings. This session will provide the user with in depth coverage on the topic of the 1800 operating systems handling of I/O for the FORTRAN language. The workshop will be free to members of COMMON. We will need to know by September 1st who plans to attend this session so that adequate materials can be provided for all the participants. If you plan to attend this workshop please contact Dale Preston and indicate how many people from your installation plan to attend. Dale's mailing address is:

Mr. Dale L. Preston
 Department of Technical Information Sciences
 Mead Johnson Research Center
 Evansville, Indiana 47721

Qualified speakers will be on hand to lead discussions and make presentations for the following sessions during the workshop.

- 9:00 A.M. FORTRAN I/O an OVERVIEW
 a description of the benefits of FORTRAN I/O and the overall techniques that the 1800 software system uses to handle I/O in the FORTRAN program.
- 10:00 A.M. FORMATTED I/O and DATA CONVERSION
 a description of the techniques used in the compile and execution time routines to perform formatted I/O under control of READ and WRITE statements.
- 11:00 A.M. NON-DISK I/O DEVICE and IOCR HANDLING
 a description of the concepts and benefits of pooling I/O buffers, their allocation and deallocation during run time FORTRAN I/O manipulation; as well as, the device code conversion and handling of the physical I/O device.
- 1:00 P.M. DISK I/O HANDLING
 a discussion of the setup and handling of disk files under FORTRAN, the implications of using reread, overlapping disk operations, etc.
- 3:00 P.M. UNFORMATTED I/O
 a description of unformatted disk and tape I/O, which provides sequential data files. Also the implications of handling data using this access method with fixed buffer sizes.
- 4:00 P.M. USER DISCUSSION and RECAP of FORTRAN I/O TECHNIQUES
 a general discussion in open forum format of the methods used in FORTRAN I/O and their effects on user programs.

MEMORANDUM

To: 1800 Installations COMMON

From: E. L. Anderson
user No. 3088

It was agreed at a B. O. F. session in Atlanta to publish the following list of known users of IBM's TSX system. These are submitted for CAST.

| <u>NAME</u> | <u>COMPANY</u> | <u>COMMON NO.</u> |
|------------------|--------------------------|-------------------|
| E. L. Anderson | Phillips Pet. Co. | 3088 |
| Ron Haynes | Gulf Oil Canada | 7139 |
| Bill Morgenstern | Syntex Research | 5575 |
| David Brownell | American Cyanamid Co. | 5919 |
| Richard Odwazny | Little Co./Mary Hosital | 5761 |
| Harris Burns | Randolph - Macon College | 5810 |

There may be others who will want this information.

Thank you.

1800 PROJECT UPDATE

IBM has been presented with a final report from our FORTRAN Review Committee, and two resolutions (on software support) which were passed by the project at the Atlanta COMMON meeting. The FORTRAN Review report was published in CAST 61, and the two resolutions are published in this issue of CAST. IBM should respond to these items by the Denver meeting.

By now all 1800 installations in COMMON should have received a mailing containing two questionnaires. The first of these is about future machine configurations and the second one deals with topics for future 1800 Project education workshops. If you did not receive this mailing, a copy of each questionnaire is included here. I have tried to clean up the mailing list for the project, and may have inadvertently dropped some valid 1800 installations. If yours is one of these, please contact me so that I can put your name on our mailing list.

Also included in this issue of CAST are some new 1800 TECHNOTES and an updated machine configuration listing for the installations in the project. Unfortunately the program which sorts the configurations had a bug in it. This caused core and disk information to be sorted wrong on the old configuration listings. This problem has been corrected and the new list should be more accurate. In case your installation is not included in this survey or you wish to update your configuration, I have included a copy of the survey sheet in this issue of CAST. As usual I will not publish your telephone number from the survey.

Reink S. Doetjes has announced a new accounting program for the 1800 MPX system. His announcement is also included here.

