

# CSAR Service - Management Report

## February 2000

This report documents the quality of the CSAR service during the month of February 2000.

A more comprehensive report is provided quarterly, which additionally covers wider aspects of the Service such as information on Training, Application Support and Value-Added services.

This and other such reports are made available through the Web to staff within EPSRC and the other Research Councils, to CfS staff and CSAR Service users. The reports are indexed in a similar way to that which other useful information and news are listed for selection.

### 1. Introduction

February has seen the T3E workload running at consistently above baseline, reliability has improved with there being only one failure this month.

This document gives information on Service Quality and on actual usage of the CSAR Service during the reporting period of February 2000. The information, in particular, covers the availability and usage of the following two main CSAR Service High Performance Computing (HPC) systems:

- Cray T3E-1200E/576 (Turing)
- SGI Origin2000/16 (Fermat).

The information is provided in both textual and graphical form, so that it is easier to see trends and variances.

### 2. Service Quality

This section covers overall Customer Performance Assessment Ratings (CPARS), HPC System availability and usage, Service Quality Tokens and other information concerning issues, progress and plans for the CSAR Service.

## 2.1 CPARS

Table 1 gives the measure by which the quality of the CSAR Service is judged. It identifies the metrics and performance targets, with colour coding so that different levels of achievement against targets can be readily identified. Unsatisfactory actual performance will trigger corrective action.

### CSAR Service - Service Quality Report - Performance Targets

Service Quality Measure	Performance Targets					
	White	Blue	Green	Yellow	Orange	Red
<b>HPC Services Availability</b>						
Availability in Core Time (% of time)	> 99.9%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Availability out of Core Time (% of time)	> 99.8%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Number of Failures in month	0	1	2 to 3	4	5	> 5
Mean Time between failures in 52 week rolling period (hours)	>750	>500	>300	>200	>150	otherwise
<b>Fujitsu Service Availability</b>						
Availability in Core Time (% of time)	> 99.9%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Availability out of Core Time (% of time)	> 99.8%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
<b>Help Desk</b>						
Non In-depth Queries - Max Time to resolve 50% of all queries (working days)	< 1/4	< 1/2	< 1	< 2	< 4	4 or more
Non In-depth Queries - Max Time to resolve 95% of all queries (working days)	< 1/2	< 1	< 2	< 3	< 5	5 or more
Administrative Queries - Max Time to resolve 95% of all queries (working days)	< 1/2	< 1	< 2	< 3	< 5	5 or more
Help Desk Telephone - % of calls answered within 2 minutes	>98%	> 95%	> 90%	> 85%	> 80%	80% or less
<b>Others</b>						
Normal Media Exchange Requests - average response time (working days)	< 1/2	< 1	< 2	< 3	< 5	5 or more
New User Registration Time (working days)	< 1/2	< 1	< 2	< 3	< 4	otherwise
Management Report Delivery Times (working days)	< 1	< 5	< 10	< 12	< 15	otherwise
System Maintenance - no. of scheduled sessions taken per system in the month	0	1	2	3	4	otherwise

**Table 1**

Table 2 gives actual performance information for the period of February 1<sup>st</sup> to 29<sup>th</sup> inclusive.

Overall, the CPARS Performance Achievement was fair (see Table 3); i.e. Yellow measured against the CPARS performance targets.

The Fujitsu availability figures are included in Table 2 but not Table 3 as they have zero weighting in CPARS terms.

### CSAR Service - Service Quality Report - Actual Performance Achievement

Service Quality Measure	2000											
	March	April	May	June	July	Aug.	Sept	Oct	Nov	Dec	Jan	Feb
<b>HPC Services Availability</b>												
Availability in Core Time (% of time)	100%	97.10%	98.50%	99.70%	99.70%	100%	100%	100%	100%	100%	96.11%	95.0%
Availability out of Core Time (% of time)	98.51%	98.10%	99.71%	99.40%	99.40%	99.40%	99.5%	100%	100%	99.70%	98.52%	100%
Number of Failures in month	1	1	3	2	2	1	1	0	0	1	4	1
Mean Time between failures in 52 week rolling period (hours)	432	480	453	395	391	416	437	486	534	563	230	515
<b>Fujitsu Service Availability</b>												
Availability in Core Time (% of time)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	99.30%	100%	100%	100%
Availability out of Core Time (% of time)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	100%	100%	100%
<b>Help Desk</b>												
Non In-depth Queries - Max Time to resolve 50% of all queries	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Non In-depth Queries - Max Time to resolve 95% of all queries	<2	<1	<3	<3	<2	<2	<1	<3	<2	<1	<1	<1
Administrative Queries - Max Time to resolve 95% of all queries	<2	<2	<2	<1	<1	<1	<1	<2	<1	<0.5	<0.5	<1
Help Desk Telephone - % of calls answered within 2 minutes	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Others</b>												
Normal Media Exchange Requests - average response time	<0.5	<0.5	<0.5	<0.5	0	0	0	0	0	0	0	0
New User Registration Time (working days)	0	0	0	0	0	0	0	0	0	0	0	0
Management Report Delivery Times (working days)	10	10	10	10	10	10	10	10	10	10	10	10
System Maintenance - no. of sessions taken per system in the month	2	0	1	2	2	2	1	2	2	2	2	2

**Table 2**

Notes:

- HPC Services Availability has been calculated using the following formulae, based on the relative NPB performance of Turing and Fermat:  

$$[ \text{Turing availability} \times 122 / (122 + 3.5) ] + [ \text{Fermat availability} \times 3.5 / (122 + 3.5) ]$$
- Mean Time between failures for Service Credits is formally calculated from Go-Live Date.

Table 3 gives Service Credit values for the month of February. These will be accounted on a quarterly basis, formally from the Go-Live Date. The values are calculated according to agreed Service Credit Ratings and Weightings.

**CSAR Service - Service Quality Report - Service Credits**

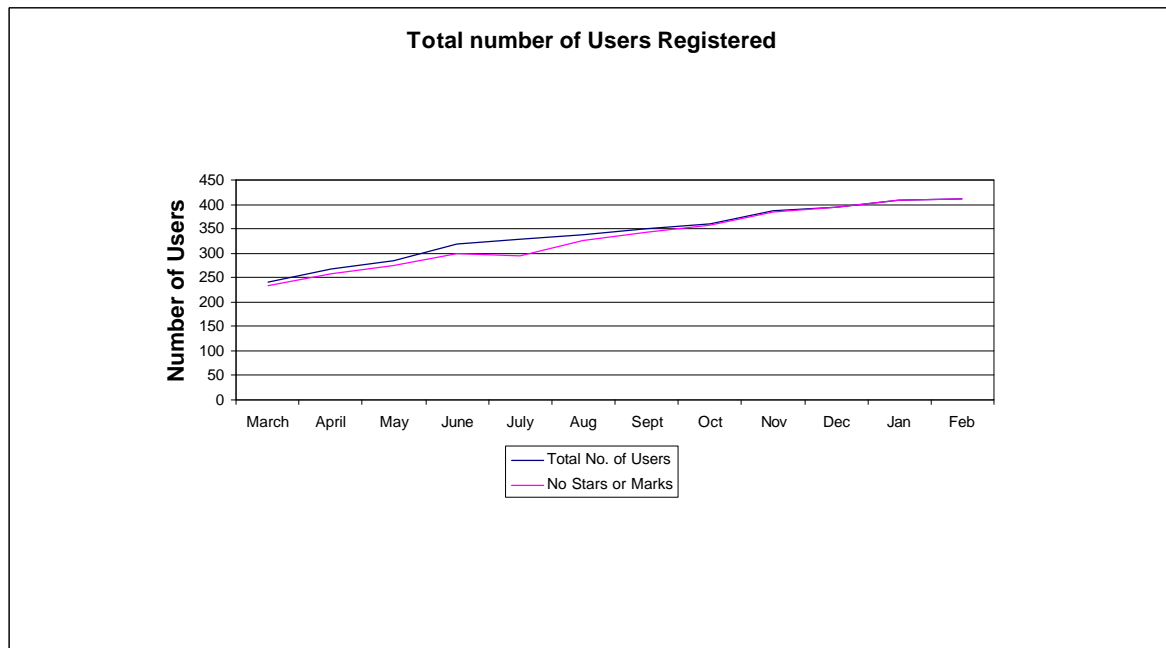
Service Quality Measure											2000	
	March	April	May	June	July	Aug.	Sept	Oct	Nov	Dec	Jan	Feb
HPC Services Availability												
Availability in Core Time (% of time)	-0.058	0.078	0.039	-0.039	-0.039	-0.058	-0.058	-0.058	-0.058	-0.058	0.195	0.195
Availability out of Core Time (% of time)	0	0.039	-0.039	0	0	0	-0.039	-0.047	-0.047	-0.039	0.000	-0.047
Number of Failures in month	-0.008	-0.008	0	0	0	-0.008	-0.008	-0.009	-0.009	-0.008	0.008	-0.008
Mean Time between failures in 52 week rolling period (hours)	0	0	0	0	0	0	0	0	-0.008	-0.008	0.008	-0.008
Help Desk												
Non In-depth Queries - Max Time to resolve 50% of all queries	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019
Non In-depth Queries - Max Time to resolve 95% of all queries	0	-0.016	0.016	0.016	0	0	-0.016	0.016	0	-0.016	-0.016	-0.016
Administrative Queries - Max Time to resolve 95% of all queries	0	0	0	-0.016	-0.016	-0.016	-0.016	0	-0.016	-0.019	-0.019	-0.016
Help Desk Telephone - % of calls answered within 2 minutes	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004
Others												
Normal Media Exchange Requests - average response time	-0.002	-0.002	-0.002	-0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New User Registration Time (working days)	0	0	0	0	0	0	0	-0.019	-0.019	-0.019	-0.019	-0.019
Management Report Delivery Times (working days)	0	0	0	0	0	0	0	0	0	0	0	0
System Maintenance - no. of sessions taken per system in the month	0	-0.004	-0.003	0	0	0	-0.003	0	0	0	0	0
Monthly Total & overall Service Quality Rating for each period:	-0.05	0.03	-0.01	-0.03	-0.04	-0.05	-0.08	-0.07	-0.09	-0.09	0.07	0.03

**Table 3**

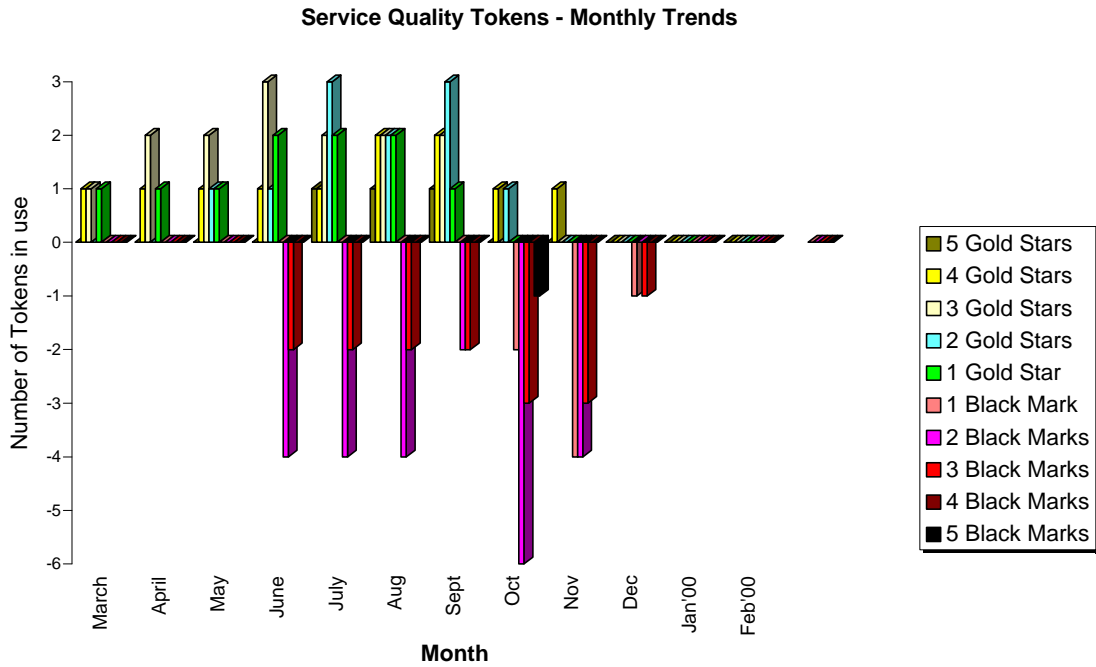
## 2.2 Service Quality Tokens

The current position at the end of February 2000 is that none of the 412 registered users of the CSAR Service had used Service Quality Tokens.

The graph below shows the total number of registered users on the CSAR Service and the number of users holding a neutral view of the service.



The graph below illustrates the monthly usage trend of quality tokens:



The current status of no black or gold service tokens outstanding is due in part to the action agreed from a previous User Steering group, which gave tokens a two-month expiry period. No Gold Stars or Black Marks have therefor been added in the last month.

## 2.3 Throughput Target against Baseline

The Baseline Target for throughput was fully achieved this month due to plenty of work over the period. The actual usage figure was 111% of Baseline capacity.

### Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 29th February 2000

	Baseline Capacity for Period (T3E PE Hours)	Actual Usage in Period (T3E PE Hours)	Actual % Utilisation c/w Baseline during Period
1. Has CfS failed to deliver Baseline MPP Computing Capacity for EPSRC?	332,140	369,728	111.32%
2. Have Users submitted work demanding > 110% of the Baseline during period?	332,140	364,992	No
3. Are there User Jobs outstanding at the end of the period over 4 days old?		Number of Jobs at least 4 days old at end Period 0	Number of Jobs at least 4 days old at end Period is not zero (Yes/No)? No
4. Have Users submitted work demands above 90% of the Baseline during period?		Minimum Job Time Demands as % of Baseline during Period 78%	Minimum Job Time Demand above 90% of Baseline during Period (Yes/No)? No
5. Majority of Job Queues contained jobs from Users for more than 97% during period?	Number of standard Job Queues (ignoring priorities) 4	Average % of time each queue contained jobs in the Period 73.0%	Average % of time each queue contained jobs in the Period is > 97%? No

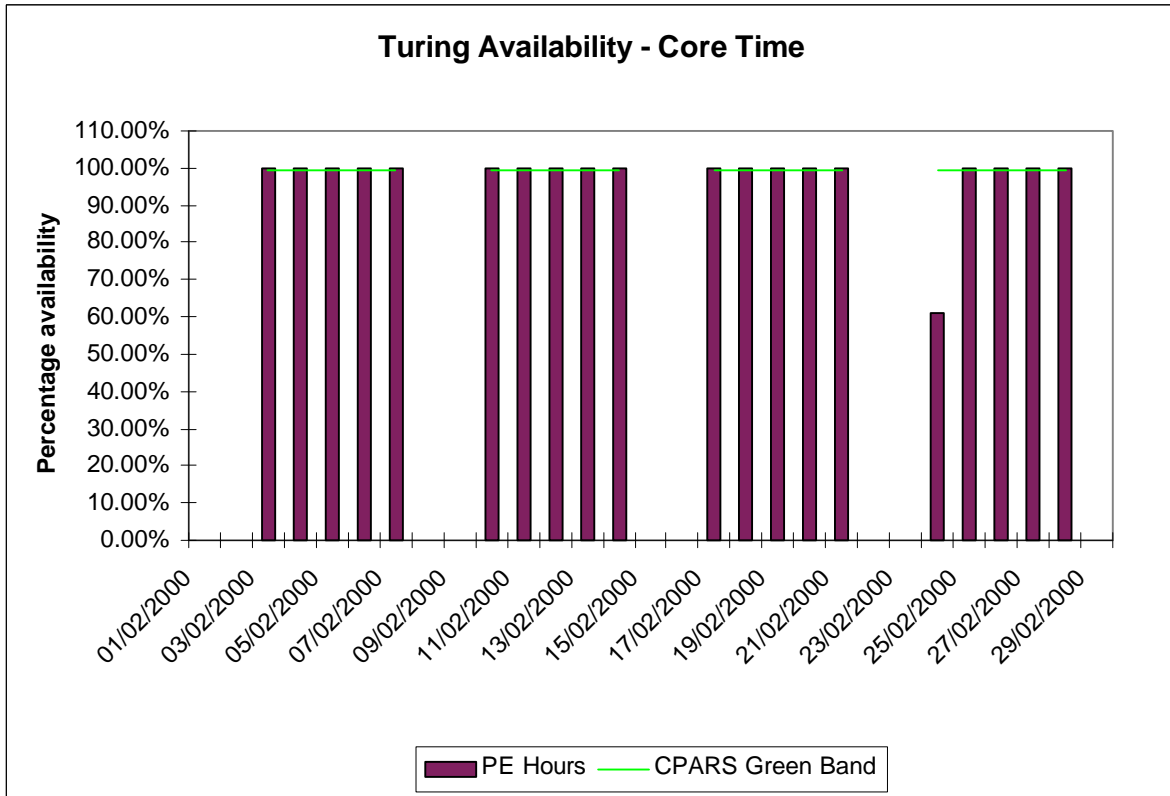
### 3. System Availability

Service availability each reporting period is calculated as a percentage of actual availability time over theoretical maximum time, after accounting for planned breaks in service for preventative maintenance.

