



Quarterly Report to the Community

February – April 2008

Editorial

JANET(UK)'s Training team this quarter [successfully launched EdLab@](#), a new online learning and collaboration facility. EdLab is a service designed to support the JANET community by providing online content and collaboration tools on topics relating to academic networking. [Elsewhere in this report](#) training courses on Managing IT Security and Information Security Policies have been presented; a meeting was held with the National Education Network Technical Group to discuss the use of attributes recommended by the UK federation in schools; and of course there has been the latest in the [annual series of Networkshop](#), attended by 320 delegates from the JANET community.

It is not enough just to run a world class network, as JANET is. Its ever growing community of users needs to be kept informed and trained in best practice, skills and techniques. JANET(UK) remains as committed to this human side of running a network as it is to maintaining JANET's high standards of availability and communication.

1 Introduction

This report broadly follows the sequence of the SLA (Service Level Agreement) between JANET(UK) and the funding bodies represented in JISC (Joint Information Systems Committee), for the financial year 1 November 2007 to 31 July 2008.

The numbering follows that of the SLA, and apparent omissions reflect the fact that there is nothing to report at present.

2. Support Services (SLA J2.4)

(a) Documentation

Documents published between February-March 2008

Newsletters	JANET News 3
Reports	JANET Development Programme
Factsheets	Factsheet Compendium 2007
Case studies	FreeRADIUS v2.02 at the University of Sussex
Services	JANET Research Services
Technical	IEEE 802.1X Implementation at JANET-connected organisations technical guide IPv6 Management Briefing Document
Newsletters	JANET News 3
Reports	JANET Development Programme
Factsheets	Factsheet Compendium 2007

(b) Workshops and Conferences [[more information](#)]

Workshop 36 [[more information](#)]

320 delegates attended Workshop 36, hosted from 8-10 April at Strathclyde University in Glasgow, returning to the city where Workshop began in 1977. Proceedings opened with a talk by Derek Law of Strathclyde University entitled "Lean mean and green: enhancing the University research machine", outlining a university's perspective on current and future JANET services. This was followed by an update on the year's activities from the Head of JANET(UK) Strategic Technologies and Head of JANET(UK) Operations. Topics in the afternoon events ranged from VoIP, to network engineering and security, with the addition of a number of presentations by exhibitors at Workshop.

The second day began with a plenary session providing an update on standards and a glimpse into the future of wireless technology, followed by a talk on Digital Video Broadcasting over the Internet. Parallel sessions throughout the rest of the day covered regional network developments, Mobile IP and Location Awareness Trials, the use of lightpaths in research in the JANET community, 802.1x Supplicant, network technology development and IPTV. This last item included a live demonstration and broadcast on a local community radio station.

Parallel sessions on the final day included network measurement and monitoring, campus residential networking and a separate session on Shibboleth.

The programme and other details can be viewed at <http://www.ja.net/services/events/2008/workshop-36.html>

Schools Videoconferencing User Group Meeting

The second Schools Videoconferencing User Group Meeting took place on 21 April 2008 at the National Maritime Museum in Greenwich, London. Attendees were a mix of content providers, educational institutions and other organisations involved in videoconferencing at school level. In the true spirit of the event, some individuals joined the meeting via videoconference.

Guest speakers included Peter Evans of the National Football Museum and Jenny Gage from the Cambridge Motivate project. Both showed how they used videoconferencing to promote interactive learning across the curriculum and how they used online characters to bring the

subjects to life; the football museum by posing questions to modern and latter day footballers and, in Cambridge Motivate, interacting with people who use maths and science in their daily lives.

The event was a useful opportunity for attendees to put forward their requirements for videoconferencing over JANET and to do some networking with their peers and content providers. Collaborative activities are expected to be born out of the event, some of which may involve collaboration with the US user group; there is already talk of expanding the London Live event to include a wider remit and plans for the Olympics 2012 cause much interest throughout the group. Feedback from the meeting will be used to shape future developments within JANET(UK)'s videoconferencing activities.

(c) Network User Groups

There were no network user groups meetings during this period.

(d) Security, Regulation and Policy [[more information](#)]

The Byron review on making the digital world safer for children has been published by the Department for Children, Schools and Families. The report stresses the importance of education and understanding, supplemented by technical protection measures, for all Internet users. The European Commission's Article 29 Working Party published an opinion on data protection and search engines, suggesting that Internet addresses should always be treated as personal data unless it was certain that it was impossible to associate them with an individual person. This is a wider interpretation than is suggested by current UK case law; however it agrees with the good practice of designing systems and processes to ensure that the privacy of all information stored or logged is protected.

As well as the UK federation presentations described below, a meeting was held with the National Education Network Technical Group to discuss how the attributes recommended by the UK federation could be used in schools and whether additions are needed. Internal discussions on policy and legal issues also took place with JANET(UK)'s authentication, wireless and video areas.

JANET(UK)'s training courses on Managing IT Security and Information Security Policies were presented, once each, in Birmingham. Presentations were also made at UK federation events in Glasgow and Brighton and at a TERENA course in the Netherlands. Other meetings included TERENA's middleware task force and Technical Committee. The UCISA Management Conference, BILETA IT law conference and JANET(UK)'s Networkshop were attended and provided opportunities for useful discussions.

3. IP Services (SLA J3)

3.1 IP Service (SLA J3.1)

This reporting period has seen a total of 38 new or enhanced customer connections completed and brought into use:

Further Education

- Basingstoke College of Technology
- Bilborough College
- Blackburn College
- Croydon College
- Derby College
- Gateshead College
- Grantham College
- Harrow College
- Herefordshire College of Technology
- Hertford Regional College
- Knowsley Community College
- Middlesbrough College
- Moulton College
- National Star College
- North Nottinghamshire College
- Northampton College
- Otley College of Agriculture and Horticulture
- Queen Elizabeth's Foundation Brain Injury Centre
- Riverside College Halton
- South East Derbyshire College
- Trafford College
- Uxbridge College
- Weston College

Higher Education

- Birmingham College of Food, Tourism and Creative Studies
- Norwich School of Art and Design
- Writtle Agricultural College

JISC

- Joint Research Council HQ
- Medical Research Council
- Medical Research Council Harwell
- Medical Research Council HQ

Self-funded

- Buckinghamshire County Council
- CableCom Networking Ltd
- European Space Agency
- Hewlett Packard Laboratories
- Leeds Learning Network
- Magdalen College School

Scottish Executive Education

- North Ayrshire Council
- Scottish Executive

For information regarding current upgrades or connections, please contact the JANET Service Desk at: connect@ja.net

A list of all primary sites connected to JANET may be found at: <http://www.ja.net/janet-sites/>

(b) FE

England

Following LSC's announcement of capital funding for upgrades to FE college connections beyond 10Mbit/s, JANET(UK) has commenced work on the project to implement upgrades for those colleges willing to fund the additional recurrent costs of such upgrades.

Northern Ireland

College access circuits continue to be reliable. Significant use is being made of the higher bandwidth circuits implemented for the area-based colleges.

Scotland

The high bandwidth connections provided to all Scottish colleges have performed well during the reporting period.

Wales

Migration of college connections to the new All-Wales Public Sector Network started during the current quarter. Eleven connections have been migrated so far.

(c) Core Network

The JANET core network has supported reliable JANET services well over the quarter despite a few fibre breaks and equipment failure. Traffic was able to re-route over other available paths during these problem periods.

There was a very long outage on the undersea cable between Glasgow C-PoP and NIRAN for 35 days. However, the service to NIRAN and HEANET was maintained via the alternative path.

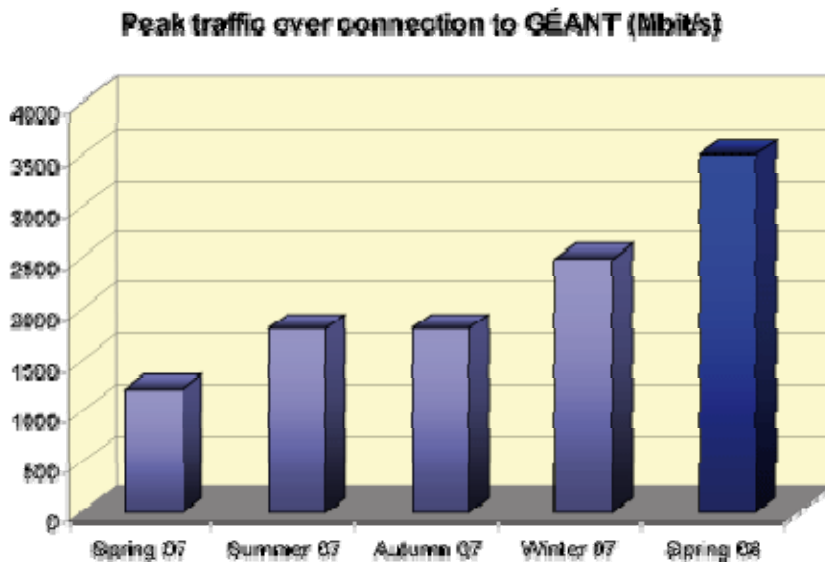
14 sites on LMN suffered a service outage on 22-23 February over 7 hours, which was due to a faulty line card on the telecom supplier's equipment.

