



Quarterly Report to the Community

August – October 2008

Editorial

There are a number of firsts, upgrades and improvements in this quarter's report. JANET has become the first European National Research and Education Network to install 40Gbit/s channel technology: the first phase of the [40Gbit/s upgrade](#) was completed by the end of September as planned. Connections from two external gateways in Docklands to Reading and London core locations are now running at 40Gbit/s. The second phase of the upgrade is expected to be completed by the end of January 2009.

Meanwhile, for example, the first three Regional Networks - AbMAN, KentishMAN and FaTMAN - have been [transitioned to the new Netsight system](#), with another three to follow within two weeks of this report; and development of the [JANET Roaming service](#) has included a programme to enable use of IPv6 with the service, which is now complete.

As our users' expectations evolve constantly, so JANET works hard to evolve ahead of them.

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 August 2008 to 31 July 2009.

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 [[more information](#)]

Documents published between August–October 2008

Newsletters	JANET News 5
Technical	Network Access for Guests

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

6th JANET CSIRT Conference

Over 80 delegates from a wide variety of sectors attended the [6th JANET CSIRT conference](#) at Loughborough University on 23 October, to hear six talks on a number of threats that networks face and some of the technologies and techniques that can be used to protect them.

David Phillips of the Open University started the day on the topical subject of securing mobile devices. As well as the risk of lost and stolen laptops and media, a growing risk of profit-driven malware threatens data stored and collected on mobile devices.

Graeme Fowler of Loughborough followed with details of the phishing attacks that many academic sites have suffered from this year, enticing users into divulging their usernames and passwords. Inbound filtering of e-mail offers limited protection. This led to the development of a system where outbound e-mails are checked and filtered for valid credentials in the university's Active Directory system.

The afternoon started with an enthusiastic talk by Chas Tomlin, of the University of Southampton, on the use of network flow data in detecting unwanted network traffic, malware downloads and communications with malicious networks. Paul Kennedy of the University of Nottingham followed this up with a talk on some of the commercial offerings for the processing of netflow data, allowing the creation of a base line from which to detect anomalous behaviour and unexpected traffic. Richard de Feu of Lancaster University gave a short presentation on a relatively unknown but well written worm called W32.Almanhe, which uses several techniques to spread discreetly and even cooperates between infected hosts on the same LAN to avoid detection. Lewis Honour of Logicalis finished the day with a talk on using virtualization and thin client technology to avoid the problems of giving untrusted workstations access to your internal systems.

(c) Network User Groups

The South West User Group met on the 15 October 2008.

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

Advice on security and legal issues has been provided to JANET activities including videoconferencing, content distribution and federated access management, and to a JISC/UCISA project on outsourced e-mail. With access management activities expanding to cross international boundaries, both within and outside Europe, investigations have been conducted into which information used by federations is likely to be considered personal data, and what legal requirements might apply to the international transfer of such information. Discussion with other TERENA members and [InCommon](#) has revealed that legal opinion is not always clear and sometimes actually contradictory. Guidance on good practice is therefore being prepared and comments sought from relevant authorities.

JANET(UK)'s one-day training course on Managing IT Security was presented in Manchester and Cambridge. Following a review of all courses, the Information Security Policies course has been substantially revised. Development of the new Computers, Privacy and the Law course has continued: the pilot presentation of this in November was fully booked within a day of being announced. Presentations on privacy issues in access management and network administration were given in London and Cambridge respectively.

Discussion has taken place with JANET-connected sites on legal issues around data retention (prompted by the Home Office's publication of draft data retention regulations applying to public networks) and copyright enforcement. A JANET(UK) response has been made to the Department for Business, Enterprise and Regulatory Reform's consultation on action against peer-to-peer sharing of copyright materials. In the same area, JANET(UK) has helped the [Federation Against Copyright Theft \(FACT\)](#) to carry out an anonymous survey of copyright enforcement activities in universities.

Other meetings attended included the Internet Watch Foundation Funding Council (of which JANET(UK) is a member), the London Internet Exchange (LINX), the National Information Assurance Forum, the All Hands Meeting and an associated workshop on Campus Grids, the Dutch Government CERT Symposium, TERENA's CSIRT Task Force, and the ISSE/ENISA conference where JANET(UK) participated in a panel session on network resilience.

3. IP Services (SLA J3)

3.1 IP Service (SLA J3.1)

This reporting period has seen a total of 119 new or enhanced customer connections completed and brought into use:

Further Education

- Abingdon & Witney College
- Accrington and Rossendale College
- Ashton-under-Lyne Sixth Form College
- Barnfield College
- Barton Peveril College
- Bexhill College
- Bicton College
- Bolton Community College
- Bolton Sixth Form College
- Boston College
- Bournville College of Further Education
- Bury College
- Cadbury Sixth Form College
- Cirencester College
- City College Coventry
- City College, Birmingham
- City of Wolverhampton College
- College of West Anglia
- Dorton College of Further Education
- Dudley College of Technology
- Dunstable College
- East Surrey College
- Easton College
- Essex Adult & Community Learning
- Evesham and Malvern Hills College
- Fircroft College of Adult Education
- Freeman College, Ruskin Mill Educational Trust
- Glasshouse College
- Greenwich Community College
- Halesowen College
- Hastings College of Arts and Technology
- Havant College
- Henley College Coventry
- Holy Cross College
- Hopwood Hall College
- Hugh Baird College
- Joseph Chamberlain Sixth Form College
- Kidderminster College
- King Edward VI College, Stourbridge
- Lincoln College
- Pendleton College
- Penwith College
- Portland College
- Portsmouth College
- Priestley College
- Queen Alexandra College for the blind
- Redcar & Cleveland Adult Learning Service
- Regent College Ltd
- Richmond Adult Community College
- RNIB New College Worcester
- Royal Borough of Windsor and Maidenhead
- Runshaw College
- Sandwell College
- Seevic College
- Shropshire Adult & Community Learning
- Solihull Sixth Form College
- South Birmingham College
- South Cheshire College
- South Devon College
- South Nottingham College
- St Vincent College
- Strode College
- Sutton Coldfield College (2)
- Tameside College
- Telford College of Arts and Technology
- Thurrock and Basildon College
- Totton College
- Trafford Adult & Community Learning
- Walsall College
- Warwickshire College (2)
- West Cheshire College
- West Kent College
- Weymouth College
- Woking College
- Wolverhampton Adult & Community Learning
- Worcester Sixth Form College

Higher Education

- Aston University (2)
- Birmingham City University (2)

- Liverpool Community College
- London Borough of Harrow Adult & Community Learning
- Long Road Sixth Form College
- Loreto College
- Luton Sixth Form College
- Mary Ward Centre
- Matthew Boulton College of Further and Higher Education
- Mid-Cheshire College of Further Education
- Mid-Kent College of Higher and Further Education
- Middlesbrough Adult & Community Learning
- Moulton College
- New College Stamford
- New College Swindon
- New College Telford
- North Devon College
- North East Worcestershire College
- North Hertfordshire College
- North Warwickshire and Hinckley College
- Northbrook College
- Norton Radstock College

- Coventry University
- Newham University College
- University College Birmingham
- University of Worcester

JISC

- Medical Research Council, Clinical Trials Unit

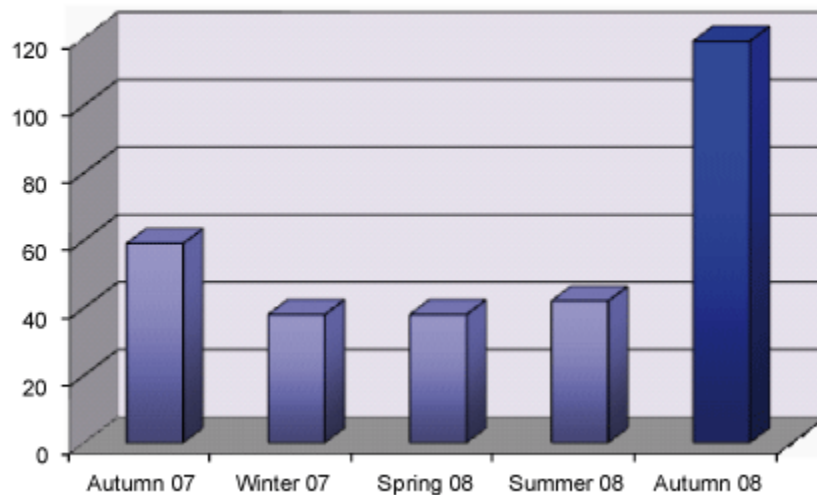
Self-funded

- CableCom Networking Ltd (5)
- Getronics UK Ltd
- Medway Council
- Milton Keynes College
- UKAEA Culham Division
- University of Reading
- Walsall Metropolitan Borough Council

Scottish Executive Education

Newbattle Abbey College

New or enhanced customer connections



For information regarding current upgrades or connections, please contact JSD 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

Work has continued on the capital-funded project to implement upgrades beyond 10Mbit/s. Upgrades have now been delivered to 154 colleges.

Northern Ireland

Nothing to report.

Scotland

Nothing to report.

Wales

Migration of college connections to the PSBA Network continued during the reporting period. Twenty connections have now been migrated to the new network.