Finally our project is trying to collect a group of utility programs for redistribution within the project. Our current plan for distribution will be 9 track magnetic tape, or cards if the installation cannot handle magnetic tapes. What were looking for is anything of a utility nature, such as card duplication, alphabetical FLET dumping, card resequencing, FORTRAN statement cross referencing, etc. If you have a program to contribute; please send a machine readable source copy of your program, along with a write up sufficiently detailed to tell the user how to use the program to:

Mrs. Emily Kitchen
A. H. Robins Co.
1211 Sherwood Avenue
Richmond, Virginia 23220

Also if you can help distribute the package when it is completed let us know. Does anyone have a good name for this package.

John Wolfgang
1800 Project Manager

1800 PROJECT RESOLUTIONS

Statement of Resolution:

Since software support is deteriorating in many cases, we would like IBM to provide an additional direct user method of communication with the software support experts within IBM on 1800 software problems.

Requested answer date: April 1974

Statement of Resolution:

That the current support for the MPX spooling package (1800 sv 002) be defined.

That all currently known spooling defects (such as retention of output within the buffers after program exit, and incorrect handling of 1443 carriage control), be corrected or clearly stated as limitations in revised editions of the appropriate IBM publications.

That it be made known to all MPX, not merely spooling, users IBM's commitment and level of support for the spooling package, the techniques to be followed in submitting APARs and the time delay which would be experienced in receiving an answer to the APAR.

1800 PROJECT UPDATE

Included here are the next set of 1800 TECHNOTES. TECHNOTES 37, 47, and 48 have been revised to correct keypunch errors (in the case of 47 and 48) and a problem with the console interrupt initiated spacing on the printer in supervisor phase SUP (in the case of 37).

Also included is a new update for the installation cross reference and configuration data for the 1800 Project installations in COMMON.

We are still trying to assemble a utility package for the 1800 system. To date we have only a few contributions, how about sending a copy of your goodies to Emily Kitchen (user 5853); so that we can have a worthwhile package to distribute. I am planning at the moment to call the resulting package TECHLIB in keeping with our TECHNOTES.

I am planning to start another type of information interchange called TECHNOGRAPHS. Things to be included here will be those items that do not lend themselves to TECHNOTES (because they are not computer reproducible or are too long for that, etc.) The first TECHNOGRAPH is the notes from the FORTRAN I/O workshop at the ATLANTA meeting, the second will be the notes from the PROCESS I/O and QUEUEING workshop from DENVER. A third one will be published in the next CAST and will deal with the handling of 2311/2314 in the MPX operating system.

Arrangements are being made to obtain the 1130 Smorgasbord programs for distribution to 1800 users.

We presented the final FORTRAN Review Committee report and two resolutions to IBM at the Atlanta meeting. Included here is IBM's response to these two items.

WV
John Wolfgang
1800 Project Manager

COMMON

A USERS GROUP FOR IBM COMPUTERS

SYSTEMS DIVISION

Reply To:

Memo to: 1800 Project Members

I have been asked to move into the position of COMMON Systems Division Manager. The 1800 Project manager is now Dale Preston. Thank you all for the support that you have given me and the project during my time as project manager. I am sure that we will all continue to support the project and Dale in the future. I have agreed to continue as a 1800 HOTLINE contact point.

Included in this issue of CAST are some new 1800 TECHNOTES, primarily updating various patches to the V3M4 level of MPX. Also attached is a new listing of installation managers and machine configurations.

In addition we also have a new IBM GSD representative to the 1800 Project, Mr. W David Jones from IBM San Jose. Dave has a background with much experience with process control systems, the San Jose DAC, and the 1800 system in particular.