(d) External Network Access Provision and Transmission

(i) Access to the European Research Network

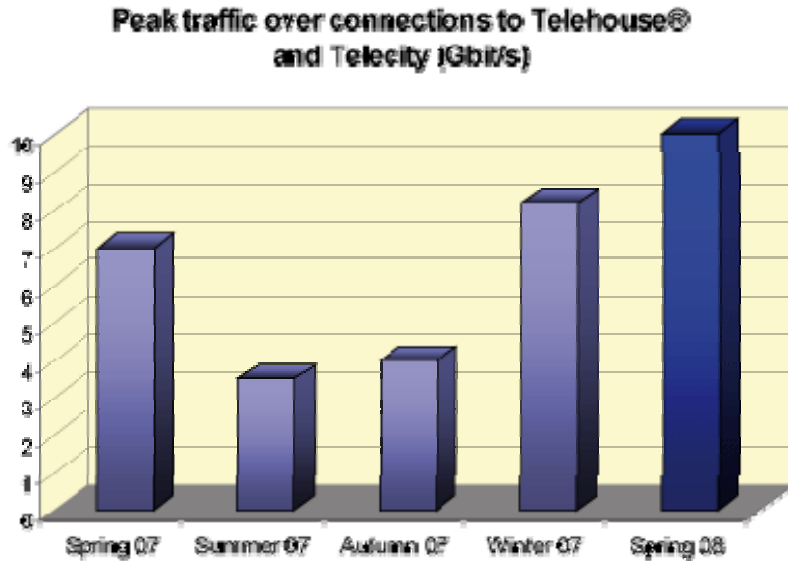
JANET access to European NRENs is via a 10Gbit/s connection to GÉANT from Telecity R-PoP with a 2.5Gbit/s backup connection from Telehouse® R-PoP. Peak traffic over the connection is normally around 2Gbit/s; however, it sparked at 3.51Gbit/s during this quarter.

A plan to upgrade the backup link to 10Gbit/s has been drawn up.



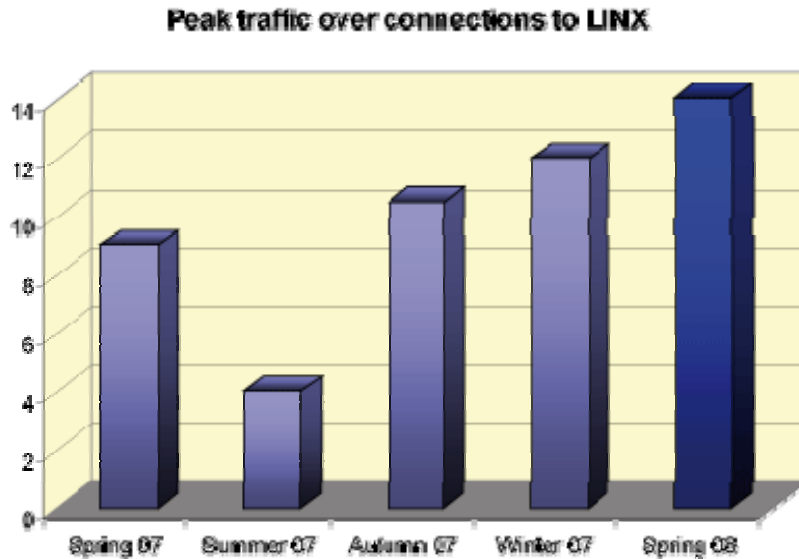
(ii) Access to the Global Internet

JANET access to the global Internet is via two global transit providers – TATA Communications (formally called VSNL) and TeliaSonera. Each company now provides four 10Gbit/s connection to two JANET PoPs at Telehouse® and Teleticity in London. Aggregated peak traffic closed to 10Gbit/s at the end of the quarter.



(iii) Access to the UK's Internet Exchanges

JANET access to the LINX (London Internet Exchange) is via four 10Gbit/s connections from the Telehouse® and Teleticity PoP locations. Aggregated traffic peaked at 14Gbit/s in February.



(iv) Access to CERNET

All traffic to CERNET is now via GÉANT. The service has been stable during the reporting period.

(v) Access to North American Research Internets

Services are provided via GÉANT and have been stable throughout the reporting period

(vi) Peer Networking Agreement Administration

PUBLIC PEERING CONNECTIONS

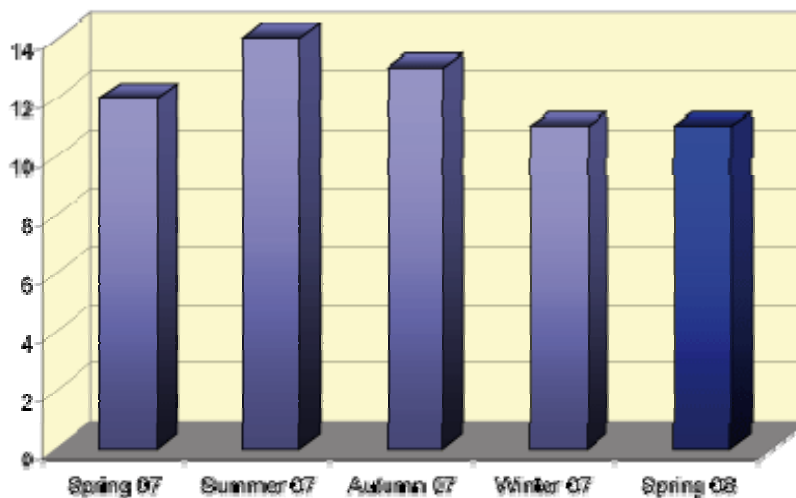
Connection point	AS	ISP Name	Date of initial request	Date all info received	Date of accept/reject
LINX	42455	WI-MANX LIMITED	31/03/2008	03/04/2008	03/04/2008
LINX	8218	Neo Telecoms	21/01/2008	04/04/2008	04/04/2008
LINX	3216	Golden Telecom (Sovam)	08/04/2008	24/04/2008	25/04/2008
LINX	16334	I-Nap Systems	16/04/2008	16/04/2008	16/04/2008

3.2 Fault Reporting (SLA J3.2)

The JANET Service Desk handles the fault reporting function. Fault reports should now be made to service@ja.net.

3.3 Management of Maintenance Activities (SLA J3.3)

Number of maintenance sessions



3.4 Network Status Information (SLA J3.4)

The original Netsight based on regionally deployed machines continues to provide a view of the status and performance of JANET. However work is well advanced with the replacement Netsight system based on centralised hardware. Testing of the system is complete and some additional requirements and amendments to the system are being resolved. The new system will be rolled out to end users during 2Q08.

3.5 Time Reference Service (SLA J3.5)

The JANET Network Time Service delivers a stable time reference to customer organisations using the Network Time Protocol (NTP) specified in [RFC 1305](#). It consists of four stratum-1 servers distributed across the JANET network, located at London, Bracknell, Manchester and Edinburgh. This mesh of communicating systems gets 'true time' from external references, such as MSF time signals broadcasted by the UK Time and Frequency Standard Station and the GPS (Global Positioning System) satellite navigation system. The result is that clock settings across the whole mesh are very closely synchronised and a single rogue system with the wrong time will have very little effect. A synchronised time service is important for some services, such as distributed file systems.

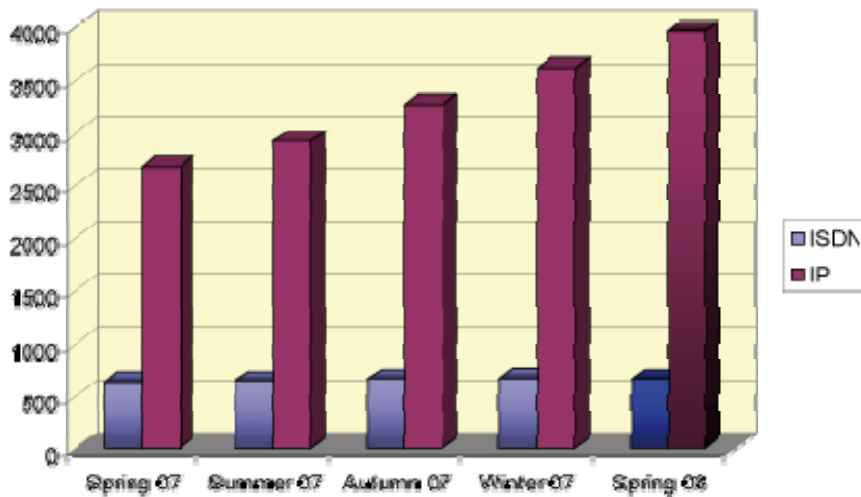
Eight more sites have registered to use the JANET NTP service during the reporting period making a total of 227 sites. Overall, it is a stable and well-used service.

4 Application Services (SLA J4)

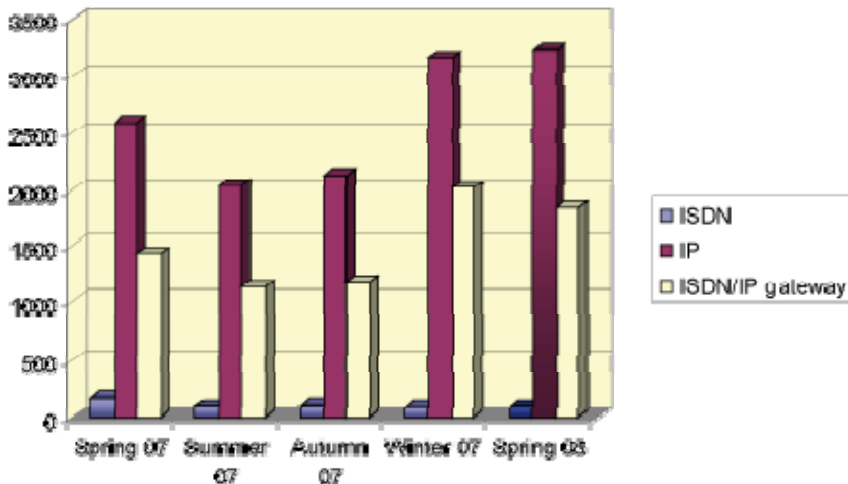
4.1 Videoconferencing Service (SLA J4.1) [[more information](#)]

The number of users of the JANET Videoconferencing Service (JVCS) continues to increase at a steady rate with 3957 venues registered to use the service over IP (JVCS-IP) and a slight fall of 673 videoconferencing venues registered to use it over ISDN (JVCS-ISDN). This quarter, 102 conferences took place over ISDN only, taking 199 hours; 3231 conferences were held using IP over 4267 hours; and 1842 conferences took place using the IP/ISDN gateway over 2590 hours. The overall statistical trend indicates an increase in the use of videoconferencing, particularly IP videoconferencing.