(c) Core Network

The JANET core network has supported JANET services reliably over the quarter despite a few fibre breaks and equipment failures. Traffic was able to re-route over other available paths in most cases; however, there was one incident that disconnected the PSBA Network from the JANET core for 9 minutes on 15 September. This was due to an interface card being unexpectedly locked up while the supplier was provisioning a new circuit.

The first phase of the 40Gbit/s upgrade was completed by the end of September as planned. Connections from two external gateways in Docklands to Reading and London core locations are now running at 40Gbit/s. The second phase of the upgrade is expected to be completed by the end of January 2009.

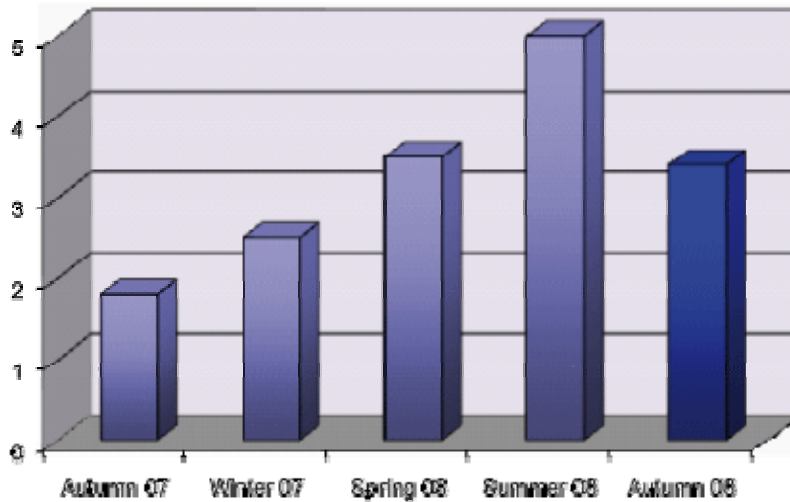
Core routers at Reading and London core locations were upgraded from T640 to T1600 at the end of October. This provides more capacity for hosting multiple 40Gbit/s ports for the second phase of the core link upgrade.

(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 2.5Gbit/s; however, there were peaks of 3.4Gbit/s during this quarter. An upgrade of the backup link to 10Gbit/s is underway.

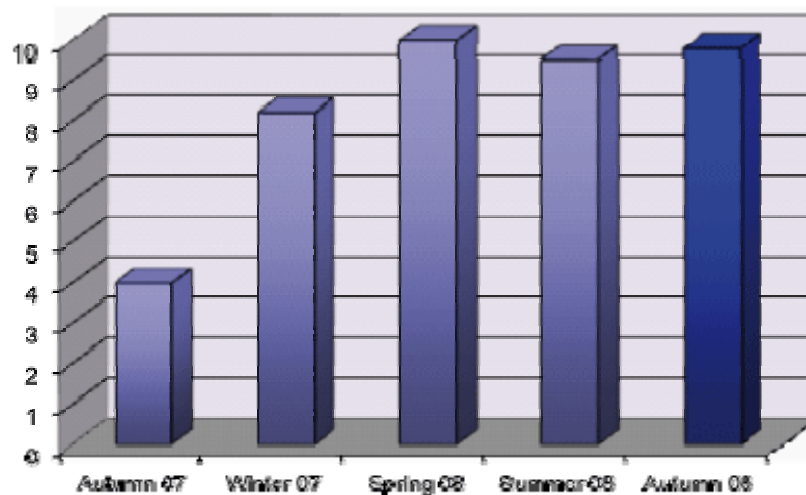
Peak traffic over connection to GÉANT (Gbit/s)



(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 Teletcity in London. Aggregated peak traffic has reached 9.8Gbit/s since the start of the new academic year.

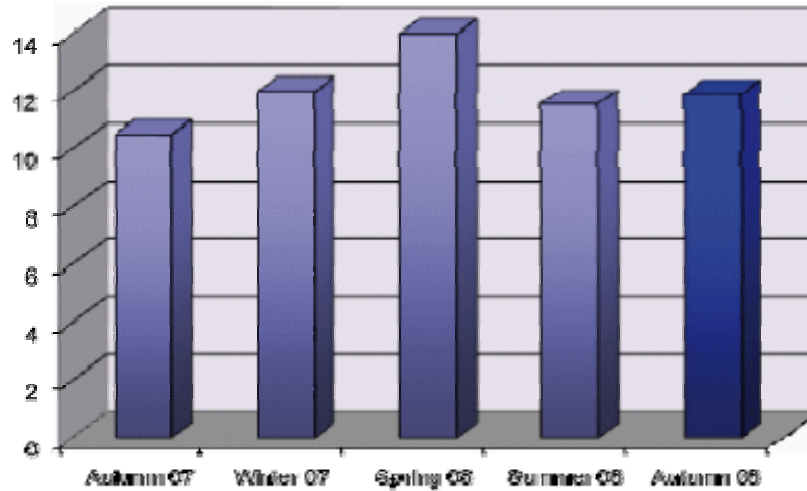
Peak traffic over connections to Telehouse® and Teletcity (Gbit/s)



(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 Teletcity PoP locations. Aggregated traffic peaked at 11.9Gbit/s in October. Aggregated private peering traffic reached 12Gbit/s late in the quarter.

Peak traffic over connections to LINX (Gbit/s)



(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	28753	Netdirekt.de	08/08/2008	28/08/2008	02/09/2008
LINX	34305	EuroAccess Enterprise Ltd	29/08/2008		
LINX	34790	Waveworks Ltd	10/09/2008		
LINX	32934	Facebook	29/09/2008	21/10/2008	21/10/2008
LINX	40009	BitGravity	30/09/2009	30/09/2008	10/10/2008
LINX	33926	EuroTransit GmbH	05/10/2008		
LINX	24867	Adapt Services Limited	16/10/2008		
LINX	39326	Goscomb Technologies Limited	21/10/2008	21/10/2008	27/10/2008
MANAP	42973	Manchester MetroNet UK	23/10/2008	29/10/2008	31/10/2008
LINX	8001	Net Access Corporation	25/10/2008		
LINX & MANAP	4250	Alentus	28/10/2008	31/10/2008	31/10/2008
LINX	36408	Panther Express	30/10/2008		

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)

During the reporting quarter there were a total of 13 planned maintenance sessions. However it should be noted that for 4 sessions during the university Clearing period (Tuesday 19 August – Tuesday 9 September) there was a moratorium on any major service affecting work taking place.

Major activities included:

- Backbone router upgraded at Docklands Telecity, Reading and London PoPs
- New linecards and PICs have been installed in the various backbone routers including Docklands Harbour Exchange and London PoPs
- Number of site connections migrated to West Midlands Regional Network
- JUNOS Upgrade.

3.4 Network Status Information (SLA J3.4)

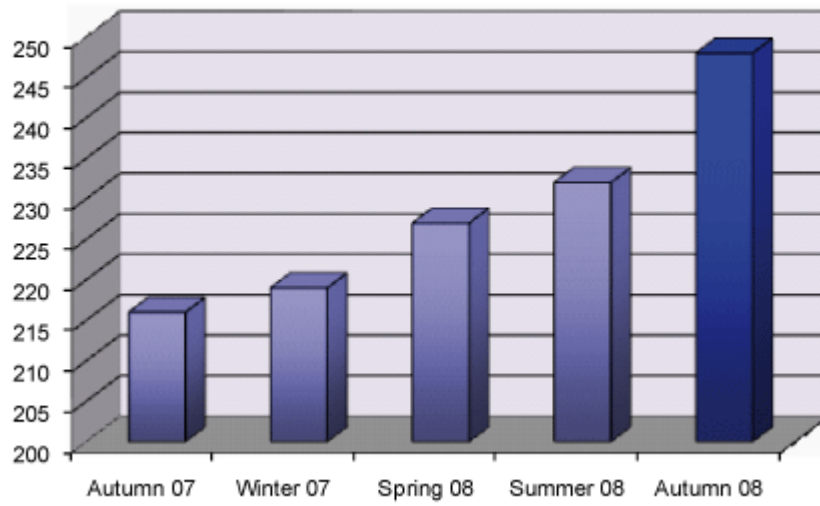
The first three Regional Networks - AbMAN, KentishMAN and FaTMAN - have been transitioned to the new Netsight system. Unexpected technical issues relating to aggregated connections and sites provisioned by layer 2 (Ethernet) links have caused server delays to the process. The transition of the remaining Regional Networks will continue during 4Q08. The original Netsight system will continue to provide a view of the status and performance of JANET, pending the completion of the transition process.

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 broadcast 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.

5 more sites have registered to use the JANET NTP service during the reporting period. There are a total of 248 sites using the service. Overall, it is a stable and well-used service.