John Wolfgang

Systems Division Manager



RESEARCH CENTER / EVANSVILLE, INDIANA 47721 TELEPHONE (812) 426-6000

DEPARTMENT OF TECHNICAL INFORMATION SERVICES

January 29, 1975

TO: 1800/User's COMMON

REGARDING: IBM Customer Education

I have been notified by W. Dave Jones of the IBM Corporation that the following 1800 Classes have been scheduled:

T1804 1800 System Principles

Date - 3/10/75 (5 days)
 Location - Boca Raton
 Cost - \$242.00

S1803 1800 MPX Specifications

Date - 3/17/75 (5 days)
 Location - Boca Raton
 Cost - \$242.00

H1801 1800 MPX Systems Training

Date - 4/14/75 (10 days)
 Location - Boca Raton
 Cost - \$991.00

Contact your local IBM Representative for class enrollment.

TSX Specifications and Systems Training will probably be offered at a later date but not in conjunction with another System Principles class.

Sincerely,

Dale L. Preston
 1800 Project Chairman
 COMMON # 5678

ms

SYSTEMS DIVISION
SYSTEMS DIVISION - 1800

180001 - 1800 Soundoff This session provides a forum for the presentation to IBM of hardware and software problems related to the 1800. This session also provides the opportunity for IBM to make any new hardware or software announcements pertaining to the 1800.

W. Jones (IBM) Monday 8:30
R. Biehl (IBM)
W. Wilkins (IBM)

180002 - 1800 Workshop This session provides a forum for the exchange of USER information regarding the 1800 System. Tips and techniques for system enhancement are the principal features of this session.

D. Preston (5678) Monday 10:00

180003 - 1800 Installation Profiles This session will consist of three 1800 installation profiles reviewing the installations' objectives, configurations and functions.

D. Preston (5678) Monday 1:30
S. Wixon (3435)

180004 - 1800 MPX Supervisor/Spooling The MPX Supervisor replacement which has been implemented by NASA and the Card-Printer Spooling package implemented by Mead Johnson & Company will be presented at this session.

J. Wolfgang (1923) Monday 3:00
D. Preston (5678)

180005 - 1800 RPQ IOCR Techniques Techniques for designing and coding an IOCR subroutine to service an RPQ device will be presented at this session.

Monday 4:30

180006 - 1800 Working Session - Exxon A working session at the Houston facilities of the Exxon Co., USA.

V. Maruska (5725) Tuesday 2:30

180007 - 1800 MPX 2311 Software This session will review available software support for the IBM 2311 Disk Drive as supported under MPX. Emphasis will be on data sets other than mapped 1810 Disk Drives.

R. Biehl (IBM) Wednesday 8:30

180008 - Computer Controlled Air Pollution Monitoring This session presents the requirements for, computer hardware configuration, and methods of monitoring and processing data for ground level SO² detection, pertinent to fuel switching in the electric power generation industry.

D. Preston (5678) Chairman Wednesday 10:00
L. Sluder, Jr. (1724)

SYSTEMS DIVISION - 1800 (Continued)

180009 - 1800 Reply/Planning This session provides the IBM Corp. the opportunity to make a formal reply to USER questions or problems submitted at the 1800 Soundoff. The remaining time in this session will be used to plan the Agenda for the next COMMON meeting.

W. Jones (IBM)

Wednesday 11:00

R. Biehl (IBM)

180010 - 1800 Education Workshop This session will address essential matters of system documentation. What are the critical documents to collect at sysgen time? How are installation modifications maintained? How is program documentation maintained and disseminated? Stripped down methods for the small shop as well as cost-is-no-object approaches will be illustrated.

G. Hovey (5772)

Wednesday 1:30

COMMON

A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

To: 1800 Project Members COMMON
From: John Wolfgang, Systems Division Manager
Subject: Release of 1800 TECHLIB Version One

The first version of the 1800 Project TECHLIB is now ready for distribution as an optional materials tape. The TECHLIB tape contains 397 source mainline and subroutine modules. They include routines for both the MPX and TSX operating systems.

Enclosed with this memo is a listing of the directory for the 1800 TECHLIB.

