

Annex A

Services Provided by UKMS

UK Mirror Service

Service Level Definitions

1st August 2002 – 31st July 2003

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Definitions

Reporting Format

All performance reports shall be delivered to the MU in machine readable form in a format defined in the document "Format for performance reports to the MU"

Maintenance Time

All the continuously available services shall normally be scheduled to be available 365 days a year (or 366 days in a Leap Year) and 24 hours per day. If, under exceptional circumstances, planned maintenance requires a service closure, times shall be published at least two weeks in advance to all client institutions.

As far as possible, maintenance times will be performed on a single-site basis (allowing the remaining site to offer a full service at reduced capacity) and shall fall during the "at risk" period from 0700 to 0900 hours on Tuesdays. In all cases planned maintenance will not be taken between the hours of 0900 and 1800 hours during weekdays, and all other known or predicted peak periods shall be avoided. Service availability shall be calculated on the basis of scheduled availability (i.e. the time when the service was actually available to users divided by the time when it was scheduled to be available). Planned maintenance of any service component averaged over a twelve-month period is not expected to exceed the total available 'at risk' hours.

Staffed periods

The service will be staffed from 09.00 to 17.00 hours on weekdays, excluding the following public holidays:

New Year's Day	Last Monday in August
Good Friday	Christmas Day
Easter Monday	Boxing Day

and all other days over the Christmas and New Year period when the Universities of Lancaster or Kent are officially closed.

A1 Mirror Services

A1.1 Basic Mirror Service

Specification

The UK Mirror Service will provide freely available data, including software, databases, audio material, static and moving picture images and Web page based information obtained mostly from sources external to the JANET network.

The UK Mirror Service will provide facilities for accessing, searching and downloading of this data via the JANET network, primarily for the purpose of increasing user awareness of and providing easy access to non chargeable material, reducing the need for random user searches of the internet, and reducing usage of the heavily subscribed international communications links.

It is an objective of the UK Mirror Service to provide interworking with the JANET WWW Cache Service to enable user ftp requests directed at mirror sources to be redirected at the Mirror Service.

Service Levels

The data will be distributed across the two sites at Lancaster and Kent, with some duplication to provide service resilience and load sharing. Normally all of the file store will be duplicated. In the event that the available file store is exceeded, then duplication will be reduced to cover the most heavily downloaded mirrors as measured on a historical basis.

The system configuration at each site comprises a Sun E450, with disk capacity of 840 Gbytes, a Sun Ultra 30, with disc capacity of 200 Gbytes, and a number of Intel Pentium IIs acting as caching front-end machines.

This service will be continuously available, subject to the 'at risk' period on Tuesdays from 0700 to 0900 hours.

Each item within the mirror file store will be tagged with the date and time when it was last compared with the origin site. Comparison with the origin site will be carried out nightly, every working day.

Performance Indicators

a) Availability

- for the whole service 99.7%
- per non-duplicated mirror 99%
- per duplicated mirror 99.5%

where a mirror is the collection of files obtained from one supplier source

b) Mean Time between Failure

- for the whole service greater than 2000 hours
- per non-duplicated mirror greater than 1000 hours
- per duplicated mirror greater than 1500 hours

c) data updates identified and applied to the mirror filestore within 30 hours

d) Response time to users

- start to load (defined as the time period between receipt of data request by the service front end machine and the return of the first byte to the network switch linking the server to the JANET gateway) will be less than 1 second
- delivery of data to the switch linking the server to the JANET network will be at the rate of not less than 16.7k bytes per second per request, where the maximum number of concurrent requests does not exceed 500 and 50 at Lancaster and Kent respectively.

Reporting

Actual performance for **a)** and **b)** above

Exception reports for **c)** above

Sample reports for **d)** above

Number of files fetched and volume of data fetched by users for the whole service shown by nominated time periods for each day

Number of files served and volume of data served, by institution by month

Number of files and volume of data imported from the origin host by mirror by month

Number of files served and volume of data served by mirror by month

Annual report of the total number of files, mirrors and volume of data held

Annual report of the number of files and volume of data held per mirror

A1.2 Collection Development

Specification

Working within the JISC collections policy, and the collections policy to be agreed with the UK Mirror Service Steering Group, the UK Mirror Service will identify potential new mirror sites, establish agreements for the acquisition of new collections/items and, where appropriate, the subsequent update of content, and incorporate these items into the Mirror filestore.

The Mirror Service will work with the Resource Discovery Network (RDN) to identify collections that should be mirrored, and to ensure that links to these mirrored sites are included in the on-line services being developed and maintained by the RDN hubs.

The Collections index will be compatible with the JISC and based on appropriate international standards.

Performance Indicators

- a) Fully incorporated into the basic service new collections by the announced/ published target date
- b) justified cost benefit analysis for new collections
- c) added value as perceived by users

Reporting

Actual performance for a) above

List of new mirrors (name and description)

List of new agreements achieved, being negotiated

Annual report to the Content Working Group of the JISC Committee on Electronic Information providing a cost benefit analysis of new mirrors.