Number of sites using the JANET NTP service

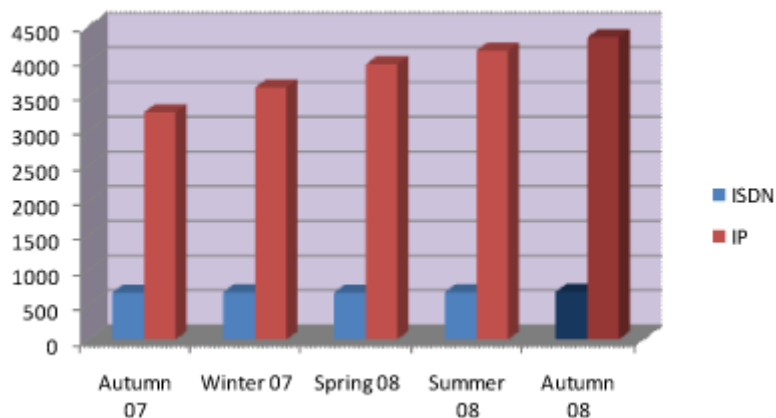


4 Application Services (SLA J4)

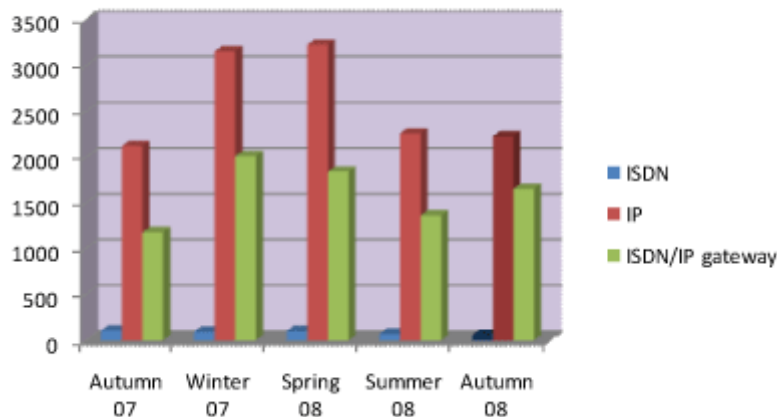
4.1 Videoconferencing Service (SLA J4.1) [[more information](#)]

There are now over 4500 users registered with JVCS (an increase of over 10% in the past 3 months). 4347 venues are registered to use the JANET Videoconferencing service over IP and 684 over ISDN. During this report period, 57 conferences were held solely over ISDN for over 96 hours whilst 2228 conferences were held using IP for almost 3059 hours. 1656 sessions took place using the JVCS IP/ISDN gateway for 2278 hours.

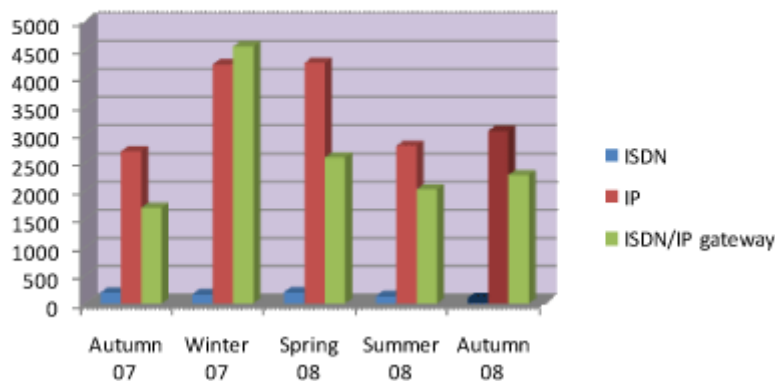
Number of venues registered to use JVCS



Number of videoconferences



Number of videoconferencing hours over ISDN and IP



New infrastructure equipment was installed in two locations on the JANET network, to increase capacity and to provide for High Definition videoconferencing and other features which were not previously supported. The new hardware is currently being commissioned and should be fully in operation by the end of the year.

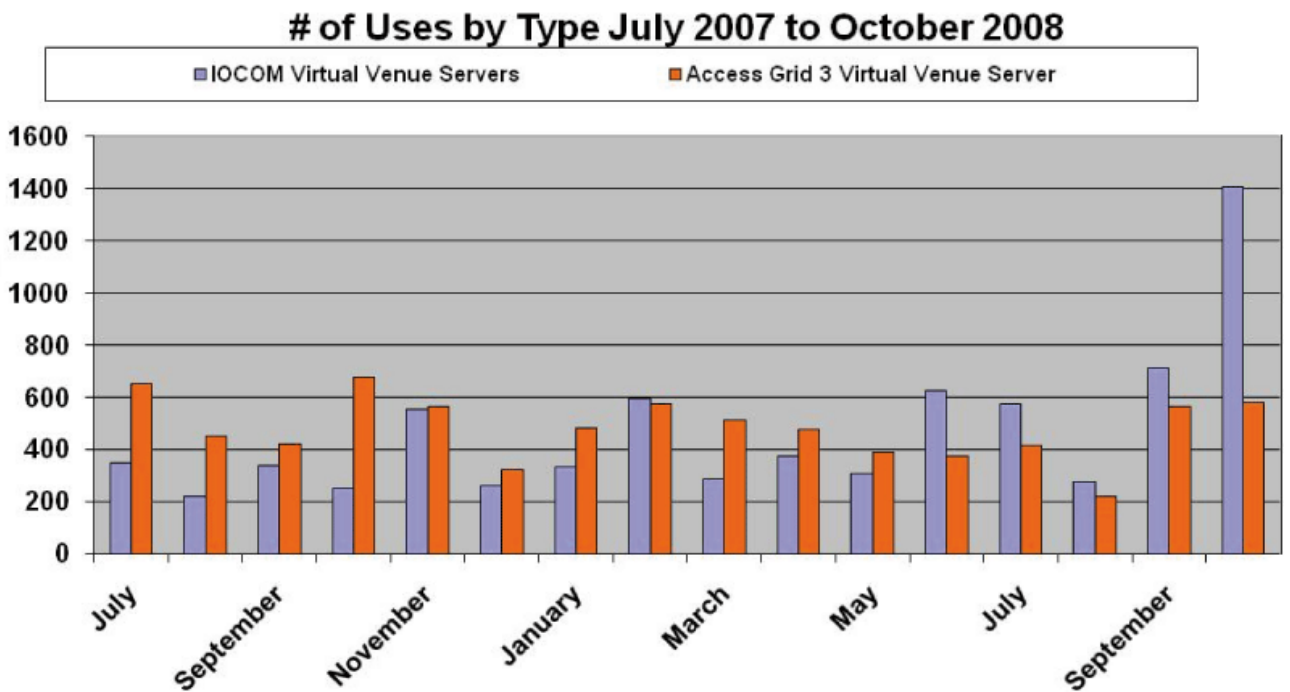
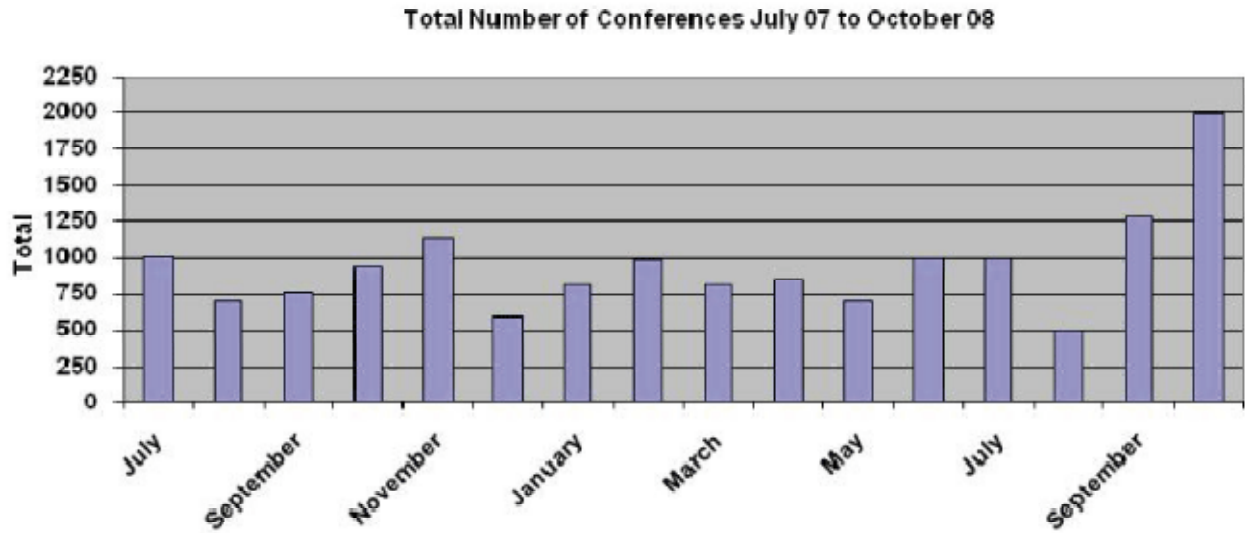
Changes are being made to the two H.323 booking services (managed and conference on demand) to integrate them both, providing simpler functionality for end users with a greater feature list and enhanced user interface. This will be implemented during the next quarter and will affect the next statistics as the conference on demand sessions were not previously reported.

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 328, including the UK Academic desktop nodes, and the number of users stands at 536. Based on server usage we believe the number of users is higher but are unable to measure the exact number at this current time. The AGSC is looking at ways of possibly retrieving this information for future reports.



Usage is on the increase after the summer break with AG-based programs such as MAGIC and TCC getting back underway.