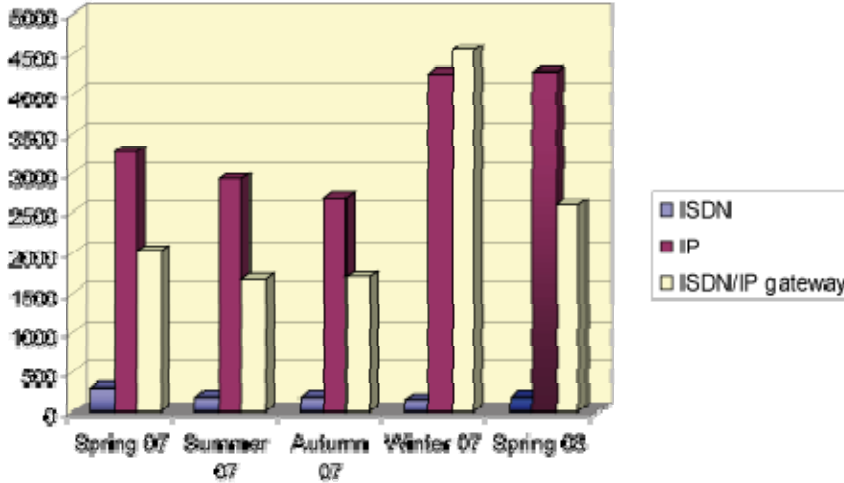
Number of venues registered to use JVCS



Number of videoconferences



Number of videoconferencing hours over IP and ISDN

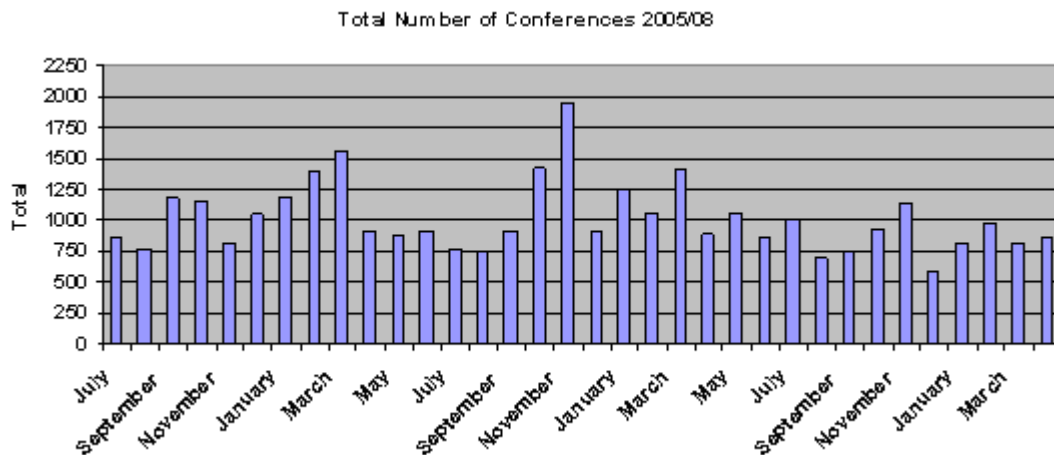


4.2 Access Grid Support Service (SLA J4.2) [\[more information\]](#)

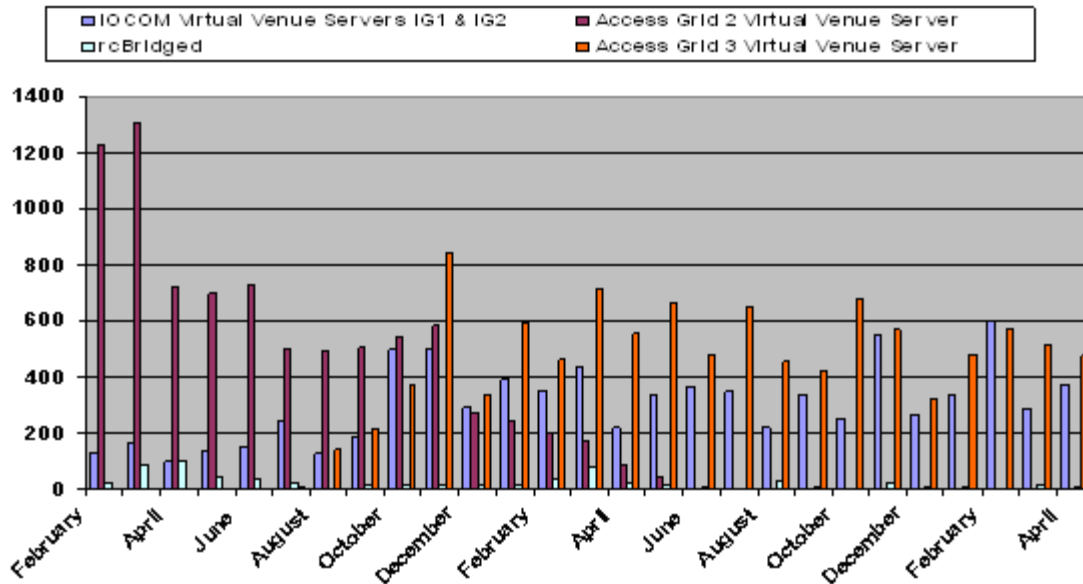
The Access Grid® Support Centre continues to support the users of the Access Grid® within the UK academic network, with the aim of improving user experience through robust and resilient services.

Server and Bridge Activity

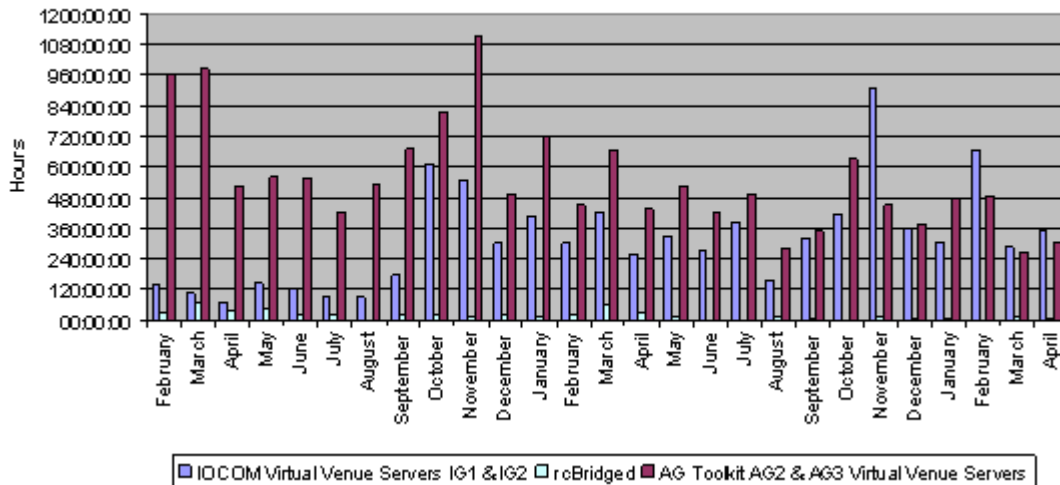
The number of registered UK AG nodes currently stands at 271, including the UK Academic desktop nodes. Based on server usage we believe the number of users is higher, but users are not required to register with us unless they want to use the Booking Server so exact numbers cannot be calculated.



of Uses by Type February to April 2008



Total Hours Used Feb 2006 to April 2008



The number of conferences remains steady as we come into the spring period.

The AGSC helped a number of primary schools with installing Access Grid as an alternative to costly non-standards compliant software for an eOutreach project. The Project Manager from Bedford School has complimented the AGSC team saying they have been extremely helpful in participating to get this trial up and running. They expect to start using the new software in the next few weeks to connect to Bristol and Sheffield University. For more information see: <http://www.ja.net/services/video/agsc/section-1/whatsnew.html>

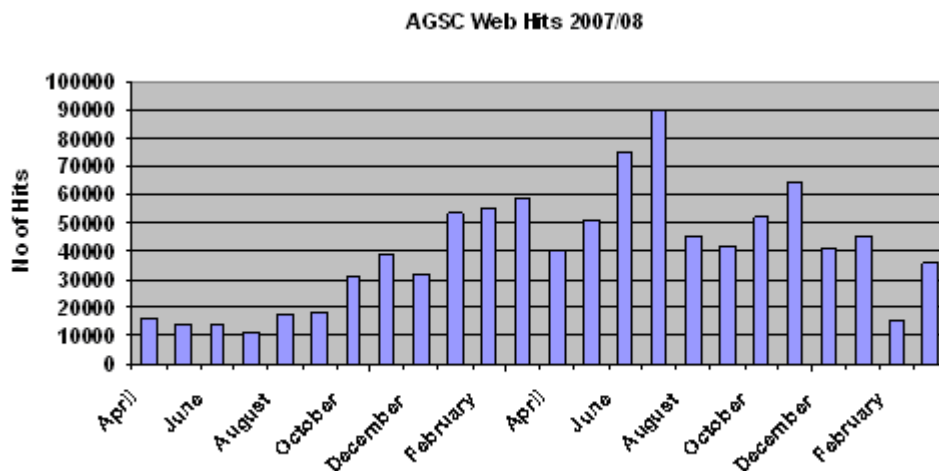
The AGSC team has started a communications outreach programme which sees them going out to sites using Access Grid to promote the service and investigate how it is being used. Most recently a team member was at the Taught Course Centre (TCC). The TCC is expanding the

boundaries of teaching by using Access Grid to relay Mathematics lectures simultaneously to PhD students across its five member universities. For more information see: <http://www.ja.net/services/video/agsc/section-1/whatsnew.html>

An Access Grid retreat is taking place in Vancouver, Canada at the end of May. This is an annual conference that sees Access Grid users, administrators and developers from around the world get together. One of the AGSC team will be attending this year and doing a presentation on AG Check (an online audio and video assessment tool for Access Grid) which has sparked global interest in the world Access Grid community.

