



Quarterly Report to the Community

May – June 2009

Editorial

Several project calls are highlighted in this report's Development section: for the new Expert Group on Portal Design (9.1.1), for work on an improved graphical user interface for the national WAYF (9.1.2), for the next stage of the 802.1x Supplicant (9.2.1) and for case studies around the implementation of Network Access Control (9.3.6).

JANET is a national network but has never sought to impose itself on the nation. Everything that JANET is has been developed within a community of users and researchers. This report is aimed at that community, and it is through projects such as these that the community can truly be a part of JANET's development.

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 for this period.

2. Support Services (SLA J2.4)

(a) Documentation [[more information](#)]

Documents published between May-June 2009

Newsletters	JANET News 8
Factsheets	Investigating Copyright Complaints

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

Although JANET was well represented at other events during this quarter (see elsewhere in this report) there were no JANET-organised events to report on.

(c) Network User Groups

The South East JANET Regional User Group met on 13 May 2009. Katharine Iles from JANET(UK) gave a presentation on the EdLab service. Minutes of the meeting can be found at <http://www1.lsbu.ac.uk/SERJUG/>.

The SWERN User Group met on 13 May 2009. Details of the meeting can be found on the [SWERN web site](#).

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

The final Digital Britain Report was published in June. It proposes that peer-to-peer sharing of copyrighted material should be dealt with in the first instance by ISPs warning their customers, backed up by civil court action by rights-holders in more serious cases. A further consultation has been launched, to which JANET(UK) will be responding, to determine what powers should be granted to Ofcom to impose additional sanctions should these prove necessary. JANET already recommends that connected organisations warn users about whom complaints are made (we have recently published a [factsheet on dealing with copyright complaints](#)) and our experience is that this is generally effective in preventing repeat offending. We are contributing to the development of an Internet Society paper on legislative responses to sharing of copyright materials. We have also had informal discussions with ICANN (Internet Corporation for Assigned Names and Numbers) on its plans to prevent misuse of future top-level domain names.

As part of JANET's contribution to the GN3 project, work has been done on draft policies for agreements between AAI federations and on Terms of Use that could be applied to federation metadata when it is published outside a single federation. The policy work was presented and discussed at both TERENA's middleware task force (TF-EMC2) and federation policy group (REFEDs), and it appears that the same terms could be used for both bilateral agreements between federations and larger-scale confederations such as eduGAIN. Following a suggestion from the European Commission, work has begun on a high-level document on how incident response teams can work to protect privacy in accordance with European privacy law. Following a presentation to TERENA's CSIRT task force and discussions at the annual conference of FIRST (Forum of Incident Response and Security Teams), a number of individuals from incident response teams have expressed an interest in contributing to this. Work has also been done on privacy and regulatory issues around collaboration tools and video recording.

JANET's course on Managing IT Security was presented in London. Other meetings attended included representing JANET on the Internet Watch Foundation Funding Council and the National

Information Assurance Forum, and the TERENA Networking Conference 2009, where the Chief Regulatory Adviser chaired the programme committee.

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

- Calderdale College
- Central Sussex College
- Coleg Elidyr
- Craven College
- East Durham College
- Epping Forest College
- Gateway College
- Hartlepool College of Further Education
- Henshaws College
- Huddersfield New College
- London Borough of Brent
- New College Pontefract
- North East Surrey College of Technology
- North East Worcestershire College
- Palmer's College
- Pengwern College
- RNIB College Loughborough
- Scarborough Sixth Form College
- Seashell Trust
- Selby College
- Shipley College
- St Brendan's Sixth Form College
- Stratford-upon-Avon College
- Trafford Council
- Yorkshire Coast College of Further and Higher Education

Higher Education

- Coventry University
- University of Worcester

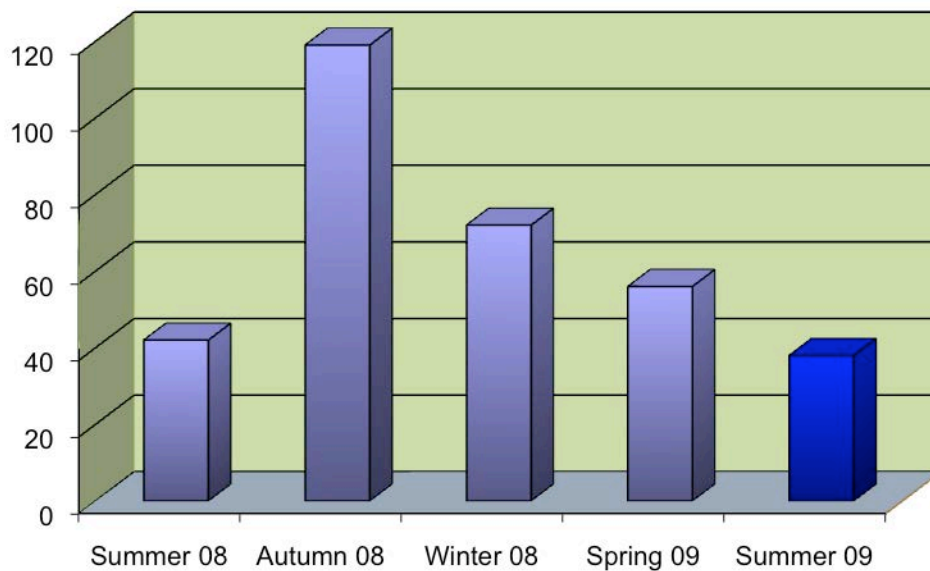
JISC

- Natural Environment Research Council
- Natural Environment Research Council – ARSF

Self-funded

- CableCom Networking Ltd x 2
- Defence Science and Technology Laboratory
- European Bioinformatics Institute
- Hampshire County Council x 2
- Oxfordshire County Council
- RGS Worcester & The Alice Ottley School
- Stockport Metropolitan Borough Council

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 308 colleges.

Wales

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

(c) Core Network

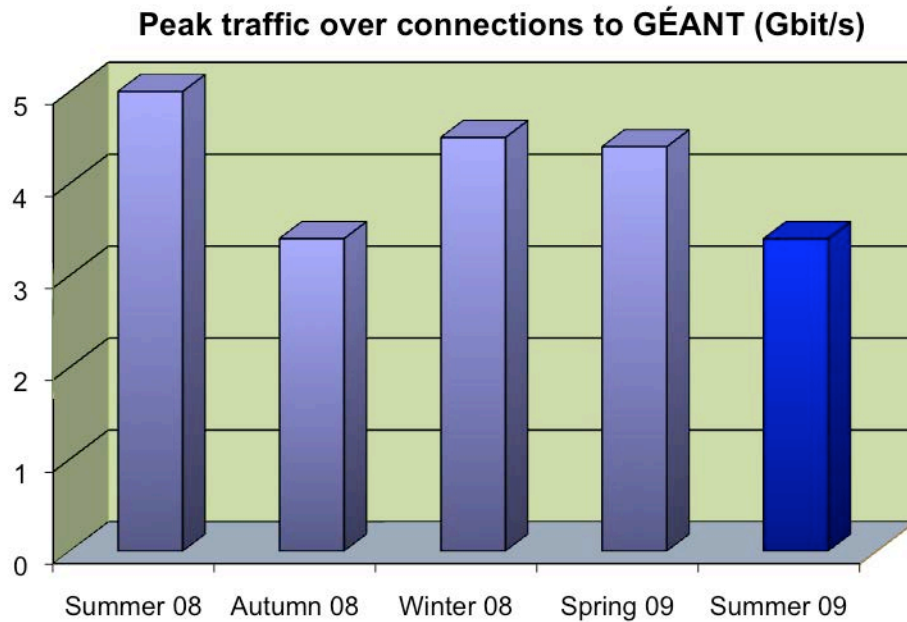
Following a JUNOS upgrade in April, some users at the end of April and in the first half of May saw their extra-JANET connectivity suffer while intra-JANET connectivity carried on. Investigation throughout May pin-pointed the vulnerability to a JUNOS 9.4 release where sudden floods of routing changes impact a particular piece of equipment that supports 40G interfaces on the core routers. A temporary fix was made by reverting to the previous JUNOS release while the router manufacturer fixes the bug in the new release. The core network has been stable since.

During July the access links for EastMAN, ClydeNET and NorMAN were upgraded from 2.5Gbit/s to 10Gbits. KentishMAN's access links are to be upgraded in the first half of August. Additional 10Gbit/s capacity has been provided to LMN, which should be brought into service shortly.