Contact the 1800 Hotline for ordering instructions. You will need to provide a reel of magnetic tape, of at least 800 foot length, to obtain the package. Provided with the TECHLIB optional materials tape will be a starter deck that includes a new version of either MOPTP or TOPTP to dump the modules on an IBM 1800.

J. W.

John Wolfgang

1800 TECHLIB VERSION 1 MODIFICATION LEVEL 0 SEPTEMBER 1975

THE ROUTINES RELEASED IN THE 1800 TECHLIB OPTIONAL MATERIALS TAPE ARE DONATED WITHOUT ANY LIABILITY EITHER EXPRESSED OR IMPLIED BY THE DONEE NO MAINTENANCE GUARANTEE IS ASSUMED BY THE ORIGINATOR OR THE 1800 PROJECT IN COMMON. IF YOU HAVE ANY PROBLEMS WITH THE ROUTINES OR THE RELEASE TAPE PLEASE CONTACT THE 1800 HOTLINE.

THE ATTACHED INDEX GIVES THE TAPE KEYS, ROUTINE NAMES AND A SHORT ONE LINE DESCRIPTOR OF THE ROUTINES FUNCTION. ALSO INCLUDED IS A LIST OF THE INDIVIDUAL SIZES FOR THE MODULES ON THE TAPE.

THERE IS A PATTERN TO THE ASSIGNED TAPE KEYS AS FOLLOWS. THE KEY IS DESIGNED AS \$SOPNNNNN- WHERE

\$S IS REQUIRED BY THE MOPTP OR TOPTP (THE OPERATING SYSTEM UTILITIES FOR DUMPING AN OPTIONAL MATERIALS TAPE)
 O IS M FOR AN MPX ONLY ROUTINE
 T FOR A TSX ONLY ROUTINE
 O FOR EITHER MPX OR TSX
 U FOR A STAND ALONE UTILITY
 P IS S IF ROUTINE IS A SUBROUTINE
 M IF ROUTINE IS A MAINLINE
 U IF ROUTINE IS A UTILITY
 X IF ROUTINE IS A MACRO
 P IF ROUTINE IS A PROGRAM PATCH
 J IF ROUTINE IS A JCL FILE
 NNNNN IS THE GENERIC NAME FOR THE ROUTINE

ALSO INDICATED IS THE LANGUAGE THAT THE ROUTINE IS WRITTEN IN AS
 A ASSEMBLY LANGUAGE
 F FORTRAN
 J 1800 JCL

ALL OF THE ROUTINES ARE IN SOURCE FORM WITHOUT ANY // CONTROL CARDS. THIS WILL PERMIT YOUR USE OF THE MOPTX ROUTINE FROM THE TAPE TO MOVE THE MODULES DIRECTLY TO A SRFLE FILE IF YOU HAVE AN MPX SYSTEM. ALSO EACH ROUTINE IS ON THE TAPE WITH ITS OWN KEY. BECAUSE OF THIS THERE IS ALSO ATTACHED A CROSS REFERENCE LIST OF OTHER ROUTINES NEEDED FROM THE TAPE BY ROUTINE.

THE RELEASED TAPE HAS BEEN TESTED USING MOPTP, AND BY IPLING ON A MODEL 30 S/360 WITH SUCCESS IN BOTH CASES.

AT THE CURRENT TIME OUR DOCUMENTATION IS LIMITED, BUT MOST OF THE ROUTINES ARE COMMENTED INTERNALLY. IF ANYONE IS WILLING TO HELP WITH CONVERTING DOCUMENTATION TO MACHINE READABLE FORMAT PLEASE CONTACT THE 1800 HOTLINE.

COMMON

A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

October 28, 1975

TO: 1800 PROJECT MEMBERS

The recently concluded Houston meeting of COMMON enjoyed a healthy participation by 1800 Project Members.

Approximately 30 users participated in sessions covering uses of 2311 Disk Drives, Development and Implementation of Job Accounting Procedures, Implementation of I/O Spooling and Techniques for Pollution Control Monitoring.