AG Web Hits

A transition period can be seen between usage of the old site and new site. Usage of the new site has continued to steadily rise and the number of hits is increasing. We are looking at the number of page hits across the new site to try and improve navigation and usability.

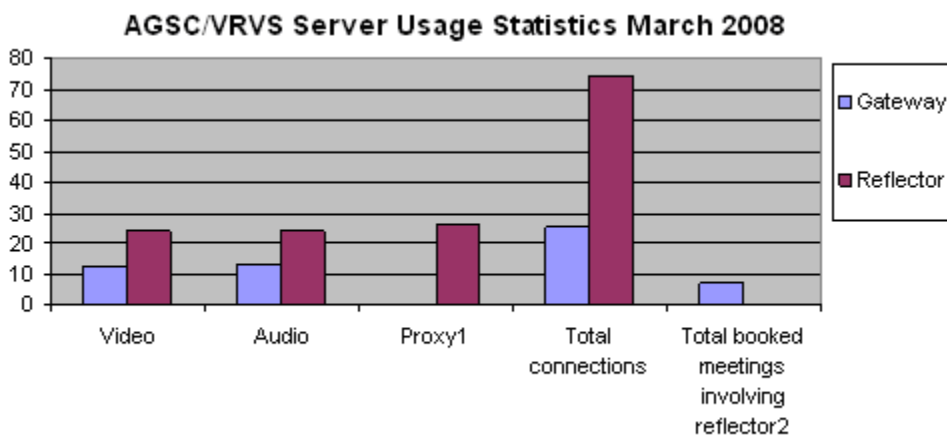
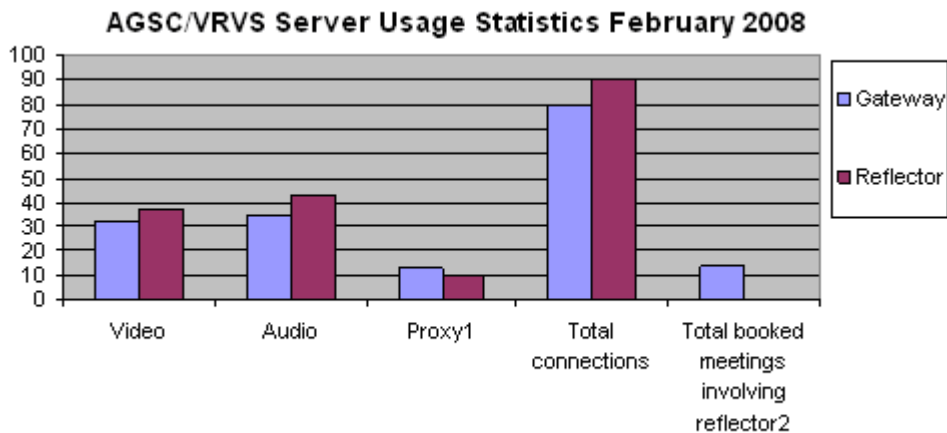


QA Testing

An alpha version of the automated QA Test service called AG Check is being piloted at the moment with 15 nodes. Improvements are continuously being made with the anticipation of rolling out this service in the next quarter.

EVO (VRVS) Piloting ([more information](#))

As of April 15, VRVS (Virtual Rooms Videoconferencing Service) has been turned off and officially replaced by the newest version of the collaboration system, EVO (Enabling Virtual Organizations). This upgraded software is user friendly, has a very attractive user interface and comes with the same excellent support that VRVS had.



4.3 Usenet News Service (SLA J4.3) [\[more information\]](#)

The JANET Usenet News Service enables JANET customers to receive Usenet News feeds from a backbone of JANET News servers. The service is available free to all customer organisations with a Primary Connection to JANET and can provide a full feed of all the newsgroups available worldwide, except for geographically limited hierarchies and groups excluded because they have a record of containing illegal material. A customer organisation may choose to be provided with a News feed which does not include all the newsgroups available. The current JANET Usenet News Service will continue to offer two ways of receiving News over JANET.

The News Feed servers were reduced to two during the last quarter of 2006. Light users of the News Feed Service are being encouraged to change to the News Reader Service to lighten the load. A number of organisations have recently migrated, which is reflected in the service statistics.

4.3.1 News Feed Service (SLA J4.1) [\[more information\]](#)

The News Feed Service continues to function well. There are 26 client sites connected to the service and most are taking a full News feed.

4.3.2 News Reader Service (SLA J4.1) [[more information](#)]

Two more organisations have joined the News Reader Service during the reporting period. There remain 82 sites connected to the Service.

4.4 Electronic Mail Services (SLA J4.4)

4.4.1 Mailer Shield (SLA J4.4.1) [[more information](#)]

The JANET Mailer Shield can help make the mail facilities of a JANET organisation more secure and robust, particularly where the organisation is small or its resources for managing e-mail are limited. Since the full production service successfully started on 1 August 2004, no outages have been suffered. No more organisations have joined this service during this reporting period. The number of recorded clients of the service remains at 28.

4.4.2 E-mail Advice and Testing Service (SLA J4.4.2) [[more information](#)]

The E-mail Advice and Testing System is what used to be known as the Spam-relay Tester And Notification system (STAN). The system provides mail protection to JANET customers and continues to run reliably and effectively.

4.4.3 E-mail Abuse Protection Service (SLA J4.4.3) [[more information](#)]

The Mail Abuse Prevention system (MAPS) RBL+ (Real-time Blackhole List) provides mail protection for JANET customers, and is available for query by any JANET user. The service continues to run effectively and reliably.

4.4.4 Electronic Mailing List Service (SLA J4.4.4) [[more information](#)]

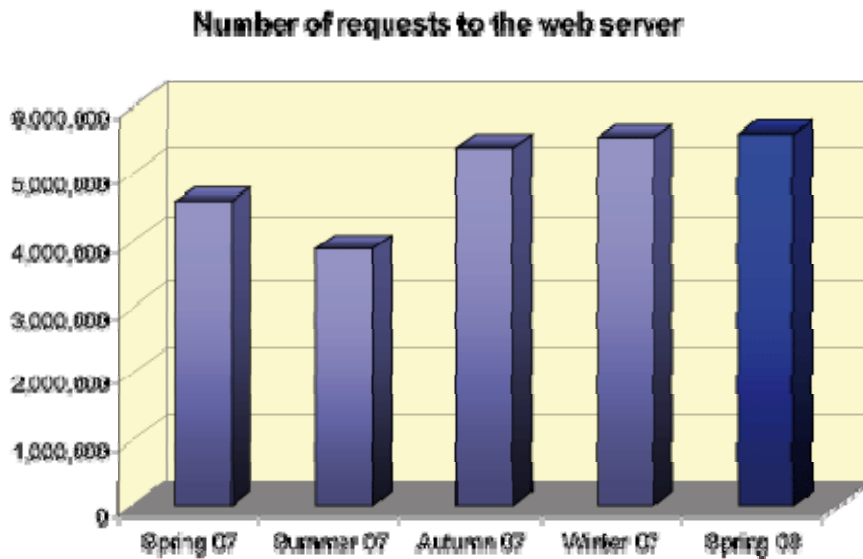
JISCMail provides an electronic mailing list service to the UK Education and Research community. The service uses the World Wide Web and e-mail to enable list members to send messages to each other and share information.

4.4.5 Web Mail Service (SLA J4.4.5) [[more information](#)]

The JANET Web Mail Service is an e-mail service provided to JANET-connected organisations that do not have the resources to support one themselves. It uses a standard web browser for administration and sending and receiving e-mail from any computer with Internet access. The mail is stored and processed on a central Web Mail server. The service is available to the Specialist College and PCDL sectors. JANET has extended the provision to the wider JANET community as a chargeable service. No new sites joined the service during the reporting period. There are a total of 35 sites using the service.

4.5 JANET Web Site (SLA J4.5)

A total of 5,580,979 requests to the server were successfully handled this quarter.



4.6 Nameserver Services (SLA J4.6)

4.6.1 Second Level Domain Service (SLA J4.6.1)

DNS (servers)

The JANET DNS service continued to run reliably with no problems encountered during this quarter.

DNS Whois service

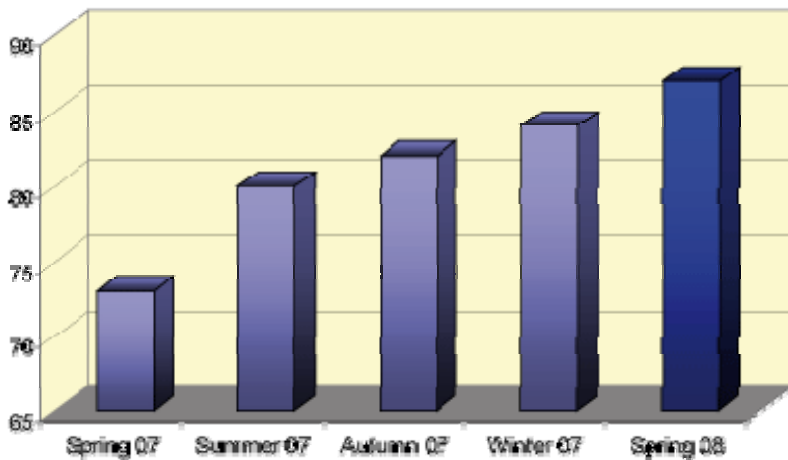
During this quarter there were no reported problems with whois.ja.net.

4.6.2 Primary Nameserver Service (SLA J4.6.2) [\[more information\]](#)

The operation of nameservers and maintenance of DNS information is an essential infrastructure activity that some small organisations do not have the resources to perform themselves. JANET can provide a basic primary nameserver service to support e-mail and web use by smaller or less experienced JANET customer organisations, publishing their zones on central nameservers and allowing a restricted facility for requesting changes to resource records. The service provides high availability primary and secondary nameservers that satisfy DNS queries for the zone data they hold.

Three organisations registered with us during the reporting period to use the JANET Primary Nameserver service. There are now a total of 87 users of the service.