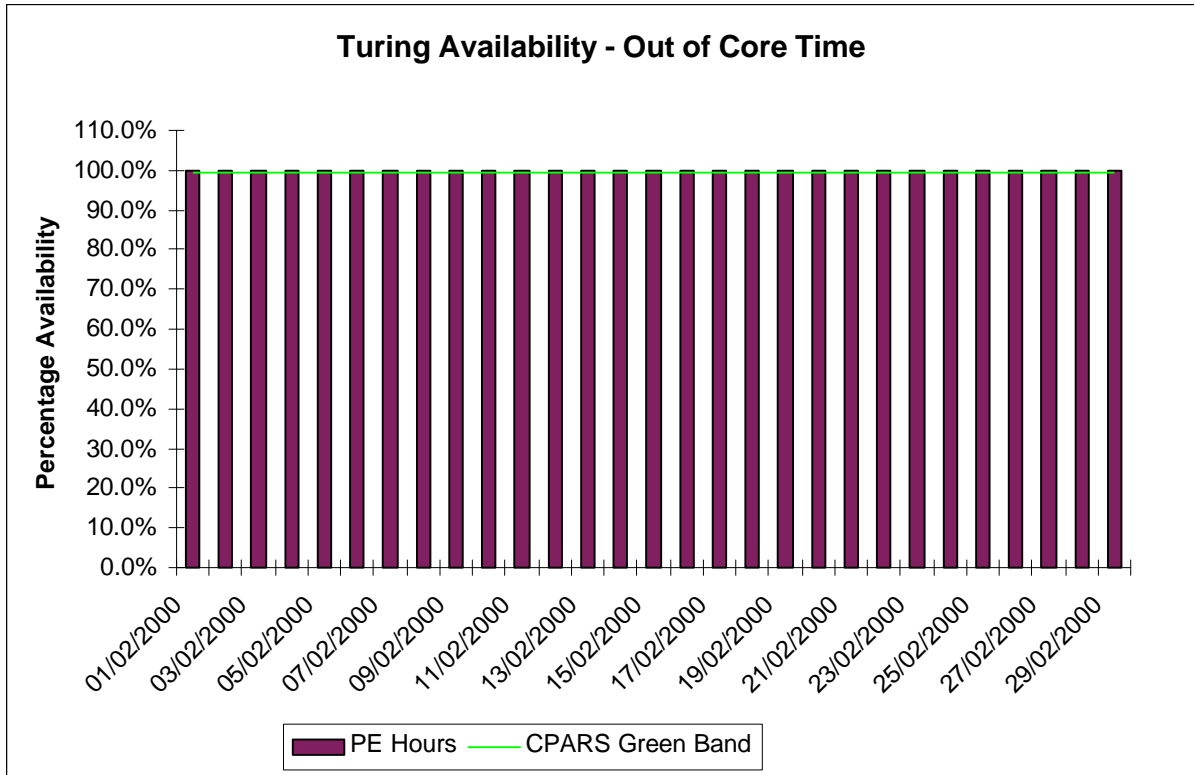
#### 3.1 Cray T3E-1200E System (Turing)

The following graphs show the availability of Turing both in core time and out of core time respectively during the period of 1<sup>st</sup> to 29<sup>th</sup> February.

Turing availability for February:



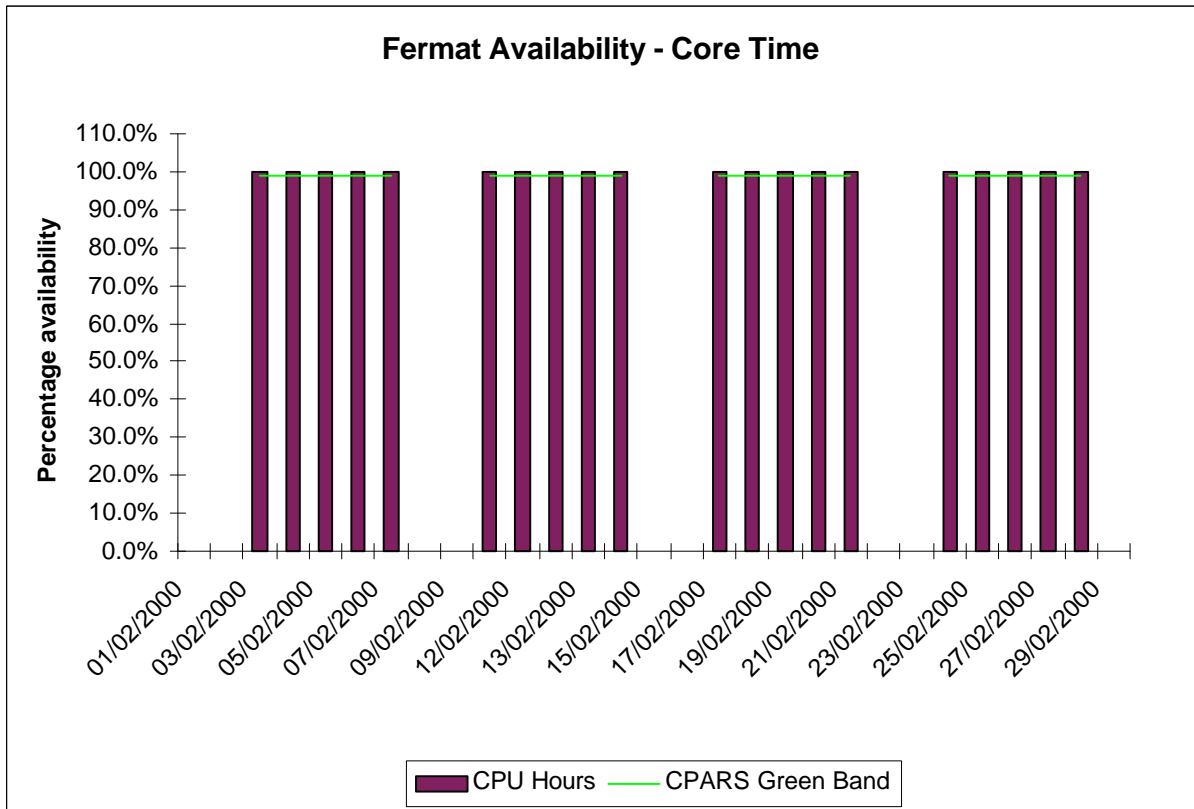
Availability of Turing in core time during February was improved over last month, however a system software issue resulted in lost time on the 24<sup>th</sup> February.



Availability of Turing out of core time during was excellent with no breaks in service.

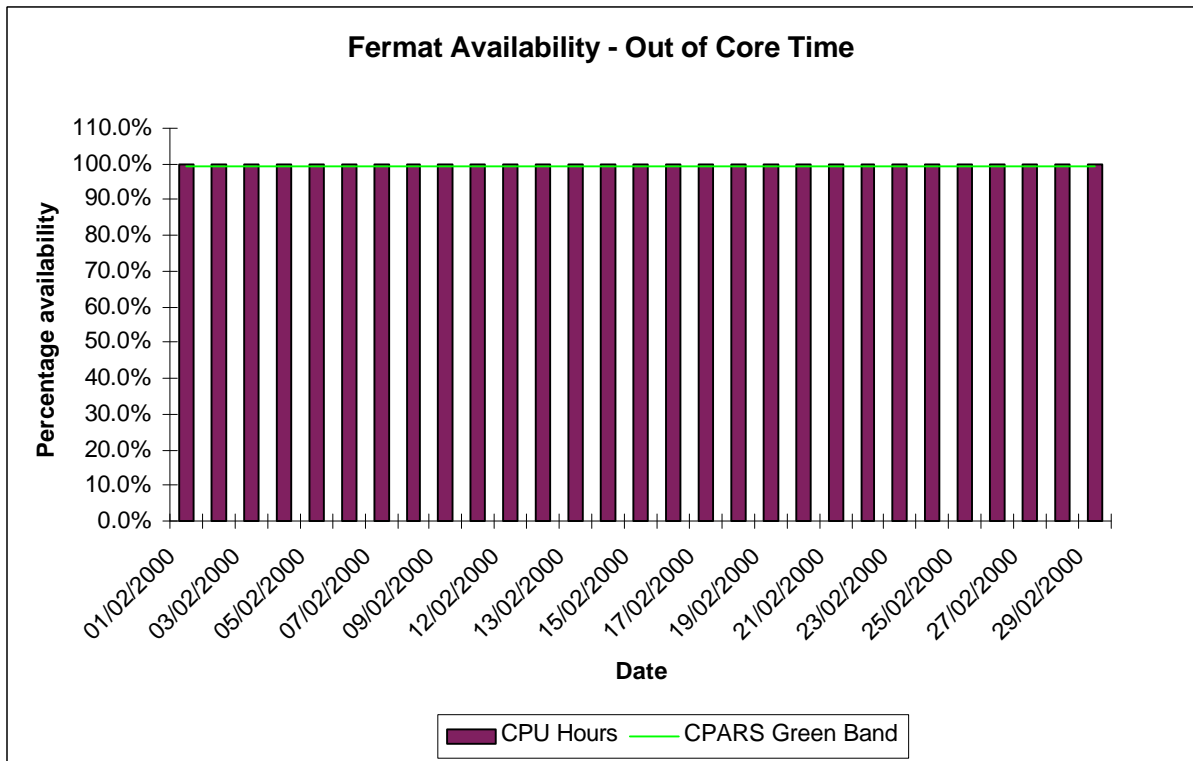
### 3.2 SGI Origin2000 System (Fermat)

The following graphs show the availability of Fermat both in core time and out of core time respectively.



Availability of Fermat in core time during February was excellent.





Availability of Fermat out of core time during February was excellent.

#### 4. HPC Services Usage

Usage information is given in tabular form, in Appendices, and in graphical format. The system usage information for the period of February 1<sup>st</sup> to 29th is provided by Project/User Group, totalled by Research Council and overall. This covers:

- CPU usage                      Turing: 369,728 PE Hours                      Fermat: 3,938.67 CPU Hours
- User Disk allocation        Turing: 36.28 GB Years                              Fermat: 13.58 GB Years
- HSM/tape usage                612.55 GB Years

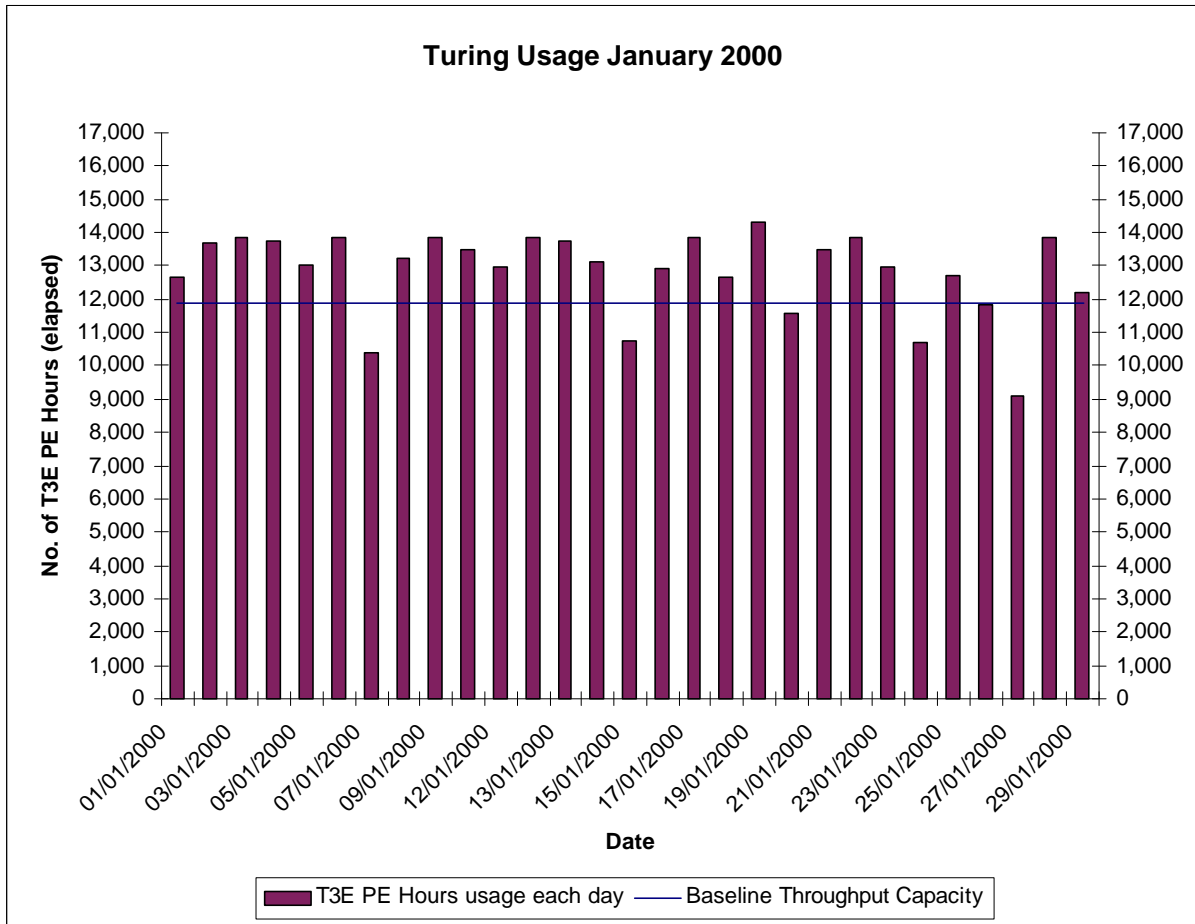
In addition, the following graphs are provided to illustrate usage per month, historically:

- a) MPP (T3E) Usage by month, showing usage each month of CPU (T3E PE Elapsed Hours), split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline is shown by an overlaid horizontal line.
- b) SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline Capacity is shown by an overlaid horizontal line.
- c) High Performance Disk (T3E) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1 Terabyte) is shown by an overlaid horizontal line.
- d) Medium Performance Disk (Origin) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1.5 Terabytes) is shown by an overlaid horizontal line.
- e) HSM/Tape Usage (T3E) by month, showing the volumes held each in GBytes, split by Research Council. The Baseline Capacity (16 Terabytes) available will be shown by an overlaid horizontal line.

### 4.1 Cray T3E-1200E System (Turing)

The following graph shows the usage of Turing during each day of February 2000. Note that there is some variance on a day-to-day basis as the accounts record job times, and thus CPU usage figures, at the time of job completion which could be the second actual day for large jobs. At present, there is a 12 hour limit on jobs, so that they are check-pointed, and computational time lost due to any failure is well managed.

Turing usage for February:



The above usage graph for the Turing system shows that the overall workload was variable, though as can be seen from the graph fewer periods with low work volumes.

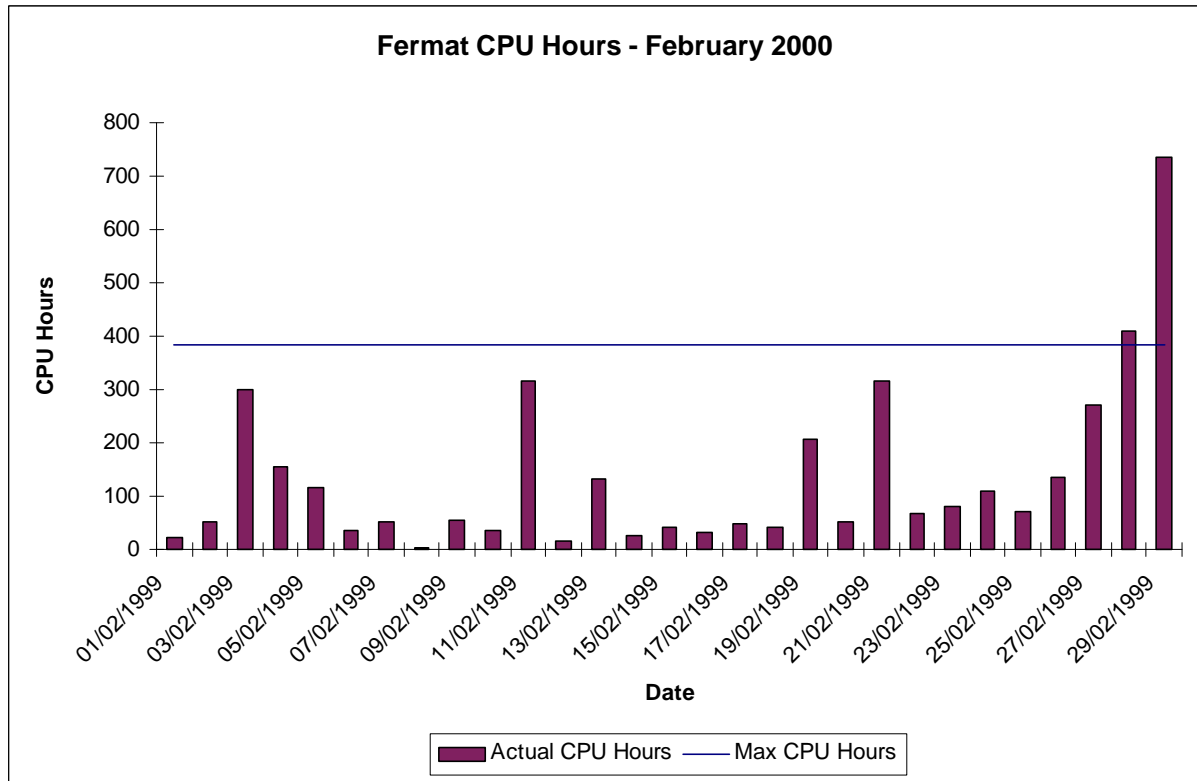
The workload at times reached 100% of maximum theoretical capacity.

Fine tuning of the CfS scheduling system will continue to ensure minimal wasting of PE resource, in order to fit in a number of different sized jobs (e.g. 32, 64, 128, 256) thus facilitating maximised job throughput.

In particular, Turing will continue to start large jobs above 256 PEs, including 512 PEs, every night they are queued.