Annual report on the user perceived value, currency and scope of the collections offered

A1.3 Indexing and Referencing

Specification

The UK Mirror Service will maintain a Collections index with appropriate links to enable users to selectively access content for browsing and downloading purposes. User access will be provided via Web based indexes organised appropriately, e.g. for software, by subject and by platform.

Performance Indicators

- a) accuracy
- b) ease of use and quality as perceived by users

Reporting

Sample reports for a) above
Number of accesses to Collections index

Annual report on the user perceived accuracy, ease of use and quality of the indexes.

A1.4 Links to Other Mirrors

Specification

The UK Mirror Service will seek links with other mirror sites with an appropriate quality of service and of benefit to the HE community and will incorporate entries in the collections index to provide reference for user access.

It is the intention in the future to evaluate the feasibility of the UK Mirror Service administering a small fund to encourage the integration of volunteer mirror sites within the HE community with an appropriate quality of service.

Performance Indicators

- a) Added value of links to new sites as perceived by users
- b) Completion of funded integrations within agreed cost and timescale

Reporting

List of mirror sites newly linked and indexed categorised by HE and non HE site

Annual list of linked mirror sites

If, in the future, the UK Mirror Service has a small fund to administer:
List of volunteer mirror sites allocated funding, the funding amount and funding purpose.
Annual report of the administration and financial outturn of the small fund, with a summary of each funded integration project.

A1.5 Link to the JANET WWW Cache Service

Specification

It is the intention in the future that the UK Mirror Service will link to the JANET WWW Cache Service and receive and handle requests received for mirror data (primarily ftp requests)

Performance Indicators

Reporting

A1.6 Technical Development

Specification

A programme of continuing development will be undertaken to provide value added services primarily concerned with more extensive searching techniques across mirrors, handling new collection types, creating 'intelligent' links to other relevant network services

This programme will be agreed annually with the National Mirror Service Steering Group

Performance Indicators

a) Developments completed successfully within agreed costs and timescale.

Reporting

List of new/updated developments implemented

Copies of the reports on progress on technical developments, to be included in the quarterly report immediately following the Steering Group meeting.

Annual report on the Development Programme

A1.7 Liaison with other Network Services

Specification

The UK Mirror Service will liaise closely with

- JANET WWW Cache Service to ensure cache requests are directed to mirrors when appropriate to maximise savings
- RDN and other subject based internet gateways and CTI (Computer in Teaching Initiative) Centres to identify potential new mirrors
- UKERNA to identify possible bandwidth needs and to bid for additional funds to increase these

Performance Indicators

Advancement of plans to develop the link with the JANET WWW Cache Service, development of the mirror collection, adequate accessibility to the UK Mirror Service.

Reporting

Annual report on the value of liaison perceived by the UK Mirror Service.

A2 Infrastructure Services

A2.1 User Support

Specification

The UK Mirror Service will provide a single point of telephone, email and fax contact to deal with user enquiries.

Service Levels

The telephone helpline will be staffed during normal office hours and by answerphone at other times.

Performance Indicators

- a) Users able to log enquiries at any time
- b) Initial responses to
 - telephone enquiries within 4 working hours
 - email or fax within 1 working day

Reporting

Number of enquiries, broken down by telephone, email and fax and by category.
Number of enquiries outstanding after 1 week, after 1 month.

A2.2 Documentation

Specification

The UK Mirror Service will provide appropriate on-line user documentation to provide on line help facilities for the use of the Mirror Services.

Performance Indicators

Comprehensive documentation accurate and up to date

Reporting

Annual list of online documentation

A2.3 Publicity

Specification

The UK Mirror Service will widely publicise its services in accordance with the JISC PR Strategy

Performance Indicators

- a) Evidence of publicity events held, attendance at relevant user group meetings, workshops and conferences
- b) regular newsletter

Reporting

Copies of all newsletters released

Annual list of publicity events held, with number of attendees
Annual list of events attended and papers published

A2.4 Operations and Technical Support and Network Connectivity

A2.4.1 Operations and Technical Support

Specification

The UK Mirror Service will be responsible for the day to day running of hardware and communication equipment. The Service will raise fault reports with the relevant supplier for any faults and will escalate problems as appropriate. The Service will be responsible for taking regular filestore backups.

The UK Mirror Service will be responsible for maintaining operating system, and mirror data handling and filestore administration software.

Service Levels

The UK Mirror Service will be continuously available and run in 'unattended' mode during unstaffed periods.