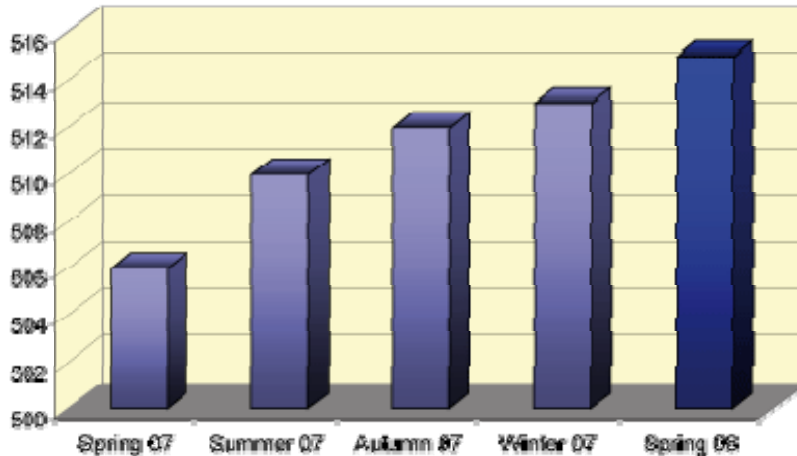
Number of organisations using the Primary Nameserver service



4.6.3 Secondary Nameserver Service (SLA J4.6.3) [\[more information\]](#)

At the end of this reporting period the number of organisations using this service has increased to 515.

Number of organisations using the Secondary Nameserver Service



4.6.4 Off-site Resolver Service (SLA J4.6.4) [\[more information\]](#)

Resolvers are part of the DNS functions that query nameservers for IP addresses. JANET organisations with very small networks will find it useful to use the off-site resolver set up for their benefit by JANET(UK). The service continues to run reliably and effectively. Nine sites joined during the reporting period, taking the total number of users up to 85.

4.7 Managed Router Service (SLA J4.7) [\[more information\]](#)

Nothing to report.

4.8 Web-Based Services (SLA J4.8)

4.8.1 Web Hosting Service (SLA J4.8.1) [[more information](#)]

The JANET Web Hosting service is intended to provide space on central web servers for JANET customer organisations with primary connections that do not have the resources to support hosting themselves. It is aimed at the Specialist College and PCDL sectors, although other eligible organisations may use the service as a contingency as a chargeable service. Two sites have joined the service this quarter, bringing the total number of sites using the service to 66.

4.8.2 Web Filtering Service (SLA J4.8.2) [[more information](#)]

The JANET Web Filtering service is intended to provide web filtering for JANET customer organisations with primary connections that do not have the resources to support it themselves, or organisations with certain specific needs. The service lets each organisation manage its own list of blocked or permitted URLs by filtering in accordance with the local policy of the organisation, and tailor these filters to its exact needs, giving protection against access to inappropriate content on the Internet. Three sites joined the service during the reporting period, bringing the total number of users to 89.

4.9 JANET Roaming Service (SLA J4.9) [[more information](#)]

JANET Roaming enables JANET-connected organisations to offer high quality network services for visitors by providing authenticated logon without IT Support workload. Visitors to JANET sites can experience quick, simply authenticated and secure access to the JANET-connected guest network services provided by the visited organisation. Visitors utilise a single username and password, the same as on their home network, for all sites they visit and do not need to refer to the IT department of the visited organisation on each occasion. This saves time and expense for both the visitor and the host organisation and enables the host to provide an enhanced and highly valued service to visitors.

A national infrastructure of RADIUS servers, deployed and maintained by JANET(UK), supports the exchange of user credentials between participating organisations and enables the service to function. There is also a JANET Roaming technical support function comprising a dedicated web site and support staff. Uptake continues to be promising, with the number of participating organisations now at 86 and a large volume of authentication traffic being seen.

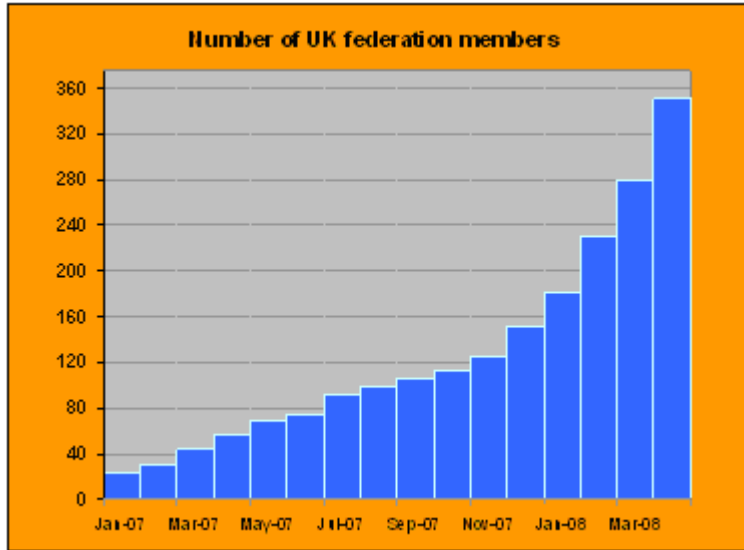
The JANET Roaming support service continues to be in great demand and a [JANET technical guide on implementation of 802.1x](#) (an IEEE standard for network port access control) at JANET-connected organisation has been produced.

The programme to enable the service to support IPv6 is near completion, the monitoring system for the national RADIUS servers has been progressed and closer integration with the eduroam participants database is being developed.

4.10 UK Access Management Federation [[more information](#)]

At the end of this quarter there were a total of 351 members of the UK federation. This is a jump of 169 new members since the last quarter. Membership can be broken down into sectors with 78% of Higher Education and 25% of all Further Education organisations now members. In the School sector 46% of all Local and Unified Authorities have joined, either directly, via their Regional Broadband Consortia or other regional provider, and are in the process of enabling access to services via the UK federation.

A full list of members can be found at:
<http://www.ukfederation.org.uk/content/Documents/MemberList>



68 providers of online content and services have also joined the UK federation. They currently provide 31 live services, with a significant number of other services in the process of being federated to enable users to access those resources through the UK federation framework.

5 Technology Advisory Services (SLA J5)

5.1 Bandwidth Management Advisory Service (BMAS) (SLA J5.1) [\[more information\]](#)

The JANET Bandwidth Management Advisory Service provides advice and guidance to JANET organisations on a wide range of issues relating to management of network traffic, and produces technical literature on the subject. The service is supported by experts from the community. The number of enquiries handled by the advisory function has been low but the extensive web site contains a wealth of information and continues to be popular with the community.

5.2 Multi-site Connectivity Advisory Service (MCAS) (SLA J5.2) [\[more information\]](#)

The JANET Multi-site Connectivity Advisory Service provides advice and guidance and produces technical literature on a wide range of issues relating to inter-site network inter-connection. A number of enquiries for the service, which is provided free of charge, were received during the quarter. Enquiries have been mainly on the topic of options for multiple campus site inter-connections. The web site, which provides wide-ranging information for the community, remains popular and the MCAS service continues to serve all sectors of the JANET community.

5.3 Video Technology Advisory Service (VTAS) (SLA J5.3) [\[more information\]](#)

The Tandberg® Content Server was tested on 11-15 February and the report published 4 April. Lifesize Express was tested on 14-18 April and the report will be released in the next few weeks. Previous evaluation reports, an overview document and an outline of the testing schedule when available can be found at: <http://www.ja.net/services/video/vtas/reports-and-studies.html>

5.4 Voice Advisory Service (VAS) (SLA J5.4) [\[more information\]](#)

The JANET Voice Advisory Service provides advice and guidance on all aspects of voice over networks technology, focusing on VoIP and IP Telephony. The service is supported by experts from the community and provides a free of charge enquiry answering service together with a consultancy arrangement facility for more in-depth investigations. The service is proving popular and has received enquiries during the quarter regarding replacement of PBXs with IP telephony systems.

5.5 Wireless Technology Advisory Service (WTAS) (SLA J5.5) [\[more information\]](#)

The JANET Wireless Technology Advisory Service provides advice and guidance on all aspects of wireless networks technology. Typical areas in which the service is able to provide independent technical support to organisations include security techniques, surveying and monitoring, WLAN management, standards and technologies, and user support models. The service is supported by experts from the community and provides a free of charge enquiry answering service together with provision for a consultancy arrangement facility for more in-depth investigations. The service is proving popular and has attracted a number of enquiries regarding security on wireless LANs during the quarter.

6. Training Services (SLA J.6)

The Training team has successfully launched EdLab®, the new online learning and collaboration facility. This service has been designed to support the JANET community by providing online content and collaboration tools on topics relating to academic networking. In the first two months of operation the site had just over 250 users register. This was mainly due to its being used to deliver Networkshop Online and the publication of all video clips of the conference presentation on the site. Work will continue to develop this facility and increase the materials available. This will include its use by Training delegates before and after attending courses.

Two new courses relating to access management have been added to the training portfolio. The Shibboleth configuration course has proved particularly popular and has already been commissioned by two regional groups. Development of a new Service Provider course will start in the summer and is expected to be trialled in September of this year. Courses closer to delivery include an IPv6 Fundamentals and two Voice courses.

Feedback on our existing portfolio continues to be positive with an average 95% of delegates marking courses as good or excellent. Overall attendance is slightly down on last year resulting in four courses having to be cancelled in the first quarter. This has however been balanced with other courses receiving record bookings. We will continue to monitor the situation to ensure we meet customer needs.