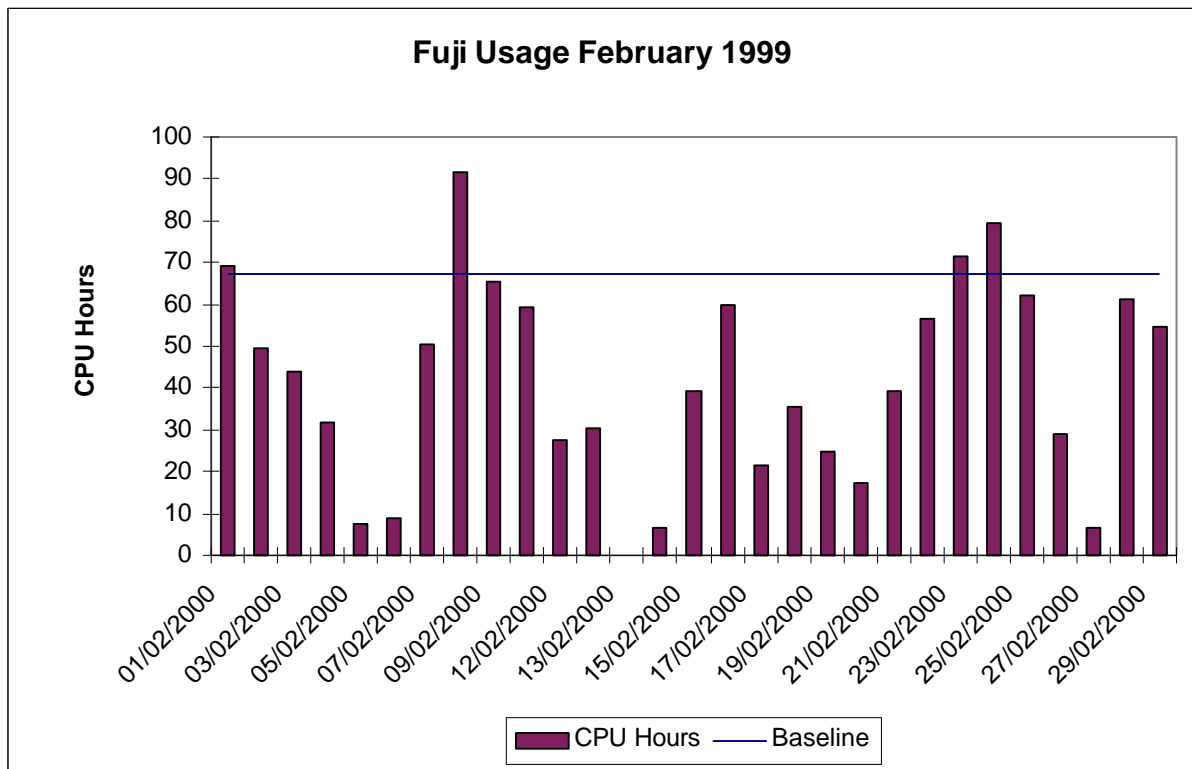
### 4.2 SGI Origin2000 System (Fermat)

The usage of the Origin system was low for the month with the daily usage of the system averaging only 31% of theoretical maximum. This figure does not show that in some periods CPU time is running at 99.9% of the total available CPU time. The groups most heavily using the Fermat system are CSE002 (Bird), CSN001 (Webb) and CSE003 (O'Neill).



The next graph shows the utilisation of the, now fully integrated Fujitsu system.

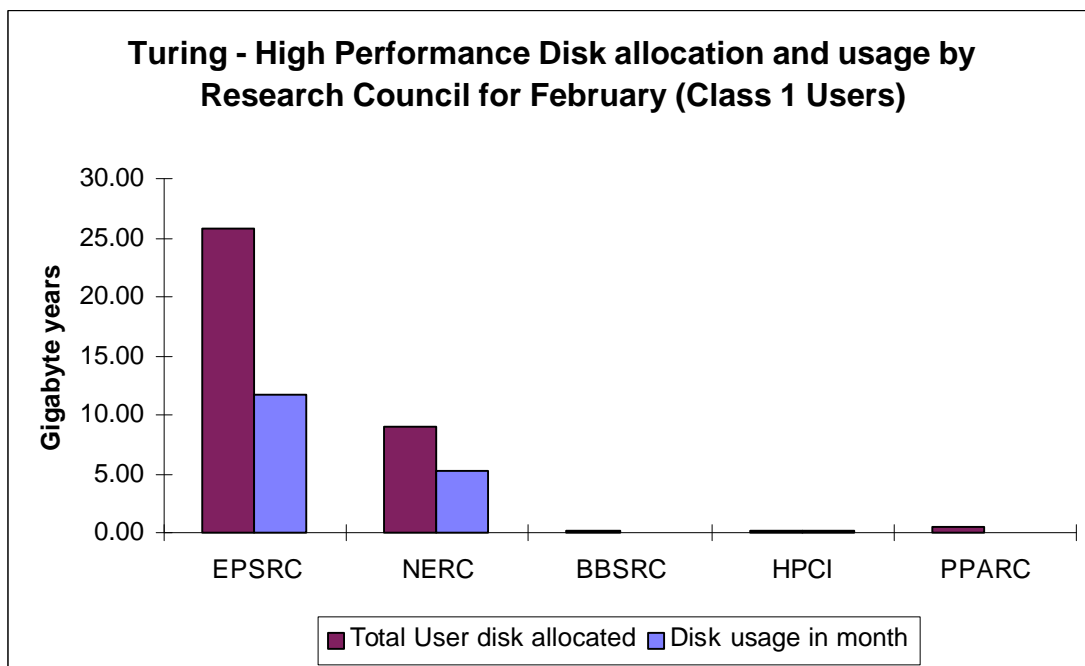
### 4.2.1 Fujitsu VPP 300/6 System (Fuji)



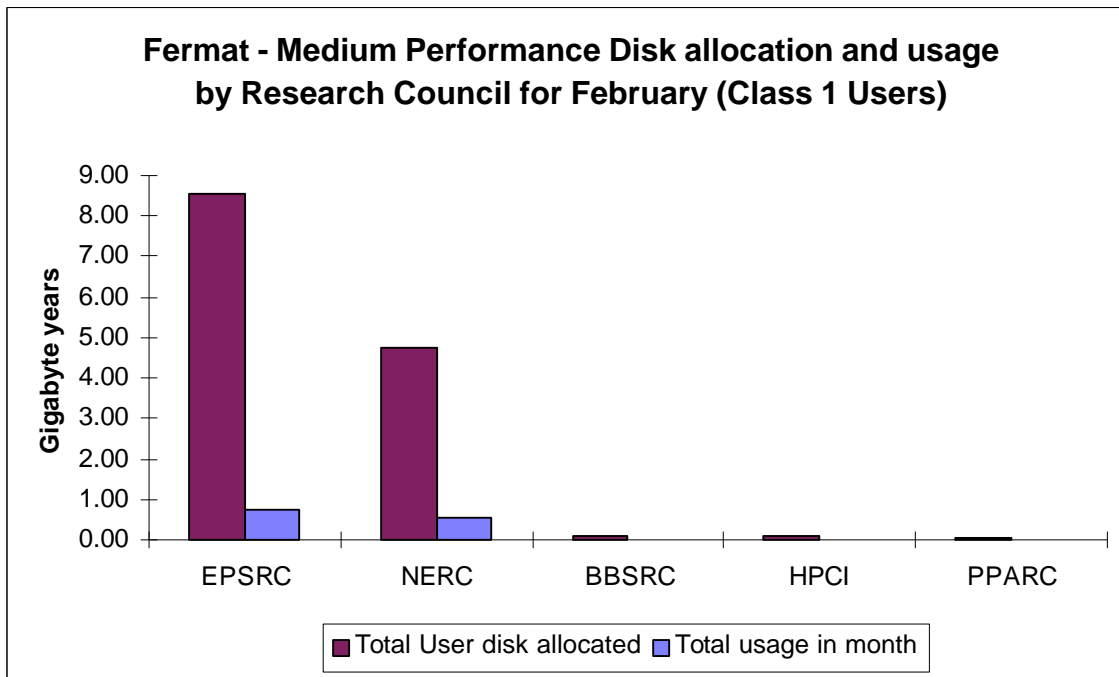
Utilisation of the Fujitsu system was variable this month.

### 4.3 Disk/HSM Usage Charts

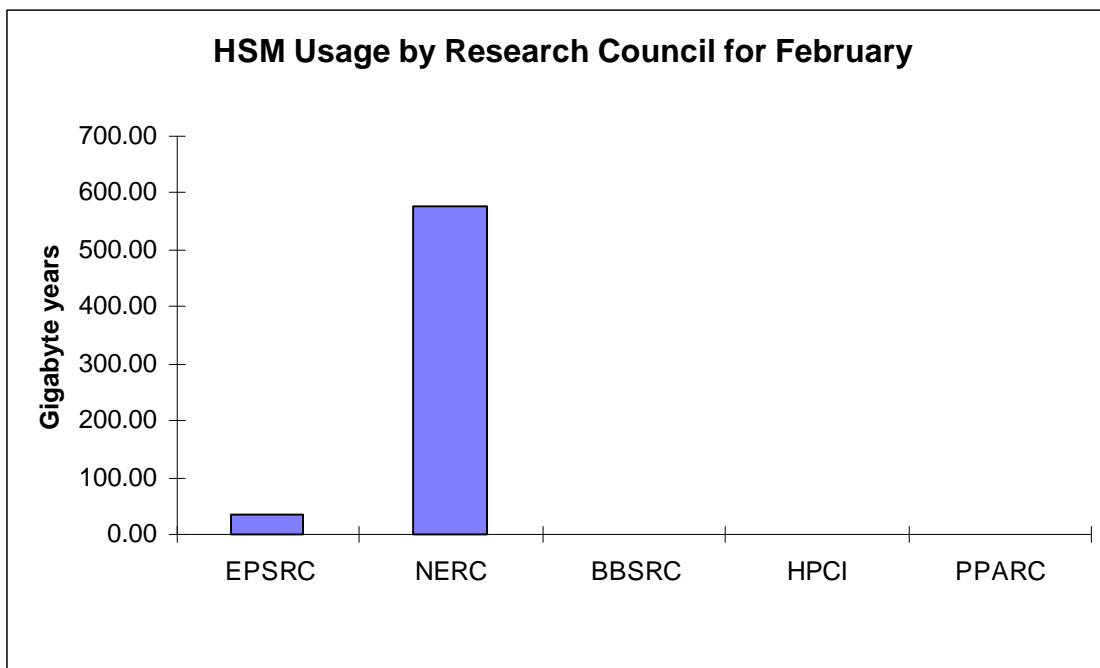
The graphs below show current disk and HSM allocations and usage.



The preceding graph shows actual usage on average against the current allocation of disk on the Turing system.

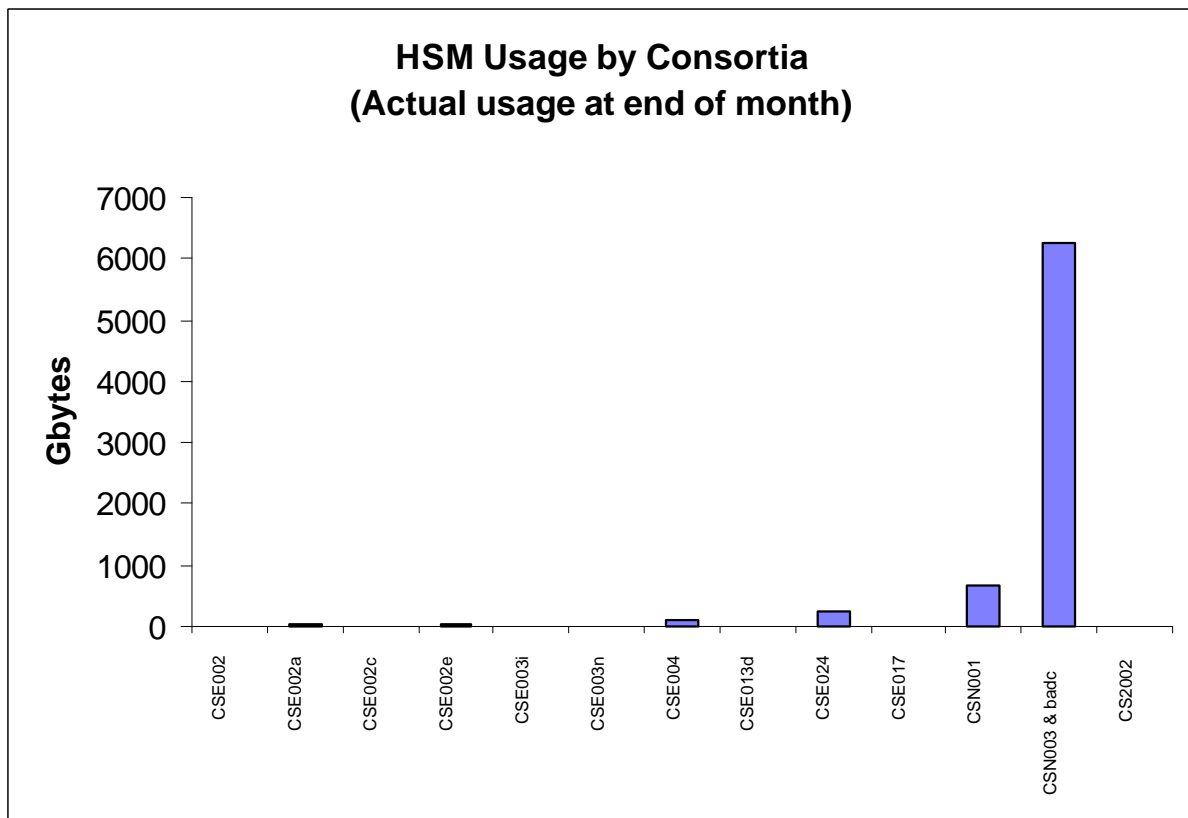
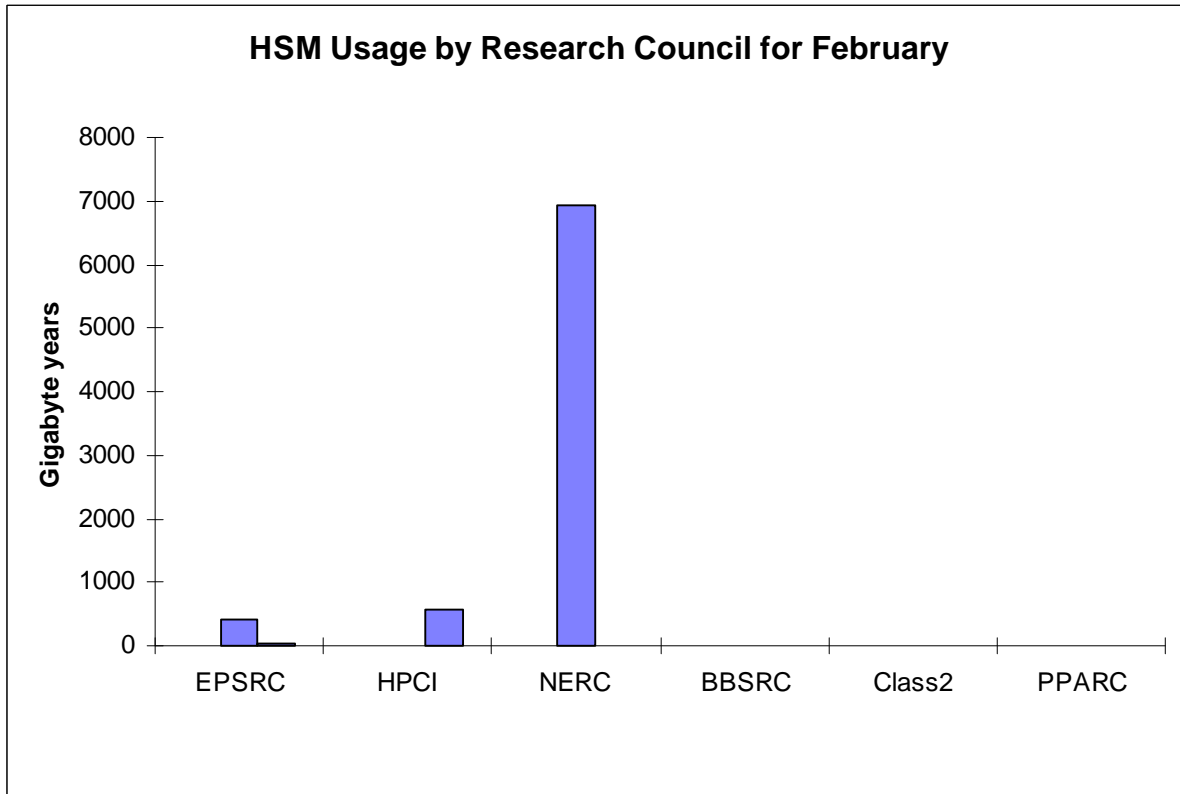


The above graph shows the disk allocations against usage on average of the disk on Fermat.