All AGSC servers previously based in the University of Manchester networking environment have now been moved to the Net North West network. This move should provide more stable multicast on both AG and IOCOM servers.

Booking Service

Recurring bookings are now available on the AG Booking Service. Users can now book up to 52

recurrences for one session instead of having to book each session individually. This feature should save a great deal of time and effort for venue administrators.

Outreaches

The AGSC demonstrated Access Grid to Trafford FE College using the portable demo node as well as presenting the AGSC services as part of the outreach programme. A number of colleges across the UK have amalgamated, creating larger colleges with campuses spread over a large geographic area. In some cases this means a course once taught at two separate sites may only be taught at one. Access Grid could potentially assist FEs in, once again, offering courses at two sites by allowing a teacher to teach a class both locally and remotely.

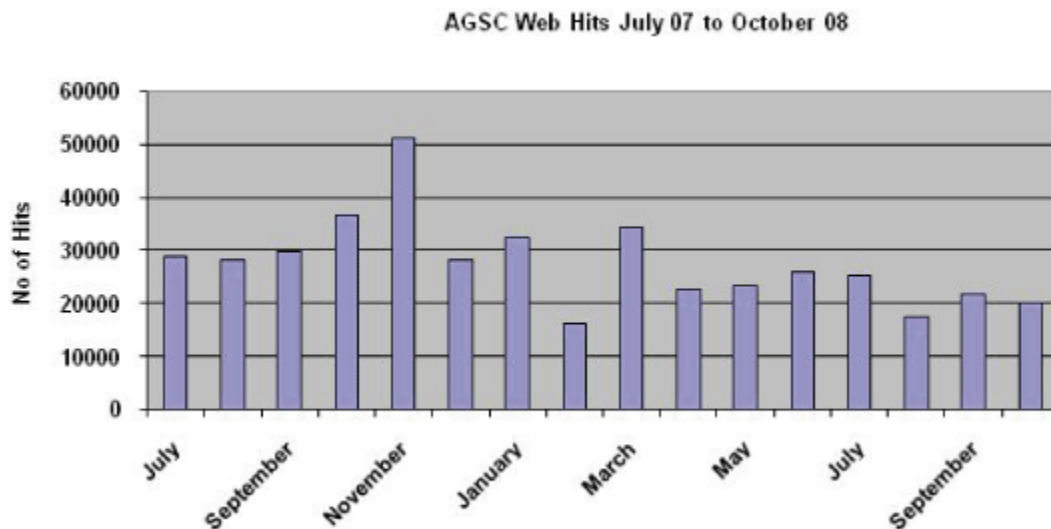
Articles on some of our visits are available on our site at:

<http://www.ja.net/services/video/agsc/AGSCHome/whatsnew.html>

New AGSC leaflets are now available. Feel free to call the AGSC on 0161 275 5997 or email at support@agsc.ja.net to receive a soft copy.

A mobile AG node has been put together which includes four regular cameras and an HD webcam, to be used to demonstrate AG client capabilities at outreaches.

AG Web Hits



The AGSC will be looking at web stats over the next quarter to see which pages are most popular and try to improve those which are viewed the least.

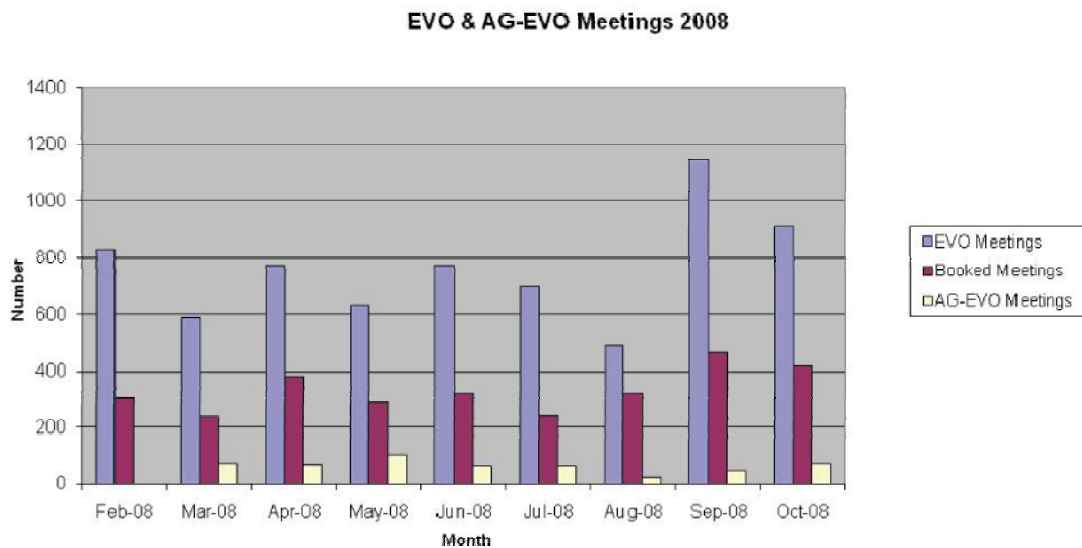
More documents have been added to the documentation page containing a variety of information for a wide user skill set:

<http://www.ja.net/services/video/agsc/technical-information/documentation.html>

EVO (Enabling Virtual Organizations)

An EVO-telephone gateway build was underway in the last quarter and it is anticipated to go live in this next quarter. This will allow UK EVO users with hardware or software issues to dial into

EVO via telephone at a national call rate instead of having to dial an international telephone gateway, incurring international call charges.



The above graph shows the number of regular EVO meetings, and the number of these that were Booked Meetings and AG-EVO bridged meetings. (The AG-EVO bridged venues are defined as permanent venues on the EVO-AG gateway reflector, so booking is not possible.)

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.

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

5 more organisations have joined the News Reader Service during the reporting period. There are currently 81 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.

During the reporting period JISCmail introduced the Depot, an enhancement to the service. The Depot is a JISC-funded service which enables all UK academics to share in the benefits of open access exposure for their research outputs. It offers an automatic re-direct service to ensure that users who have an existing Institutional Repository are directed to that local service. Those researchers at institutions that do not currently have an Institutional Repository can deposit their research outputs directly into the Depot.

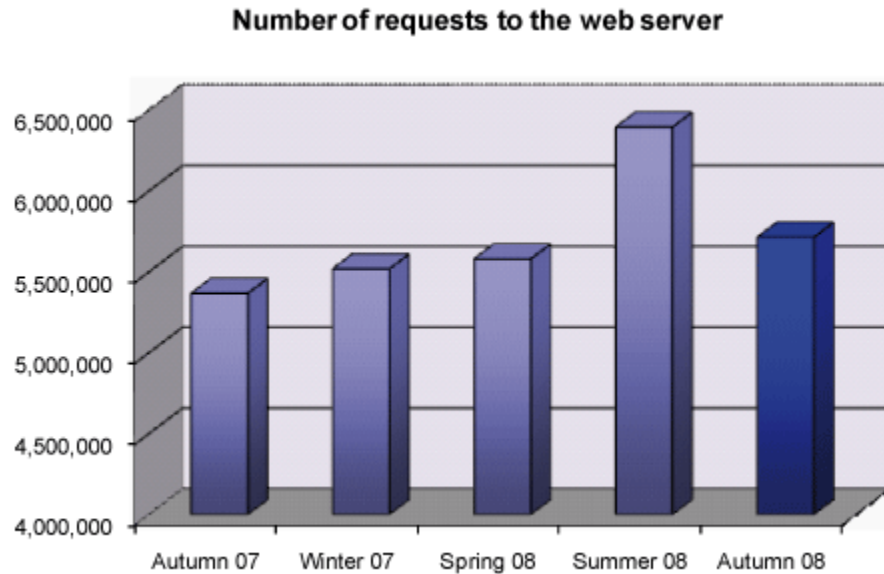
4.4.5 Web Mail Service (SLA J4.4.5) [[more information](#)]

The JANET Web Mail Service is an e-mail service provided to JANET 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 funded service is available to the Specialist College and ACL sectors, and JANET has extended the provision to the wider JANET community as a chargeable service.

No new sites have joined the service during the reporting period. There are a total of 34 sites using the service.

