LeNSE Report

The LeNSE core/HEI network continues to operate exceptionally well with no loss of service despite the various scheduled LeNSE (and un-scheduled JANET) SJ5 resilience tests/incidents. However, we continue to experience the occassional failure of individual FEI BT WES/E3 circuits, with at least one per month taking over 24 hours to fix, normally as a result of poor BT fault finding procedures or engineering work coordination. We will (again) seek an explanation from BT via our supplier (Synetrix) why these long incidents occur but, of course, do not anticipate a meaningful response. (It would be more helpful if we had access to a senior contact inside BT, independent of our supplier, who we could call during such incidents to help expedite more timely responses from the engineers on the ground - but BT don't appear to work this way).

We have recently conducted our annual external threat assessment (penetration test) on all our customer public IP address ranges, and will be sending out the individual results. Co-incidentally, we suffered a DOS attack last Thursday (19th June) which interfered with the JANET service to a number of FE sites over several hours.

We are progressing well with the large number FE 100Mbps connection upgrades, which started this month but will no doubt run through over the next few months depending on LeNSE, college and JANET(UK) staff resources. We are also nearing the completion of the creation of three new PoPs in the far East, West and South of our region which will help us deliver cheaper higher speed circuits to a number of distant FE/other organisations.

The other main issue for us to focus on now is to complete our preparations for the new JPA contract, and in particular the implications of the new JDT requirements, by the end of September.

Mike Byrne

AbMAN Report

Once again a short report: we have finally got IPv6 multicast working on the AbMAN Cisco 7600s. Michael Forrest, University of Aberdeen, gave a case study at the recent JANET(UK) IPv6 event. We have been improving the FE connectivity and have ordered Steathwatch for traffic profiling using netflow from the AbMAN core and institute routers. We are in the process of applying to use the RNEP inter-core for the backup AbMAN inter-core. The recent JANET(UK) Review raised no significant issues.

John Linn

LMN

Progress on LMN3 Procurement

LMN continues to install LMN3 with around 95% of new circuits (1Gbps and 100Mbps
primary with resilience connections) now delivered to our HEs.

LMN has produced a framework agreement with JANET(UK) which other RNOs and broadband consortia can call-off if they choose. The framework includes the following options:

1. Network Maintenance only
2. Management and operation only
3. Both 1. and 2.

The framework has been produced to meet all the requirements of the new JPA. The selected suppliers are Logicalis, Synetrix and Thus.

LMN continues to procure our Operation, Management and Maintenance contract and we are currently running a mini-competition under the framework.

LMN is currently organising the FE upgrade programme. Eighteen FEs in our region are upgrading from 10 to 100Mbps and we are performing the upgrades in three tranches to ensure delivery expectations are met.

Business Development Activities

1. Timetable of events

Wednesday 15th October 2008
Archiving Compliance and Procurement

Thursday 27th November 2008
Media on Demand

Wednesday 10th December 2008
IT Directors Forum

Wednesday 28th January 2009
Training opportunities

2. New Services

2.1 Transit of JANET to halls of residence managed service

LMN has now closed a deal with keycom/Catalyst Ltd to deliver managed student internet services to halls of residence. The first circuit is on order for the Harrow Halls of residence for University of Westminster.

2.2   Disposal of IT equipment to meet WEEE directive

LMN secured highly discounted service for secure and green disposal of IT equipment with eol IT services that:

- Complies with WEEE directive legislation-Provides fully integrated managed 27x4 service
-Offers savings of around 20% for LMN members via the unique LMN business model
- Eliminates concerns surrounding data security by using state of the art software (Blancco) to ensure complete eradication of data.

2.3 ISP Connectivity

LMN has chosen Verizon to provide JANET-independent internet services.
LMN will offer 35% discount on ISP connectivity for the LMN community institutions.

2.4 Cisco Certified Training

LMN is offering our member up to 80% discount on the following Cisco training to our members:
ICND1
ICND2
BSCI
BGP

We are using the world wide company Fast Lane.

