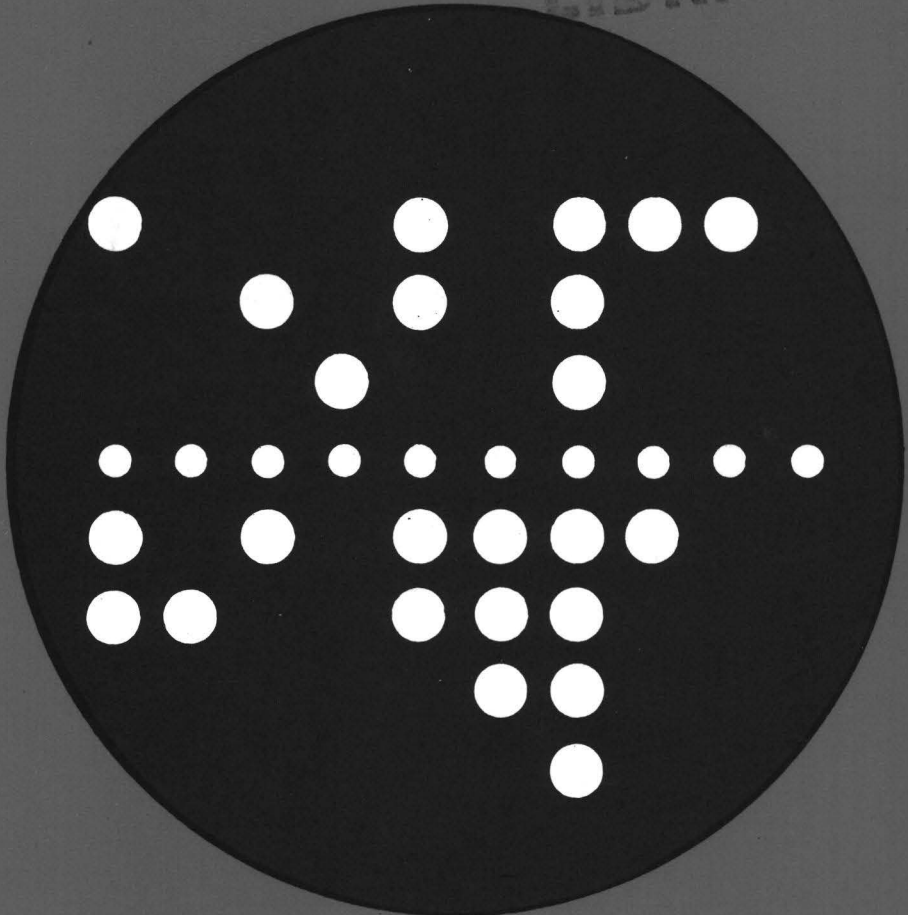


COMPUTING CENTRE NEWSLETTER

February 1979 - No 28

LIBRARY



Commission of the European Communities

**JOINT
RESEARCH
CENTRE**

Ispra Establishment



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EDITORIAL NOTE.

The Computing Centre Newsletter is published monthly except for August and December.

It describes developments, modifications and specific topics in relation to the use of the computing installations of the Joint Research Centre, Ispra Establishment.

The aim of the Newsletter is to provide information of importance to the users of the computing installations, in a form which is both interesting and readable.

The Newsletter also includes articles which are of intellectual and educational value in order to keep the users informed of new advances in computer science topics.

The Editorial Board is composed as follows:

J. Pire.	Responsible Editor.
M. Dowell.	Technical Editor.
C. Pigni.	Editors.
H. de Wolde.	

Administration and contact address:

Ms. A. Cambon (tel. 730)
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21020-ISPRA (Varese)

LEGAL NOTICE:

Neither the Commission of the European Communities nor any person acting on behalf of the Commission is responsible for the use which might be made of the information in this Newsletter.

COMPUTING CENTRE INFORMATION.

M. Dowell.

The Computing Centre provides information for computer users which is presented in several different ways. This article is intended as a summary of the current situation and also as an indication of some future enhancements.

The information available will be described using the following categories.

Green books

The documents which provide comprehensive information on some aspects of the use of the central facilities.

Installation notes

Extensive information which is stored in files on the central computer. Separate sections of these notes may be listed by users. This information is of significance to all users.

Newsletters

A categorised list of important items from previous issues of the Newsletter is given.