4.5 JANET Web Site (SLA J4.5)

A total of 5,714,708 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)

Whois service

There were no reported problems with whois.ja.net during this quarter

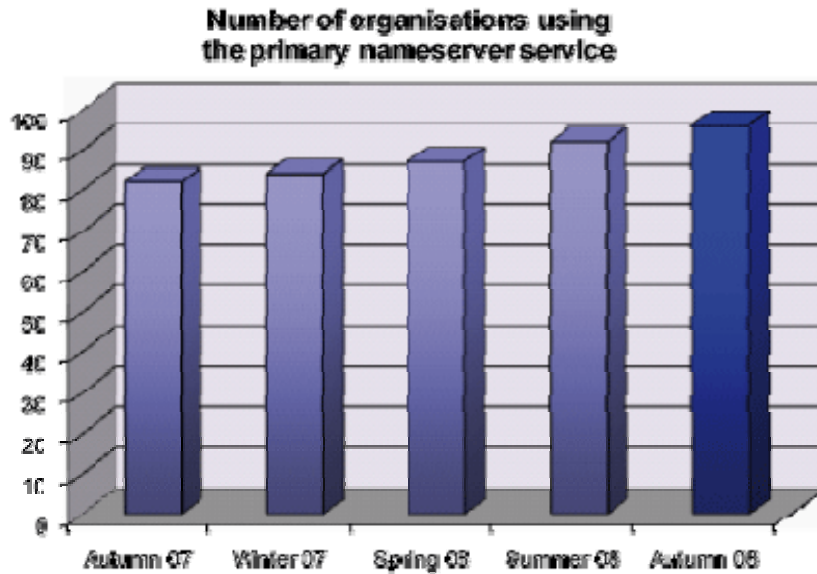
DNS (Servers)

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

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

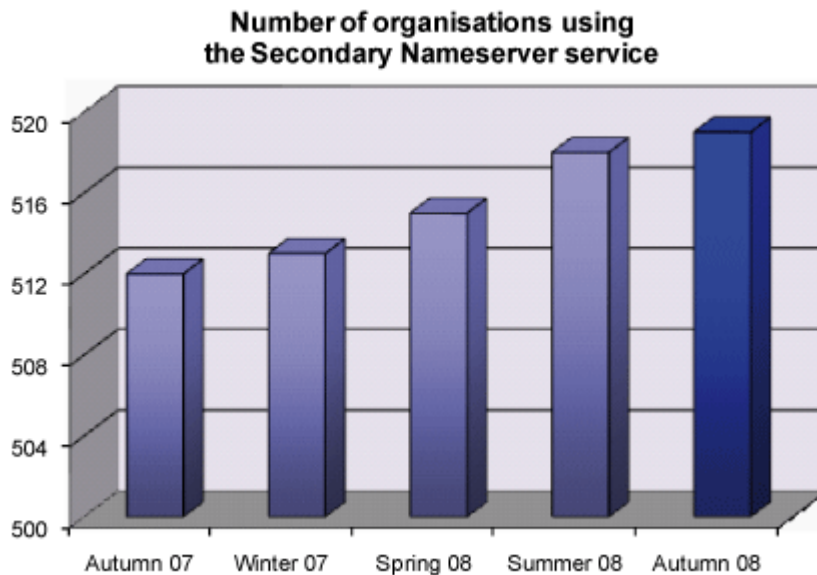
The operation of nameservers and maintenance of DNS information is an essential infrastructure activity that some small organisations do not have the resources to perform themselves. JANET can provide a basic primary nameserver service to support e-mail and web use by smaller or less experienced JANET 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.

Four organisations registered during the reporting period to use the JANET Primary Nameserver service. There are now a total of 96 users of the 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 519.

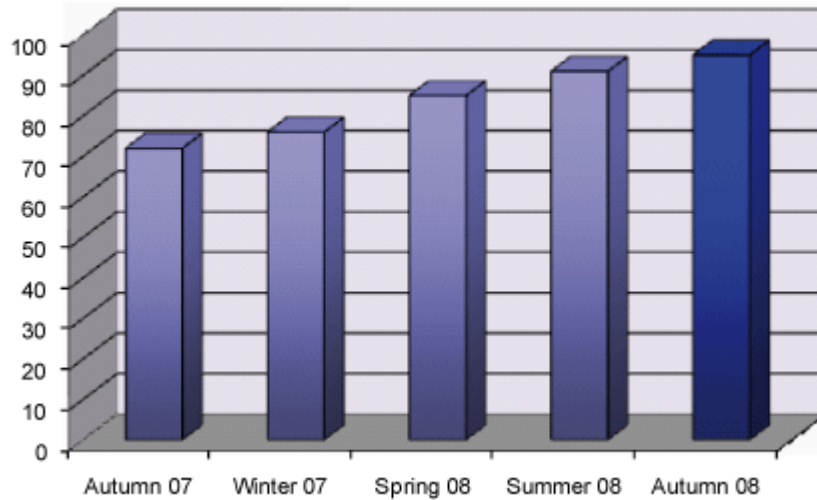


4.6.4 Off-site Resolver Service (SLA J4.6.4) [\[more information\]](#)

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.

Four sites joined during the reporting period taking the total number of users up to 95.

Number of sites using the Off-site Resolver service



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 ACL sectors, although other eligible organisations may use the service as a contingency as a chargeable service.

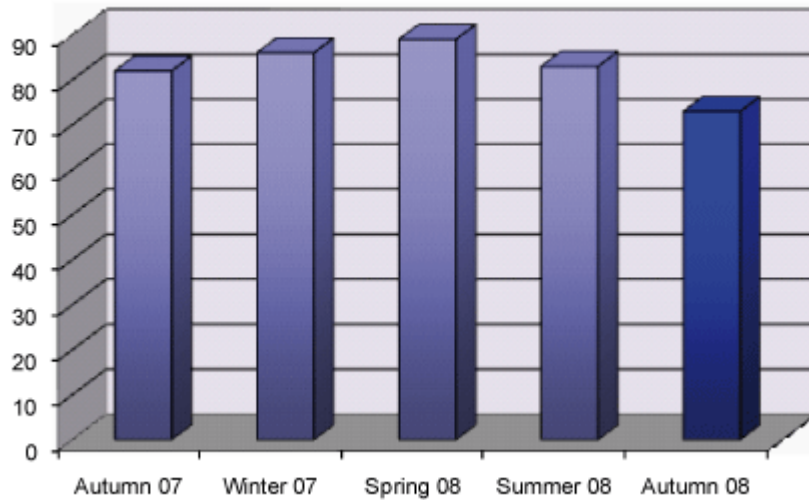
One site has joined the service during the reporting period, bringing the total number of sites using the service to 71.

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 tailoring these filters to its exact needs, giving protection against access to inappropriate content on the Internet.

During the reporting period a survey was carried out asking subscribed organisations that had showed no usage over the last six months whether they still had a requirement for the service. 20 organisations volunteered to be removed. There are currently 73 organisations using the service.

Number of sites using the Web Filtering service



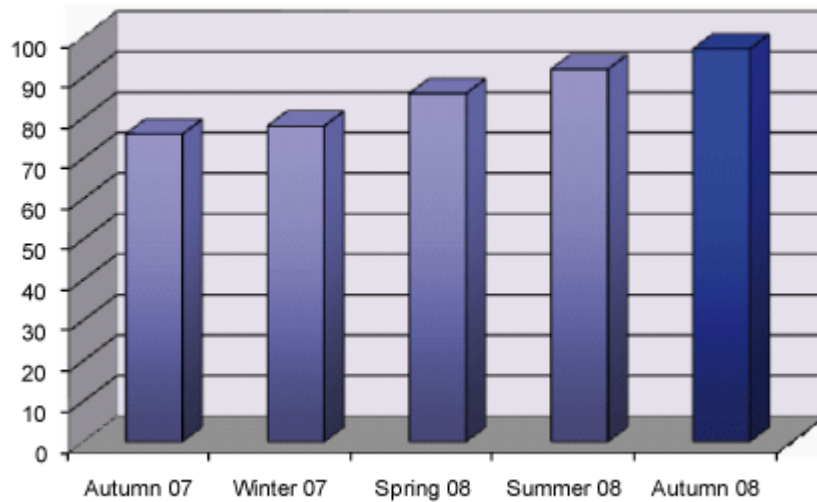
4.9 JANET Roaming Service (SLA J4.9) [[more information](#)]

JANET Roaming lets JANET-connected organisations 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.

The service is underpinned by a national infrastructure of RADIUS servers, deployed and maintained by JANET(UK), which support the exchange of user credentials between participating organisations. Technical support is provided by dedicated staff who also develop enhancements for the support server. Uptake continues to be promising, with the number of participating organisations now at 97 and a large volume of authentication traffic being seen.

Development of the service has included a programme to enable use of IPv6 with the service, which is now complete. Close integration with the eduroam participant database has also been achieved and an expanded data set containing details about the JANET Roaming eduroam network offered by organisations has been implemented.

Number of sites using the JANET Roaming service



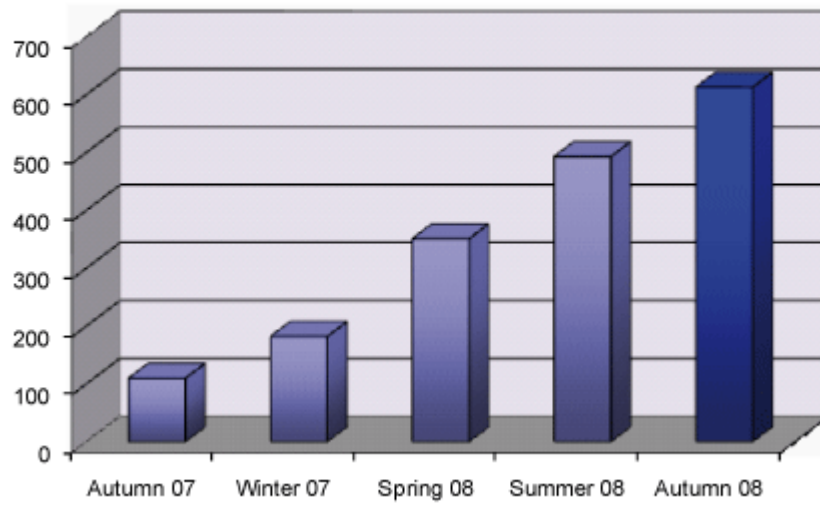
4.10 UK Access Management Federation [\[more information\]](#)

At the end of October there were 613 members in the UK federation, made up of organisations from UK education sectors and commercial organisations providing online services to these sectors.