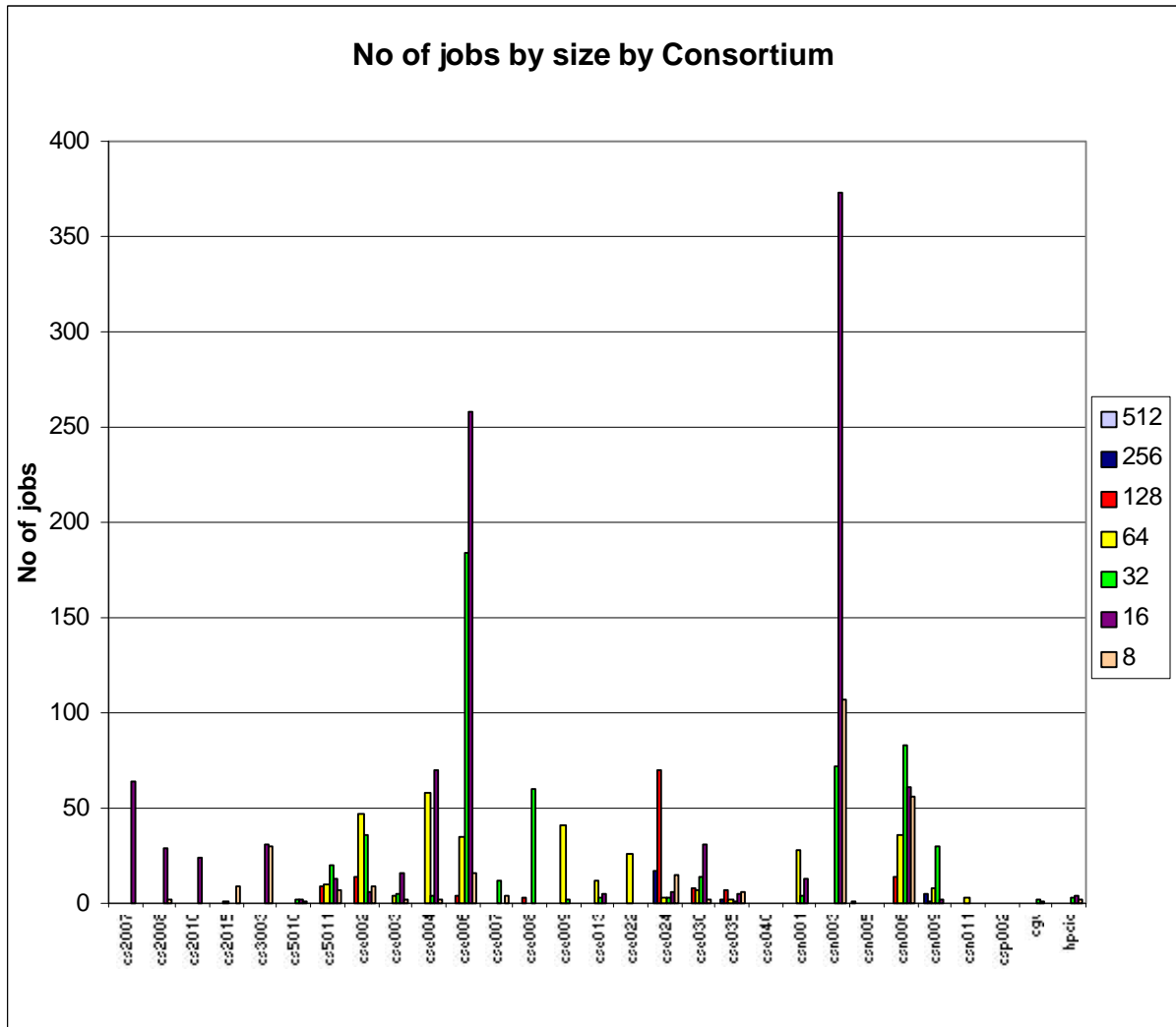
The above graph shows the total usage of the HSM facility by Research Council.

The next two graphs give actual usage of HSM by Research Council and by Consortium.



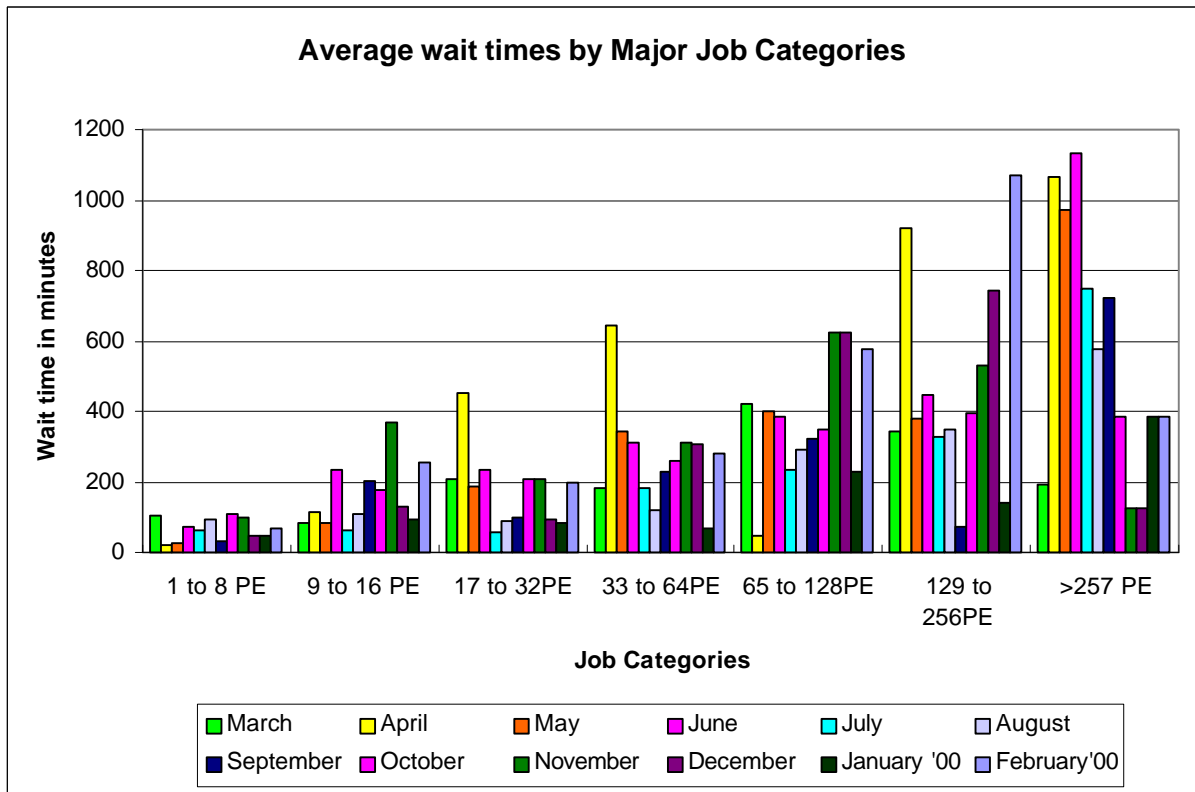
CSE002 (Gillan), CSE004 (Sandham), CSE024 (Tennyson), CSN001 (Webb) & CSN003 (O'Neill).

Job statistics for Turing:

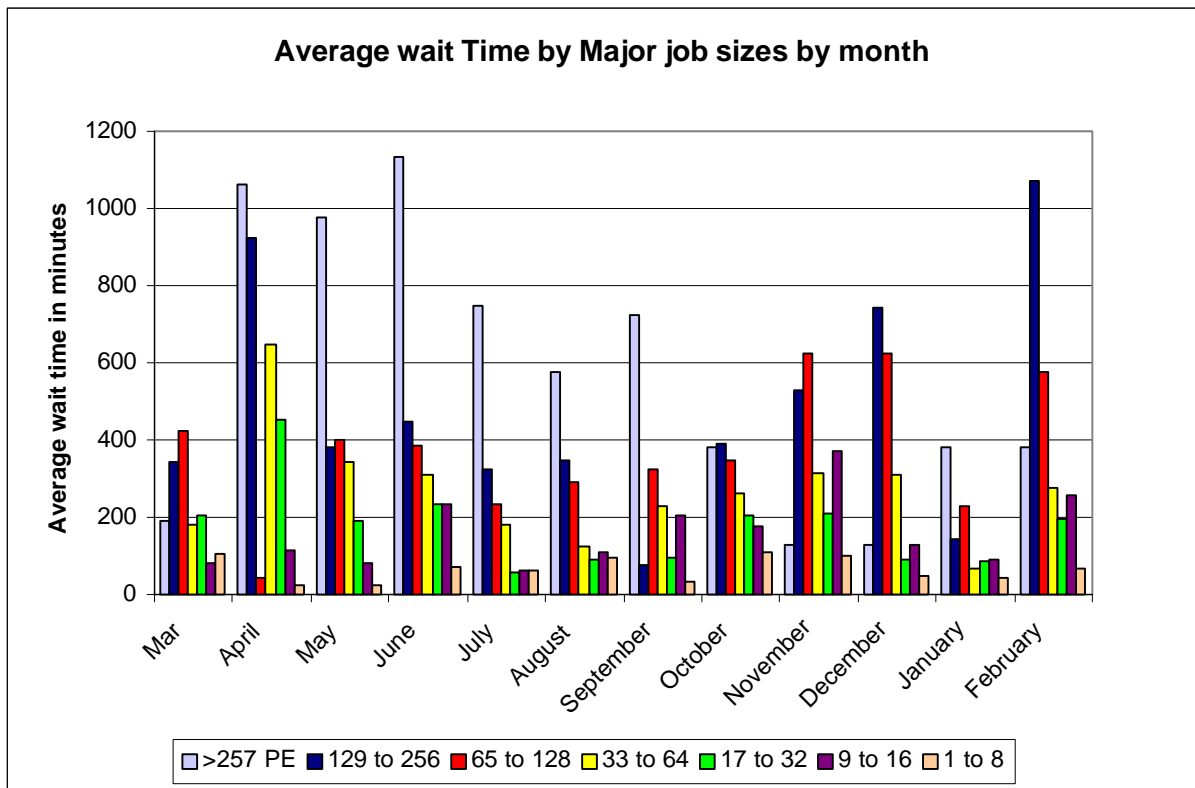


The above graph shows the number of jobs of the major sizes run in the period 1<sup>st</sup> to 29<sup>th</sup> February 2000.

The next graph shows the wait times in minutes for the major categories of jobs.



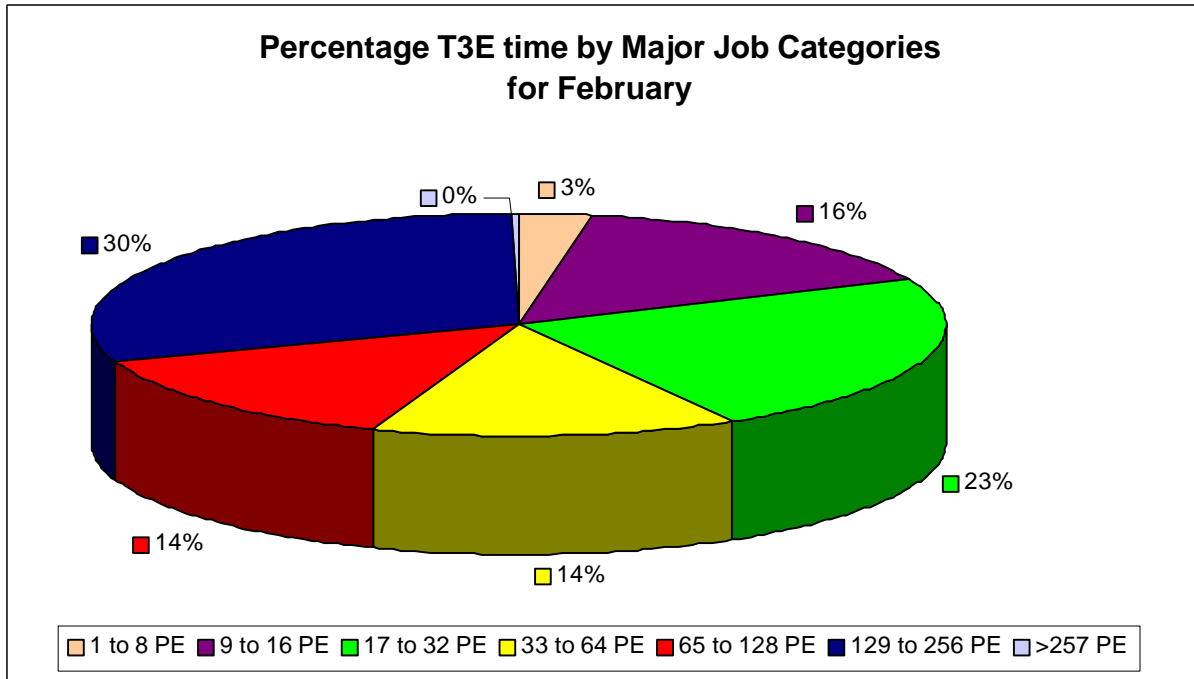
The above chart shows the average wait time trend over the months from February to date.



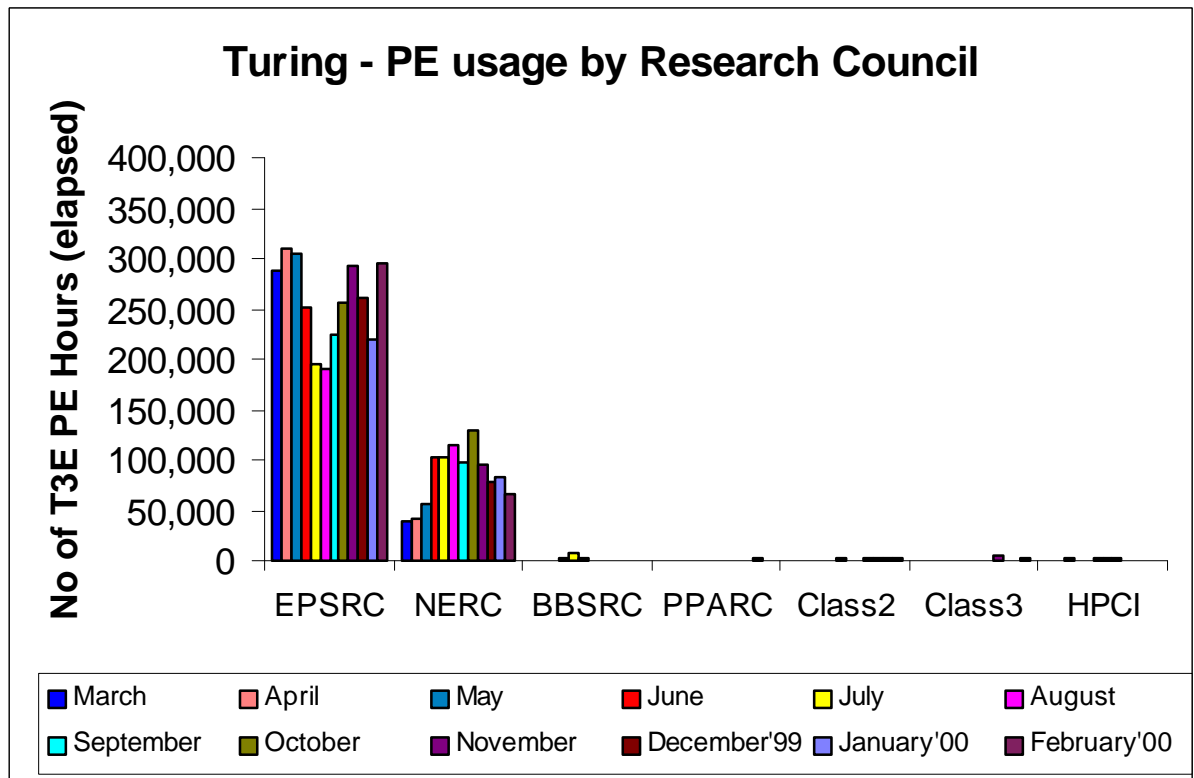
It can be seen from the above graph that enhancements to the scheduling on Turing have reduced the average wait times however attention must be paid to ensure sufficient head room exists in the system to prevent wait times from rising overall.



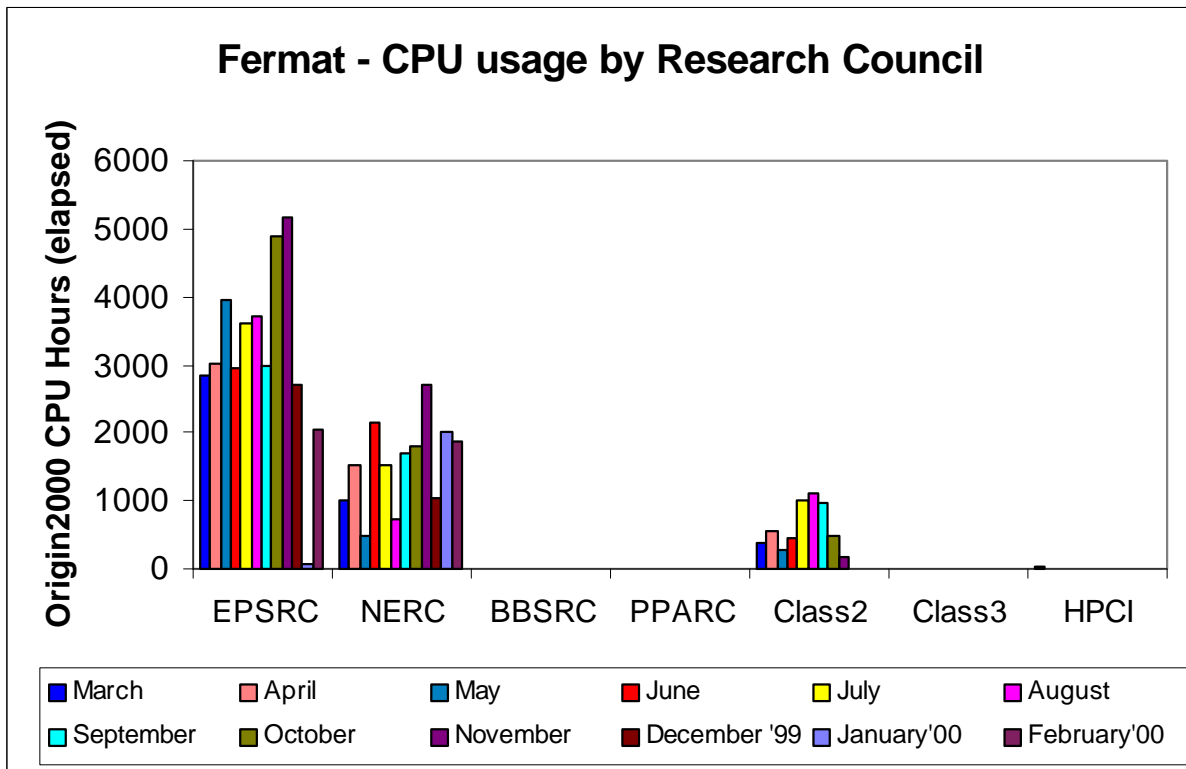
The next graph shows the percentage Turing time utilised by the major job categories for the month.