(d) External Network Access Provision and Transmission

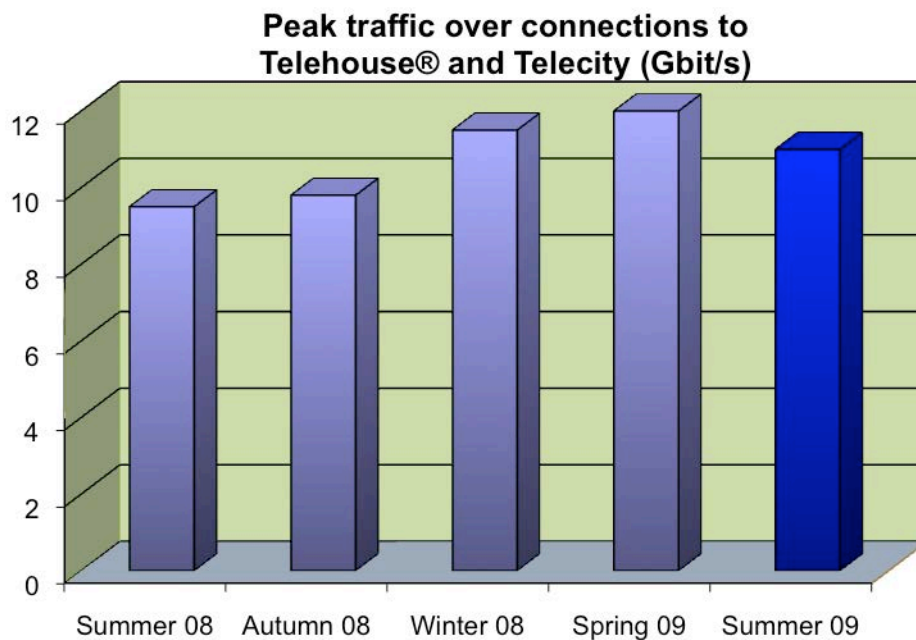
(i) Access to the European Research Network

JANET access to European NRENs is via a 10Gbit/s connection to GÉANT from the Telecity R-PoP with a 10Gbit/s backup connection from the Telehouse® R-PoP. Peak traffic over the connection is normally around 2.4Gbit/s; however, there were peaks at 3.4Gbit/s during this quarter.



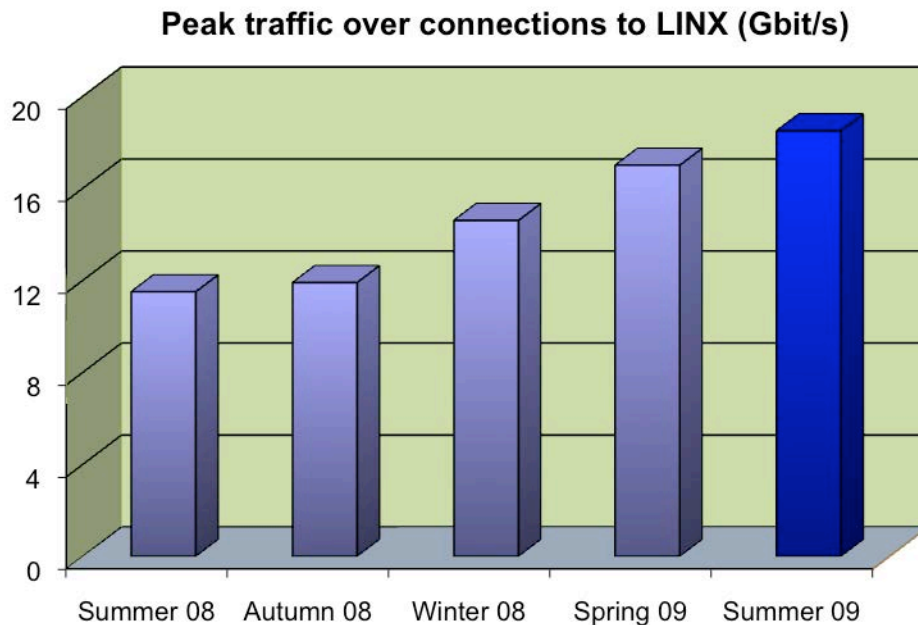
(ii) Access to the Global Internet

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 was about 11Gbit/s in May, reduced to half of that towards the end of July.



(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 public peering traffic peaked at 17.6 Gbit/s in May and aggregated private peering traffic reached around 18.5Gbit/s in the same month. The traffic reduced to half of May's load towards the end of July.



(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					
<u>Connection Point</u>	<u>AS No</u>	<u>ISP Name</u>	<u>Date of initial request by peer</u>	<u>Date all info received from peer</u>	<u>Date of accept/reject of peering agreement</u>
LINX	31458	Smart Telecom	07/05/2009	07/05/2009	07/05/2009
LINX	30740	Exa Networks	07/05/2009	07/05/2009	12/05/2009
LINX	15133	EdgeCast Networks	07/05/2009	12/05/2009	13/05/2009
MANAP	25376	22/05/2009	22/05/2009	28/05/2009	08/06/2009
LINX	4436	nLayer Communications	21/05/2009	N/A	28/05/2009
LINX	5580	Atrato IP	30/06/2009	07/07/2009	08/07/2009

		Networks			
LINX	AS6762	Telecom Italia Sparkle (Seabone)	15/05/2009	04/06/2009	08/06/2009

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 period there were a total of 13 planned maintenance sessions.

Major activities that took place included:

- Access links to NorMAN, ClydeNET and EaStMAN have been upgraded to 10Gbit/s.
- Processor upgrades to routers in EastNet at Chelmsford and Cambridge PoPs.
- New routers deployed at the JANET PoPs in Aberdeen, Dundee and Edinburgh.
- New routers deployed in the Docklands PoPs at Telecity & Telehouse.
- Router replacements at Reading and Oxford.
- Regrade of JunOS in some of the JANET core routers.
- IOS upgrades to a number of backbone access routers.

3.4 Network Status Information (SLA J3.4)

The phased rollout of the new Netsight system is nearing completion. Only two regional networks remain to be transitioned, EMMAN and NNW. Sixteen regional networks have now transitioned. There was a slow-down in transitioning at the end of the quarter while documentation was brought up-to-date and training sessions for RNOs completed.

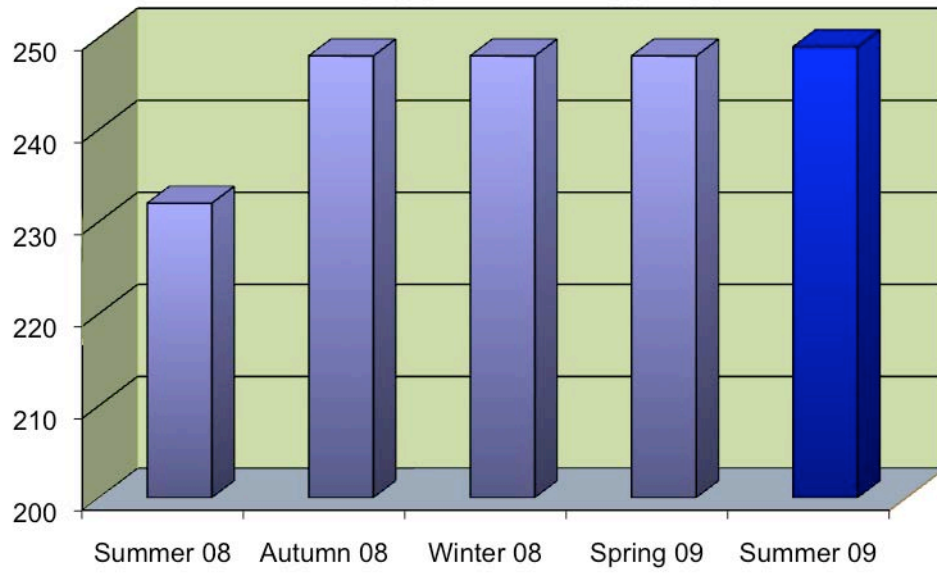
Eleven of the original Netsight systems are now out of service and are being decommissioned. The remaining systems will remain in service until their respective networks are transitioned to new Netsight. It is hoped the transition project will be complete by end 3Q09.

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..

3.5 Time Reference Service (SLA J3.5) [\[more information\]](#)

One more site registered to use the JANET NTP service during the reporting period. There are a total of 249 sites using the service. Overall, it is a stable and well-used service.