JANET(UK) is continuing to advise and support UK federation members in implementing federated access management across their organisations, to enable more and more users to access the ever increasing number of online services and resources beneficial to UK education.

Deploying federated access management is assisting Local Authorities in delivering the requirements set out in the Government's e-Strategy, so users across primary and secondary education are now seeing its benefits.

Total UK federation membership



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 website 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 website, 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 Video Technology Advisory Service provides a helpdesk supported by videoconferencing experts for issue resolution, product evaluations and documentation on all aspects of videoconferencing. The use of VTAS is free of charge to organisations who qualify to use JVCS.

A Tandberg FieldView was evaluated between 25–29 September 2008 and the report was published on the website on 10 October 2008. The FieldView is a fully integrated, portable, wireless handheld video device that can be used anywhere in an organisation.

A decision will be made early in this quarter regarding which items of equipment will be evaluated over the coming year.

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 Voice over IP (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 has received a number of enquiries during the quarter including questions on Skype and the 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.

6. Training Services (SLA J.6)

The Training team continues to deliver a portfolio of courses across the country. Fifteen courses were run this quarter despite no courses being run in September to allow organisational staff to focus on preparing for the new academic year.

Development of new courses continues, with pilots of new 'Computers, Privacy and the Law' and 'Implementing Shibboleth 2 Service Provider' courses scheduled to take place this quarter and further runs scheduled in 2009. Additional trials are planned for the new year including a new course on 'Virtualization'.

We have also extended our list of 9 venues to include Belfast. Five courses have been scheduled for 2009 at this venue following a request from their Regional Network Operator.

The JANET Training schedule is available on the web site. Additional dates and courses are added when available:

<http://www.ja.net/services/training/schedule/by-date.html>

The development of EdLab®, our online learning and collaboration facility, is continuing with access to online course support for many of the courses rolled out during the period. These areas include additional course information, a message from the trainer, details of what to expect and pre-course information and activities. After the course delegates have access to all the course materials, activities used in the course, additional resources and subject tests. Discussion forums and other tools are available to continue class discussion and collaboration. Our focus now is on the promotion of community discussion and collaboration. With this in mind a programme of online events, discussions and interactive activities is being developed for 2009.

Registration for EdLab® is available at <http://www.ja.net/training/edlab>.

7. Administration Services (SLA J7)

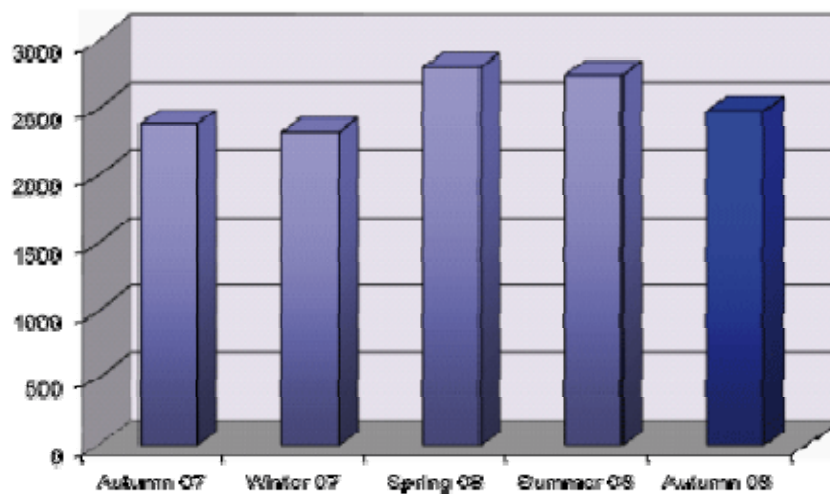
7.1 JANET Service Desk (SLA J7.1) [[more information](#)]

JSD provides the primary point of contact for all enquiries concerning JANET services and requests for information. Contact information is provided below.

During this reporting period the total number of enquiries received was 2484. Most of these queries related to the Domain Name registration service, requests for JANET connections and applications or queries relating to other JANET services.

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

Number of enquiries to JANET Service Desk



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](#).

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

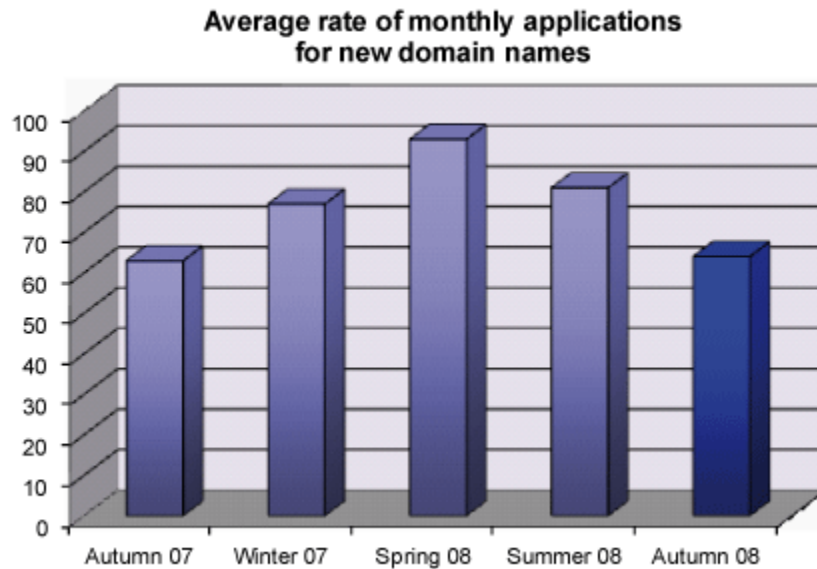
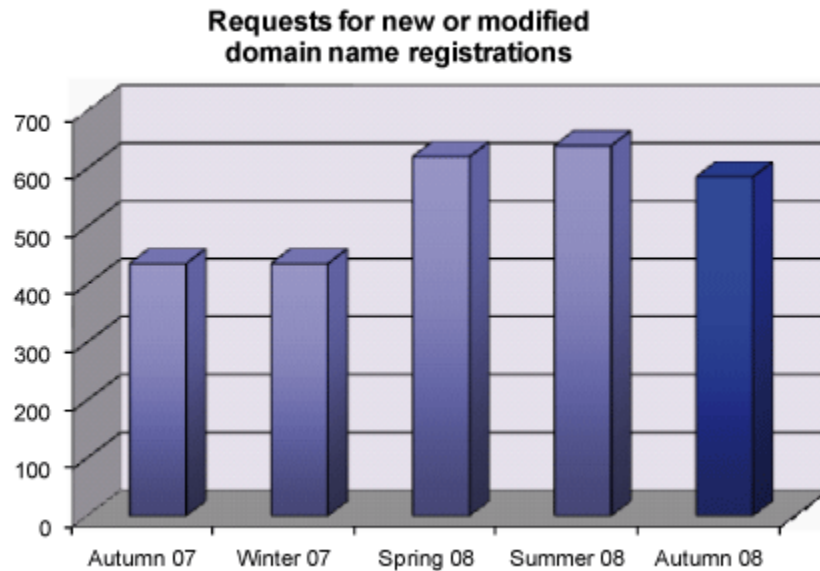
7.3 Licence Administration (SLA J7.3)

Over the past three months 5 new Sponsored Connection Licences and no new Proxy Connection Licences have been issued.

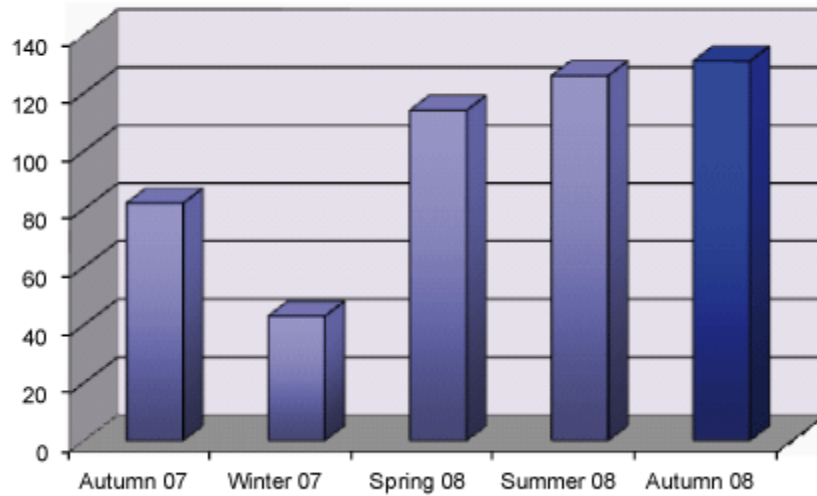
7.4 Domain Name Service Administration (SLA J7.4)

7.4.1 Domain Name Registration Service (SLA J7.4.1)

During the reporting period a total number of 586 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 64 per month, with an average of 131 modifications for each month.