In addition, three installations presented 30 minute profiles of their individual systems and applications.

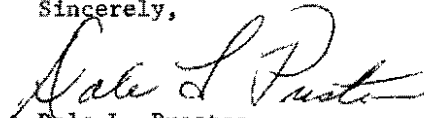
Joe Maruska hosted a working session at the Houston headquarters of the Exxon Corporation, demonstrating the system objective and operation.

The agenda for the Montreal meeting of COMMON which is scheduled for April 25-28, 1976 will have to be finalized by the end of December 1975.

As your Project Chairman, I am asking your advice and help in preparing the Montreal meeting.

Your participation can be two-fold; either suggesting programs or presenting a program on your particular installation or activity. Would you please take the time to review how you can make a participation to the Montreal meeting and notify me early in December. Only by knowing the needs of the project members can a successful and meaningful Montreal session be conducted.

Sincerely,



Dale L. Preston
1800 Project Chairman

ms

COMMON

A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

January 29, 1976

TO: 1800 Project
FROM: Dale L. Preston
SUBJECT: 1442 and 1443 Spooling System

Enclosed is a write-up and listings for a
1442 and 1443 Spooling System.

Please forward any comments or questions on
the system operation.

ms



International Business Machines Corporation

P.O. Box 1328
Boca Raton, Florida 33432
305/391-0500

June 14, 1976

Mead Johnson Company
Research Center
Technical Information Services
Evansville, Indiana 47721

Attention: D. L. Preston
1800 Project Chairman/Common

This letter is in response to a request you made through Bob Kollmar at the Montreal Common Meeting for written clarification of our plans for the clean-up PTFs for MPX and TSX.

As you know, effective July 30, 1976, both 1800 MPX and TSX will be reclassified to service class 'C'. On or about September 1, 1976 we will make available two composite PTFs. One for MPX and one for TSX.

Both PTFs will contain complete object replacement decks for those modules which have been changed since the last release of each operating system. For example, changes have been made to the assembler, therefore the entire assembler will be replaced. There will be no patches in either of the final PTFs.

*For MPX, changes to source files such as BOMCD and EXDCD will be made via *SRFLE.*

For TSX, changes to TASK and SYSTEM DIRECTOR will be made by manually replacing or adding source statements in the respective source file.

All changes to be included in the final PTFs are presently available in individual PTF form. The final PTF can be applied to the appropriate operating system whether or not any or all of the current PTFs are installed. The final PTFs will be auto shipped to all current users of MPXV3M4 or TSXV3M9. All new users ordering MPX or TSX will also receive the applicable PTF.

A source tape, similar to an optional materials tape, will be auto-shipped to all users who have ordered the O.M.T. since the last release. The source tape will contain only those modules

which have been changed. In the case of MPX, the source tape will also contain those programs which were deleted from the V3M4 optional materials tape. A new set of microfiche listings will be available for TSX and a TNL update to the MPXV3M4 microfiche will be distributed.

The PTFs are not to be construed as new releases. That is, V3M4 of MPX and V3M9 of TSX will continue to be the latest release designations. However, the source listings and microfiche will show 3-5 [MPX] and 3-10 [TSX] to indicate the changes made since the particular operating system was last released.

I want to emphasize here, that the source tapes, microfiche listings and final PTFs will be completely compatible.

The TSX non-reentrant library will consist of a new release, V1M4.

I hope this answers any questions that you, or other Common members may have regarding the final PTFs. If you wish, you may publish this letter in CAST.