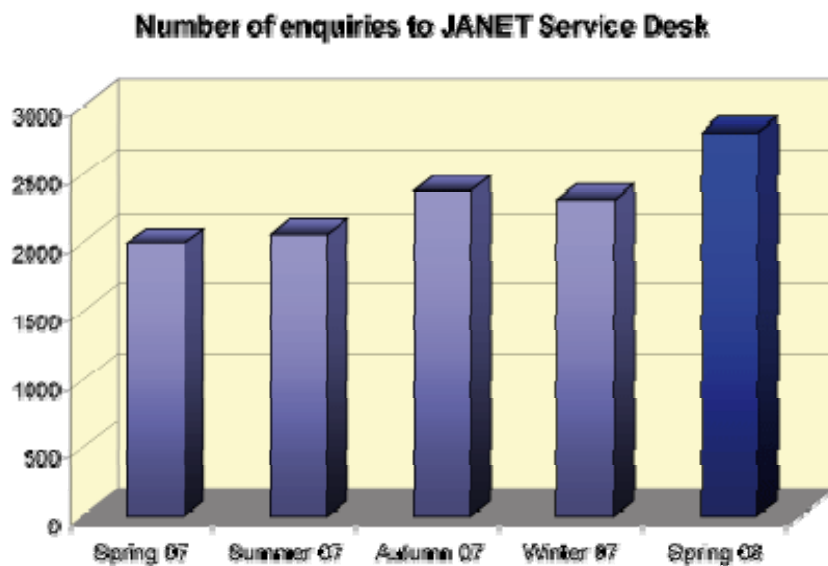
7. Administration Services (SLA J7)

7.1 JANET Service Desk (SLA J7.1) [[more information](#)]

The JANET Service Desk provides the primary point of contact for all enquiries concerning JANET services and requests for information.

During this reporting period the total number enquiries received was 2802. Most of these queries related to the Domain Name registration service, requests for JANET connections and applications or queries relating to other JANET services.

Three complaints were received, all of which have been successfully concluded in this reporting period.



7.2 Connection Services Administration (SLA J7.2)

JANET(UK) is responsible for administering the procedure for the approval and commissioning of new and upgraded connections to the JANET network. This involves liaising with customers to report progress on their new or upgraded connections. All sites connected to JANET must adhere to the JANET Connection Policy that can be found at:

<http://www.ja.net/documents/publications/policy/connection-policy.pdf>

Requests for new or enhanced JANET connections should be made via the JANET Service Desk (see Section 7.1).

A list of organisations connected to JANET during the reporting period is provided in section 3.1. For information regarding current upgrades or connections, contact JSD at connect@ja.net or service@ja.net.

7.3 Licence Administration (SLA J7.3)

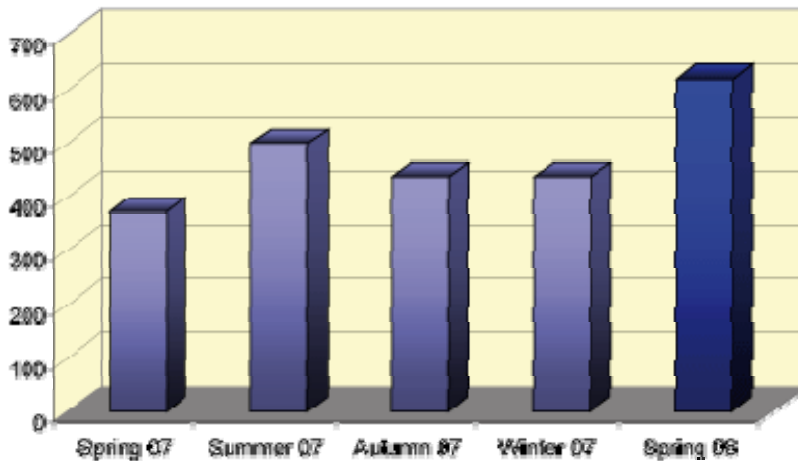
Over the past three months 2 new RNO Sponsored Connection Licence and 5 new Sponsored Connection Licences have been issued.

7.4 Domain Name Service Administration (SLA J7.4)

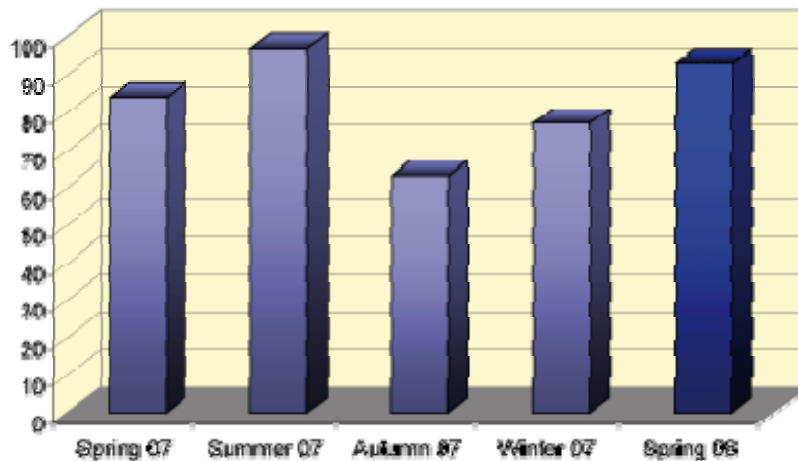
7.4.1 Domain Name Registration Service (SLA J7.4.1)

During the reporting period a total number of 621 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 93 per month, with an average of 114 modifications for each month.

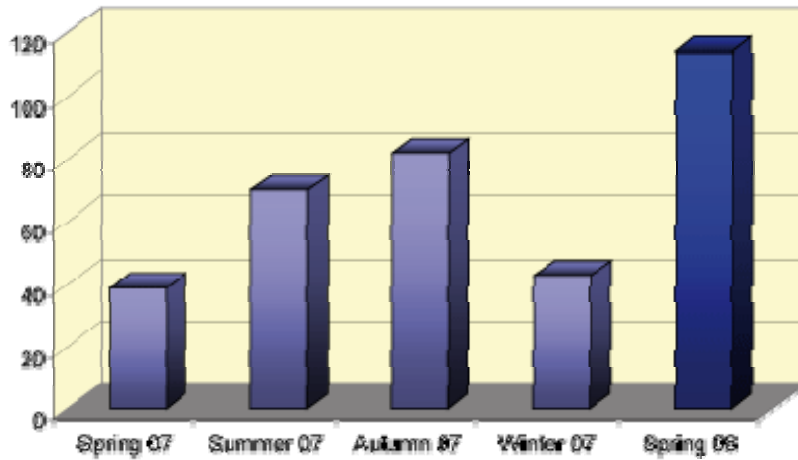
Requests for new or modified domain name registrations



Average rate of monthly applications for new domain names



**Average rate of monthly applications
for modified domain names**



7.5 IP Address Assignment (SLA J7.5)

During the reporting period 25 applications were received and completed.

7.6 urn:mace:ac.uk Namespace Administration (SLA J7.6)

There were no new applications during this quarter.

7.7 Server Certificate Service

In this reporting period the number of Server Certificate requests increased by 940 to 4325.

8. Security Services (SLA J8)

February

February saw a large DNS amplification attack due to flaws in the DNS standard. (Many of the old standards, e.g. Mail etc. have similar flaws. They were all designed in the days when only well behaved people used the Internet.) It is possible for an attacker to use behaved and legitimate DNS to amplify the size of a DDoS (Distributed Denial of Service) attack. A number of DNS servers at JANET-connected organisations were abused in this way. Working with affected sites, JANET CSIRT placed traffic blocks on JANET to mitigate this attack.

A number of JANET end users fell victim to a key-logging trojan, which captured their login details to various services at JANET-connected organisations (amongst other sites they may have logged into, e.g. Internet banking). JANET CSIRT advised sites to check their own network and to inform affected users of the trojan, which in most cases was on their home system and not on a system inside JANET.

Malware on JANET continues to be detected by JANET CSIRT netflow monitoring and other third party detection systems, including automated UBE reporting systems such as SpamCop. JANET CSIRT continues to deal with these in the usual manner.

March

JANET users appeared to be targeted for further phishing attacks against academic users. E-mails were sent to .ac.uk organisations claiming to be from the IT services of that organisation, requesting confirmation of login details. Unfortunately a number of users were taken in by this ruse causing a number of accounts to be abused for things such as spam. JANET CSIRT has been indirectly involved by providing support where required to the system administrators, although JANET CSIRT has also been involved with individual cases where accounts were abused and complaints received.

The usual number of reports about scanning continue to be received, and some JANET user account compromised reports were received from AUSCERT.

There appear to have been more copyright infringement reports for a wider variety of JANET sites than in the past. As usual the sites are requested to investigate to confirm these reports and deal with any individual in accordance to their own local policies.

JANET CSIRT proactive monitoring has been affected by system hardware failures this month with a reduction in incidents raised due to these failures.

April

In April there was a slight rise in phishing attacks aimed at JANET users. There have been a couple of incidents of open relays on JANET, both web and mail - something that has not been seen in any great numbers for some time. A campaign by JANET CSIRT a couple of years ago had all but eradicated these on JANET.

9. Development

9.1 Federated Access Management [[more information](#)]

9.1.1 UK federation Development

Membership of the UK federation continues to grow rapidly, which is reported in detail in section 4.10 of this report. In respect of developments and enhancements to this rapidly growing service a revised and updated version of the development roadmap is being prepared.

Development of the second training course for the UK federation, covering the in-house deployment of a Shibboleth IdP, has been completed. For further details of the courses on offer and for booking information please see <http://www.ja.net/services/training/schedule/by-date.html>

A further UK federation briefing event was run in Glasgow on 14 February. The event was fully booked and feedback indicates it was well received. The first of a different format of event, based on group discussion sessions, ran in Brighton on 29 April. The event was titled 'Towards Implementation' and focused on addressing some of the challenges of deploying federated access management at organisations and how to obtain maximum benefit from the use of this technology.

9.1.2 Federation Enabled JANET Services [[more information](#)]

Discussions are ongoing on how best to provide future JANET services in a federated manner. Planning to provide provision of federated access to existing services, where applicable, is also ongoing.

9.1.3 Shibboleth on Windows [[more information](#)]

Testing is underway; most sites have installed the Shibboleth on Windows installer on test systems and are able to authenticate against test Shibboleth systems. JANET(UK) has widened participation to the trial to allow more sites access to the installer in order to increase the level of feedback. A Beta version of the installer package is being prepared for release.