Average rate of monthly applications for modified domain names



7.5 IP Address Assignment (SLA J7.5)

During the reporting period 35 applications were received and completed.

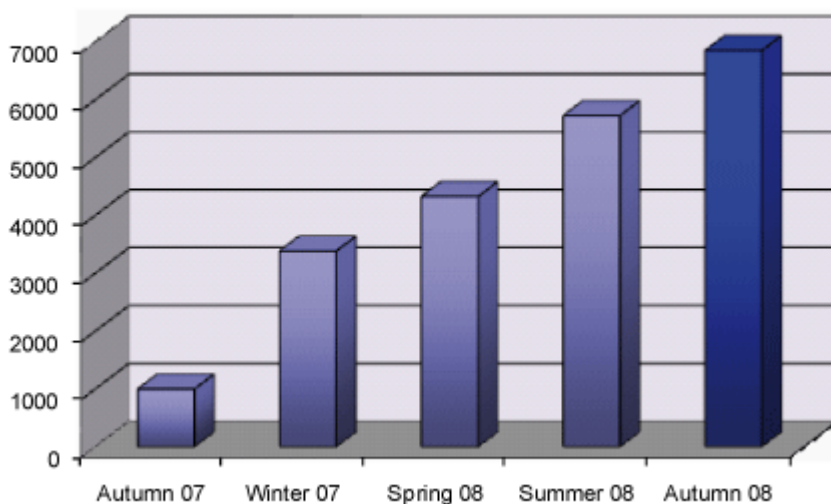
7.6 urn:mace:ac.uk Namespace Administration (SLA J7.6)

There were no new applications during this quarter.

7.7 Server Certificate Service

The number of Server Certificate requests increased by 1126 to 6849 in this quarter.

Number of Server Certificate Service requests



8. Security Services (SLA J8)

August

August was quieter than recent months, as would be expected in the summer holiday period, with no particular incidents of note. The majority of incidents involved compromised end user computers sending out spam or network probes. Phishing attacks against connected sites have continued, although there have been fewer reports received of well targeted attacks. A small number of these attacks resulted in accounts being compromised and used to send fraudulent e-mails.

September

In September there was a larger number than usual of reports of copyright infringement. These were mainly reports from major film studios of residential network computers downloading films. The increase is probably due to the start of the term and a lack of awareness amongst new users.

There were also a large number of investigations into systems which had been compromised and used as part of a larger botnet. The systems were typically compromised through weak accounts or malware. The rise is possibly due to increased reporting rather than increased activity.

October

The high level of copyright infringement notices was sustained throughout the month of October. Discussions have taken place throughout the community with no consensus as to the cause of the higher levels of reports of this activity for recent months.

New peer-to-peer applications have appeared in the CSIRT Netflow data. Many of these are entirely innocent and related to IPTV.

A major update for Microsoft operating systems was released, and although this vulnerability is already being exploited in the wider Internet JANET CSIRT has not seen a measurable volume of incidents related to this.

9. Development

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

9.1.1 UK Federation Development

Membership of the UK federation continues to grow, which is reported in detail in section 4.10 of this report.

Two training courses covering federated access management are now available. 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 series of regional briefing events have been planned. Two have already taken place in Brighton and Leeds. Another is scheduled for March 2009 in Bristol with more planned throughout the year. These events are based around group discussion sessions to move organisations towards implementation of access management. More details can be found at <http://www.ja.net/services/events/calendar-2008.html>.

9.1.2 UK 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](#)]

The beta version of the Shibboleth on Windows installer has now been released and can be found on the [Internet2 web site](#). Participation in the trials has been widened. The test sites are now concentrating on producing documentation and case studies.

9.1.4 WAYF Interface Development

Nothing to report.

9.1.5 Expert Group on Portal Design

Nothing to report.

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

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

The latest release of the supplicant (v2.1.5.400) is now available with a number of additional features and an improved GUI.

Reports from the JANET community show a significant increase in the number of student machines running Microsoft Vista. The OpenSEA Alliance has responded to this by raising the priority of a Vista version of the supplicant, which is expected around the first quarter of 2009.

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

Nothing to report.

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

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

Version 2 of the Mobile IP testing platform and related documentation are available for download. This tool is being used in intra- and inter-site testing currently underway to establish the performance of Mobile IP in a number of relevant scenarios (including Voice over IP and mobile data sources, for example). Trial participants have recently shared expertise gained with a group supporting mobility-impaired students undertaking field-based activities with mobile network access.

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

Five organisations have been selected to take part in trial activities in this area. The project will document the current state of the LLU market, provide a number of case studies, and survey two regions with a view to identifying future LLU opportunities.

9.3.3 Location Aware Wireless Infrastructure

Development continues among trial participants who have recently demonstrated prototype applications for attendance registration, device tracking and network usage via an interactive Google Earth interface. Experience from the latter was recently shared with a student group conducting a design project with JANET(UK) in the same area.

The TF-Mobility group has been rechartered with location awareness as one of its core activities, led by JANET(UK).

9.4 Network Engineering

9.4.1 IPv6

Work is continuing to enable IPv6 support within JANET production services.

JANET(UK) is progressing with the development of the IPv6 training course with a view to running it in 2009.

9.4.2 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.

Installation and commissioning of the core hardware and launch of the trial have now taken place. Over 100 JANET sites are currently signed up to take part in the trial, providing a trial user base of over 7500. A wide range of JANET sites are taking part in the trial including FE, HE, RBCs, Local Authorities and research organisations. The one-year trial will run until 31 August 2009.

A second call for participation has taken place inviting additional organisations to take part in the trial and provide feedback to help JANET understand the application of JANET Talk within the JANET community. Market research is also underway to provide a wider overview of the JANET community's voice requirements. The trial will provide JANET(UK) with feedback enabling a clear future sustainability model for JANET Talk to be developed for March 2009.

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 group would focus on the future of JANET Talk and also concentrate on the development of services to enhance and improve local voice services. The results of a recent ENUM market research activity proved to be positive, and as a result JANET(UK) is now building up a business case with a view to operating as an ENUM registrar on behalf of the JANET community.

9.6 Video [[more information](#)]

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

The JANET IPTV Special Interest Group is continuing to provide invaluable advice on JANET's video activities. The group has decided on a number of key development areas which JANET(UK) has included in a JANET Internet and Broadcast Media strategy. The strategy focuses on both the technical and copyright issues associated with all video applications available on the network.

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. 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 completed a procurement for core videoconferencing infrastructure equipment to replace the current infrastructure deployed for the JANET Videoconferencing Service.

9.6.4 Ultra High Definition [[more information](#)]

Video technology has progressed in recent years with High Definition becoming an international standard. Ultra high bandwidth video and audio technology have begun to be used within the broadcast and research industries worldwide.

A Call for Expression of Interest will be released in the next month, with the intention for a workshop for selected parties within the new year.

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

9.7.1 Netsight [\[more information\]](#)

The phased rollout of the new Netsight system has commenced. Three RNOs have so far been transitioned to the new system, with another three to follow within two weeks of this report. With unexpected technical problems now solved, the rollout will ramp up.

Those involved will be contacted to co-ordinate the transition between the old and new systems. To smooth the transition process, both systems will run in parallel for a short time.

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. This work is on hold pending completion of the new Netsight rollout.

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

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

The majority of the SDSL communications circuits are now working following resolution of a problem attributed to incompatibilities between particular firmware versions running in the equipment at opposite ends of the links. Work continues with BT to resolve the final problem which is of a different nature.

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

Discussions continue with a project which has requested lightpaths to North Wales. The PSBA Network in Wales is one option but is not yet ready to offer this kind of service, although this is expected to change later this year. An initiative of the Welsh Assembly Government called Fibrespeed looks like it might provide another mechanism to deliver these paths but further work is needed to understand the infrastructure and its business models. The Fibrespeed project is installing dark fibre to 14 business parks in North Wales, and the Fibrespeed operating company will act as a wholesaler to a tier of service providers who will offer a range of services to customers.

Technical options are being examined with a view to re-engineering the TDM (Time Division Multiplexing) part of the JANET Lightpath Service with packet-based technology. This includes closer examination of both MPLS and Carrier Ethernet technologies.

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

9.9.1 Technology Tracking

Discussions with vendors continue for both Carrier Ethernet and optical transmission equipment.

JANET(UK) purchased a number of boxes from World Wide Packets (now part of CIENA) in order to test PBB TE (Provider BackBone Traffic Engineering, one of the technologies under the Carrier Ethernet umbrella) functionality within a lab environment. The tests have been completed and the results will be disseminated on the JANET website during the next quarter. Planning is also currently underway to conduct wide area testing with members from the JANET community.