**Number of organisations using
the JANET NTP Service**

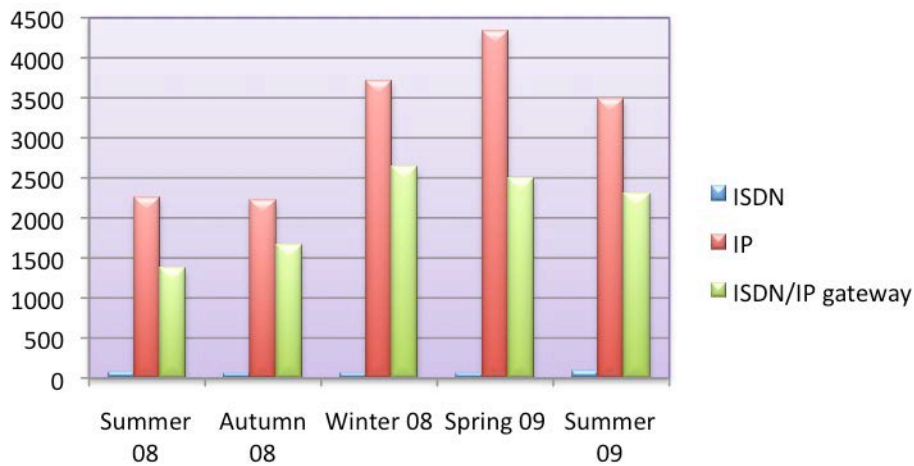


4 Application Services (SLA J4)

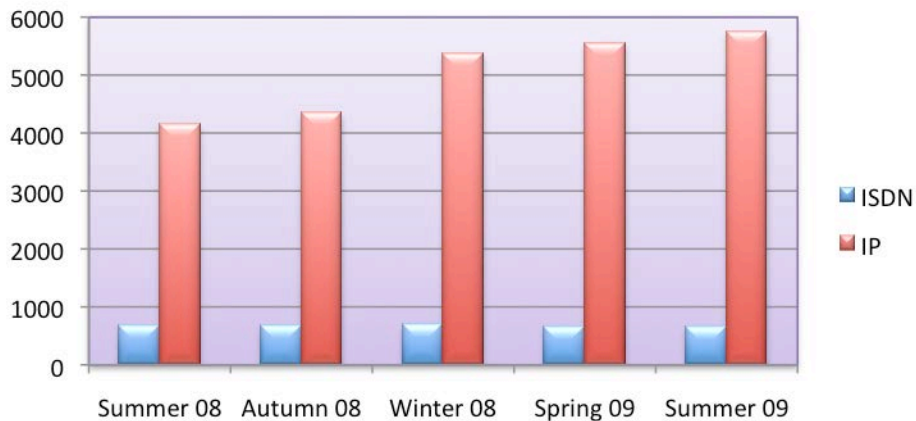
4.1 Videoconferencing Service (SLA J4.1) [\[more information\]](#)

The number of users of this service continues to grow steadily; currently 5751 of the registered venues are able to use the JANET Videoconferencing Service over IP (JVCS-IP) and 664 are able to use the service over ISDN (JVCS-ISDN). During the reporting period 86 conferences took place using ISDN only over 194 hours, 3488 conferences took place using IP over 3811 hours, and 1802 conferences took place using the IP/ISDN gateway over 2308 hours. The overall statistical trend indicates an increase in the use of videoconferencing, particularly IP videoconferencing.

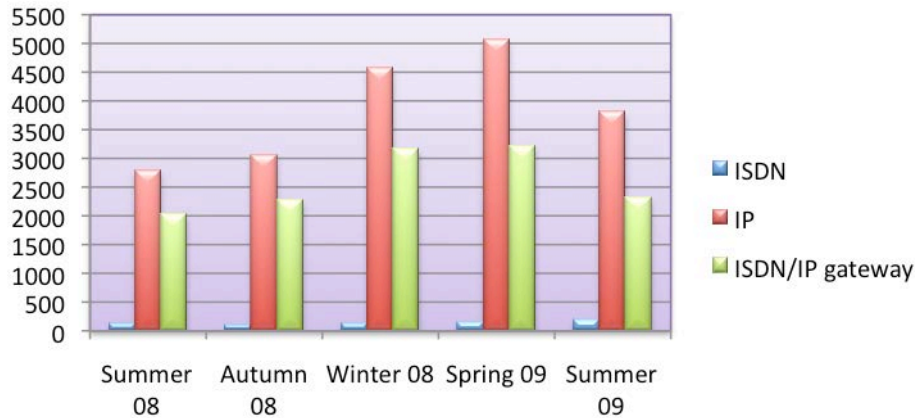
Number of videoconferences



Number of venues registered to use JVCS



Number of videoconferencing hours over IP and ISDN



JVCS ([more information](#))

Now that the new core equipment is in daily use, we can see that despite usage of the system being around 30% up on last year, peak concurrent usage is still only at 25% of capacity. It is becoming apparent that whilst the growth in number of new users is slowing, hours of use per endpoint is increasing, underlining how owners of this equipment are realising the benefits of their capital outlay, and the benefits of using the service.

The [JANET Videoconferencing Recording Service pilot](#) has now become part of the JVCS and the Booking Service is a standard offering to all users who sign up to the terms and conditions of use. Additional equipment has been purchased and installed to provide resilience to this element of the service.

Videoconference streaming is undergoing final testing prior to launch on the Booking Service, and another feature called ConferenceMe is also being trialled in parallel. By downloading and installing a small application from a link sent by the Booking Service, the ConferenceMe feature will give PC desktop users the option to connect to JVCS multipoint control units and join a conference via another link supplied by the Service. In addition to a browser and a connection to the internet, users will need only a simple webcam and headset (or microphone and speakers), and sessions can easily be made available to users in remote locations.

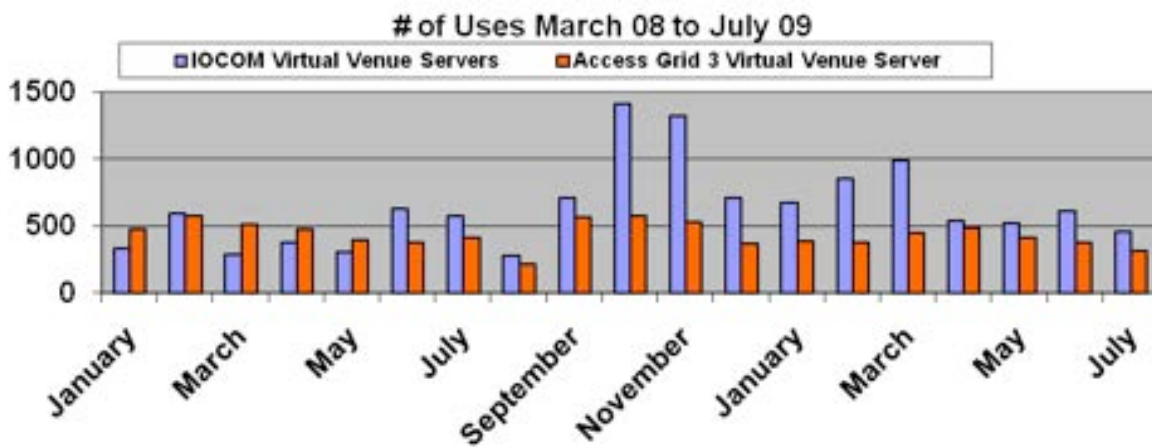
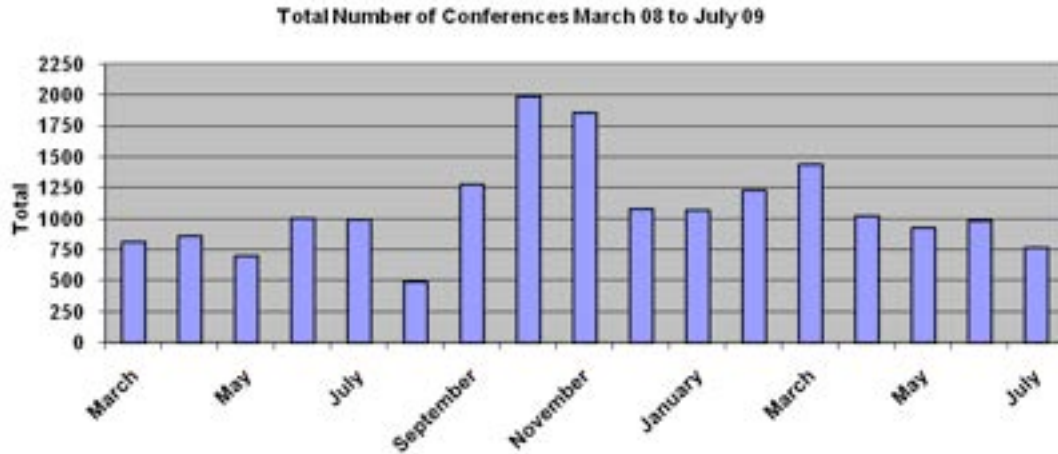
JANET Video Services see this as a breakthrough, allowing PC desktop users to participate in conferences via a simple, uncluttered interface providing high quality images and even allowing desktop sharing for collaboration at no additional cost for hardware or software.

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 education and research 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 373, including desktop nodes, and the number of users stands at 622. The AGSC are investigating how to trace server usage that they believe is higher than indicated but are currently unable to measure.



Booking Service

A project is currently underway to revise the Booking Service user interface. This should provide users with a better experience when using the site and ultimately make it easier to use.

AGSC Workshop

The next workshop will be in November 2009. Updates for this workshop will appear on in the Events section of the AGSC website. [Presentations from the workshop in April are available.](#)

Outreaches

The AGSC continue their outreach programme and have demonstrated Access Grid to colleges across the UK. A number of the colleges can see the practical application of AG and are currently working on possible implementation strategies.

It is anticipated the AGSC will hold monthly demonstrations of Access Grid technologies at Manchester University, beginning in the next few months. This will give interested organisations an opportunity to see the technologies in action with a view to better understanding their practical applications.

Documentation

There are now [20 useful documents on the AGSC website](#), which is constantly being updated. Suggestions from the AG community on what documentation should appear on the site may be submitted to the AGSC via telephone or email.

EVO (Enabling Virtual Organizations)

A helpful document on hardware requirements to use EVO is [now available from the EVO homepage](#). There are also a few Video Tutorials available including a useful Quick Start guide for beginners.

The EVO – Telephone Bridge is now live. This is a VoIP gateway which allows anyone with a telephone to dial into an EVO meeting. This may be helpful if users are experiencing hardware, software or networking issues and are unable to join a session by video. Alternatively, users may find this a convenient way to attend a meeting if they are away from their desk, e.g. at home.