Sincerely,



R. E. Biehl
Program Language Support

REB:smn

8080A MICROPROCESSOR AS AN ADJUNCT TO THE

IBM 1800 PROCESS CONTROLLER

DEAN CHAPMAN

NIAGARA MOHAWK POWER CORPORATION
SYRACUSE, NEW YORK

**Cost Percentage
of a Project**

| | |
|-----------------------------|----------|
| I. FEASIBILITY STUDY | 1 - 5% |
| II. A. PROJECT REQUIREMENTS | 8 - 10% |
| B. PROJECT SPECIFICATIONS | 18 - 22% |
| III. PROJECT DEVELOPMENT | 50 - 70% |
| IV. PROJECT INSTALLATION | 5 - 15% |
| V. REVIEW AND REFINEMENTS | 1 - 5% |

8080A MICROPROCESSOR AS AN ADJUNCT TO THE IBM 1800 PROCESS CONTROLLER

INTRODUCTION

At Niagara Mohawk Power Corporation, a dual IBM 1800 process controller configuration, operating in a "prime-backup" mode, is used to monitor and log bulk power transfers and to control and dispatch generation within the power system. The system supports both an in-core and a disk file data base, accepts new inputs from several hundred monitoring points within the system every two seconds, and interfaces with the power dispatchers through a system of CRT's. In addition, the system maintains a data link with the New York Power Pool in Albany and passes over two hundred data points to that organization's computer system on a six second scan basis.

As the system has evolved over the past few years, more and more tasks have been added until we find ourselves now at the point where to add more tasks would begin to seriously affect system response time.

At this point, it was decided to investigate the possibility of unloading some of the tasks from the 1800 itself and to perform them in peripheral processors. This paper will report the initial results of these efforts. The description begins with an overview of the INTEL SBC-80 series of microprocessor hardware, the system chosen for this project. Details are then given covering the hardware interface between the 1800 and the microprocessor. Techniques for developing and maintaining software for the microprocessors follow. Finally, several applications are discussed, both from a hardware and a software standpoint.

INTEL SBC-80 HARDWARE

The microprocessor hardware chosen for this project is the INTEL Single Board Computer (SBC) line which was specifically developed for industrial applications (as opposed to home hobby computer market). The heart of these systems is one of several CPU boards. These boards are complete computers with provision for Read-Only Memory (ROM) for non-volatile program storage and semiconductor Random Access Memory (RAM) for scratch pad and data storage. Each features parallel and serial I/O (the latter using the Universal Synchronous/Asynchronous Receiver Transmitter (USART) module), and the top of the line system, the SBC 80/20 features hardware which supports 8 levels of vectored interrupts with one of several priority algorithms available. This unit will also function in a multi-processor configuration with built-in arbitration logic controlling access to a common bus.



Dynamic Control Corp.

FRANKLIN INTERNATIONAL PLAZA • SUITE 330 • (305) 444-8524
255 ALHAMBRA CIRCLE
CORAL GABLES, FLA. 33134

August 1, 1978

Small Systems World
53 West Jackson Blvd.
Chicago, Ill. 60604

Dear Editor:

In response to the letter by Bret Sutton in the August edition, I would like to remind him and your other readers that there is an organization dedicated to the interchange of ideas regarding computers and their usage.

The organization is COMMON, and further information may be received from:

COMMON
Room #1717
435 No. Michigan
Chicago, Ill. 60611
312-644-0828
Attn: Dave Lister

Sincerely,

David M. Pomerance
S/3 Chairman

cc: Dave Lister

COMMON

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A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

Dear COMMON 1800 Member:

Did you know that there are over 50 Members of COMMON who have, and are using, IBM 1800 Computer Systems?

Did you also know that there are many of us die-hards who plan to continue using them for at least five years?

This is a significantly large body of people who share a mutual need and knowledge and can contribute to the better use of these versatile, viable computer systems. Shouldn't we work a bit harder to tap this enviable resource?

As your 1800 COMMON Project Chairman, I've put together a short questionnaire to try to estimate your needs for the 1978 Denver Conference to be held October 15-18, 1978. Based on your responses, I plan to try to put together a useful, educational and economically beneficial program.

But I need your help to do it.

Won't you please take a minute to fill out the questionnaire and return it as soon as you can?