9.10 Schools Services [\[more information\]](#)

9.10.1 Content Access

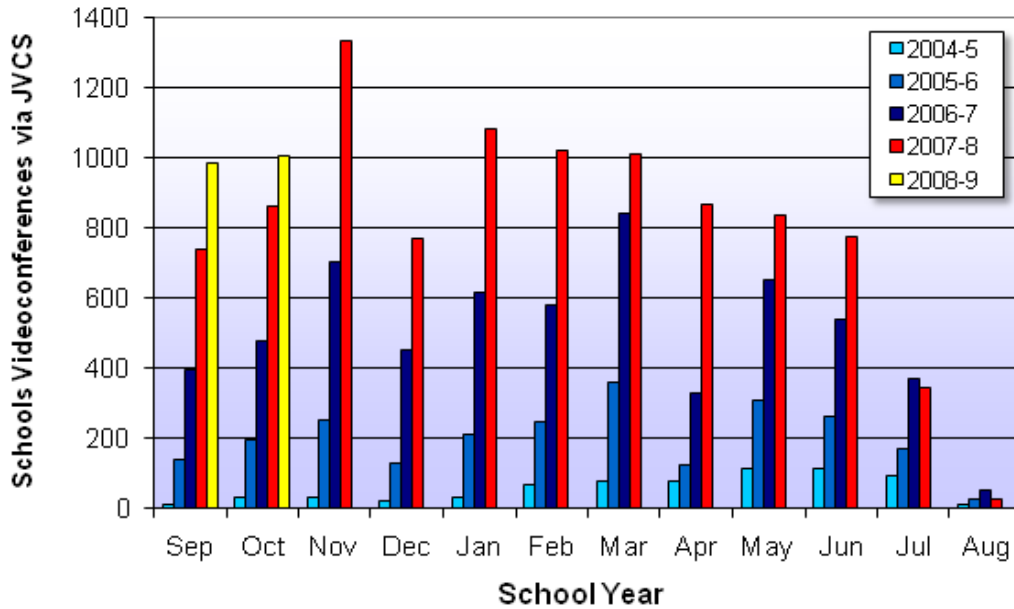
JANET(UK) continues to work closely with the NEN (National Education Network) Providers in England, LTS (Learning and Teaching Scotland), C2K (Classroom 2000) in Northern Ireland, and the local authorities NGfL Cymru and DCELLS (Department for Children, Education, Lifelong Learning & Skills) in Wales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

The CAS (Content Access Service) continues to provide UK schools with access to licensed online educational content such as 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 Content Management Group involving representatives from Regional Broadband Consortia, Becta and JANET(UK) continues to oversee the development of the CAS.

The NEN Services Group has been working in collaboration with South East Grid for Learning to set up a pilot for the delivery of film clips and associated materials via the NEN. The team has also continued to work closely with Becta on an outline business case for an NEN Digital Resource Delivery Service.

9.10.2 Videoconferencing

The take-up of videoconferencing by schools continues to grow. By the end of October 2008 the total number of schools sector endpoints registered with JVCS was 3500 (as compared to just over 2600 at the end of October 2007). Over 2000 videoconferences were undertaken this quarter, approximately half with national content providers. Over 85% of the conferences continue to be for teaching, tutorials and related educational activities; other purposes include administrative meetings, system testing and quality assurance.



9.10.3 Collaboration [[more information](#)]

The [JANET Collaborate](#) prototype pilot was completed in July 2008. The prototype continues to be used by a growing number of members from the FE, schools and content providers communities. Feedback on the usability and suitability of the prototype has shown that the prototype is meeting the needs of its users. Further development is being considered.

10. Community Update

(a) FE Liaison

JANET(UK) attends regular meetings with the LSC to raise awareness of new JANET initiatives, report on current progress with the English upgrade programme and discuss future developments within the FE community.

[MoLeNET](#) (the Mobile Learning Network) is a unique collaborative approach to encouraging, supporting, expanding and promoting mobile learning, primarily in the English Further Education sector, via supported shared cost mobile learning projects. A second year of funding by LSC of £4m has attracted 110+ applicants to participate in the project. Early analysis of the first year impact is that use of the range of mobile learning devices such as PDAs, Smartphones, PSPs etc. does lead to improvement in achievement and increase in retention for the levels of students involved in the project. Further work is looking at a wider range of student groups and hardware/software.

(b) Specialist Colleges

Approval has been obtained from LSC for 15 funded upgrades to 10Mbit/s, and quotes have been requested for another six colleges who also now meet eligibility criteria. St Elizabeth's College has made a request for a funded connection which is pending approval from LSC.

(c) PCDL (Personal and Community Development Learning)

Progress is being made on providing costs to upgrade connections for PCDL to the city of Peterborough, Stockport, Bedford and Central Bedfordshire, Buckinghamshire and London Borough of Harrow.

JANET had a stand at the recent [SocITM annual conference](#) at the Celtic Manor in Newport. This is a well attended conference and exhibition focused on the IT Management teams within Local Authorities throughout the UK. The link provides details of the conference sessions.

(d) Scotland

SSDN

The reprourement of the SSDN Interconnect has begun and JANET(UK) has held several meetings with the SSDN unit at Learning and Teaching Scotland.

The Scottish Learning Festival

The Account Manager attended the Scottish Learning Festival held in the SECC in September. Over 7000 delegates attended this two-day event and the keynote address was given by Fiona Hyslop, the Cabinet Secretary for Education and Lifelong Learning in the Scottish Parliament.

RSC

JANET(UK) has participated in several meetings and technical fora arranged by both RSC North and East Scotland and RSC South and West Scotland.

(e) Northern Ireland

JANET(UK) plans to hold a number of JANET training courses in Northern Ireland and has identified suitable venues.

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

NHS JANET Gateway Early Adopter Project

South Tees NHS Trust was the first in the NHS to use H.323 videoconferencing across the N3 JANET Gateway. It is one of four NHS Trusts in the CETL4HealthNE partnership that are due to use the service to enhance teaching and learning, particularly support for students and staff involved in undergraduate clinical placements at NHS sites. North Tees and Hartlepool NHS Trust are next and then user benefits can start to be seen.

The set-up and testing of the use of JVCS by an NHS Trust has been led by Geoff Constable of the Welsh Video Network (WVN) working with Direct Visual who supplied the Tandberg Expressway equipment procured by the CETL4HealthNE project. There has been a series of barriers to overcome but each one has been tackled in a collaborative effort with BT, which supplies N3 and manages the N3 JANET Gateway firewall, and the technical staff at South Tees.

Six communities are now early adopters of the N3 JANET Gateway with the University of York joining in July. York is leading work with the Department of Health in Improving Access to Psychological Therapies (IAPT). The University is providing an interactive database for the Primary Care Trusts. Responsive access is essential and will be even more important as IAPT is rolled out fully across the NHS in England.

Business Case for Resilient and Responsive N3 JANET Gateway in Future

JANET(UK) is working with NHS Connecting for Health on the business case for a jointly funded full N3 JANET Gateway service to follow on from the current early adopter. It is envisaged that this would take all network traffic between N3, which is the core network for the NHS in England and Scotland, and JANET. It will be resilient with an active and standby link. There are however a series of key dependencies to work through, such as finding an appropriate information governance model for sessions initiated in JANET. The Business Case is planned to be ready by the end of December.

NHS HE Forum

The next NHS-HE Forum is likely to be in early 2009. Following the retirement of Roland Rosner the Forum is to have a new Chair with an NHS background, Ted Woodhouse. Ted was a founder member of the Forum and has been involved in its planning. He was formerly Director of IT at Leeds Hospitals NHS Trust. It is also pleasing that Roland is going to keep some involvement during an interim period when the function and form of the Forum are reviewed in light of new developments such as the creation of Academic Health Science Centres and NHS Connecting for Health's Research Capability Programme.

(h) Research Councils

NERC's Airborne Research & Survey Facility at Kidlington is upgrading from 2Mbit/s to 10Mbit/s.

(h) Libraries, Museums and Archives

JANET connections to the Imperial War Museum are progressing with the connection to Duxford now in service, and connections to Salford and London due shortly. A visit to the Victoria & Albert Museum has resulted in a request for quotes for JANET connections. British Library sites have recently implemented HD videoconferencing services and are looking at how best to make use of the JANET Videoconferencing Service.

11. European Activities

(a) TF-Mobility

TF-Mobility has been re-chartered for a further two years, and location awareness (see 9.3.3 above) has been adopted as one of its core activities.

(b) TF-NGN

Nothing to report.

(c) TF-PR

TF-PR had a joint meeting with TF-MSP (Management of Service Portfolios) that explored and identified synergies for future collaborative work.

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

The Programme Committee for the TERENA Networking Conference 2009 has issued a Call for Papers exploring the theme "Virtuality into Reality".

The conference will be held from 8-11 June 2009 in Málaga in Spain, organised by TERENA and hosted by the University of Málaga and RedIRIS, the Spanish national academic and research network.

See more detailed information about the Call for Papers, topics and guidelines on the TNC 2009 website at:

<http://tnc2009.terena.org/contribute/>

(e) TERENA General Assembly

The next TERENA General Assembly will be held in Málaga, Spain in June.

(f) TERENA Compendium

The final copy of the TERENA Compendium 2008 is now available. Details are available from:

<http://www.terena.org/activities/compendium/>

(g) Mobility Group - JRA5

Nothing to report.

(h) QoS Project - Service Activity 3

Nothing to report.

(i) GEANT 2 - Service Activity 3

Nothing to report.

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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