The UK Mirror Service hardware and communications equipment is based at Lancaster and at Kent. The systems based at each location are as follows:

At each site:

1 Sun Enterprise 450 with 3 processors and 1 Gbyte memory
RAID arrays attached to the Enterprise 450s: 2 of 144 Gbytes, 2 of 288 Gb and 1 of 432 Gb

1 Sun Ultra 30 with 384 Mbytes memory and 200 Gbytes of standard filestore.
Intel P3 systems, 800 MHz, each with at least 128 Mbytes memory and 32 Gbytes filestore, acting as caching front-ends: at least 6 distributed across both sites.

Performance Indicators

Service machines and communications facilities will be available 99% of scheduled service uptime

Reporting

Number of breaks in service per machine. Machine downtime per break
Number of periods and length of time per period per machine for scheduled downtime

A2.4.2 Network Connectivity

Specification

At each site the UK Mirror Service equipment is interconnected via a dedicated LAN comprising 100 Mbps Ethernet segment. At each site, the switch controlling the dedicated LAN is directly connected to the site's JANET gateway. Each site's LAN specification is capable of supporting over 500 users each transferring data at up to 1 Mbyte per minute; however, the connection from each site to JANET constrains activity below this level

Performance Indicators

The LANs will be available 99% of scheduled service uptime
The LANs will have sufficient capacity to maintain quoted local response times

Reporting

Number of breaks in service per site. Length of time per break.
Sample reports on LAN performance.

Annex A Schedule 1

Financial Planning Indicators

Annex B

Format for the Annual Budget and Strategic Plan

B.1 Objective of the documents

The budget and the strategic plan, taken together, should present a complete picture of the intended development of the services over the planning period (three years). The first year shall be covered in detail and the second and third years set out at a more strategic level.

Where appropriate, the budget and the strategic plan shall mirror the headings used in the service level agreement.

B.2 General Information

The strategic plan should offer a brief review of the present situation, particularly of recent developments and challenges, and should indicate the current vision of developments during the planning period, indicating the main initiatives and service improvements expected.

The budget should include the current financial baseline.

B.3 Structure of Proposals

The proposals made shall distinguish clearly between the maintenance of the existing core programme and any new initiatives or extensions proposed.

New initiatives or extensions should be structured into largely self-contained options, indicating any dependencies, to facilitate prioritisation.

Financial details of new proposals should include their full marginal costs or savings.

B.4 Financial Details

B.4.1 Expenditure

Where appropriate, costs will be estimated using financial planning indicators listed in Annex A Schedule 1

B.4.1.1 Expenditure Format

The following financial heads shall be used:

- staff salaries (including N.I and Pensions)
- travel and subsistence
- maintenance
- network costs
- telephone, postage, stationery
- publicity material
- training
- membership fees (if any)
- conference attendances (if any)
- contingency budget (if any)

Costs for staff shall be separated between the services defined in Annex A as follows:

- A1.1, A2.4
- A1.2, A1.3, A1.4
- A1.5, A1.6, A1.7
- A2.1, A2.2, A2.3

All other costs shall be given as a combined total for all services.

Annex C

Change Control Procedures

C1 Principles

C1.1 Where the JISC or UKMS see a need to change the services the JISC may at any time request, and UKMS may at any time recommend, such a change only in accordance with the Change Control Procedures as set out at section 2 of this annex.

C1.2 Neither the JISC nor UKMS shall unreasonably withhold its agreement to any change.

C1.3 Until such time as a change is made in accordance with the Change Control Procedure, UKMS shall, unless otherwise agreed in writing, continue to supply the services, as if the request or recommendation had not been made.

C1.4 Any discussions which may take place between the JISC and UKMS in connection with a request or recommendation before the authorisation of a resultant change to the services shall be without prejudice to the rights of either part.

C1.5 Any work undertaken by UKMS, its subcontractors or agents, which has not been authorised in advance by a change to the services and which has not been otherwise agreed in accordance with the provisions of paragraph 1.3 of this Schedule shall be undertaken entirely at the expense and liability of UKMS.

C2. Procedures

C2.1 Discussion between the JISC and UKMS concerning a change to the services shall result in any one of the following:

- a) no further action being taken
- b) a request to change the services by the JISC; or
- c) a recommendation to change the services by UKMS

C2.2 Following result b) or c) the MU will coordinate the preparation of a Change Control Request (CCR) containing the following minimum information

- a) the title of the change
- b) the originator and date of the request or recommendation for the change
- c) the reason for the change;
- d) full details of the change including any specifications;
- e) a timetable for implementation
- f) the price, if any, of the change, including any recurrent implications;
- g) a schedule of payments if appropriate;
- h) details of the likely impact, if any, of the change on other aspects of the services;
- i) the date of expiry of validity of the CCR; and
- j) provision for signature by the JISC and UKMS

C2.3 Two copies of the CCR, in hard copy format, shall be prepared, for signature by both parties, each party retaining one signed copy. The CCR will normally be signed by both parties within one month of receipt of the document.

C2.4 A CCR signed by both parties shall constitute an amendment to the Service Level Agreement.