Sincerely,



Frederick J. Ludwick
COMMON 1800 Project Chairman

FJL/pmk
Attachment

COMMON Denver Conference Questionnaire
October 15-18, 1978

Please check any and all that apply to you. Feel free to write in any comments or append a note to give me further insight into your needs.

1. a. We still have one or more IBM 1800's.
- b. We plan to keep them more years.
- c. I'm not interested. Please drop me from your list.
2. I am interested in having COMMON sessions covering the following areas:
 - a. Assembler Programming techniques workshops
 - b. FORTRAN Programming techniques workshops
 - c. SYSGEN workshop
 - d. TSX internals
 - e. MPX internals
 - f. IOCR's (specify) _____
 - g. Hardware (specify) _____
 - h. Installation Profiles (someone else's)
 - i. Installation Profiles (mine, and I'd be willing to give it)
 - j. Series/1 Compatibility/Incompatibility
 - k. Technical Library Progress
 - l. Real-Time Applications (specify) _____

 - m. Sensor-Based Applications (specify) _____

 - n. Communications (specify) _____

 - o. Programming/Documentation Aids

___ p. Interfacing with the real world

___ q. Other (specify) _____

3. Since COMMON depends greatly on its own members' presentations for depth of material, please go back and circle your check marks if you can participate in, or give, a one-hour presentation in the appropriate area of interest.

4. Name _____

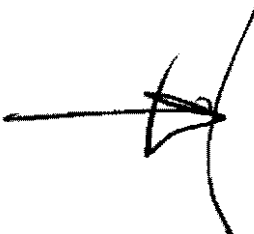
Company _____

Address _____

Phone _____

Member Number (if known) _____

I'm going to try to issue a questionnaire like this one prior to each meeting. Please, again, take the time to return it to me. It is the basis for our future programs.



Return to:

F. J. Ludwick
c/o Power Control
Niagara Mohawk Power Corporation
Syracuse, New York 13202

COMMON

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A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

September 14, 1978

Mr. Robert A. Sutherland
Manager, Systems Division
System/3 Associates, Inc.
2 Three Ring Way
North Scituate, Mass. 02060

Dear Bob:

As you know, I issued a questionnaire to our 50 IBM 1800 installations. I received some 18 responses, which was certainly gratifying. Here are the results to date.

There were 17 members with one or more 1800's, and the average expected retention was 4.3 more years.

Session interests can be summarized as follows:

| | | | |
|-----------------------|---|--------------------------------|----|
| Assembler Programming | 7 | Series/1 Compatibility | 16 |
| FORTRAN Techniques | 6 | Technical Library | 7 |
| SYSGEN Workshop | 7 | Real-Time Applications | 2 |
| TSX Internals | 1 | Sensor-Based Applications | 1 |
| MPX Internals | 9 | Communications | 3 |
| IOCR's | 3 | Programming/Documentation Aids | 7 |
| Hardware | 3 | Real World Interfaces | 3 |
| Installation Profiles | 4 | | |

Specific interest was expressed in areas of mini-micro interfaces, a FORTRAN Optimizing Compiler, DMP functions, and a Series/1 emulator. Several members expressed interest in a re-do of the 2311 disk storage. Sessions which were held in Miami in 1974 by IBM, which concentrated on BULKN, FILEN and Channel Programming.

These responses show that COMMON has much to offer the 1800 user. I have had several offers to do installation profiles, as well as Assembler, FORTRAN and SYSGEN workshops.

As I indicated, the results were most rewarding. I will be sending out another questionnaire for the Philadelphia meeting.

Very truly yours,



Frederick J. Ludwick
1800 Project Chairman, COMMON

FJL/pmk

xc: Dave Lister/CAST

SERIES/1 - 1800 HARDWARE EMULATOR PRESENTATION

Steve Wixson

INTRODUCTION

This presentation was a progress report on our project to add hardware to the Series/1 to allow it to run 1800 system and application programs. The purpose was to present the final design prior to implementation, discover mutual interest, and solicit ideas to correct and improve the the design. The viewgraph foils that were shown are included, and referenced by drawing number instead of page number.