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

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

The News Feed Service continues to function well. There are 24 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 organisations joined the News Reader Service during the reporting period. There are currently 80 sites connected to the Service.

4.4 Electronic Mail Services (SLA J4.4)

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

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

No more organisations 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)

The JANET(UK) web site continues to be a reliable and well-used resource.

4.6 Nameserver Services (SLA J4.6)

4.6.1 Second Level Domain Service (SLA J4.6.1)

DNS (Servers)

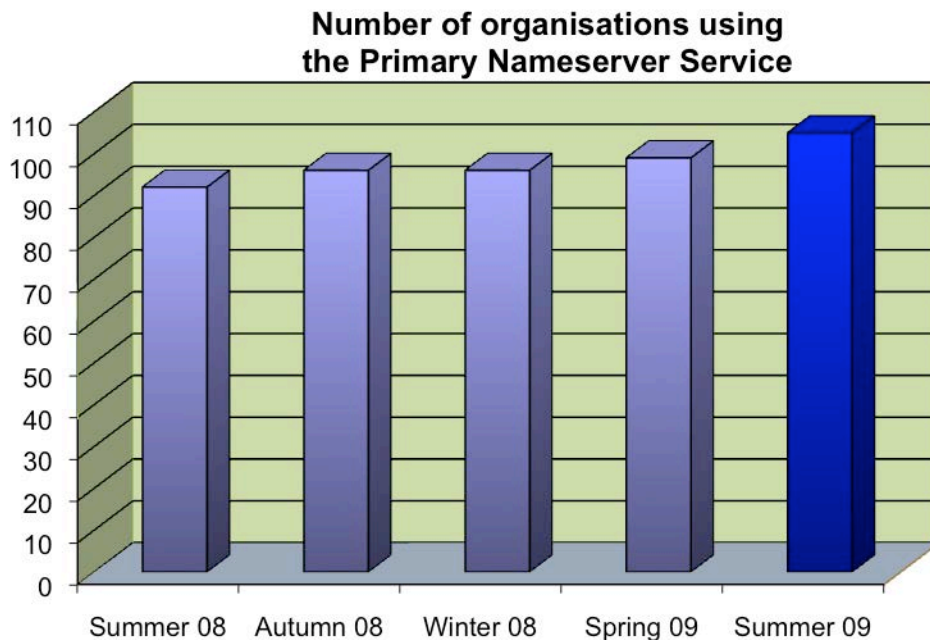
The JANET DNS service continued to run reliably with no problems encountered during this quarter.

DNS (Whois Service)

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

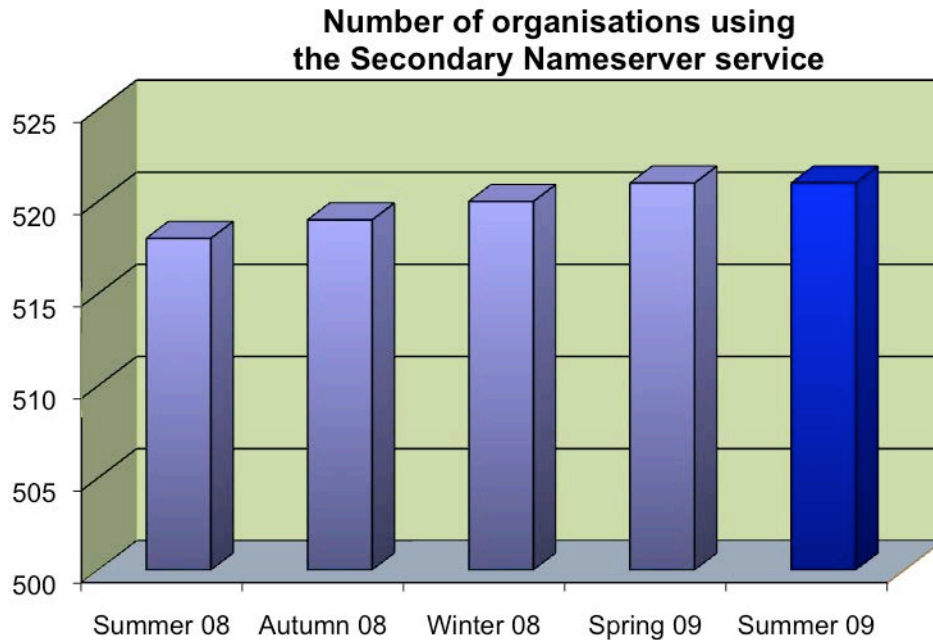
4.6.2 Primary Nameserver Service (SLA J4.6.2) [\[more information\]](#)

Six more organisations registered during the reporting period to use the JANET Primary Nameserver service. There are now a total of 105 users of the service.



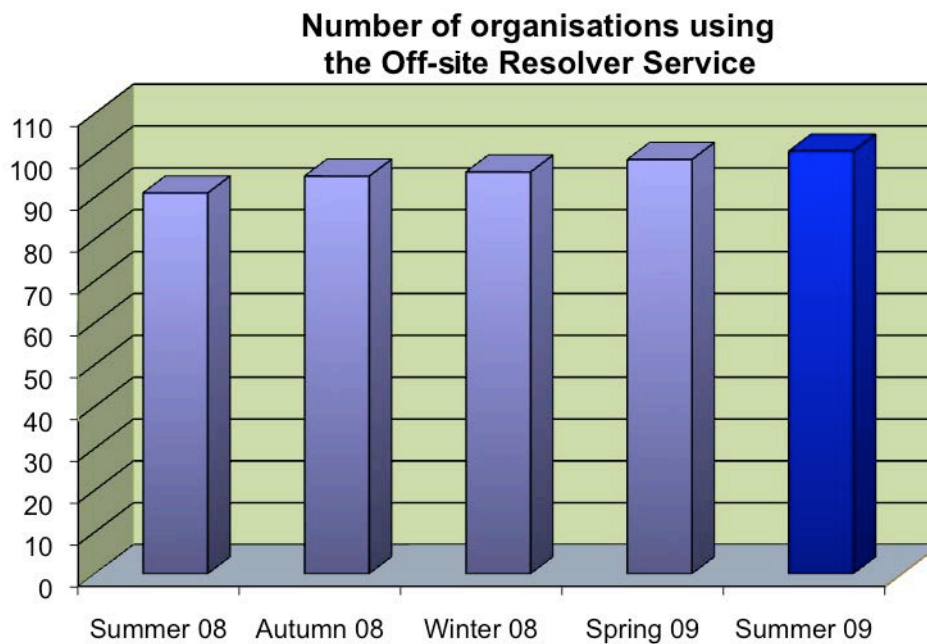
4.6.3 Secondary Nameserver Service (SLA J4.6.3) [\[more information\]](#)

There have been no breaks of service within this quarterly period. At the end of the period the number of organisations using this service is 521.



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

Two sites joined during the reporting period taking the total number of users up to 101.



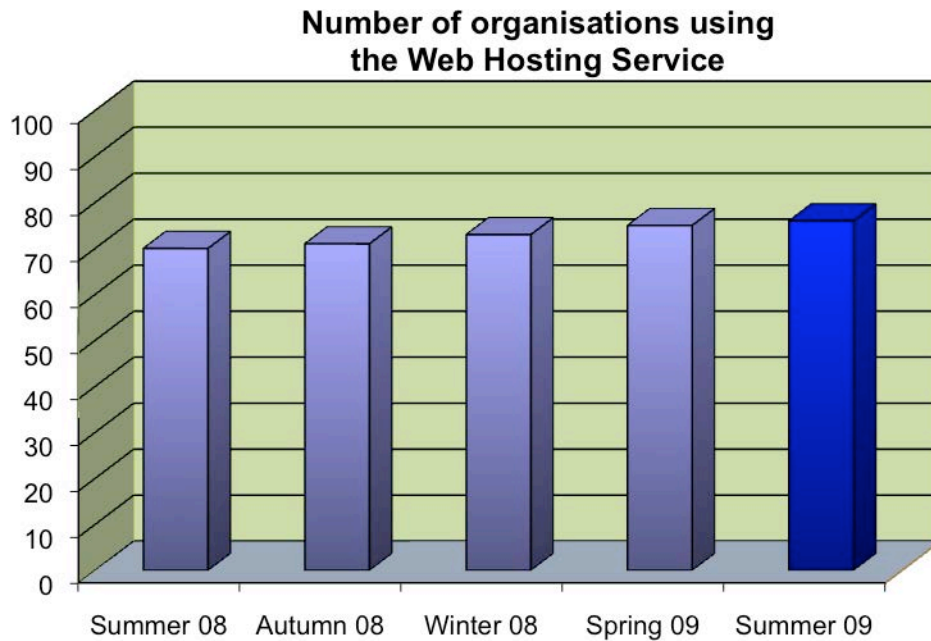
4.7 Managed Router Service (SLA J4.7) [[more information](#)]

Nothing to report.