Computing support library

Information concerning the documentation available is described.

Some of the documents are for perusal or reference, other documents may be purchased.

Advisory service

Details of the direct support consultancy service are given.

HASP news

Information given at the beginning of the output listing of a job.

TSO HELP

Information to assist with problems whilst using a TSO terminal.

Courses and seminars

General information is given.

Telephone information

This gives information about the current state of the central computer system.

"GREEN BOOKS" -COMPUTING CENTRE DOCUMENTS FOR USERS.

The Computing Centre provides a series of useful and educational documents on various topics. These documents are in the same format as the Newsletter and are commonly known as "green books". Currently there are three of these books available and others being designed or prepared. The following list gives information about the current situation and also an indication of projected documents.

Currently Available.

1. The LIBRARIAN. -- R. Meelhuysen, H.I. de Wolde.

This document describes the LIBRARIAN package which is a dataset retrieval and maintenance system designed to facilitate the writing, maintenance, testing and documenting of programs.

Source programs, object decks, test data and any other information traditionally stored on cards, may be stored through the LIBRARIAN system on disk. Updating and manipulation may be performed by single simple commands.

A new issue of this document is currently in preparation. This will describe, additionally, the manner in which LIBRARIAN may be used as a back-up storage and retrieval system for datasets when using the TSO interactive system.

2. Towards a New Programming Style. -- A.A. Pollicini.

This document presents a description of current developments in programming language design and new programming techniques.

It also contains a discussion about various alternative structured programming techniques. It is hoped to give the reader an insight into new programming techniques and thus to be a beneficial influence on his/her future work.

3. GRAPHIT. -- H.I. de Wolde, A.A. Pollicini.

The GRAPHIT system is of considerable benefit to all users of the Computing Centre services who need to produce graphic output. It enables them to access different plotting devices (GOULD 5200 electrostatic plotter, BENSON 1102 penplotter, Calcomp 1136 penplotter [and planned Tektronix 4015]) using a computer program which has only graphic output for one specific device.

This document describes the development of the system and how to make use of the facilities on the System 370/165.

Available Soon.

1. J.R.C. TSO Primer. - A. Rink.

This document is intended to give both a background to interactive terminal systems in general and an introduction to the concepts and facilities of the TSO system. The document will contain specific samples of TSO usage with explanatory notes.

Projected Documents.

1. Users' Guide to the Computing Centre Services.
2. Remote Job Entry, Use of the Solar 16 System.
3. Job Control Language.
4. Use of FORTRAN.
5. Use of Graphics on the System 370/165.
6. Use of Magnetic Tapes and Disks.
7. Use of Mathematical Subroutine Libraries.

INSTALLATION NOTES

General information on the use of the IBM 370/165, O.S, HASP and various items of information concerning the use of software (e.g compilers, subroutines) may be obtained from the 'installation notes'. A line printer listing of selected items from the set of installation notes may be obtained by executing a batch job. The appropriate format for the job is given below.

```
//.....JOB(your job card)...  
$   LINES l11  
//   EXEC LIHNO,MEMB=nnnn
```

Where l11 and nnnn should be replaced by the appropriate items from the following table.

nnnn	Description of the contents.	111
INFO	General information on 370/165, O.S. and HASP utilization.	002
PROC	Information about the job control procedures available for use with Algol, Assembler and FORTRAN (G1 and HE).	003
PPGL	Information about the job control procedures available for use with PL1 and COBOL compilers and also SORT/MERGE. There is also extended information for Algol and FORTRAN (G1 and HE).	002
UTIL	Programs and utility routines.	002
CCSL	Information about the local set of scientific subroutines.	003

It is envisaged that users will produce copies of various sections of the installation notes for subsequent reference. It is, of course, possible to obtain lists of several of the sections of the installation notes in one job. This may be accomplished by having a 'LINES' card which contains the total accumulated 'l11' values. This is followed by the appropriate EXEC cards to produce the listing required.

Note The specification of the job format does not include a 'TIME' card. It is not envisaged that the production of listings of one (or even all) of the sections of the installation notes will require more than the default time allocation.

From time to time sections of the installation notes may be modified to perform additions, deletions or corrections. The following facility has been made available to enable users to ensure that their copies of the sections of the installation notes are always up to date.