The average job size in the month of February showed a wide spread, with the bulk of the jobs (44%) ranging between 65 and 256 PEs in size.



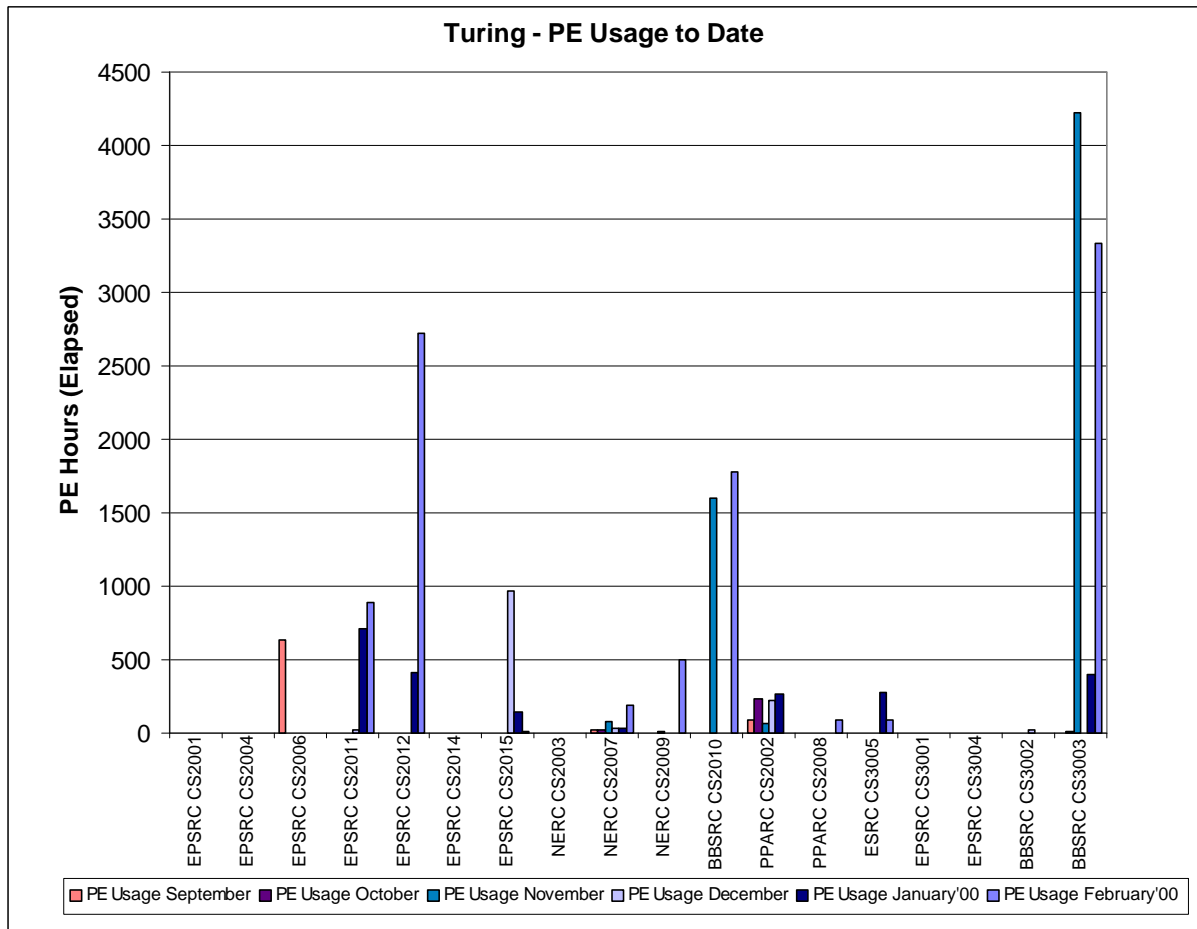
Turing PE usage is shown by Research Council during the past 12 months of service in the above chart.



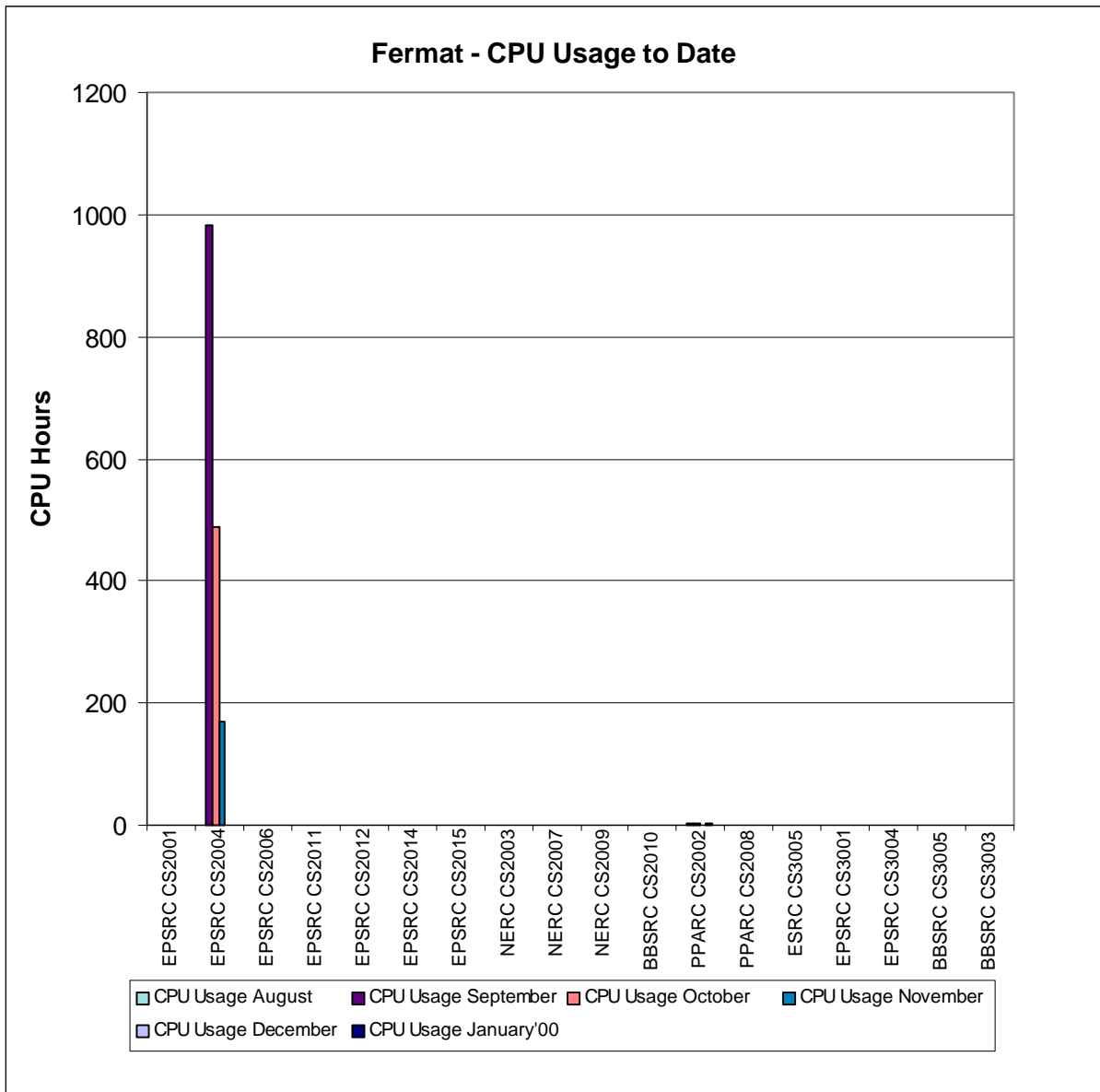
Origin 2000 CPU usage is shown by Research Council during the past 12 months of service in the above chart.

### 4.4 Class 2 & 3 Usage Charts

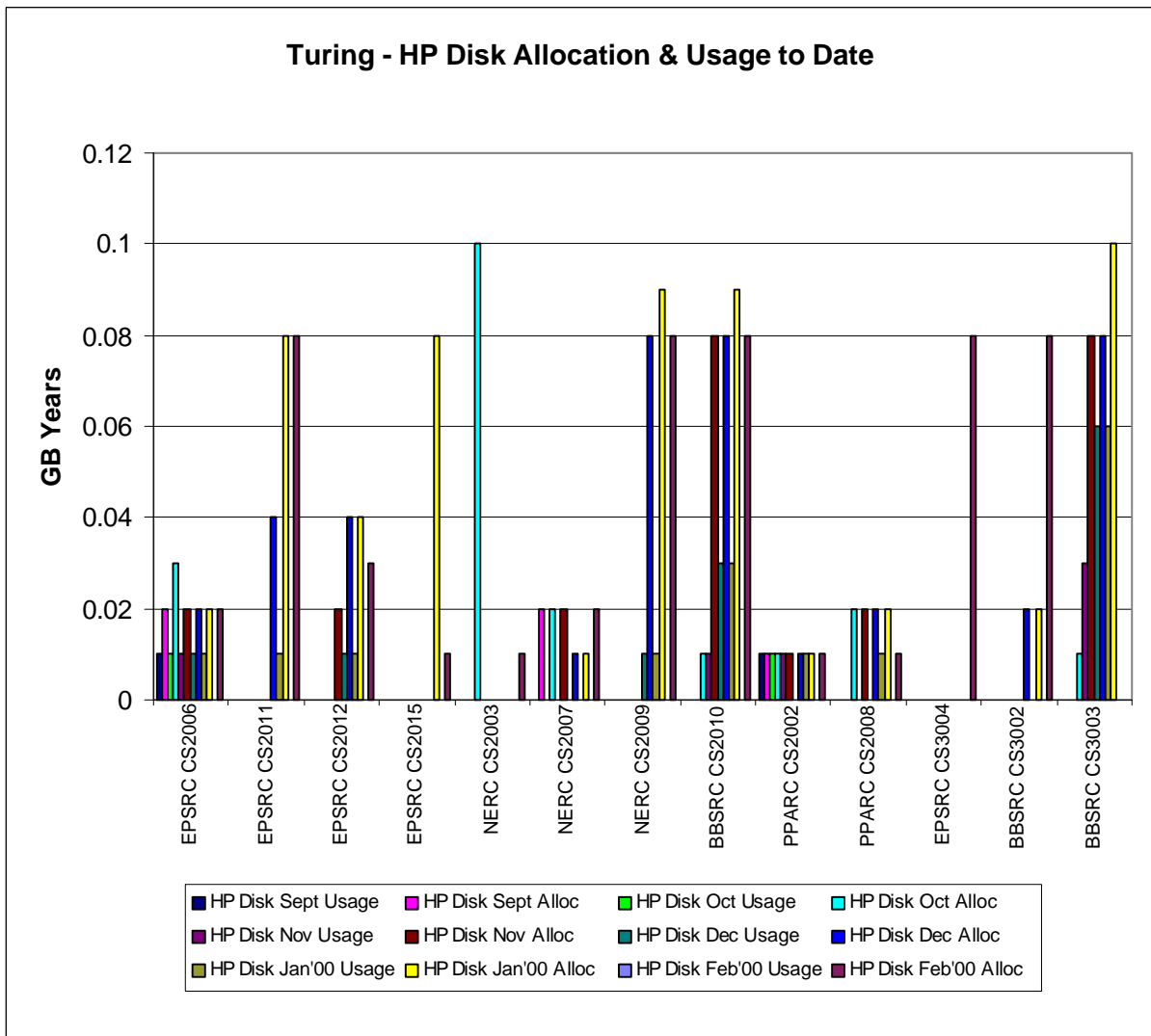
The next series of charts show the usage of the system by the class 2 & class 3 users. The usage is shown by project and identifies the Research Council of the individual projects.



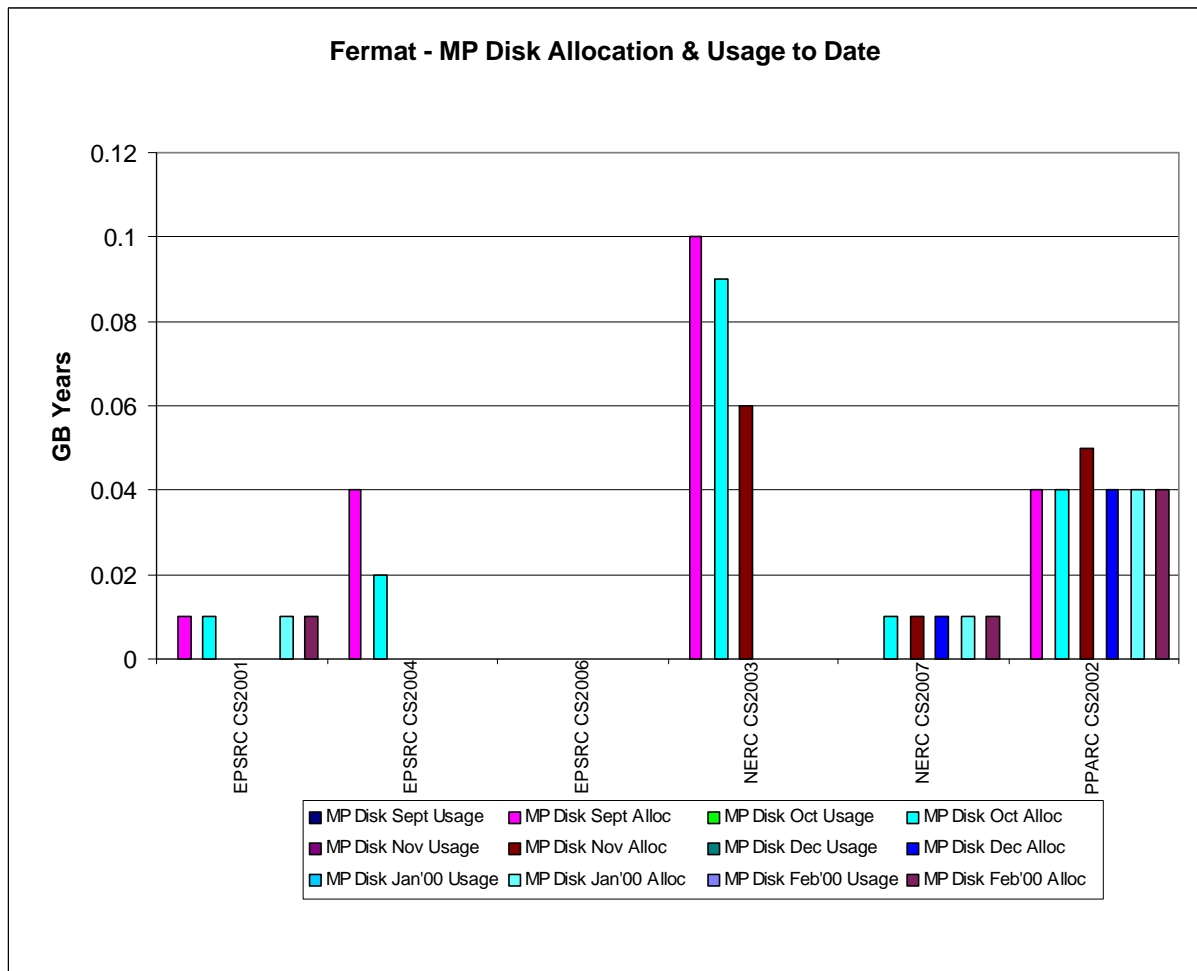
The above chart shows the most significant PE usage of the Turing system by class 2 and class 3 users.



The above chart shows the CPU usage of the Fermat system by class 2 and class 3 users.



The above chart shows the most significant disk allocations on the Turing system for class 2 and class 3 users.