4.8 Web-Based Services (SLA J4.8)

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

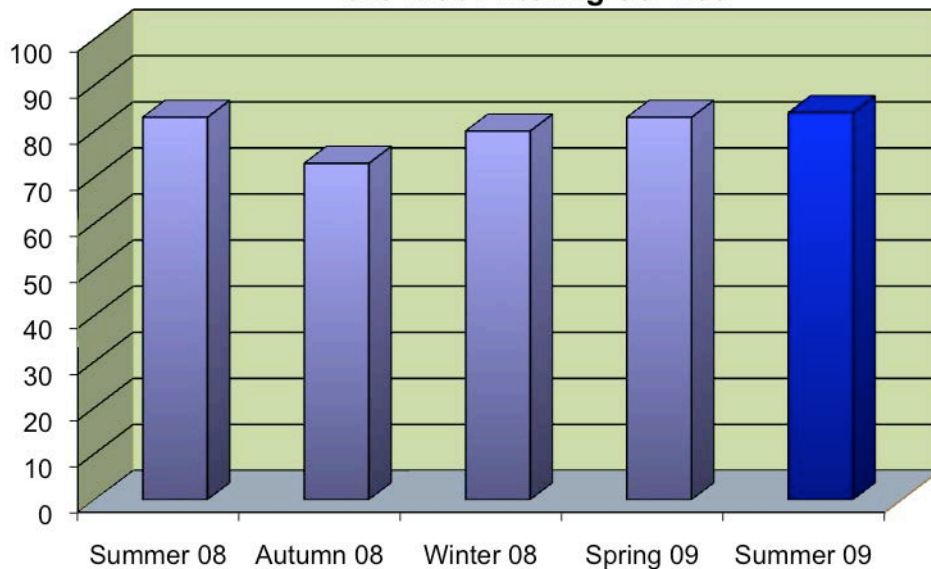
Three sites has joined the service during the reporting period, and two have left, bringing the total number of sites using the service to 76.



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

During the past reporting period 1 organisation joined the service. A few organisations have elected to have two filtering accounts. There are currently 84 individual organisations using the service.

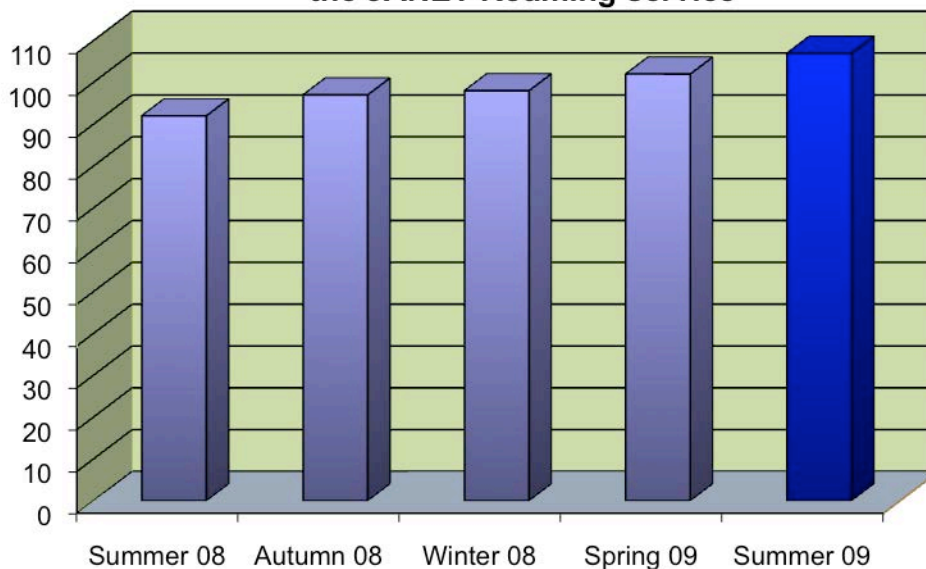
Number of organisations using the Web Filtering Service



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

Uptake continues to be promising, with the number of participating organisations now at 107 and increasing volumes of authentication traffic being seen.

Number of organisations using the JANET Roaming service

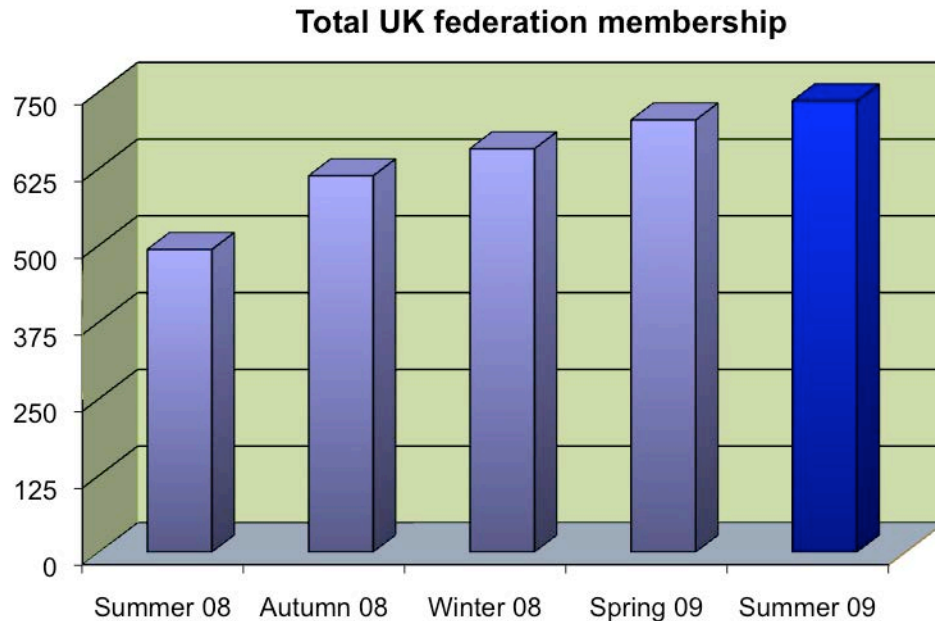


Key news this quarter is the introduction of the facility for participating organisations to register multiple sites on the JRS Support server and for the information they provide about the service offered on each site to be presented on the JANET Roaming web site location maps. Other areas of the JANET Roaming web site have also been updated.

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

4.10.1 Membership of the UK federation

At the end of July there were 735 members in the UK federation, made up of organisations from UK education sectors and of commercial organisations providing online services to these sectors.



4.10.2 UK federation Support, Training and Events

In the last quarter it was announced that support for version 1.3 of the Shibboleth Identity Provider software will end on 30 June 2010. Instructions for upgrading from 1.3 to version 2 are available at <http://www.ukfederation.org.uk/content/Documents/RollingIdPUpgrade>.

Three JANET-provided [training courses covering federated access management](#) are now available.

The federation has commissioned a number of case studies from different sectors and will be holding a [cross-sector event in London on 14 October 2009](#) at which many of these case studies will be presented.

5 Technology Advisory Services (SLA J5)

5.1 Bandwidth Management Advisory Service (BMAS) (SLA J5.1)

[\[more information\]](#)

Product evaluation and technology papers production is being considered.

5.2 Multi-site Connectivity Advisory Service (MCAS) (SLA J5.2)

[\[more information\]](#)

A number of enquiries for the service were received during the quarter, mainly on the topics of options for multiple campus site inter-connections, high bandwidth local links and the implications of college mergers. 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 document "[Introduction to Videoconferencing](#)" has been updated by the original author, Paul Down, and published on the VTAS website. This publication aims to achieve three objectives: to act as a basic introduction to videoconferencing for potential users; to explain some of the terminology that is peculiar to videoconferencing; and to supply links to other relevant information that should be useful to both beginners and more experienced users.

5.4 Voice Advisory Service (VAS) (SLA J5.4)

[\[more information\]](#)

This service received enquiries on the use of Skype, JANET Talk, and general information. Product evaluation and technology papers production is being considered.

5.5 Wireless Technology Advisory Service (WTAS) (SLA J5.5)

[\[more information\]](#)

Enquiries were received on the subjects of Microsoft's Wireless Zero Configuration Client and thin access point infrastructure. Product evaluation and technology papers production is being considered.

6. Training Services (SLA J.6)

The Training team continues to deliver a portfolio of courses across the country. Eighteen courses were run during this quarter which included the trial of our new JANET Roaming Fundamentals course. Bookings have dipped after our initial good start to the year, resulting in the cancellation of two courses: however, overall we are still up on delegate numbers from last year. Work on the 2010 schedule has begun and dates will be published as they become available.

The [JANET Training schedule](#) is available on the web site. Additional dates and courses are added when available.

Following the extensive work carried out during Networkshop Online, development on EdLab has centred around the creation of new subject area pages. This has been hampered in the latter part of the period due to staff absences. Work on this will start again soon, along with the development of new areas and facilities.