Users may obtain a copy of the changed pages of installation notes to enable them to update their manuals ('INFO', 'PROC', 'UTIL',.....) by executing a job of the form:-

```
//.....JOB(your job card)...  
$   LINES 002  
//   EXEC LIHNO,MEMB=NEWSyymm  
Where yymm is the year and month of that 'news file' (e.g NEWS  
7901 for January 1979)  
Thus, the user may receive copies of all the manual pages which  
have been modified during the corresponding month. The  
information will remain available for a three month period (ie  
NEWS 7901 will be available from 1st Feb.1979 until 1st May  
1979).
```

Example 1

To obtain a copy of the two sections of installation notes named INFO and PROC.

```
//.....JOB(your job card)...  
$   LINES 005  
//   EXEC LIHNO,MEMB=INFO  
//   EXEC LIHNO,MEMB=PROC
```

Example 2

To obtain a copy of the updates for all sets of installation notes for January 1979.

```
//.....JOB(your job card)...  
$   LINES 002  
//   EXEC LIHNO,MEMB=NEWS7901
```

SUMMARY OF NEWSLETTER ARTICLES.

There follows a list of articles published in the Newsletter up to, and including, the issue of February 1979 (no. 28). The material has been classified by subject. Where appropriate the same article has been included in two different subject lists. Copies of previous issues of the Newsletter may be obtained from Mrs. A. Cambon - Computing Support Library (room 1871, telephone extension 730).

<u>Issue</u>	<u>Title of Article</u>	<u>Author</u>
<u>General Interest For Users Of The Service.</u>		
2	Private Program Libraries	P.A. Moinil, H.I. de Wolde
3	Simulation Techniques at the JRC Computing Centre	F. Argentesi
3	WANG 2200	C.L. van den Muyzenberg
4	Acquisition, Manipulation et Stockage de l'information	J. Pire
4	Structured Programming	C.L. van den Muyzenberg
5	Catalogued procedure PLPCLGS	C.L. van den Muyzenberg
6	The COREA system	G. Crestoni, G. Gaggero, A.A. Pollicini
6	SHELTRAN: An Example of Application	A.A. Pollicini
7	IMS - Rules for Application	A. Borella
7	An Example of the Use of the COREA System	G. Gaggero, A.A. Pollicini
10	The System Software at the Computing Centre. Present Status and Possible Development	D. Koenig
13	The Operating System OS/MVT: An Overview	D. Koenig, P. Moinil
17	Support to Computing	H.I. de Wolde
20	"Tuning" de la stratégie d'exploitation	J. Pire
22	Mathematical and Statistical Subroutines	A. Inzaghi, H.I. de Wolde
28	Computing Centre Information	M. Dowell

<u>Issue</u>	<u>Title of Article</u>	<u>Author</u>
<u>T.S.O.</u>		
14	IBM Time Sharing Option(TSO) -Concepts, Features and Facilities	C. Daolio, D. Koenig
21	The LIBRARIAN-TSO Interface now in use	A.A. Pollicini
21	Note to TSO Users	"Systems Group"
22	TSO Data Utilities: COPY,FORMAT, LIST and MERGE	A. Rink
24	Note to all TSO Users	C. Daolio, A. Rink
24	New TSO Data Management Commands: CONCAT,DECON,and FREEALL	C. Daolio, A. Rink
27	Note to TSO Users	D. Koenig
28	TSO Response Time Measurements	A. Rink

For FORTRAN Users.

2	Private Program Libraries	P.A. Moinil, H.I. de Wolde
6	SHELTRAN: An Example of Application	A.A. Pollicini
10	IBM FORTRAN IV(H Extended)	C. Pigni
11	Portability of FORTRAN programs	A.A. Pollicini, G. Prinzivalli
22	Mathematical and Statistical Subroutines	A. Inzaghi, H.I. de Wolde
24	Note to all FORTRAN Users	C.L. van den Muyzenberg
25	A Look at FORTRAN 77	A.A. Pollicini

Graphics.