Pete White

YHMAN Report

Operations

YHMAN core/backbone network
Since the last UKMANs there have been no faults on the core network, though there have been minor scheduled interruptions to service associated with the resilient CPoP project, see below.

Core equipment maintenance contract
Following an EU procurement, NTL/Telewest took over the contract for the maintenance of YHMAN core equipment (Cisco 6509, 4507R and ADVA FSP2000) on 1st April. This has resulted in a reduction in the cost of maintaining this equipment. Quarterly service review meetings with the new supplier have been initiated.

Access boundary/edge router maintenance
YHMAN has contracted BTi-Net to maintain 'boundary access routers' that are not JANET (UK) owned and maintained under the YHMAN-JANET Managed Router Service. This contract is the same as the contract that JANET UK) has with BTi-Net for the FE routers.

RPAN review meeting
The biannual RPAN service review meeting took place, via a telephone conference, on 7th May. JANET UK) expressed satisfaction with the service offered by YHMAN Ltd and asked for thanks to be passed on to those concerned.

Projects

Core Network PoP Resilience
On 8th April the last of the seven (Bradford, Huddersfield, Hull, Leeds, Leeds Met, Sheffield and Sheffield Hallam) second PoP sites was commissioned. Universities and colleges are now able to connection via one or two local physically separate PoP sites for service protection/resilience. The universities are working with YHMAN Operations to implement mechanisms to use these additional connections in a fully automated manner using BGP. In the mean time YHMAN Operations are progressing manual fail-over procedures with the universities.

Protecting the 2nd Wavelength connection from RNEP1 Leeds) to Sheffield University
To support Sheffield University's participation in LHC/GridPP research, in September 2007 the link from Leeds (RNEP1) to Sheffield University was upgraded from 1Gbps (plus 1G resilience) over one wavelength to 2Gbps (plus 1G resilience) over two wavelengths. At that time this additional wavelength bandwidth was not protected (resilience was not provided for the extra bandwidth via Sheffield Hallam and Leeds Met (RNEP2)). On 3rd June 2008 the equipment to provide this protection was installed and it is planned to commission this equipment to provide this resilience on 10th June.

National Science Learning Centre for Schools
This project, which involved connecting three national servers, one at York and two at Sheffield Hallam has been completed and NLSC has moved from YHMAN sponsorship to JANET nominated (primary) connection status. This project is now closed.

SYCoNET
The replacement South Yorkshire Colleges sub-region network providing a resilient ring with connections points (PoPs) in Barnsley, Doncaster, Rotherham and Sheffield is being progressed by the service provider ntl: Telewest. Until recently this project was progressing well; however recent issues mean that the project end date has slipped from the end of July to the end of August.

FE & 6th Form College upgrades
100Mbps upgrades are in progress with JANET (UK).

YHMAN (Bradford2) PoP move
Bradford University need to move all YHMAN equipment at the PoP2 site to a new location. Bradford hope to have the new location ready in Q3 or Q4 2008.   All FE connections will be moved to the second YHMAN (Bradford1) PoP. The YHMAN core equipment will not be moved until after Bradford has successfully connected to the second CPoP.   YOT are planning for this work to be complete by the end of 2008, or if the room is delayed Q1/09.

YHMAN core technology refresh
A project has been initiated to review current core Cisco and ADVA equipment and determine whether it is suitable to meet current and future YHMAN/JANET (UK) requirements, e.g development of future IPv4 and IPv6 resilience and multicasting, for the next three to five years.

Risk register
The biannual review of the technical and business risk register took place in May. Because of the introduction of the second PoPs several sections of the register have been reviewed in some detail.

Shared Data Centre Services
YHMAN is exploring a regional collaborative data centre service with HEFCE.

Out-of-Hours Helpdesk
Following the survey of YHMAN joint venture universities, Huddersfield, Leeds Metropolitan and Sheffield Hallam universities are progressing OOH student and staff support with the NorMAN/Northumbria helpdesk for 08/09.