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

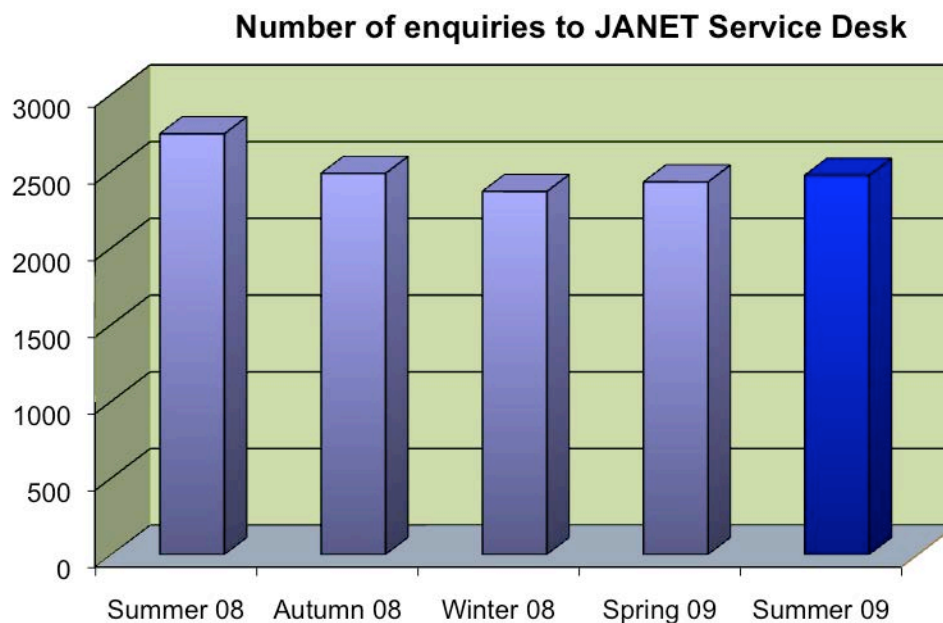
7. Administration Services (SLA J7)

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 enquiries received was 2472. 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, three 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](#).

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.

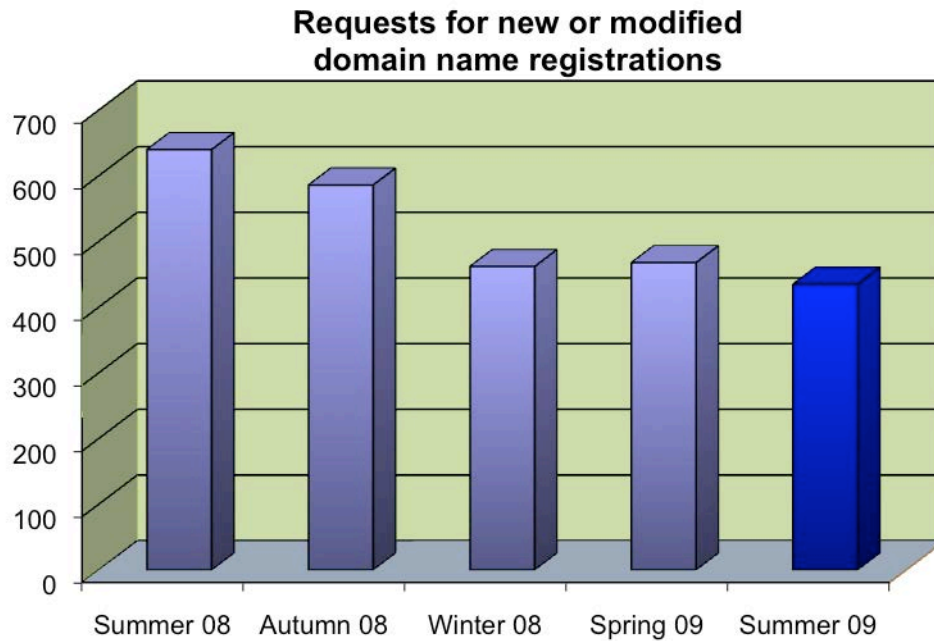
7.3 Licence Administration (SLA J7.3)

Over the past three months two new RNO Sponsored licences, three new Sponsored Connection Licences and two new Proxy Connection Licences have been issued.

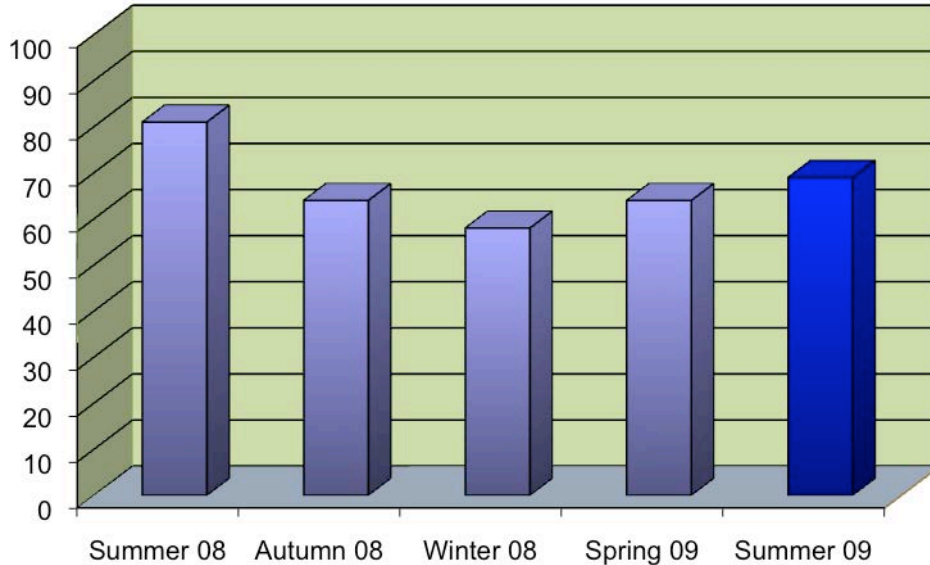
7.4 Domain Name Service Administration (SLA J7.4)

7.4.1 Domain Name Registration Service (SLA J7.4.1)

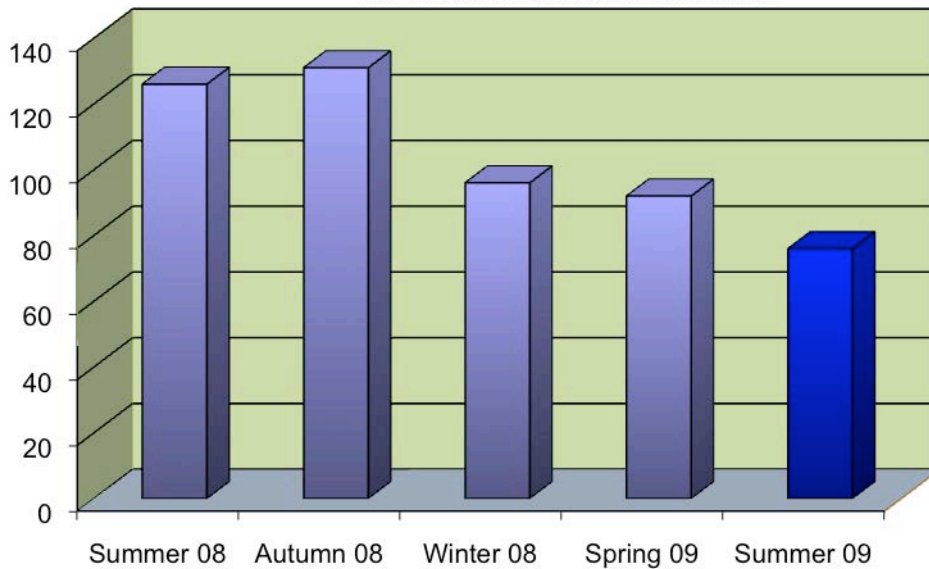
During the reporting period a total number of 435 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 69 per month, with an average of 76 modifications for each month.



**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 31 applications were received and completed.

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

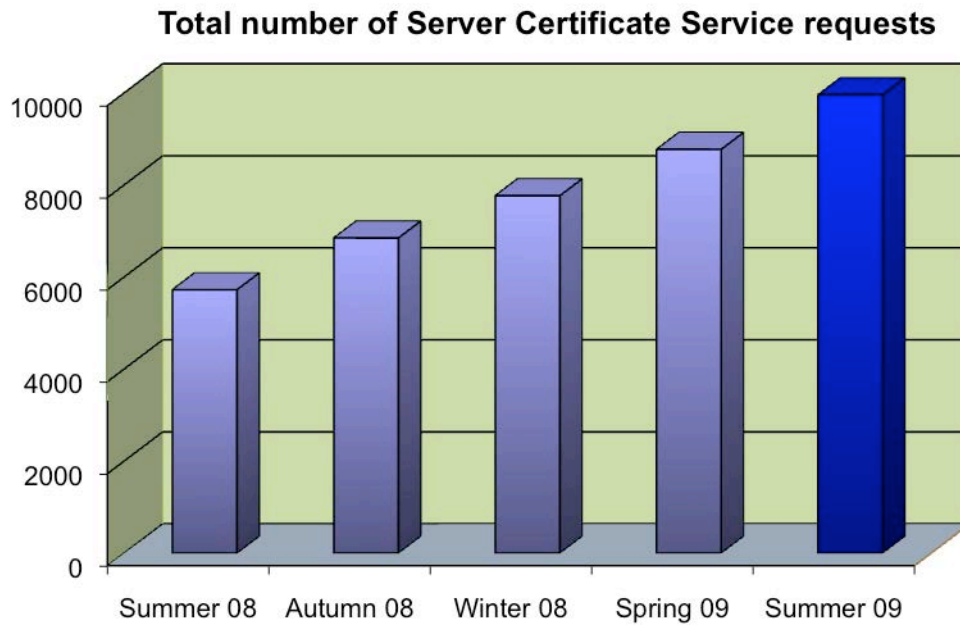
There were no new applications during this quarter.