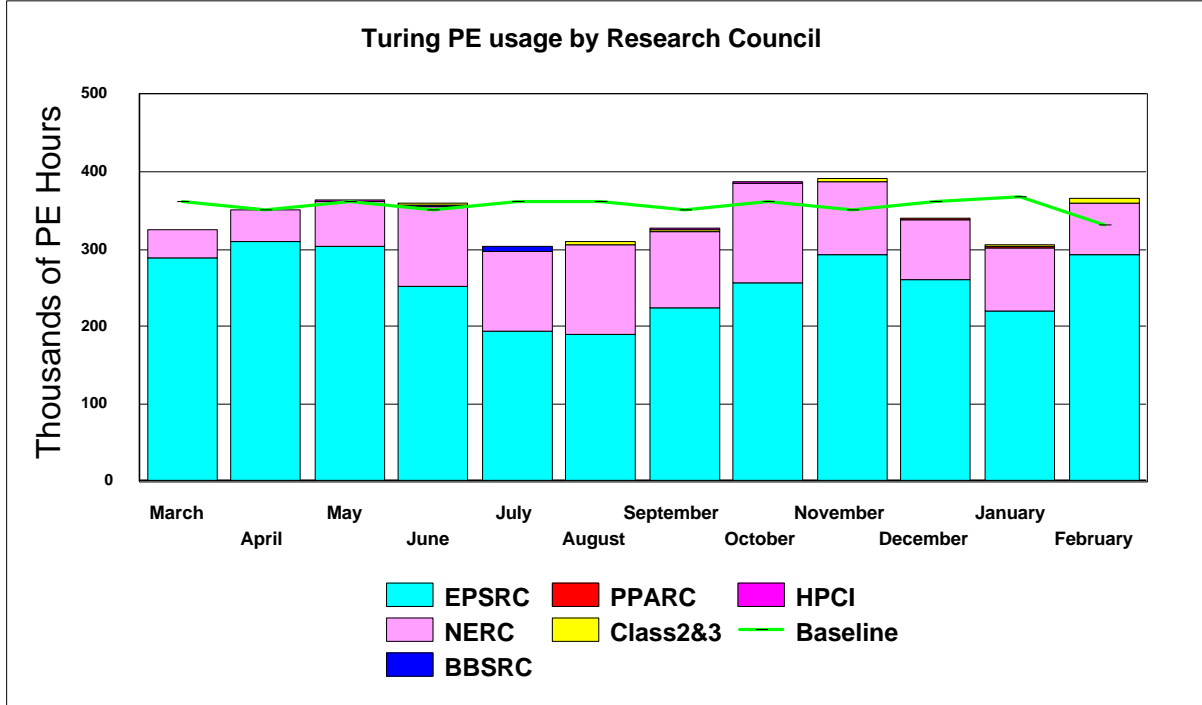
The above chart shows the most significant disk allocations on the Fermat system for class 2 and class 3 users.

There is currently no HSM usage by class 2 and class 3 users.

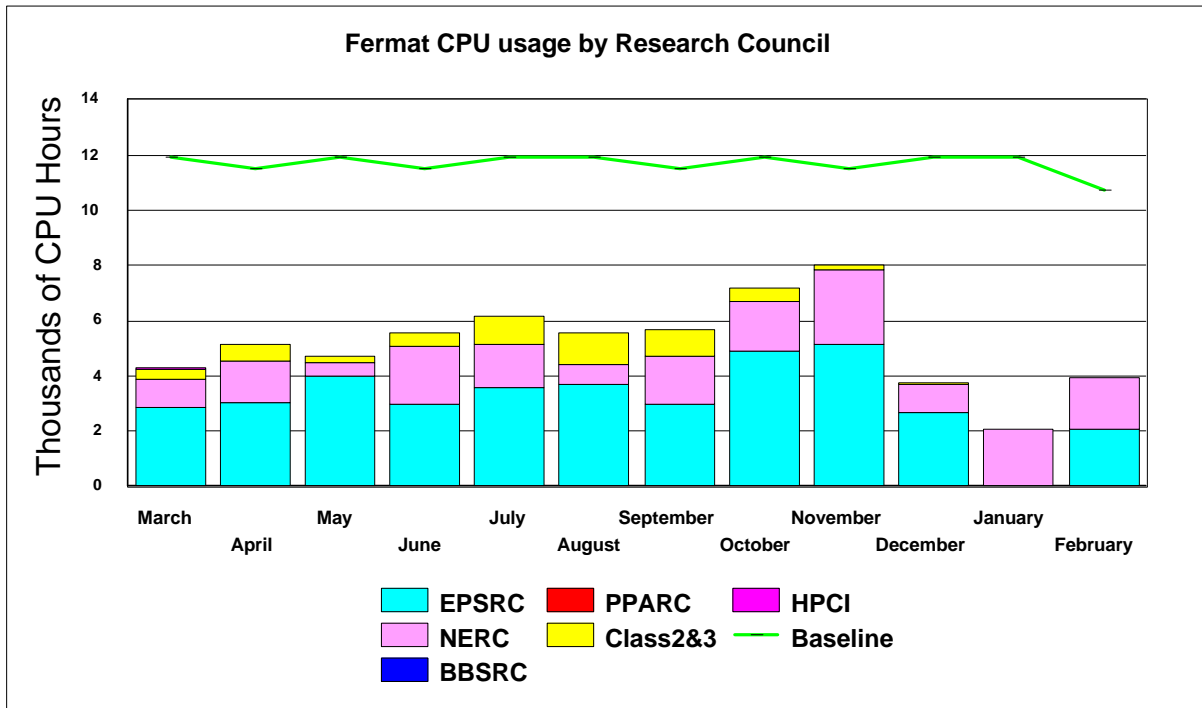
### 4.5 Charts of Historical Usage

In all the Usage Charts, the baseline varies dependant on the number of days in each month, within a 365-day year.

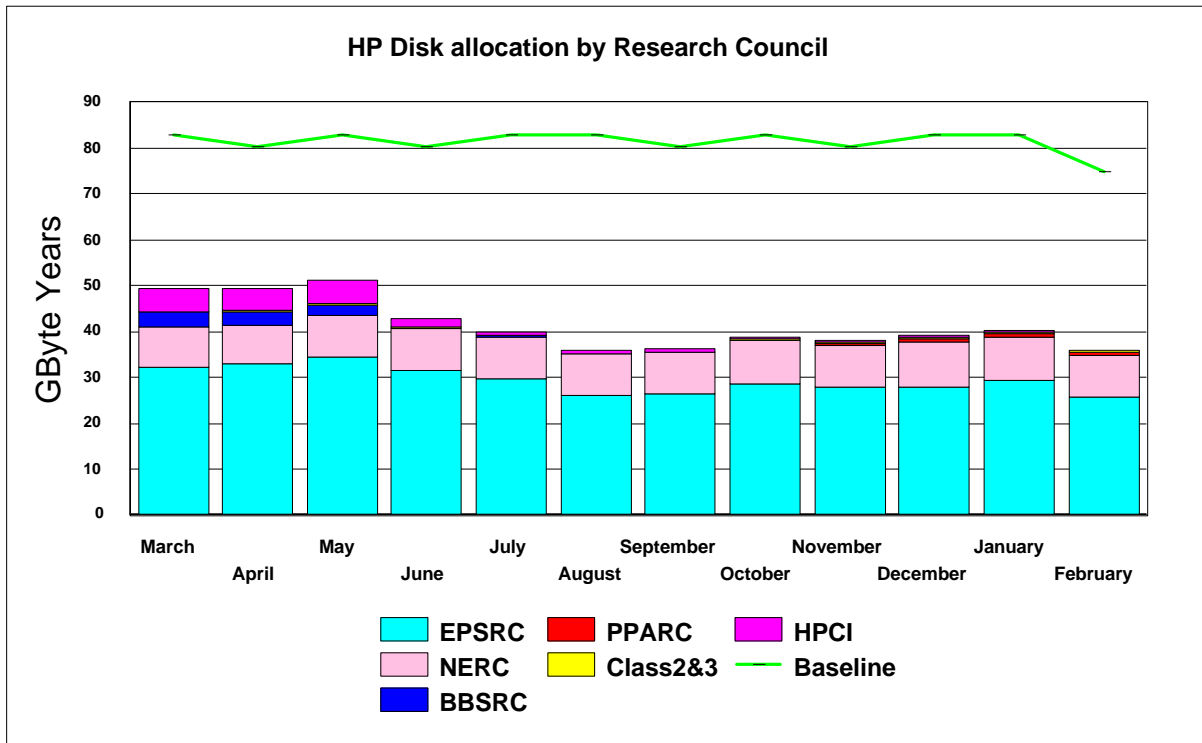
The graph below shows the PE hour's utilisation on Turing by Research Council for the previous 12 months.



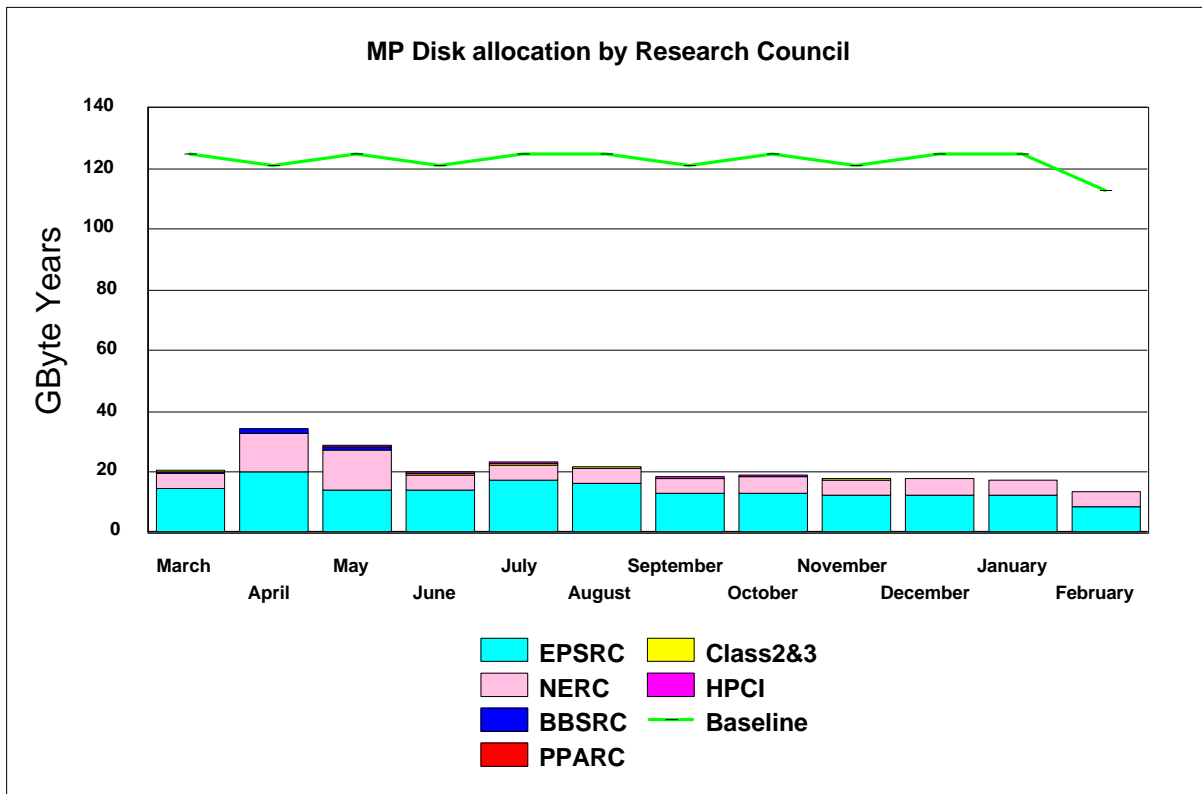
The graph below shows the historic CPU usage on Fermat by Research Council for the previous 12 months.



The next series of graphs illustrates the usage of the disk and HSM resources of the system.



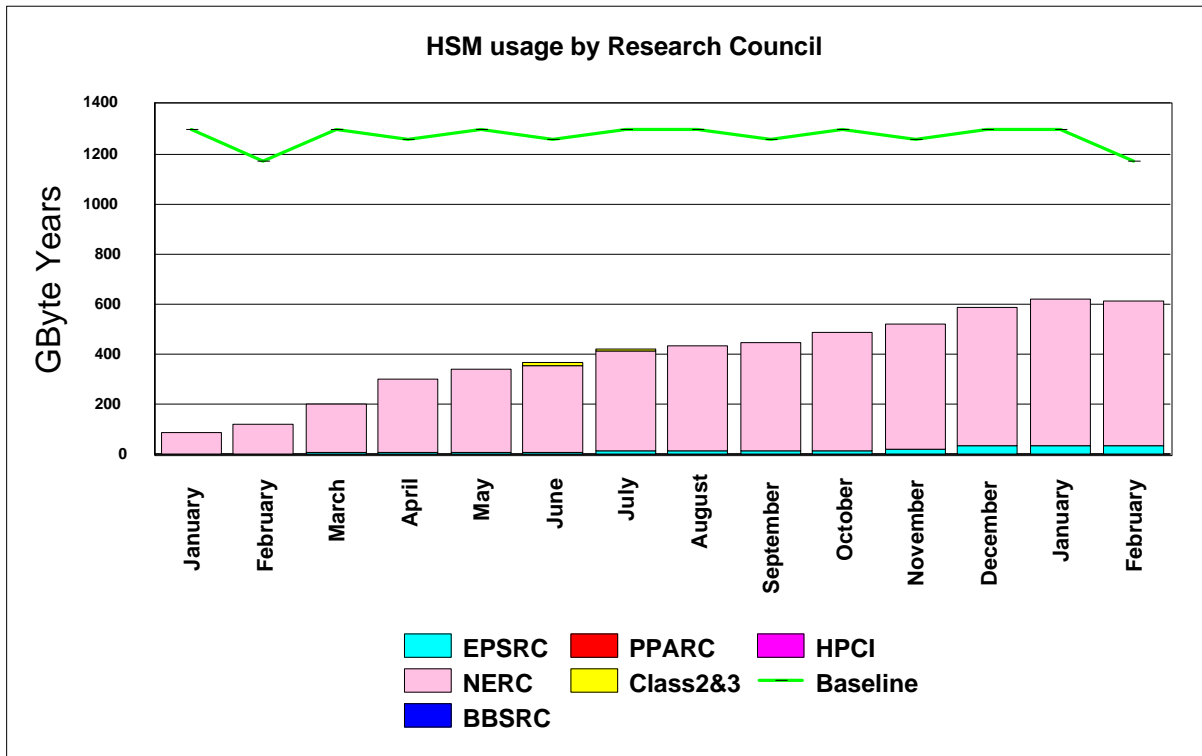
The preceding graph illustrates the historic allocation of the High Performance Disk on Turing.



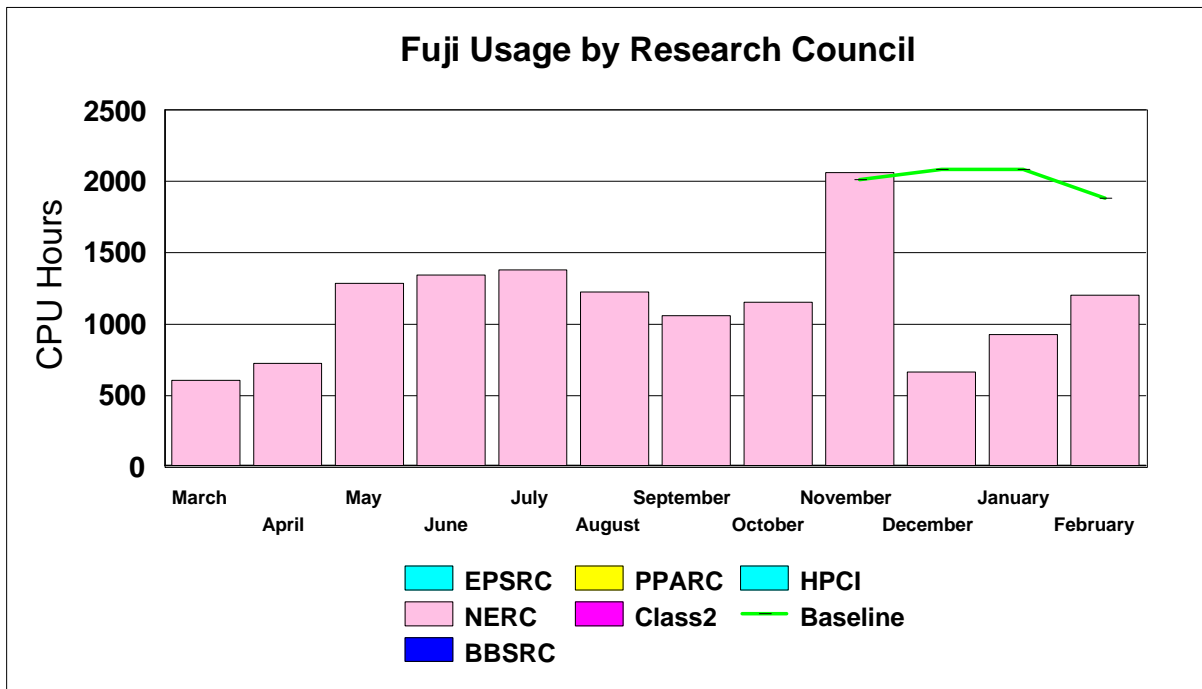
The graph above illustrates the historic allocation of the Medium Performance Disk on Fermat.

The graph below shows the historic HSM usage by Research Council funded projects. The primary usage is for NERC.