9.1.4 WAYF Interface Development

The national 'Where Are You From' (WAYF) service forms part of the discovery process deployed in federated access management. This project is looking at the usability and functionality required for this redirect service that has to cater for people of all abilities and assess the requirements necessary to maximise the site's accessibility.

The current phase of the project has seen the agreement of technical specifications and the brief for suppliers. Three providers have been identified for assessment and possible invitation to tender.

Any recommendations will then form the basis of a specification to develop and deploy a new design for the WAYF GUI as well as provide guidance and packaged code for those deploying a local WAYF as discovery.

9.1.5 Expert Group on Portal Design

This project aims to bring together an expert team gathered from within the education and research community to form a working group that will consider the technologies and definitions of portal deployment and operation. The project will cover the technologies and definitions of portals as a vehicle for discovery, as part of a federated access management infrastructure, in the authentication and authorisation of users. It will not deal with the design of user interfaces for portals but rather provide guidance to solving configuration and technical issues that may arise when authenticating users of federated services via a portal.

Focusing on pooling expert knowledge from members of the community who have experience of portal implementation for identity provision, the project will provide guidance and best practice for those involved in the deployment of discovery services as part of the UK federation. However, it is not intended that a packaged solution for portal deployment be produced.

9.2 Roaming & Mobility [[more information](#)]

9.2.1 802.1x Supplicant [[more information](#)]

JANET(UK) has now been participating in the OpenSEA Alliance for a year, working towards a cross platform, open source supplicant. A face to face meeting of the test sites agreed on the move to wider deployment of the supplicant. Although not all of the features on the original specification are as yet available, it has reached sufficient maturity for some sites to begin wider deployments.

The OpenSEA Alliance is set to invest in further development of features for the supplicant in line with the specification that JANET-connected organisations helped to define last year. In addition, the supplicant will be ported to other operating systems in order to meet growing demand. This has been particularly evident in a considerable increase in the number of students using MS Vista on their machines.

JANET(UK) has renewed its membership of the OpenSEA Alliance in order to represent the views of the educational community in the development of this open source supplicant.

9.2.2 Eduroam Confederation Policy [[more information](#)]

JANET(UK) has received the new Eduroam Confederation Policy. It is anticipated that JANET(UK) will formally sign up to the new policy over the coming months.

9.3 Network Access [[more information](#)]

9.3.1 Mobile IP [[more information](#)]

Participants in the trial programme continue to deploy their mobile IP infrastructure and progress was reported at Networkshop 36. Cross-JANET testing will begin with the release of the first deliverable of the project, a preconfigured mobile IP testing platform based upon Linux, which will be available to the community from mid-May. This package will be formally launched to our European colleagues at [TNC 2008](#).

9.3.2 Local-Loop Unbundling [\[more information\]](#)

The project continues to track the changing needs of the community in this area. A Call for Interest targeting Regional Network Operators and JANET-connected organisations will be issued in the coming weeks.

9.3.3 Location Aware Wireless Infrastructure

The programme participants are in the early stages of their trial activities. The first deliverables of the project, technology and security review documents, will be finalised late summer.

9.3.4 Wireless Advisory Group

Nothing to report.

9.4 Network Engineering

9.4.1 IP QoS

The final version of the JANET QoS Technical Guide has been delivered and is at the proof stage. This extensive document completes the set of guidance documentation developed by the JANET QoS Development project participants to help the JANET community with their understanding in the QoS area and the steps required for deployment.

The results of the JANET QoS development project were presented to the community at Networkshop 36.

9.4.2 IPv6

Planning is currently underway to include IPv6 unicast and IPv6 multicast within the wider JANET SLA in August 2008, and to enable IPv6 support within JANET production services.

9.4.3 IP Multicast

Nothing to report.

9.5 Voice [\[more information\]](#)

9.5.1 JANET Talk [\[more information\]](#)

JANET Talk is a rich voice and collaboration tool for use within the JANET community providing applications such as voice, video, shared whiteboard, chat and application sharing. Contracts have been signed with Verizon Business to provide the core infrastructure equipment for JANET Talk.

Over 110 JANET sites are signed up to take part in the trial providing a trial user base of over 7500. A wide range of JANET sites will be taking part in the trial including FE, HE, RBCs, Local Authorities and research organisations. A further call for trial sites will take place in May 2008.

The JANET Talk installation phase has been extended by six weeks. Trial participants will be added into the trial throughout May and June in a phased approach. The trial will provide

JANET(UK) with feedback enabling a clear future sustainability model for JANET Talk to be developed post October 2008.

9.5.2 JANET Voice Advisory Group (VAG) [[more information](#)]

The Voice Advisory Group continues to ensure that JANET's voice activities are relevant and appropriate. At the last meeting held in April it was decided that the VAG would focus on the future of JANET Talk and also concentrate on the development of services to enhance and improve local voice services. Early work is underway with Nominet to understand how ENUM may play a role within the JANET community. A market research exercise is underway, the results of which will indicate the requirement for ENUM support on JANET.

9.6 Video [[more information](#)]

9.6.1 IPTV (Internet Television) [[more information](#)]

The first meeting of the JANET IPTV Special Interest group was held in early April. The group decided on a number of key development areas which JANET(UK) will include in a JANET IPTV Strategy. The strategy will focus on both the technical and copyright issues associated with IPTV.

Early work is underway with the BBC to understand how BBC content may be better provided on JANET.

9.6.2 Content Providers

Work continues with a number of content providers including JISC, IET, OSTN, INUK and SUB TV. Activities in this area are focused on understanding how these and other services and provisions may be suitable for deployment in the JANET environment. Early work to understand the potential for a JANET-based content sharing portal is also underway.

9.6.3 JANET Videoconferencing Services Equipment Re-procurement [[more information](#)]

JANET(UK) has launched a procurement for core videoconferencing infrastructure equipment to replace the current infrastructure deployed for the JANET Videoconferencing Service. It is envisaged that any new equipment will be installed during this summer.

9.7 Measurement & Monitoring [[more information](#)]

9.7.1 Netsight [[more information](#)]

The phased rollout of the new Netsight system has commenced within JANET(UK) and a small group of Regional Network Operators. Those involved will be contacted to co-ordinate the transition between the old Netsight system and the new. For a short time both systems will run in parallel to smooth the transition process.

9.7.2 Research [[more information](#)]

Nothing to report.

9.7.3 Schools

JANET(UK) is in the early stages of a joint project with Becta to define the requirements for gathering network measurement information from schools networks. A small pilot group of Regional Broadband Consortia and Local Authorities is being formed to work with Becta and JANET(UK) on a simple proof of concept for the technology and initial requirements.

9.8 Support for Research [[more information](#)]

9.8.1 JANET Aurora [[more information](#)]

Researchers have established connections between Cambridge, Essex and Telehouse® and are sending test traffic over their transmission equipment which is connected to the fibres. A meeting was held with the Photonic research community to understand the range of research projects they intend to try on JANET Aurora, and to begin discussions on governance and sustainability of the infrastructure. Problems persist with commissioning the SDSL telecoms links to provide management access to the equipment at the remote locations. This issue is being escalated with the circuit and equipment providers.

9.8.2 JANET Lightpath [[more information](#)]

Background discussions are being held with additional research groups with a view to them submitting lightpath applications. Some of these may be to locations within JANET regions which have not previously supported lightpaths, and as such may be particularly challenging.

9.9 Optical Networks [[more information](#)]

9.9.1 Technology Tracking

The PBB-TE (Provider Backbone Bridging Traffic Engineering) equipment [mentioned in the previous report](#) has been installed and is being configured to test scenarios for using this technology. The management system is also being examined closely to consider how much support it has for provisioning ethernet paths. This will be a critical scaling issue if this technology is ever to see wide-scale deployment supporting many paths.

9.10 International Collaboration [[more information](#)]

Funding has been made available to support small-scale, relatively short-term activities to encourage the JANET community to get involved in collaborative work within the international community. The work would need to be relevant to the JANET development programme, but funding could be allocated for a number of activities.

9.11 Schools Services [[more information](#)]

9.11.1 Content Access

JANET(UK) continues to work closely with the NEN (National Education Network) providers in England, LTS (Learning and Teaching Scotland), C2K (Curriculum 2000) in Northern Ireland, and the local authorities NGfL Cymru and DCELLS (Department for Children, Education, Lifelong Learning & Skills) in Wales, to enable access to high quality content for schools interconnected to the JANET network.

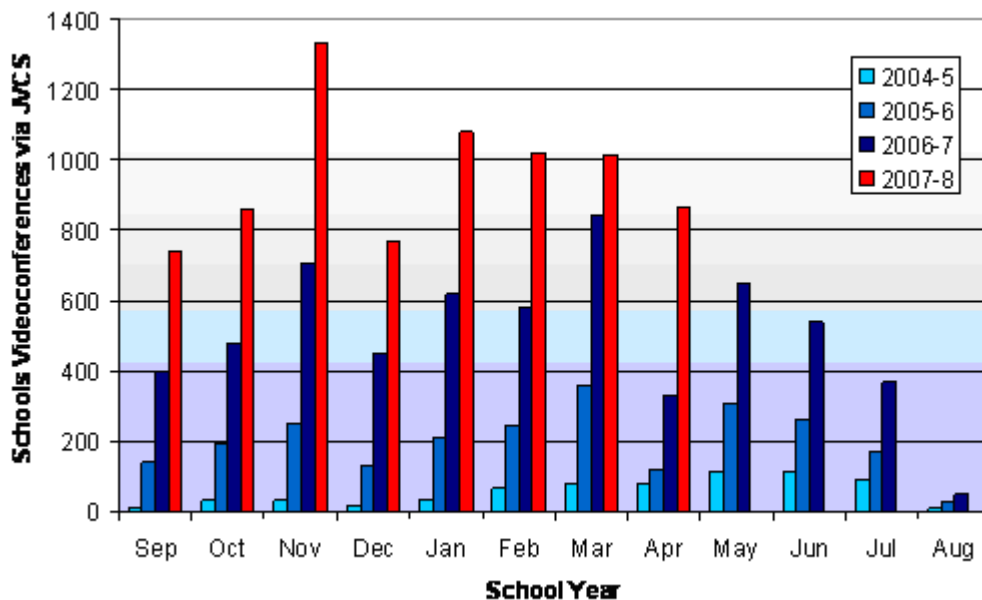
The CAS (Content Access Service) continues to provide UK-wide access to licensed online educational content such as British Pathé, Audio Network and the National Archives Learning Curve. The JANET Technical Advisory Group maintains, manages and supports the Content Access Registry of IP addresses.