7.7 JANET Lightpath (SLA 7.7)

Lightpath connections were delivered to the University of Edinburgh and the University of Durham.

Server Certificate Service

The number of processed Server Certificate requests increased by 1200 to 9960 in this quarter.



8. Security Services (SLA J8)

May

As in the previous quarter the Conficker worm infection continues to occupy CSIRT, with multiple new and re-infections happening throughout JANET. The last week of the month saw the re-emergence of a Trojan called Clampi that affects Windows operating systems. Complaints about copyright infringements continue at the same rate as previous months.

June

The primary activity for this quarter continues to be focused on the Conficker worm and copyright infringement complaints. The usual other unwanted activities remain in the background to varying levels, those being scanning for open and vulnerable ports, weak passwords and open accounts, and unsolicited bulk e-mail.

July

The majority of CSIRT work has once again been a result of infections of the Conficker worm. A degree of automated reporting of these infections has been instigated which has helped greatly with the workload. The number of infections reported to CSIRT has dropped over the last couple of weeks. This will primarily be due to the end of the academic year but there is hope that the improved reporting and awareness by system administrators have also been a factor. A sizable proportion of new infections have been transient systems such as VPN clients and visiting laptops which appears to indicate that the majority of centralized systems are now protected.

This month has also seen a large number of infections of the Clampi Trojan. This infection is used to load or 'drop' other malware onto the affected system and has been associated with the theft of banking details and passwords. Although nowhere near as prevalent as Conficker, it has the potential to present a greater risk to users.

Both of these infections are spotted by the traffic sent back to their botnet controller. Unfortunately CSIRT are still finding that many sites do not have sufficient logging in place to trace network activity back to a specific system. Sometimes logging is simply not present, but in other cases the logging is insufficient, proprietary, or cannot cope with the levels of network traffic present.

CSIRT have also been involved with some interesting phishing incidents where the software used by the phishers was itself insecure, allowing us to notify affected institutions if they had fallen victim to these attacks.

9. Development

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

This area is now reported on as part of 4.10.

9.1.1 Expert Group on Portal Design [[more information](#)]

The UK Access Management Federation for Education and Research uses the Security Assertion Mark-up Language (SAML) standard to establish whether a user is from a member organisation, and if they are entitled to access a protected online resource. The SAML standard can be used in many different ways, allowing the implementation of different types of federated communities.

At the moment users can identify the organisation to which they belong by using the national Where Are You From (WAYF) service, provided by JANET. However, there is the potential to improve the usability of this process by utilising a web based portal service, tailored to the users' particular educational requirements and location.

Project aims and objectives are:

- To identify and establish a team of experts who work within, or supply access management and/or portal services to, the education and research sectors.
- To utilise the knowledge and expertise of this group to consider best practice for federated access management, web-based portal services, and how best to address the challenge of authenticating users of online services.
- To provide guidelines and best practice documentation.

The call for participation in this project has been circulated.

9.1.2 WAYF Interface Development [[more information](#)]

The UK federation is currently promoting and supporting the implementation of federated access management within the UK schools sector. Discussions with representatives from Regional Broadband Consortia and Local Authorities have highlighted the need for an improved graphical user interface (GUI) design for the national WAYF (Where Are You From) to improve accessibility for users.

The aim of this project is to develop an improved graphical user interface for the national WAYF that addresses the accessibility needs of a wide remit of users. Careful consideration needs to be given to the accessibility requirements of all user groups needing to use the WAYF as part of the process of authenticating users of online services. Project objectives are:

- Provide a detailed specification for procurement of an improved user interface design
- Commission and implement design for the improvements to the user interface.

Consultants have been commissioned to assess the usability and accessibility of the existing service and report on their findings by the end of September 2009.

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

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

JANET will shortly be issuing a call for proposals for the next phase of the supplicant project. This will involve testing of the Linux and Vista ports, along with wider scale deployment.

Version 2.1.8 is now available with work in progress to fix any existing bugs and stabilise the supplicant for 2.2.0 stable release. All features for the 2.2.0 version will be included in the 2.1.8 release with no additional features to be added; this will also include an installer for x86 based Linux distributions.

The latest release of the installer has so far only been tested on the Ubuntu distribution: however this should also be compliant with other Linux distributions. The aim is to fix any existing bugs from x64 based distributions and release this code for the 2.1.9 version.

802.1X supplicant has been accepted into the Wi-Fi Alliance's Wi-Fi Protected Access (WPA) testbed.

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

This area is now reported on as part of 4.9.

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

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

Final deliverables from this project will be presented to the community in the first week of November at a Network Access event.

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

Following a mid-point review held in London, work remains on track for early completion of deliverables in Autumn 2009.

9.3.3 Location Aware Wireless Infrastructure

Final deliverables from this project will be presented to the community in the first week of November at a Network Access event.

9.3.4 Portable WLAN

Contracts are now in place and initial work is proceeding. Preliminary findings will be reported at the November Network Access event.

9.3.5 Mobile Broadband

This new work area will initially involve developing JANET's knowledge of community demand, use cases, and market capability with respect to delivering mobile network access off-campus.

Technologies to be addressed will include commercial WiFi hotspots, 3G data telephony and WiMAX.

9.3.6 Network Access Control

A call for case studies around the implementation of NAC (network access control) using off-the-shelf implementations has been prepared for launch in August.

9.4 Network Engineering

9.4.1 IPv6

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

9.5 Voice [[more information](#)]

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

The trial ended on 29 May 2009. Although initially set up to run August 2008 to August 2009, in the light of the feedback received and the lack of usage of the equipment it was relevant to end the trial early, in order to re-purpose the equipment used to host the trial.

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

The Voice Advisory Group was established over four years ago. During this time a number of meetings were held, promoting healthy discussion in all things Voice, ultimately leading to the conception and creation of various technical documents and paving the way for the JANET Talk trial.

With over a year since the last meeting, it has been decided that the time has come to close the Voice Advisory Group. For voice related queries, the JANET Voice Advisory Service is still in place: however due to a general shift to online collaboration environments, there is no perceived need to maintain a focus group devoted to voice at this time.

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(UK) Internet and Broadcast Media Strategy. The strategy focuses on both the technical and copyright issues associated with all video applications available on the network. The JANET(UK) Internet and Broadcast Media Strategy will be available in due course to read on the JANET website.

9.6.2 Content Providers

Work continues with a number of content providers including JISC, IET, INUK and SUB TV. Activities in this area are focused on understanding how these and other services and resources may be suitable for deployment in the JANET environment.

9.6.3 Ultra High Definition [\[more information\]](#)

Video technology has progressed in recent years with high definition becoming an international standard. The next stage, ultra high definition video and audio technology, has begun to be used within the broadcast and research industries worldwide. A number of UK educational and research institutions have begun to explore this new technology, and we are currently investigating the role that this may play within the JANET community. As a result, JANET has created the Ultra High Definition Special Interest Group, which will help shape a programme of work in this area. The first meeting, to be held in August 2009, will investigate the requirements of the JANET community and explore how the technology and equipment may work over JANET.

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

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

See section 3.4.

9.7.2 Flow Monitoring

JANET(UK) is looking to replace the existing flow monitoring system with a new system that provides additional features and functionality. Following various supplier meetings, JANET(UK) is carrying out the second of three commercial product evaluations. It is hoped that the evaluations will give us greater understanding of the state of the NetFlow product market and help inform our requirements capture.

9.7.3 Schools

As the rollout of the JANET Netsight nears completion, JANET(UK) and Becta have reopened dialogue on their joint pilot project to define the requirements for gathering network measurement information from schools networks. Becta's requirements have changed over the last 12-18 months, and discussions are now centred on how Becta can make use of existing JANET network performance data and how best to highlight the benefits of JANET connectivity.

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

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

The core infrastructure for JANET Aurora has been extended to connect Aston University and the University of Southampton. The dark fibre extensions were undertaken by JANET(UK)'s contractor for this project, ntl:Telewest. Work is currently progressing to install the remote management infrastructure.

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

This area is now reported on as part of 7.7.

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

9.9.1 Technology Tracking

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

The Ethernet Expo 2009 event took place in May 2009 in London and was attended by JANET(UK). The Ethernet Expo is one of the main annual events dedicated to the emerging area of Carrier Ethernet. The event was well attended with more than 400 attendees present from various network service providers, vendors and corporate users. The main topic areas covered during the event were MPLS TP and PBB-TE. Case studies on service deployment using these technologies and a market overview were also provided.

A document "[Lightpath Extensions through Regional Networks](#)" was written and published on the JANET website in July 2009. This document addresses the main technical and organisational issues faced when extending the JANET Lightpath core channels through the regional networks. An evaluation of various Carrier Ethernet technologies such as PBB/PBB-TE and Ethernet over MPLS is also provided.