8	The Graphics Facilities at the Computer Centre	H.I. de Wolde
15	GINO-F. A graphics package	H.I. de Wolde

<u>Issue</u>	<u>Title of Article</u>	<u>Author</u>
<u>General Interest.</u>		
2	Eurocopi - European Computer Program Institute	G. Gaggero
5	A programming language for you	A.A. Pollicini
6	An Introduction to Data Base Management Systems	A. Borella, S. Capobianchi
8	Software portability - An Introduction to the Problem	A.A. Pollicini
11	Portability of FORTRAN programs	A.A. Pollicini
13	Testing by Assertions	H. Fangmeyer, K. Hanke, C.L. van den Muyzenberg
16	Le Calcul Formel avec FORMAC	F. Rechenmann
18	Programming Foundations	W. Boettcher, R. Jaarsma, A.A. Pollicini
23	An Introduction to Modular Systems	G. Gaggero
24	International Summer School on Program Construction	M. Barnreiter
25	A Look at FORTRAN 77	A.A. Pollicini
27	Basic Requirements for a Modern Integrated Modular System for Engineering	G. Gaggero

Informatics Networks.

11	A European Informatics Network	A. Endrizzi
12	Project COST 11 - European Informatics Network Implementation Architecture	K. Weaving
20	Packet Switching Networks. Example: TRANSPAC	W. Boettcher
23	The European Informatics Network Demonstration	A. Endrizzi

<u>Issue</u>	<u>Title of Article</u>	<u>Author</u>
<u>Utilisation And Accounts Of the Service.</u>		
5	Le Coût du Centre de Calcul - Années 1973-1976	J. Pire
7	Evolution du Centre de Calcul au cours de la période 1973-1977	J. Pire
18	Evolution de Utilisation de l'ordinateur du Centre de Calcul 1973-1977	J. Pire
24	Eléments de Facturation du Centre de Calcul	J. Pire
26	Coût des Travaux à Ispra	J. Pire
26	Utilisation de TSO	J. Pire
27	Utilisation de L'ordinateur du Centre de Calcul en 1978	J. Pire

Users' Group.

12	Contact with USERS	H.J. Helms
12	Users' Group (U.G.)	J.P. Halleux
12	Proposition for the Statut of a Permanent Users' Group Concerning Computing Facilities at the JRC Ispra	
15	U.G. Short News: Internal Meeting of October 6th	
16	U.G. Short News: Internal Meeting of October 20th	J.P. Halleux
17	Users' Group (Minutes of the 1st. Meeting)	
19	Users' Group (Minutes of the 2nd. Meeting)	

COMPUTING SUPPORT LIBRARY

The library is situated in room 1871 of the building 36. In this room is held a set of documentation which the users may freely reference. The documentation, which is varied, includes a comprehensive set of relevant IBM manuals, IMSI manuals, graphics information and many other manuals. Also, there is a collection of computing newsletters and journals from other institutions which users may wish to read.

It is possible to obtain free of charge copies of previous Newsletters and also copies of 'green books' from Mrs A. Cambon (at present replaced by Mrs C. La Cognata) who can be found in the office which adjoins the room of the Computing Support Library.

It is also possible to purchase copies of some IBM manuals and other documents from the same office. Lists of the manuals available for purchase and also a list of the newsletters and journals available are given below.

VARIOUS COMPUTER NEWSPAPERS/JOURNALS

The following literature may be read at the Computing Support Library (Building 36):

Newspapers

Computer Weekly	(till No.640, Febr.15, 1979)
Computing	(till Vol.7-No.8, Febr.22, 1979)
Go information	(till No.4, Decem.1978)
Rivista di informatica (AICA)	(till Vol.7- No.1, 1977)
Siemens Data Report	(till 4, Decem.1978)
APEC Journal	(till summer 1978)
Uomini e Computer Come	(till No.14, January 1978)
Computer Products International	(till February 1979)
Quaderni di informazione E.D.P	(till Sept.1977)
INFOTEC	(till Decem. 1979)
Datamont and Dualdata Informazioni Tecniche	

Computing Centre Newsletters

Le Canal (Bulletin d'information du Centre Interuniversitaire de Calcul de Grenoble)	(till No.63, January 1979)
Notizie sui Sistemi di Elaborazione dati del CNEN	(till No.7, Sept.1977)
Quid Novi? (Bimestrel d'Information du Centre de Calcul du Luxembourg)	(till June 1978)

The Computing Support Library informs users that the following manuals are available for distribution:

	Price U.C.E	
GC20-1790	An introduction to structured Programming in FORTRAN	6.0
GC28-6763	TSO Terminal User's Guide	3.6
GC28-6732	TSO Command Language Reference	10.7
SC28-6433	TSO Terminal User's Guide and Reference	10.3
GC28-6762	TSO Terminals	1.8
SC28-6855	Terminal User's Supplement for FORTRAN IV (G1) Processor and TSO FORTRAN Prompter	10.2
SC28-6852	FORTRAN IV (H Extended) Compiler Programmer's Guide	12.9
SC28-6765	TSO Data Utilities: COPY FORMAT,LIST,MERGE User's Guide and Reference	6.0
GC28-6515	IBM System/360 and /370 Fortran IV Language	4.8
SC28-6853	Code and Go FORTRAN and FORTRAN IV (G1) Programmer's Guide	12.5
GC28-6514	OS Assembler Language	4.8
GC28-6631	IBM System/360 Operating System: Messages and Codes	100.0
SC33-0027	OS PL/I Optimizing Compiler: Messages	12.6
SC33-0029	PL/I Optimizing Compiler TSO User's Guide	3.1
GA22-7000	Principles of Operation	45.0
TUCC	(Triangle Univ.computation Centre)TSO-Editor	5.0
PLOT-10	TEKTRONIX User Manual	13.0
LIBRARIAN		3.0
ADABAS-ADACOM	Reference Manual	10.0
ADABAS-ADAMINT	Reference Manual	22.0
ADABAS-ADASCRIP	Reference Manual	9.0
ADABAS-ADAWRITER	Reference Manual	18.0
ADABAS-Application	Programmer Guide	3.5
ADABAS-Reference	Manual	30.0
ADABAS-Utilities	Manual	45.0
GINO-F		25.0

The following manuals will be on limited distribution:

IBM Manuals

SC28-6865	FORTRAN IV (H Extended)Compiler and Library (Mod II) Messages	7.2
ADABAS	Introduction	6.5

Order forms for the manuals are available at the office of Mrs. Cambon (building 36 - tel. 730). Please remember that the Computing Support Library only accepts requests with the budget number signed by the programme manager (activity sheet holder), to assure payment.

ADVISORY SERVICE

Since the beginning of 1979 an advisory service has been available to the computer users during one hour each day for the four days Tuesday - Friday of each week. The service is given in the room of the Computing Support Library (room n.1871 of the building A 36).

Recently the service has been extended to cover one hour each day for all five days of the working week. This service has been extensively advertised in the HASP news. We feel that the service has been of considerable benefit to many of the users. We take this opportunity to remind users of the existence of the service and to specify the terms under which the service is available.

The advisory service is designed to enable users to obtain direct advice on informatics problems from members of the support to computing group. It is hoped that the advice will help to solve their problems.

However, the service is not designed to help users with problems which are their sole responsibility. For example, debugging of the logic of programs and requests for information which can easily be retrieved from available documentation.

If necessary other competent personnel from the systems or the support group may be contacted by the advisors, but not directly by the users. Please note that the advisory service is available only during the times specified in the HASP news.

Also, the advisor will be willing to listen to any suggestions or complaints regarding particular or general aspects of the service. In this role the advisors will not be able to solve any particular problem, but will simply act as an information interface between the users and the staff of the computing centre services.

HASP NEWS

Information and news which is urgent is drawn to the attention of the users by inserting on special page at the beginning (after the identification page) of their line printer output. This, we feel, is a quick and effective way of making users aware of changes, enhancements, restrictions and temporary problems as they occur. We advise user to always give a brief look at this information.

There may be something of interest for you in there!

TSO HELP

For TSO users, a facility is available to enable them to obtain information whilst they are using their TSO terminal. The TSO HELP facility may be used to request general information, or specific information about a command or subcommand. It enables users to obtain fairly short and concise information without having to leave their terminal to consult a manual. Full details of this facility will be given in the green book 'TSO Primer' and also in the appropriate IBM manuals.

COURSES AND SEMINARS

In the past years a number of courses have been organized. Recently some useful results have been produced by collaboration between EFIS and the Computing Centre. Courses have been divided into three categories :

- 1) Basic course - Normally in the form of a one or two weeks full-time course to introduce basic informatics or a special field of informatics. The courses are intended for people without experience in the particular field.
- 2) Topic courses - Instructions to programmers on special tools or software packages. Normally the courses are 2-3 days in duration.
- 3) Informatics information - These are short courses of about seminars 1/2 day which are organized to explain particular aspects which may be encountered in the use of the central computing seminars.