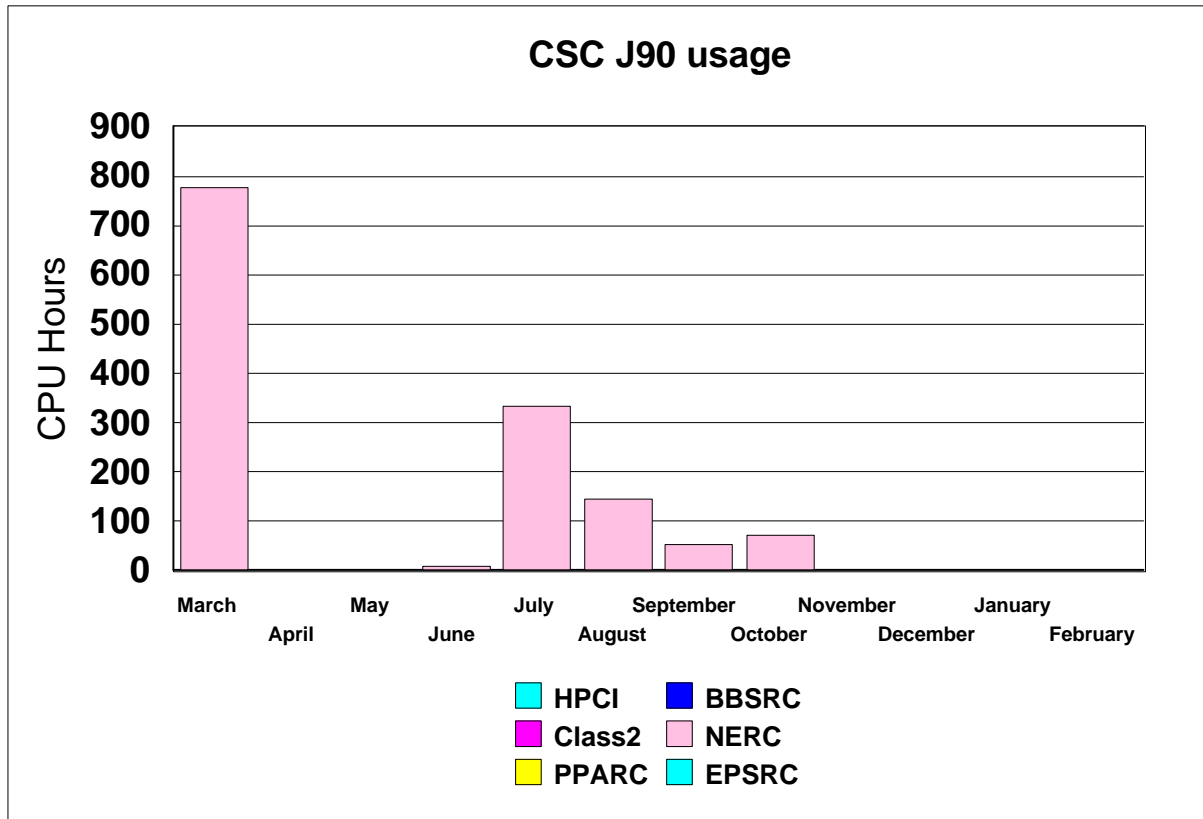


The next chart shows the historic usage of the Fuji system.



### 4.5 Guest System Usage Charts

The following graph shows the CPU usage on the current available CSAR guest system.



There was zero usage on the CSC J90 guest system in the month of February.

## 5. Service Status, Issues and Plans

### 5.1 Status

This month has seen an element of reliability return to the system, however the CPARS were at an overall yellow due to one period of loss in service, during core time, of Turing. This issue will remain a priority over the coming months.

### 5.2 Issues

The workload on Turing has been maintained at a high level throughout the month, as can be seen from the utilisation graph in section 4.1 of this report.

The planned upgrade of Turing to add 200 additional PEs is due to commence at 08:00 on Saturday 11th February.

### 5.3 Plans

It is planned to upgrade the drive capability within the STK Tape Archive Subsystem and to increase the volume of the /hold area in the near future.

The details will be released as they become available.

The J90 guest system will be removed from service at the end of March.

## 6. Conclusion

February 2000 saw the overall CPARS rating at orange. The service will be monitored closely during the course of March.

Continued management attention will be given to maximise the throughput of the Service, whilst balancing as fairly as practicable the shares between Projects and jobs of the varying sizes.

**Appendix 1** contains the accounts for February 2000

**Appendix 2** contains the Percentage shares by Consortium for February 2000

**Appendix 3** contains the Percentage shares by Research Council for February 2000

**Appendix 4** contains the Training and support figures to the end of February 2000

**Appendix 5** contains a reference table of the consortia name, the subject area and the PI name.

Appendix 1

CfS Supercomputer Service

Usage report for Research Council Projects

From Tuesday 1-Feb-00 to Tuesday 29-Feb-00

Account		----- CPU Usage (Hours) -----					--- Storage (GB-Years) ---		
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
CSE001 Admin users	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject									
EPSRC Administration	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002 gr/n02337 Bird	turing	-	-	-	-	-	-	0.11	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002a gr/n02337 Bird	turing	42.33	96.05	9393.27	-	9531.65	3.86	4.45	-
	fermat	4.33	-	-	-	4.33	0.11	0.79	3.18
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002b gr/n02337 Bird	turing	0.71	-	3389.92	2936.22	6326.85	0.05	1.13	-
	fermat	-	-	-	-	-	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002c gr/n02337 Bird	turing	0.52	-	1861.90	-	1862.42	0.56	1.18	-
	fermat	-	-	-	-	-	0.02	0.56	0.25
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002d gr/n02337 Bird	turing	0.00	-	-	-	0.00	0.00	0.16	-
	fermat	1308.62	-	-	-	1308.62	0.06	0.68	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002e gr/n02337 Bird	turing	1.83	0.81	-	-	2.64	0.29	1.07	-
	fermat	-	-	-	-	-	0.17	0.79	1.59
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002f gr/n02337 Bird	turing	0.47	-	-	-	0.47	0.28	0.78	-
	fermat	-	-	-	-	-	0.02	0.56	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002g gr/n02337 Bird	turing	0.00	-	22.79	-	22.79	0.08	0.20	-
	fermat	2.87	-	-	-	2.87	0.02	0.48	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002h gr/n02337 Bird	turing	-	-	-	-	-	0.04	0.44	-
	fermat	-	-	-	-	-	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Cse002i gr/n02337 Bird	turing	45.39	35.02	7003.83	-	7084.25	0.52	1.17	-
	fermat	-	-	-	-	-	0.00	0.24	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

			----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---			
Account			Inter	Priority	Normal	Low	Total	D-Usage	D-Allocln	HSM
CSE003	gr/m01784	Taylor	turing	-	-	-	-	-	0.08	-
			fermat	0.12	-	-	0.12	0.00	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003a	gr/m01784	Taylor	turing	101.29	-	580.22	681.51	0.14	0.64	-
			fermat	0.17	-	-	0.17	0.01	0.03	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003b	gr/m01784	Taylor	turing	30.78	-	20854.41	20885.19	0.06	1.67	-
			fermat	-	-	-	-	0.00	0.04	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003c	gr/m01784	Taylor	turing	-	-	-	-	0.00	0.01	-
			fermat	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003d	gr/m01784	Taylor	turing	-	-	-	-	-	0.00	-
			fermat	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003e	gr/m01784	Taylor	turing	-	-	-	-	-	0.00	-
			fermat	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003f	gr/m01784	Taylor	turing	0.00	-	-	0.00	0.01	0.04	-
			fermat	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003g	gr/m01784	Taylor	turing	-	-	-	-	-	0.00	-
			fermat	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003h	gr/m01784	Taylor	turing	0.00	-	-	0.00	-	0.00	-
			fermat	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003i	gr/m01784	Taylor	turing	55.09	-	756.05	811.14	0.52	0.60	-
			fermat	-	-	-	-	0.00	0.09	0.66
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003j	gr/m01784	Taylor	turing	-	-	-	-	-	0.00	-
			fermat	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003k	gr/m01784	Taylor	turing	0.42	-	-	0.42	0.02	0.06	-
			fermat	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-
CSE003m	gr/m01784	Taylor	turing	14.48	0.00	132.39	146.87	0.00	0.08	-
			fermat	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-

CfS Supercomputer Service

			----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---				
Account			Inter	Priority	Normal	Low	Total	D-Usage	D-Allocln	HSM	
CSE003n	gr/m01784	Taylor	turing	0.04	41.76	-	-	41.80	0.14	0.84	-
			fermat	-	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE007	gr m05348	Foulkes	turing	3.78	-	1985.97	-	1989.75	0.25	0.56	-
			fermat	-	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
cse021	GR/L95427	Staunton	turing	0.03	-	223.68	-	223.71	0.00	0.08	-
			fermat	-	-	-	-	-	0.00	0.08	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE023	GR/M16023	Allen	turing	-	-	-	-	-	0.00	0.02	-
			fermat	-	-	-	-	-	0.00	0.00	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE025	GR/L22331	Bishop	turing	-	-	-	-	-	0.00	0.04	-
			fermat	-	-	-	-	-	0.00	-	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE030	GR/M56234	Cates	turing	-	-	-	-	-	-	0.00	-
			fermat	0.87	-	-	-	0.87	0.00	-	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE030a	GR/M56234	Cates	turing	1.04	414.16	636.42	-	1051.62	0.11	1.31	-
			fermat	-	-	-	-	-	0.06	0.79	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE030b	GR/M56234	Cates	turing	23.40	106.14	3009.30	-	3138.84	0.42	1.31	-
			fermat	-	-	-	-	-	0.00	0.64	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE030d	GR/M56234	Cates	turing	-	-	-	-	-	0.00	0.20	-
			fermat	-	-	-	-	-	0.00	0.64	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
Total for Subject											
Physics			turing	321.60	693.94	49850.15	2936.22	53801.90	7.35	18.22	-
			fermat	1316.97	-	-	-	1316.97	0.48	6.56	5.68
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE006	gr/m05201	Briddon	turing	403.31	287.50	59293.23	-	59984.04	0.24	0.41	-
			fermat	-	-	-	-	-	0.00	0.01	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-
CSE026	GR/L76693	Neal	turing	0.00	-	-	-	0.00	0.00	0.01	-
			fermat	-	-	-	-	-	-	0.00	-
			fuji	-	-	-	-	-	-	-	-
			CSCJ90	-	-	-	-	-	-	-	-

Cfs Supercomputer Service

Account Total for Subject Materials		----- CPU Usage (Hours) -----					--- Storage (GB-Years) ---			
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM	
	turing	403.31	287.50	59293.23	-	59984.04	0.24	0.42	-	
	fermat	-	-	-	-	-	0.00	0.01	-	
	fuji	-	-	-	-	-	-	-	-	
	CSCJ90	-	-	-	-	-	-	-	-	
CSE004	gr/m08424 Sandham	turing	180.81	-	47996.23	-	48177.04	2.19	3.29	-
		fermat	1.38	-	-	-	1.38	0.20	1.19	8.18
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE010	gr/104108 Williams	turing	-	-	-	-	-	0.00	0.01	-
		fermat	-	-	-	-	-	0.00	0.00	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE011	gr/k52317 Williams	turing	0.00	-	-	-	0.00	0.50	0.51	-
		fermat	-	-	-	-	-	0.00	0.00	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
cse013	gr/k43902 Leschzine	turing	-	-	-	-	-	0.00	0.00	-
		fermat	-	-	-	-	-	0.00	0.00	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE013b	gr/k43902 Leschzin	turing	0.03	-	-	-	0.03	0.03	0.04	-
		fermat	535.78	-	-	-	535.78	0.00	0.03	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE013c	gr/k43902 Leschzin	turing	-	-	-	-	-	0.02	0.03	-
		fermat	-	-	-	-	-	-	0.01	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE013d	gr/k43902 Lesc	turing	6.86	57.17	664.37	-	728.41	0.04	0.06	-
		fermat	-	-	-	-	-	0.01	0.04	0.07
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
cse014	GR/K73466 Goddard	turing	-	-	-	-	-	0.00	-	-
		fermat	-	-	-	-	-	0.00	-	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE016	GR/K96519 Cant	turing	-	-	-	-	-	0.08	0.32	-
		fermat	-	-	-	-	-	0.00	0.00	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
cse018	GR/L68353 Cant	turing	-	-	-	-	-	0.00	0.32	-
		fermat	-	-	-	-	-	0.00	0.00	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
cse022	GR/L98527 Jones	turing	10.33	-	1421.67	-	1432.00	0.02	0.05	-
		fermat	-	-	-	-	-	0.00	-	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-
CSE029	GR/L58804 Leschzine	turing	-	-	-	-	-	-	-	-
		fermat	169.47	-	-	-	169.47	0.01	0.40	-
		fuji	-	-	-	-	-	-	-	-
		CSCJ90	-	-	-	-	-	-	-	-



CfS Supercomputer Service

Account	Total for Subject	----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---			
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
Engineering	turing	198.03	57.17	50082.27	-	50337.47	2.90	4.62	-
	fermat	706.63	-	-	-	706.63	0.23	1.67	8.25
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE008 GR/M07624 Hillier	turing	1.03	0.00	16180.70	-	16181.73	0.07	0.16	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE009 gr/m07441 Catlow	turing	11.86	-	1326.37	-	1338.24	0.77	1.59	-
	fermat	26.70	-	-	-	26.70	0.01	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
cse024 GR/M44453 Tennyson	turing	106.60	9014.90	102413	-	111535	0.19	0.36	-
	fermat	0.42	-	-	-	0.42	0.00	0.12	19.50
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
cse033 GR/M63874 Imregun	turing	0.20	-	-	-	0.20	0.00	0.00	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE035 GR/M76720 King	turing	1.68	-	782.00	-	783.69	0.08	0.24	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject									
Chemistry	turing	121.38	9014.91	120702	-	129839	1.11	2.35	-
	fermat	27.12	-	-	-	27.12	0.01	0.20	19.50
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE019 cr/173104 Berzins	turing	0.00	-	-	-	0.00	0.02	0.08	-
	fermat	-	-	-	-	-	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE020 GR/L75139 Szularz	turing	-	-	-	-	-	0.01	0.08	-
	fermat	-	-	-	-	-	0.00	0.01	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject									
Information Technology	turing	0.00	-	-	-	0.00	0.04	0.16	-
	fermat	-	-	-	-	-	0.00	0.09	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSE034 gr/m78342 Durham	turing	-	-	-	-	-	0.00	0.01	-
	fermat	-	-	-	-	-	0.00	0.01	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Account	Total for Subject	----- CPU Usage (Hours) -----					--- Storage (GB-Years) ---		
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
Mathematics	turing	-	-	-	-	-	0.00	0.01	-
	fermat	-	-	-	-	-	0.00	0.01	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council									
EPSRC Class 1	turing	1044.32	10053.52	279928	2936.22	293962	11.63	25.79	-
	fermat	2050.72	-	-	-	2050.72	0.72	8.54	33.43
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
HPCI Southampton	turing	-	-	-	-	-	0.04	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
HPCI Daresbury	turing	16.74	97.07	-	-	113.81	0.05	0.08	-
	fermat	6.58	-	-	-	6.58	0.00	0.02	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
HPCI Edinburgh	turing	0.00	-	-	-	0.00	0.00	0.08	-
	fermat	0.07	-	-	-	0.07	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council									
HPCI Class 1	turing	16.74	97.07	-	-	113.81	0.09	0.16	-
	fermat	6.65	-	-	-	6.65	0.00	0.10	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN001 SOC Core Strategic	turing	0.91	89.94	2362.15	-	2453.00	2.31	3.97	-
	fermat	1151.57	-	-	-	1151.57	0.46	3.97	56.73
	fuji	23.96	-	-	-	23.96	0.05	0.23	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN002 gr3.10789 Hillier	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
badc	turing	-	-	-	-	-	-	-	-
	fermat	0.80	-	-	-	0.80	0.00	-	85.31
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN003 UGAMP O'Neill	turing	57.77	49.11	42719.59	-	42826.47	0.89	1.59	-
	fermat	726.33	-	-	-	726.33	0.10	0.79	435.35
	fuji	836.86	-	-	-	836.86	0.78	11.72	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN005 GR9/2909 Davies	turing	0.00	-	-	-	0.00	0.70	1.35	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN006 GR9/3550 Price	turing	233.97	0.27	17922.98	-	18157.22	1.02	1.91	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Account		----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---			
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
CSN007 GST/02/1454 Price	turing	-	-	-	-	-	0.11	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN009 GST/02/1472 Proctor	turing	25.19	194.95	1303.97	-	1524.11	0.02	0.06	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN011 GST/02/1889 Thorpe	turing	0.19	-	987.46	-	987.65	0.11	0.16	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSN012	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	312.80	-	-	-	312.80	0.04	0.83	-
	CSCJ90	-	-	-	-	-	-	-	-
MiscFuji	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	25.89	-	-	-	25.89	0.02	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council NERC Class 1	turing	318.04	334.26	65296.16	-	65948.46	5.17	9.04	-
	fermat	1878.70	-	-	-	1878.70	0.56	4.77	577.39
	fuji	1199.52	-	-	-	1199.52	0.89	12.78	-
	CSCJ90	-	-	-	-	-	-	-	-
CSB001 27/B07117 Goodfello	turing	-	-	-	-	-	0.03	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSB002 86/B10059 Danson	turing	0.01	-	-	-	0.01	0.02	0.08	-
	fermat	-	-	-	-	-	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSB003 117/S09645 Williams	turing	-	-	-	-	-	0.01	0.03	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council BBSRC Class 1	turing	0.01	-	-	-	0.01	0.06	0.11	-
	fermat	-	-	-	-	-	0.00	0.08	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSP002 NPSSAP Chapman	turing	0.08	-	-	-	0.08	0.02	0.48	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSP003 PPA/G/S/1999/00190	turing	0.35	-	102.48	-	102.83	0.00	0.04	-
	fermat	1.78	-	-	-	1.78	-	0.04	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