A CMG (Content Management Group) involving representatives from Regional Broadband Consortia, Becta and JANET(UK) continues to oversee the development of the CAS. The CMG is also considering related activities including: a NEN DNS service; a NEN search engine; content delivery and hosting; and content management, licensing and Intellectual Property Rights.

An NEN Content Hosting Architecture Group is putting together recommendations for the hosting of national content for the NEN.

9.11.2 Videoconferencing

By the end of April 2008 the total number of schools sector endpoints registered with JVCS was almost 3200 (as compared with just over 2100 at the end of April 2007), with almost 3000 videoconferences undertaken this quarter. Over 85% of the conferences have been for teaching, tutorials and related activities; other purposes include administrative meetings, system testing and quality assurance. The take-up of videoconferencing by schools is accelerating year on year.



ISDN videoconferencing is showing a marked decline in favour of IP videoconferencing. The ISDN Invoicing Service, launched in April 2007, is proving effective and JANET(UK) continues to investigate a number of related national services, including a Recording and Streaming Service.

9.11.3 Collaboration [\[more information\]](#)

The [JANET Collaborate](#) pilot project continues to promote the prototype for initial use by the FE, Schools and Content Provider communities. The pilot project is assessing the use of the prototype and gathering feedback on the usability and suitability of the feature set provided.

10. Community Update

(a) FE Liaison

JANET(UK) participated in the following events: RSC SW Technical Forum – Gloucestershire & Wiltshire; RSC SW Technical Forum – Devon & Cornwall; RSC SW Technical Forum – Somerset; RSC EM Technical Forum; RSC WM Technical Forum; RSC National Technical Forum; RSC SW Wiltshire Technical Forum; and LSC Quarterly Meeting.

(b) FE Colleges

The following organisations have been visited: Thomas Danby College; Notre Dame Sixth Form College; Leeds College of Building; Walsall College; Paston College; Northampton College; South Nottinghamshire College; Stephenson College; Havering Sixth Form College; Tribal Group; and Fortune Centre.

(c) Schools

JANET has been continuing to liaise with Becta and Regional Broadband Consortia with the development of the National Education Network. There has also been continuing involvement with Becta in the Next Generation Learning Campaign.

(d) Specialist Colleges

Quotes have been requested for self-funded upgrades for Hinwick Hall and Beaumont College. A quote has been supplied for the block upgrade of 15 Specialist Colleges, for consideration by LSC.

(e) PCDL (Personal and Community Development Learning)

JANET connections have been delivered to the remaining Local Authorities - Milton Keynes, Redcar & Cleveland, Gloucestershire CC and Sheffield - which were to receive connections funded by the Learning and Skills Council, and are waiting to be brought into service. Requests for information and quotes for JANET connections continue to be received from other local authorities - eight during this quarter - where typically existing commercial contracts are coming up for renewal and in two instances where the authority is being restructured and divided.

The Imperial War Museum has placed an order for JANET primary connections for its sites in London, Salford and Duxford. This national museum is making significant investment in its IT infrastructure to be able to deliver online content and other resources to the education community, associated with an ongoing large scale digitisation agenda. The connectivity to JANET will enable the museum to have a resilient presence and to take up JANET services.

(f) Scotland

SSDN: There have been a number of changes in personnel at [LTS](#) (Learning & Teaching Scotland) and in the [SSDN](#) (Scottish Schools Digital Network) in particular. Replacing Jim Buchan, the new Chief Technology Officer is Andy Pendry. Two other new members to the SSDN team include Jim Henderson (who will lead from the LTS side on the reprocurement) and Stuart Campbell, newly seconded from West Lothian Council. It is hoped to arrange a SSDN/JANET(UK) meeting in the near future.

RSC: The Account Manager has participated in several RSC North and East Scotland and RSC South and West Scotland events including: a video presentation available on the RSC N&E Technical Forum blog; a presentation on new JANET services for RSC S&W via Instant Presenter; and attending the regular RSC S&W Technical Forum.

(g) Northern Ireland

The Account Manager attended the [LSDA](#) (Learning and Skills Development Agency) Northern Ireland Conference at Galgorm, Co. Antrim in Northern Ireland. JANET(UK) participated in the exhibition and hosted one of the workshops.

(h) NHS/HE Connectivity Project [[more information](#)]

NHS JANET Gateway Early Adopter Project

The N3 JANET Gateway infrastructure has been in place since 9 November 2007. Two extra early adopters joined this quarter to make the current total 4:

- University of Bristol with the University of West of England
- The partners in the CETL4HealthNE Partnership (Universities of Newcastle, Northumbria, Durham, Teesside and Sunderland and NHS Trusts in the north east of England)
- University of Birmingham (Division of Primary Care, Public and Occupational Health)
- Wellcome Trust Sanger Institute.

At the moment the use of the Gateway is limited to sessions initiated in N3 but it has now been agreed that patient identifiable data can be included if the appropriate research ethics approval and information governance is in place.

The inclusion of H.323 videoconferencing between university and NHS sites through JVCS is still imminent after a series of issues with the set-up. CETL4HealthNE purchased this equipment for the N3 JANET Gateway project and they will be first to try it out.

It is hoped that the University of Edinburgh and the University of York can become early adopters this coming quarter.

Other work is currently underway to:

- see whether the NHS smartcard for authenticating NHS England clinicians for the National Programme for IT clinical systems could be used from JANET
- investigate whether JANET Roaming could be used from an NHS site through the Gateway
- prepare a business case for what should follow the early adopter N3 JANET Gateway

NHS-HE Forum Meetings

The next NHS-HE Forum meeting is on 14 May in London. Details at <http://www.nhs-he.org.uk/forum.html>

A Health and Social Care – HE event took place in Northern Ireland on 28 April. It had representation from all of the five Health and Social Care Trusts as well as the Directorate of Information Systems within the Department of Health and Social Care for Northern Ireland. It was agreed that a high level framework was needed to support a HSC HE connectivity work-stream.

The NHS and the UK Access Management Federations

A planning meeting with key members of the National Library for Health took place in March and a project plan for some joint work with the UK Access Management Federation is being created.

(i) Research Councils

JANET(UK) participates in the Tripartite Meetings between representatives of the Research Councils and the JISC. JANET(UK) provides connections to the Research Councils as part of its agreement for JISC services.

(j) Others

The LSC funded a Molenet (Mobile Learning) Project to explore the potential and issues for using mobile devices - for example PDSs, smart phones etc. - in teaching and learning. This £6m, 12 month project has been managed by LSN (Learning and Skills Network) and is now entering into an evaluation and dissemination phase. www.Molenet.org.uk contains news and details.

11. European Activities

(a) TF-Mobility

Nothing to report.

(b) TF-NGN

JANET(UK) participated in the [Second Next Generation Networking workshop](#) which was held in Munich on 4 April 2008. The workshop aimed to share the experience accumulated by NRENs in the area of the advanced transport technologies such as ROADM, IP over DWDM, GMPLS and others.

(c) TF-PR

TF-PR held a useful meeting in Zagreb in February. A wide range of issues was discussed and it was decided to host a joint meeting with TF-MSP (Management of Service Portfolios, formerly TF-LCMP) at the TERENA Conference. The new TERENA Compendium was unveiled (see below).

(d) TERENA Networking Conference [[more information](#)]

The 2008 TERENA Networking Conference will take place in Bruges (Belgium) from 19-22 May.

(e) TERENA General Assembly

The next meeting of the TERENA General Assembly will take place on 22 May 2008 in Bruges.

(f) TERENA Compendium

TERENA have opened the Compendium 2008 web site to members of the individual NRENs to allow them to provide updated data. The next meeting of the TERENA Compendium working group will take place on 18 May in Bruges.

(g) Mobility Group - JRA5

The experimental eduGAIN authorisation infrastructure is progressing towards a pilot service, under the purview of DANTE. The eduGAIN code-base will be distributed under an open source license; the first Release Candidate is expected shortly.

There has been significant interest expressed in simpleSAMLphp, an implementation of SAML (Security Assertion Markup Language) written in PHP. The primary aim of simpleSAMLphp is to facilitate the federation of PHP-based web applications.

The RADSec proposal, which is expected to replace RADIUS within eduroam, is gaining traction within IETF. The first implementation of RADSec within a commercial access point has just been announced.

A database and XML schema for eduroam deployments is approaching finalisation. This will allow users to locate organisations participating within eduroam.

(h) QoS Project - Service Activity 3

GEANT2 SA3 has been finalising the main principles of the Federated PERT (Performance Enhancement and Response Team) policy. The Federated PERT service will integrate national and organisations' PERT bodies with the aim of resolving cases related to poor network performance.

Further Information

Further information on any aspect of this report can be obtained through JANET(UK)'s general enquiry point, the JANET Service Desk. This is staffed from 08.00 to 18.00 Monday to Friday, with voicemail available for calls outside these hours or if staff are temporarily unable to answer a call.

Enquiries may be made by e-mail, telephone, fax, post, or in person, as follows:

E-mail: service@ja.net

Telephone: 0870 850 2212

Fax: 0870 850 2213

Post: JANET Service Desk, Lumen House, Library Avenue, Harwell Science & Innovation Campus, Didcot, Oxon OX11 0SG

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