Note

For seminars which take more than a few hours, permission for participation from the Head of Division is required.

For 1979 a session of the TSO course has already taken place. It is hoped to provide another TSO course later in the year. Informatics information seminars will be provided in 1979. Dates of the courses will be given as soon as they are available.

TELEPHONE INFORMATION

Information regarding the current state of the main computer system can be obtained by using the telephone. By dialling extension 751 it is possible to listen to a recorded message (in Italian) which gives details of the situation in the event of a computer breakdown. The information is short and concise and will usually contain an indication of the expected length of time of the delay.

TSO Response Time Measurements

C. Daclio, P. Moinil, A. Rink

In September 1978 a first set of tests concerning the relationship between TSO response time and the number of active users (simultaneously logged on) was undertaken. Since in the meantime a number of TSO improvements had been carried out it seemed to be useful to perform the same set of tests again. This happened early in 1979. This article now intends to present the results of the undertaken tests.

A single test run consisted of a terminal session simulated by a command procedure. The command procedure contained 24 EDIT subcommands. Thus, a pure editing session was simulated. Terminal session time measurements were performed by using the TIME command, and number of active user measurements by using the DISPLAY command of TSO.

The average TSO response time (for n active users) was then defined as average terminal session time divided by 24 (number of subcommands).

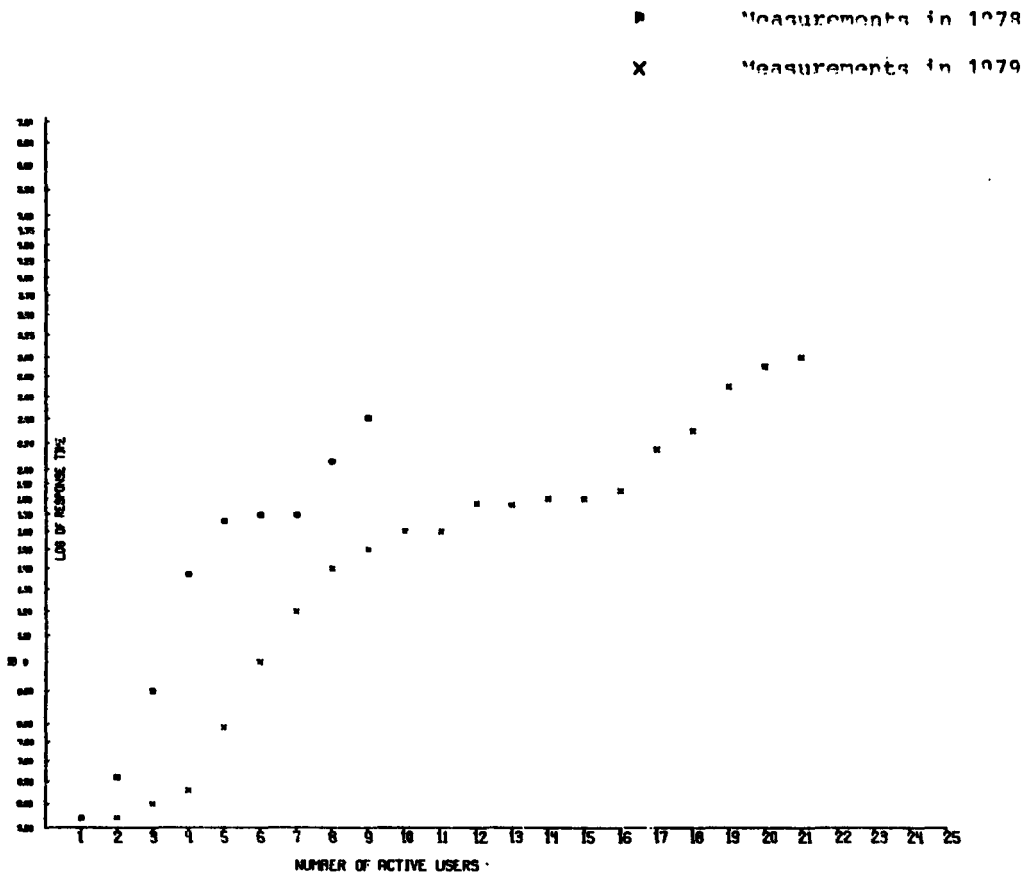
In September 1978 when the first set of tests was run only one foreground region was available for TSO. Since then the following major changes have been performed:

- a second foreground region has been opened,
- I/O - requests which were formerly served on a first-in - first-out basis are now served on a priority basis in favour of TSO and IMS,
- the TP-SYSTEM has been taken out, and
- the job queue has been moved on to a user disk.