		----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---			
Account		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocln	HSM
Total for Council									
PPARC Class 1									
	turing	0.43	-	102.48	-	102.91	0.02	0.52	-
	fermat	1.78	-	-	-	1.78	-	0.04	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSS001 507255155 Turton									
	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CSS002 507255155 Turton									
	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	0.01	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council									
ESRC Class									
	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	0.01	-
	CSCJ90	-	-	-	-	-	-	-	-
cs2001 CompApps3D Jain									
	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2004 ICE Watkins									
	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2006 AISSM Temmerman EPS									
	turing	-	-	-	-	-	0.01	0.02	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2011 Drikakis EPSRC									
	turing	54.20	-	837.86	-	892.07	0.03	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2012 MILES Qin EPSRC									
	turing	0.07	-	2725.82	-	2725.89	0.02	0.03	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2014 Karlin EPSRC									
	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2015 Tejera-Cuesta EPSRC									
	turing	5.18	-	1.61	-	6.79	0.00	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council									
EPSRC Class 2									
	turing	59.45	-	3565.29	-	3624.74	0.06	0.21	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Account		----- CPU Usage (Hours) -----				----- Storage (GB-Years) -----			
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
cs2003 GST/02/0760 Coultha	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	0.00	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2007 SNOW Choularton NER	turing	0.11	-	192.32	-	192.43	0.00	0.01	-
	fermat	0.82	-	-	-	0.82	0.00	0.01	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council NERC Class 2	turing	0.11	-	192.32	-	192.43	0.00	0.01	-
	fermat	0.82	-	-	-	0.82	0.00	0.01	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2009 AMMP Proctor NERC	turing	46.22	21.39	430.14	-	497.75	0.03	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2010 Dempsey BBSRC	turing	0.09	-	1777.08	-	1777.16	0.04	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council BBSRC Class 2	turing	46.31	21.39	2207.21	-	2274.92	0.06	0.16	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2002 PTMP Lyne	turing	0.00	-	-	-	0.00	0.00	0.01	-
	fermat	-	-	-	-	-	0.00	0.04	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS2008 ET Genge	turing	6.19	75.00	2.58	-	83.78	0.01	0.01	-
	fermat	-	-	-	-	-	0.00	0.00	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council PPARC Class 2	turing	6.19	75.00	2.58	-	83.78	0.01	0.02	-
	fermat	-	-	-	-	-	0.00	0.04	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS3001 Stavely	turing	0.01	-	-	-	0.01	0.00	0.00	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS3004 EPSRC avis	turing	0.00	-	-	-	0.00	0.00	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Account		----- CPU Usage (Hours) -----				--- Storage (GB-Years) ---			
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
Total for Subject Class 3 EPSRC									
	turing	0.01	-	-	-	0.01	0.00	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS3002 Coveney									
	turing	0.00	-	-	-	0.00	0.00	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS3003 Chambers									
	turing	0.34	-	3337.53	-	3337.87	0.05	0.08	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject Class 3 BBSRC									
	turing	0.34	-	3337.53	-	3337.87	0.05	0.16	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
CS3005 Zarei									
	turing	26.94	-	59.95	-	86.88	0.00	0.02	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject Class 3 ESRC									
	turing	26.94	-	59.95	-	86.88	0.00	0.02	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council Class 3									
	turing	27.29	-	3397.47	-	3424.76	0.05	0.27	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
euukcp									
	turing	-	-	-	-	-	0.01	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
eugamp									
	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
euqub									
	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
euqmw									
	turing	-	-	-	-	-	1.73	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Account		----- CPU Usage (Hours) -----					--- Storage (GB-Years) ---		
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
euhpci	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
eural	turing	-	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
earlyu	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	-	0.10	-	1.72
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
dummy	turing	-	-	-	-	-	-	-	-
	fermat	-	-	-	-	-	0.00	-	-
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Subject eu accounts	turing	-	-	-	-	-	1.74	-	-
	fermat	-	-	-	-	-	0.10	-	1.72
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-
Total for Council Research	turing	-	-	-	-	-	1.74	-	-
	fermat	-	-	-	-	-	0.10	-	1.72
	fuji	-	-	-	-	-	-	-	-
	CSCJ90	-	-	-	-	-	-	-	-

CfS Supercomputer Service

Usage report for All Research Councils

From Tuesday 1-Feb-00 to Tuesday 29-Feb-00

Account		----- CPU Usage (Hours) -----					--- Storage (GB-Years) ---		
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
Total Research Councils	turing	1518.89	10581.24	354692	2936.22	369728	18.91	36.28	-
	fermat	3938.67	-	-	-	3938.67	1.39	13.58	612.55
	fuji	1199.52	-	-	-	1199.52	0.89	12.79	-
	CSCJ90	-	-	-	-	-	-	-	-

Appendix 2

Percentage PE time per consortia for Turing in February 2000		Percentage CPU time per consortia for Fermat in February 2000	
Consortia	% Machine Time	Consortia	% Machine Time
CSE002	6.72	CSE002	33.41
CSE003	6.10	CSE003	0.01
CSE007	0.54	CSE007	0.00
CSE021	0.06	CSE021	0.00
CSE023	0.00	CSE023	0.00
CSE025	0.00	CSE025	0.00
CSE030	1.13	CSE030	0.00
CSE006	16.22	CSE006	0.00
CSE026	0.00	CSE026	0.00
CSE004	13.03	CSE004	0.04
CSE010	0.00	CSE010	0.00
CSE011	0.00	CSE011	0.00
CSE013	0.20	CSE013	13.60
CSE014	0.00	CSE014	0.00
CSE016	0.00	CSE016	0.00
CSE018	0.00	CSE018	0.00
CSE022	0.39	CSE022	0.00
CSE029	0.05	CSE029	0.04
CSE008	4.38	CSE008	0.00
CSE009	0.36	CSE009	0.68
CSE024	30.17	CSE024	0.01
CSE033	0.00	CSE033	0.00
CSE035	0.21	CSE035	0.00
CSE019	0.00	CSE019	0.00
CSE020	0.00	CSE020	0.00
CSE034	0.00	CSE034	0.00
HPCI Southampton	0.00	HPCI Southampton	0.00
HPCI Daresbury	0.03	HPCI Daresbury	0.17
HPCI Edinburgh	0.00	HPCI Edinburgh	0.00
CSN001	0.66	CSN001	29.24
CSN002	0.00	CSN002	0.00
BADC	0.00	BADC	0.02
CSN003	11.58	CSN003	18.44
CSN005	0.00	CSN005	0.00
CSN006	4.91	CSN006	0.00
CSN007	0.00	CSN007	0.00
CSN009	0.41	CSN009	0.00
CSN011	0.27	CSN011	0.00
CSN012	0.00	CSN012	0.00
CSB001	0.00	CSB001	0.00
CSB002	0.00	CSB002	0.00
CSB003	0.00	CSB003	0.00
CSP002	0.00	CSP002	0.00
CSP003	0.03	CSP003	0.05
CS2001	0.00	CS2001	0.00
CS2002	0.00	CS2002	0.00
CS2003	0.03	CS2003	0.04
CS2004	0.00	CS2004	0.00
CS2006	0.00	CS2006	0.00
CS2007	0.05	CS2007	0.01
CS2008	0.02	CS2008	0.00
CS2009	0.13	CS2009	0.00
CS2010	0.48	CS2010	0.00
CS2011	0.24	CS2011	0.00
CS2012	0.74	CS2012	0.00
CS2014	0.00	CS2014	0.00
CS2015	0.00	CS2015	0.00
CS3001	0.00	CS3001	0.00
CS3002	0.00	CS3002	0.00
CS3003	0.90	CS3003	0.00
CS3004	0.00	CS3004	0.00
CS3005	0.02	CS3005	0.00



## Appendix 2

Percentage disc allocation by Consortia for Turing in February 2000		Percentage disc allocation by Consortia for Fermat in February 2000	
Consortia	%Allocation	Consortia	%Allocation
CSE002	29.47	CSE002	31.37
CSE003	11.08	CSE003	1.18
CSE007	1.54	CSE007	0.00
CSE021	0.22	CSE021	0.59
CSE023	0.06	CSE023	0.00
CSE025	0.11	CSE025	0.00
CSE030	7.77	CSE030	15.24
CSE006	1.13	CSE006	0.07
CSE026	0.03	CSE026	0.00
CSE004	9.07	CSE004	8.76
CSE010	0.03	CSE010	0.00
CSE011	1.41	CSE011	0.00
CSE013	0.36	CSE013	0.59
CSE014	0.00	CSE014	0.00
CSE016	0.88	CSE016	0.00
CSE018	0.91	CSE018	0.00
CSE022	0.14	CSE022	0.00
CSE029	1.10	CSE029	0.00
CSE008	0.47	CSE008	0.00
CSE009	4.38	CSE009	0.66
CSE024	0.99	CSE024	0.88
CSE033	0.00	CSE033	0.00
CSE035	0.66	CSE035	0.00
CSE019	0.22	CSE019	0.59
CSE020	0.22	CSE020	0.07
CSE034	0.03	CSE034	0.07
HPCI Southampton	0.00	HPCI Southampton	0.00
HPCI Daresbury	0.22	HPCI Daresbury	0.15
HPCI Edinburgh	0.22	HPCI Edinburgh	0.59
CSN001	10.94	CSN001	29.23
CSN002	0.00	CSN002	0.00
BADC	0.00	BADC	0.00
CSN003	4.38	CSN003	5.82
CSN005	3.72	CSN005	0.00
CSN006	5.26	CSN006	0.00
CSN007	0.00	CSN007	0.00
CSN009	0.17	CSN009	0.00
CSN011	0.44	CSN011	0.00
CSN012	2.29	CSN012	0.00
CSB001	0.00	CSB001	0.00
CSB002	0.22	CSB002	0.59
CSB003	0.08	CSB003	0.00
CSP002	1.32	CSP002	0.00
CSP003	1.10	CSP003	0.29
CSS001	0.00	CSS001	0.00
CSS002	0.00	CSS002	0.00
CS2001	0.00	CS2001	0.00
CS2002	0.00	CS2002	0.29
CS2003	0.00	CS2003	0.00
CS2004	0.00	CS2004	0.00
CS2006	0.06	CS2006	0.00
CS2007	0.03	CS2007	0.07
CS2008	0.03	CS2008	0.00
CS2010	0.22	CS2010	0.00
CS2011	0.22	CS2011	0.00
CS2012	0.11	CS2012	0.00
CS2014	0.00	CS2014	0.00
CS2015	0.22	CS2015	0.00
CS3001	0.00	CS3001	0.00
CS3002	0.22	CS3002	0.00
CS3003	0.22	CS3003	0.00
CS3004	0.22	CS3004	0.00
CS3005	0.06	CS3005	0.00

Percentage usage of HSM by Consortium for February 2000	
Consortium	% Usage
CSE002	0.82
CSE003	0.11
CSE004	1.34
CSE013	0.01
CSE024	3.18
CSN001	9.26
BADC	13.93
CSN003	71.07
CS2002	0.00

## Appendix 3

<u>Percentage PE usage on Turing by Reserch Council for February 2000</u>			<u>Percentage CPU usage on Fermat by Reserch Council for February 2000</u>		
<u>Research Council</u>	<u>% Usage</u>		<u>Research Council</u>	<u>% Usage</u>	
EPSRC	80.49		EPSRC	52.07	
HPCI	0.03		HPCI	0.17	
NERC	17.89		NERC	47.72	
BBSRC	0.00		BBSRC	0	
PPARC	0.03		PPARC	0	
PPARC(Class2)	0.02		PPARC(Class2)	0	

<u>Percentage Disc allocated on Turing by Research Council for February 2000</u>			<u>Percentage Disc allocated on Fermat by Research Council for February 2000</u>		
<u>Research Council</u>	<u>% Allocated</u>		<u>Research Council</u>	<u>% Allocated</u>	
EPSRC	71.89		EPSRC	62.89	
HPCI	0.44		HPCI	0.74	
NERC	24.94		NERC	35.20	
BBSRC	0.74		BBSRC	0.59	
PPARC	1.43		PPARC	0.29	
PPARC(Class2)	0.06		PPARC(Class2)	0.29	

<u>Percentage HSM usage by Research Council for February 2000</u>		
<u>Research Council</u>	<u>% usage</u>	
EPSRC	5.46	
HPCI	0	
NERC	94.26	
BBSRC	0	
PPARC	0	
PPARC(Class2)	0	

**Appendix 4**

The following tables show the training and support resource usage by the consortias in person days.

**Training Used to end of February**

<b>Project</b>	<b>Used</b>
cse009 GR/M07441 Catlow	0
csn001 SOC Core Strategic Webb	0
cse013 Complex Flows Leschziner	1
cse017 GR/L58699 Luo	0
cse021 Magnetism Staunton	1
cse024 GR/M44453 Tennyson	0
cse025 Nuclear Theory Bishop	1.5
cse002 gr/m01753 Gillan	0
cse007 gr/m05348 Foulkes	2
cse003 gr/m01784 Taylor	5
cse004 UK Turbulence Sandham	2
cs2001 CompApps3D Jain	0
csb003 117/SO9645 Williams	0
cse011 GR/K52317 Williams	0
cse010 GR/L04108 Williams	0
csn003 UGAMP O'Neill	4
cse030 GR/M56234 Cates	7
cs2002 PTMP Lyne	0
csp002 NPSSAP Chapman	4
cs3001 - Staveley	3
cs3002 Novik Simulations of DNA	2
cs3005 Zarei	2
cs2005 ISAAG Walsh	0
cs2007 SNOW Choularton	1
csb001 27/B07117 Goodfellow	0
cs2012 Large Eddy Sims Qin	1.5
cs2014 - Karlin	2
cs2015 Tejera-Cuesta	1.5

**Support Used to end of February**

<b>Project</b>	<b>Used</b>
cse009 GR/M07441 Catlow	0
cse006 gr/m05201 Briddon	0
cse002 gr/m01753 Gillan	<b>89.5</b>
cse011 GR/K52317 Williams	<b>2.18</b>
csn001 SOC Core Strategic Webb	0
cse007 gr/m05348 Foulkes	0
cse017 GR/L58699 Luo	0
cse008 GR/M07624 Hillier	0
cse024 GR/M44453 Tennyson	0
cse021 GR/L95427 Staunton	0
cse010 GR/L04108 Williams	<b>15.95</b>
cse030 GR/M56234 Cates	<b>12</b>
cs2002 PTMP Lyne	<b>0.25</b>
cs2008 ET Genge	<b>7.91</b>
csn005 GR9/2909 Davies	<b>12</b>
cs2005 ISAAG Walsh	0
cse003 gr/m01784 Taylor	0

## Appendix 5

Code	PI	Subject	Subject Area
Cse002	Dr Nicolas Harrison (Gillan)	Support for the UKCP	Physics
Cse003	Prof. Ken Taylor	HPC Consortiums 98- 2000	Physics
Cse004	Dr Neil Sandham	UK Turbulence	Engineering
Cse006	Dr Patrick Briddon	Covalently Bonded Materials	Materials
Cse007	Dr Matthew Foulkes	Quantum Many Body Theory	Physics
Cse008	Dr Mark Vincent (Hillier)	Model Chemical Reactivity	Chemistry
Cse009	Dr Ben Slater (Catlow)	HPC in Materials Chemistry	Chemistry
Cse010	Dr John Williams	Free Surface Flows	Engineering
Cse011	Dr John Williams	Open Channel Flood Plains	Engineering
Cse013	Dr David Aspley (Leschziner)	Complex Engineering Flows	Engineering
Cse014	Dr Cassiano de Oliverira (Goddard)	Probs in Nuclear Safety	Engineering
Cse016	Dr Stewart Cant	Turbulent Combustion	Engineering
Cse018	Dr Stewart Cant	Turbulent Flames	Engineering
Cse019	Dr Jason Lander (Berzins)	ROPA	Information Technology
Cse020	Dr Marek Szularz	Symmetric Eigenproblem	Information Technology
Cse021	Dr Julie Staunton	Magentisim	Physics
Cse022	Mr Niall Branley (Jones)	Turbulent Flames	Engineering
Cse023	Allen	Liquid Crystalline Materials	Robin Pinning
Cse024	Dr Robert Allan (Tennyson)	ChemReact 98-2000	Chemistry
Cse025	Dr Niels Rene Walet (Bishop)	Nuclear Theory Progamme	Physics
Cse026	Dr Maureen Neal	J90 move	
Cse027	Dr M Imregun	J90 move	
Cse028	Prof. P.W. Bearman	J90 move	
Cse029	Dr David Aspley (Leschziner)	J90 move	Engineering
Cse030	Prof M Cates	HPC for Complex Fluids	Physics
Cse031	Brebbia	J90 move	
Cse033	Dr M Imregun	Tubomachinery core compressor	Chemistry
Cse034	Dr Paul Durham	R&D of liner/non-linear systems	Mathematics
Csn001	Mrs Beverly de Cuevas (Webb)	HPCI Global Ocean Consortium	
Csn002	Dr Mark Vincent (Hillier)	Pollutant Sorption on Mineral Surf	
Csn003	Dr Lois Steenman-Clark (O'Neill)	UGAMP	
Csn005	Dr Huw Davies	Constraining Earth Mantle	
Csn006	Dr John Brodholt (Price)	Density Functional Methods	
Csn007	Dr John Brodholt (Price)	Density Functional Methods	
Csn008	Hulton	Sub-Glacial Process	
Csn009	Dr Roger Proctor		
Csn010	Dr Jason Lander (Mobbs)	Flow over Complex terrain	
Csn011	Dr Ed Dicks (Thorpe)	J90 move	
Csb001	Dr David Houldershaw (Goodfellow)	Macromolecular Interactions	
Csb002	Dr Adrian Mulholland (Danson)	Stability of Enzymes at high temp	
Csb003	Dr John Carling (Williams)	J90 move	
Css001	Dr Stan Openhaw	Human Systems Modelling	
Css002	Dr Robert Crouchley	Dropout in panel surveys	
Hpcid	Dr Robert Allan		
Hpcie	Dr David Henty		
Hpcis	Dr Denis Nicole		
Cs2001	Dr Sudhir Jain	3D Ising Spin Glass	
Cs2002	Dr Ingrid Stairs (Lyne)	Millisecond Pulsars	
Cs2003	Mr Tom Coulthard	Holocene Sediment Fluxes	
Cs2004	Dr A. Paul Watkins	Internal Combustion Engine	
Cs2005	Mr Sean Walsh	Arabidopsis Genome	
Cs2006	Prof. Walter Temmerman	Superconductivity & Magmetisim	
Cs2007	Choularton	Precipitation in the Mountains	
Cs2008	Dr Matthew Genge	Extraterrestrial Mineral Surfaces	
Cs3001	Mr John Andrew Staveley	Helical Coherent Structures	