WHY A HARDWARE EMULATOR?

For the past 10 years, the University of Alabama in Birmingham under funding from the National Heart Institute has provided technical support for physicians caring for and studying patients with ischemic heart disease. The result is a large set of 1800 programs and subroutines unique to our application. Since the 1800 has no growth path, much of the subroutine library has been rewritten in assembler to increase performance.

Recently, University Hospital asked us to automate two floors of a new wing of the hospital. Funds for the project are limited, and not sufficient to recode and debug the existing software. The availability of the Series/1 with its magnificent I/O channel, and LSI technology in simple to implement forms led us to propose construction of a one-time piece of hardware and software to run these programs on a standard Series/1.

NEGOTIATIONS WITH IBM

IBM was approached for the Series/1-1800 support. An RFP to replace the microcode for the Series/1 instruction set with microcode for the 1800 instruction set (less 1800 Executive I/O instruction plus Series/1 Operate I/O instruction) was submitted to IBM. IBM's reply indicated it is technically feasible to do this, but the market is too small. A proposal for a joint development effort was submitted but not approved.

SERIES/1 - 1800 HARDWARE COMPARISON

The Series/1 hardware appears to be a legacy of the System/7 for register architecture (20%), 1800 for I/O channel architecture (50%), and new instruction set (30%). A detailed comparison of the I/O channel for the Series/1 and 1800 is shown in drawing S18-0020.

COMMON

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REVISED 4/25/79

A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

April 25, 1979

To: COMMON 1800 Members

The MPX and Assembler Course will be held at Goddard Space Flight Center, Greenbelt, Maryland on June 11-15, 1979. Class size will be limited to 20, and will be filled on a first-come, first-served basis; and there will be no fee. If there is sufficient demand, we will hold a second class. Participants must bring their own manuals: MPX Programmer's Guide, 1800 Functional Characteristics, and Assembler manual. The class will be taught by John Wolfgang. If you are interested, please send the following registration form to me no later than June 1, 1979.

Fred Ludwick
1800 Project Chairman

FJL/pmk

COMMON 1800 MPX/Assembler Class

June 11 through 15, 1979

NASA Goddard Space Flight Center
Greenbelt, MD

REVISED 4/25/79

Name & Addresses of Attendees:

Name _____

Name _____

Address _____

Address _____

Please send a list of motels.

Please send (no later than 6/1/79) to:

F. J. Ludwick
Power Control Dept.
Niagara Mohawk Power Corporation
300 Erie Blvd. W.
Syracuse, NY 13202



A USERS GROUP FOR IBM COMPUTERS

SYSTEMS DIVISION

January 25, 1980

To COMMON 1800 Members:

As I indicated at the New Orleans Meeting, I am willing to act as a "clearinghouse" for 1800 Hardware which our members wish to buy or sell. I have already received several lists from members, and have them on file.

Should you wish to pass on any information on hardware, please send me as complete a description as possible, along with any price information you may have.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Fred", written in dark ink.

Frederick J. Ludwick
1800 Project Chairman

FJL/pmk

COMMON

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A USERS GROUP FOR IBM COMPUTERS 00000

SYSTEMS DIVISION

April 29, 1980

COMMON 1800 Project Members:

It is my pleasure to announce that Bernie Nordberg, of ARCO Pipeline Company, has agreed to take over the 1800 Project for me. He is an informed and capable leader, and will serve you well. Please direct all future 1800 correspondence to him. His address is:

Mr. B. A. Nordberg
COMMON 1800 Project Chairman
ARCO Pipeline Company
ARCO Building
Independence, Kansas 67301

I'm looking forward to seeing you at Cleveland. The 1800 Project will be presenting several new and interesting sessions.

Sincerely,



Frederick J. Ludwick, Jr.
Manager, Systems Division

FJL/pmk