The effect of these changes is shown by figure 1.

Looking at the picture it can be seen that now about twice as many users can be handled than in Sept.1978. This represents an important improvement. The average number of active users counted in Sept.1978 was 6. Now the average has increased to 15 active users, with peaks upto 30.

Figure 1: A graph of the "logarithm of response time" against the "number of active users"



NOTE TO ALL TSO USERS
D. Koenig

* IMPORTANT *

Use of SUBMIT Command

If a user has allocated datasets in the course of his terminal session which do not have the attribute SHR (as specified in the DISP-parameter of ALLOCATE), and subsequently the user SUBMITs a job for batch execution which accesses these allocated datasets, then this batch job cannot be executed for the duration of the terminal session and will be executed only in the evening when TSO is stopped.

The user can avoid this situation by specifying the parameter FR(FREEALL) when issuing the SUBMIT command. Using this parameter causes all datasets allocated by the user in the course of his session to be freed by the SUBMIT command before the batch job is actually submitted. If the user wishes to reuse some of the datasets in his session then the files must be reallocated using the ALLOCATE command. However, datasets used in the SUBMITTED batch job should be reallocated only after the job has been executed.

Statistics of computing installation utilization.
 Report of computing installation exploitation
 for the month of February 1979.

	YEAR 1978	YEAR 1979
<u>General</u>		
Number of working days	20 d	20 d
Work hours from 8.00 to 24.00 for	16.00h	16.00h
Duration of scheduled maintenance	21.25h	15.33h
Duration of unexpected maintenance	32.63h	4.33h
Total maintenance time	53.88h	19.66h
Total exploitation time	272.12h	300.34h
CPU time in problem mode	106.68h	176.61h

Batch Processing

Number of jobs	9127	8540
Number of cards input	2135000	1465000
Number of lines printed	23069000	27398000
Number of cards punched	147000	114000
CPU time	105.08h	160.95h
Number of I/O (Disk)	20043000	24004000
Number of I/O (Magnetic tape)	4614000	4544000

T.S.O

Number of LOGON's	568	2676
Number of messages sent by terminals	20399	143000
Number of messages received by terminals	81930	689000
CPU time	1.60h	14.42h
Number of I/O (Disk)	302000	3600000
Connect time	207.35h	1457.04h

IMS

Total time service is available	-	265.00h
CPU time	-	1.07h
Number of I/O (Disk)	-	309000

Utilisation of computer centre by objectives and appropriation accounts for the month of February 1979.

IBM 370/165
equivalent time in hours

1.20.2	General Services - Administration - Ispra	45.93
1.20.3	General Services - Technical - Ispra	0.89
1.30.3	Central Workshop	4.72
1.30.4	L.M.A.	-
1.90.0	ESSOR	15.54
1.92.0	Support to the Commission	4.54
2.10.1	Reactor Safety	168.43
2.10.2	Plutonium Fuel and Actinide Research	29.31
2.10.3	Nuclear Materials	11.49
2.20.1	Solar Energy	0.21
2.20.2	Hydrogen	0.42
2.20.4	Design Studies on Thermonuclear Fusion	6.68
2.30.0	Environment and Resources	20.18
2.40.0	METRE	5.15
2.50.1	Informatics	34.47
2.50.2	Training	-
2.50.3	Safeguards	13.07
	TOTAL	361.03
1.94.0	Services to External Users	14.12
	TOTAL	375.15

BATCH PROCESSING DISTRIBUTED BY REQUESTED CORE MEMORY SIZE

	100	200	300	400	600	800	1000	1200	1400	>1400
No. of jobs	2091	2747	1585	1375	269	84	41	30	7	2
Elapsed time	54	215	294	246	77	50	14	9	2	0.1
CPU time	2.3	25.5	57.5	36.8	20.5	11.7	3.8	2.1	0.5	0.01
"Equiv" time	17	69	98	88	35	21	6	4	1	0.02
"Turn" time	0.7	2.2	3.5	3.5	5.0	6.0	6.2	4.0	5.2	-
I/O (disk)	1364	5597	5601	5866	2080	1356	304	297	114	3
I/O (tape)	1652	1418	340	1035	35	42	2	1	-	-

NOTE.