9.9.2 Carrier Ethernet [[more information](#)]

Following a call to the JANET community, four organisations were selected to carry out practical and theoretical trials on Carrier Ethernet technologies. These participant organisations attended a project launch meeting in June 2009. Draft contracts have now been issued and agreements made for the purchase of local infrastructure for use in the trials. Procurement of equipment for the JANET-wide core test bed has been slightly delayed but should be in place during the last quarter of 2009.

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

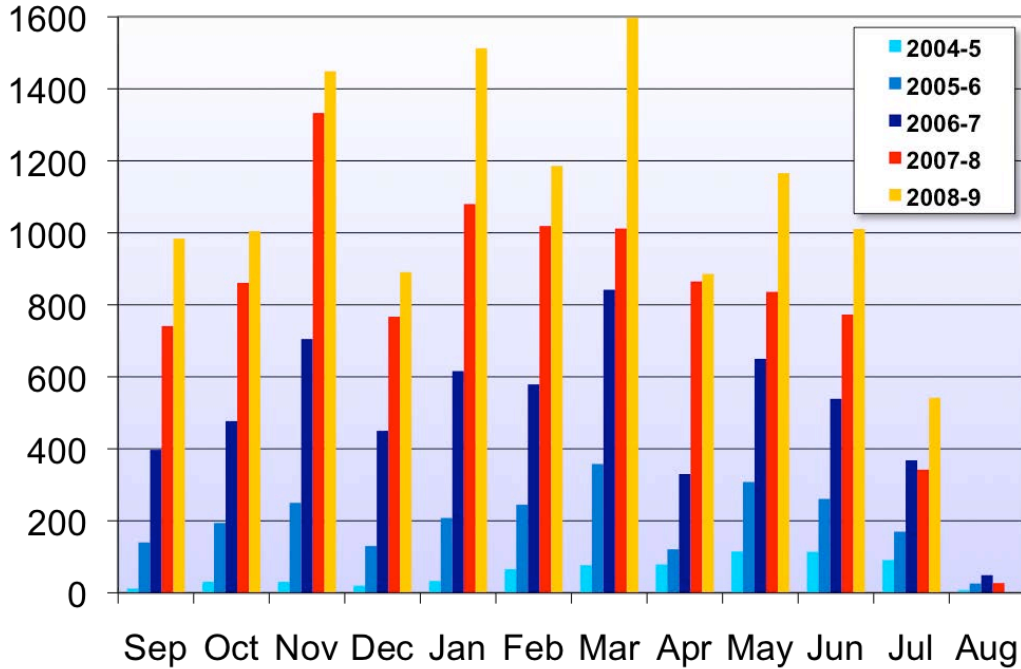
9.10.1 Content Access

Membership of the UK federation has increased substantially within the Schools sector, where secure access is fast becoming established as a necessity. The CAS (Content Access Service) continues to provide UK schools with access to licensed online educational content that is authenticated via IP address, such as Audio Network and the National Archives Learning Curve. The JANET Technical Advisory Group maintains, manages and supports the Content Access Registry. 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 on the Film Education NEN Pilot, and with North West Learning Grid on hosting the National Digital Resource Bank (NDRB). The team has also continued to work closely with Beta on a National Digital Learning Resource Strategy.

9.10.2 Videoconferencing

The take-up of videoconferencing by schools continues to grow. By the end of July 2009 the total number of schools sector endpoints registered with JVCS was almost 4000 (as compared with just over 3300 at the end of July 2008). Over 3900 videoconferences were undertaken this quarter (as compared with almost 3700 in the previous quarter), approximately half with national content providers. Over 75% of the conferences continue to be for teaching, tutorials and related educational activities; other purposes include administrative meetings, system testing and quality assurance. The growth in schools videoconferences, managed by JVCS throughout the last five years, is illustrated below.



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.

(b) Specialist Colleges

Whitegates College, which currently has a 256K connection due to historical reasons, is eligible for an upgrade but waiting on funding approval. Strathmore College is investigating options for upgrading to a Primary link and additional JANET connectivity for four other campuses.

(c) PCDL (Personal and Community Development Learning)

JISC Regional Support Centres held a series of e-fairs during July and JANET(UK) had a presence at each one. The range of speakers, workshops, presentations and other activities covered many aspects of using technology to deliver teaching and learning. Russell Prue and Lee LeFever provided an interactive session live from the US at the North West Event. Many of the presentations were recorded and are available for download or watching on the RSC web sites.

Attendance at the North West event was over 270 and delegates at each event came from FE, Adult Learning, Local Authorities, work-based learning and Specialist Colleges. The presence of each of the JISC services provided a chance for delegates to discover the richness of resources now available. Other exhibitors included East Midlands MAN focusing on the JISC funded Security Service offering and PageOne covering the JANET txt service.

(d) Scotland

JANET(UK) continues to liaise with LTS and its supplier, Thus, to enable a smooth transition to the new SSDN network, and was represented at the JISC Services Awareness event held at the Glasgow Science Centre in June. This meeting was addressed by Guy Lambert, newly appointed Managing Director of the JISC Services Company.

JANET(UK) attended regular meetings with the SFC and the RSCs in Scotland to raise awareness of JANET services.

(e) Northern Ireland

JANET(UK) has met with C2K in Northern Ireland to raise awareness of JANET services and the schools sector in the UK.

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

The business case for a jointly funded full N3 JANET Gateway service to follow on from the current early adopter is awaiting formal sign-off by Connecting for Health. In the meantime Leeds University has become a new user of the early adopter N3 JANET Gateway to help improve access from N3 to the National Institute of Health Research (NIHR) website, which they host on behalf of NIHR.

(g) Research Councils

Confirmation has been received that NERC's CEH Dorset site will close but NERC is looking at options (in conjunction with LENSE) for the Freshwater Biological Association to retain a JANET connection on site. Plymouth Marine Laboratory, which currently has a Sponsored connection to JANET, is looking at obtaining a Primary through the Research Council or self funded route.

(h) Other Organisations

Local Authorities proceeding with a JANET connection during the period are Eastbourne Council and Royal Borough of Windsor & Maidenhead. Enquiries are in progress for Blackpool, Doncaster, Peterborough, Hertfordshire Local Authorities. In the Museums sector, enquiries are being progressed for the RAF Museums, Museum of London and Kew Gardens.

11. European Activities

(a) TF-Mobility

The next TF-Mobility meeting will be held in Rome, where various aspects of JANET's strategic programme will be reported upon.

(b) TF-NGN

Nothing to report.

(c) TF-PR & TF-MSP

The TERENA-MSP (Management of Service Portfolios) and TERENA-PR groups had a joint meeting prior to the TERENA Networking conference in Malaga. The TERENA-PR group discussed new terms of reference, to be submitted to TERENA for approval.

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

The conference was 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. Delegates were able to attend a sessions on a variety of topics. All the sessions were streamed and can be found at: <http://tnc2009.terena.org/media/archive.php>.

(e) TERENA General Assembly

The TERENA General Assembly was held in Málaga, Spain on 11 and 12 June. The meeting heard reports from the Technical Advisory Group and the Technical Committee.

(f) TERENA Compendium

The 2009 compendium questionnaire has been distributed to the NRENs and responses were due back at the end of July.

(g) Mobility Group - JRA5

This group was terminated in February 2009 with the conclusion of the GEANT3 project.

(h) QoS Project - Service Activity 3

Nothing to report.

(i) GEANT 3 – Service Activity 3 Leadership

The GN3 SA3 and JRA3 activities held a joint Kick-Off meeting at the end of May to mark the start of their work, and to initiate planning of their respective tasks.

The eduPKI task began a sequence of interviews with the NREN-operated Certificate Authorities to establish their policies and capabilities, and also with the GN3 services to establish their requirements for PKI. In parallel, the eduPKI Policy Management Authority was established,

satisfying the milestone of the project. The eduPKI task also completed its task-plan for the first year of the project.

The eduroam task continued the operation of this service. Three new NRENs signed the eduroam policy, bringing the total number of participating NRENs to 37. The process of refreshing the eduroam policy was initiated by issuing a call for any desired policy alterations to the eduroam community. The eduroam service was successfully deployed at the TERENA Networking Conference in Malaga, where it was even made available within the buses running between the city centre and the conference venue.

The eduGAIN task began work on defining the service's Business Case, Service Description and Service Definition. Significant progress has been made in developing the task-plan for the first year. It is expected that this will be finalised soon, allowing this task to proceed with the development of the necessary technical infrastructure shortly thereafter.

(j) GEANT 3 - JRA1 Task 1 "Carrier Class Transport Network Technologies"

JANET(UK) participated in the JRA1 kick-off meeting in Copenhagen on 16 June 2009. The aim of this meeting was to introduce the participants and exchange details on their experiences and plans in the area of emerging Carrier Class transport technologies, such as PBB-TE, MPLS-TP etc. The main objectives of JRA1 Task 1 was also discussed in detail.

JANET(UK) also participated in the first videoconference meeting of JRA1 Task 1 on 22 July 2009. The main discussion related to the first deliverable of Task 1 which is due by 21 October 2009; it was agreed that JANET(UK) would be an owner of the PBB-TE and General QoS sections within this document.

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.

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