All times are in hours.

"Equiv" means equivalent.

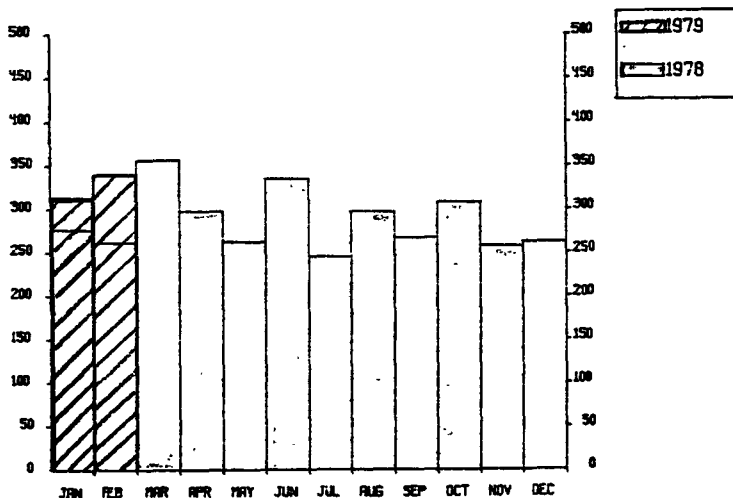
"Turn" means turn around.

All I/O transfers are measured in 1000's.

PERCENTAGE OF JOBS FINISHED IN LESS THAN

TIME	15mn	30mn	1hr	2hrs	4hrs	8hrs	1day	2day	3day	6day
%year 1978	39	57	72	84	93	97	98	99	100	100
%year 1979	25	37	50	66	82	94	99.6	99.8	100	100

HISTOGRAM OF TOTAL EQUIVALENT TIME(HRS)



Projected Total for 1979 =3909 hours(using the average).
 Total for 1978 was =3424 hours.

REFERENCES TO THE PERSONNEL/FUNCTIONS OF THE COMPUTING CENTRE.

			Room	Tele.
<u>Manager of The Computing Centre</u>	J.Pire			
Responsible for User Registration	Ms. G.Rambs			
<u>Operations Sector</u>				
Responsible for the Computer Room	P.Tomba			
Substituted in case of absence by:	A.Binda			
Responsible for Peripherals	G.Nocera			
<u>Systems Group</u>				
Responsible for the group	D.Koenig			
Substituted in case of absence by:	P.A.Moinil			
Responsible for TSO Registration	C.Daolio			
<u>Informatics Support Sector</u>				
Responsible for the Sector	G.Gaggero	1874	787	
<u>Secretary</u>	Mrs. G.Hudry	1873	787	
Responsible for User Support	H.de Wolde	1883	1259	
General Inf./Support Library	Mrs. A.Cambon (See Note 2)	1871	730	
<u>Advisory Service/List of Consultants(See Note 1)</u>		1870	730	
A.Inzaghi	A.A.Pollicini			
	H.I. de Wolde			
R.Meelhuysen	M.Dowell			

NOTE 1. The advisory service is available in the same room as the Computing Support Library(room 1870). Exact details of the advisory service times for a specific week can be found at the head of any output listing(for that week).

Any informatics problem may be raised. However, the service is not designed to help users with problems which are their sole responsibility. For example, debugging of the logic of programs and requests for information which can easily be retrieved from available documentation.

If necessary, other competent personnel from the informatics division may be contacted by the consultant but not directly by the users.

The users should only contact the person who is the consultant for that specific day and only during the specified hours.

Outside the specified hours general information may be requested from Mrs. A. Cambon(see note 2) in the Computing Support Library.

NOTE 2. Mrs. Cambon is at present replaced by Mrs. C. La Cognata.

HOW TO BECOME A REGULAR READER OF THE NEWSLETTER.

Persons interested in receiving regularly the "Computing Centre Newsletter" are requested to fill in the following form and send it to :-

Ms. A. Cambon
Support To Computing
Building 36
Tel. 730.

NAME

ADDRESS

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TELEPHONE