On-Call JPA arrangements
YHMAN is conducting a mini-competition exercise under the JANET/LMN Framework Agreement.

Ed Carter, June 2008

ClydeNET

Have commissioned the new 100Mbps links to our non-metro sites.
After extensive discussions with Thus, we have identified a cost effective solution that will allow us to remove a "mini-PoP" about 80 miles away that currently serves 2 colleges. Now awaiting delivery of upgraded circuits.

New edge site routers commissioned at all sites apart from the two supported by the mini-PoP.

We have also commissioned a new OOB service at edge sites based on ADSL lines from BT, not all of which have gone in smoothly! Aim is also to provide a limited element of last mile resilience.

College relocations - 1 completed in March, two scheduled over the summer and have started to get involved in two planned for next year.

JPA signed are we are now preparing for our new obligations.
Our solicitors have drafted an amendment to our consortium agreement which is currently going round all members for signature.

Linda McCormick

Kent MAN Ltd

A new support arrangement has been agreed with Canterbury Christ Church University for provision of the Network Operations Centre for the Kentish MAN and Support Services for Kent MAN Ltd. Tenders were invited from the members of the company. Two members expressed an interest in bidding but one withdrew before the closing date. We are grateful to Kit Powell who acted as a consultant in our drafting of the tender and review of the bid. The new arrangement will come into force from 1st October 2008, to coincide with the start of the JPA contract.

As a result of the review and the prior resignation of the Business Administrator, a new post of Business Manager has been created and recruitment will begin in the near future.

The University College for the Creative Arts at Canterbury, Epsom, Farnham, Maidstone and Rochester (to give it its full name!) withdrew from the company in February 2008. It has established its own network to link the five campuses (via a third party) and has a nominated connection to the Kentish MAN via Maidstone.

A series of equipment moves at the University of Kent, Canterbury Campus, including the RNEP, have taken place successfully. The equipment had to be decanted from the machine room while it was refurbished. As the RNEP move was undertaken during "normal hours" and the Kentish MAN suffered no loss of service, it was declared to be a successful SJ5 failover test.

A connection to OrbitalNet has been made at Maidstone. This will provide commercial bandwidth for the Internet and the first customer will be the Lambeth Conference, to be held at the University of Kent.

FE College upgrades are under way and a project to replace out-of-band equipment is in progress.

Paul Kentish

NIRAN Report

1. Local Government Sector

As a consequence of the NIRAN Awareness event and other PR activities by the Coordinator on behalf of NIRAN and JANET, four more NI Local Borough Councils have formally requested to connect to NIRAN at 10Mbits/s for their Internet service. This will bring the total to six:

1. North Down Council
2. Derry City Council
3. Banbridge District Council
4. Ballymena District Council
5. Craigavon District Council
6. Armagh City Council

2. NIRAN II Procurement

The current NIRAN network contract with its Supplier, NTL, expires in October 2009. In this context, NIRAN will commence a re-procurement of its network infrastructure over 2008/09 so that a new network can be in place to provide continuity of service to its member institutions. The procurement process will be pursued through the OJEU and the NIRAN-2 network must be in place by September 2009. The NIRAN-2 contract will likely be for a 5-year period up to end-2014.

3. NIRAN II Economic Appraisal [EA]

As a precursor to the imminent NIRAN-2 procurement, the Department for Employment and Learning has requested that a full business case/economic appraisal be prepared in order that they can consider the funding of the NIRAN II proposals. The Coordinator has pursued a tender process to obtain assistance in the preparation of the economic appraisal and the role was won by EPEC in conjunction with Masons Communications. The Coordinator is now embroiled in the work to complete the report for the Department.

A dilemma has arisen as the Department will require indicative costs in the EA. To obtain these, NIRAN will have to pursue a Request for Information to the Telcos. If NIRAN is able to define roughly what it requires in a RFI, then that may well preclude NIRAN from subsequently pursuing a procurement using the Competitive Dialogue procedure.

4. NIRAN Dual Entry Point Circuits Split

NIRAN submitted a request to JANET(UK) some months ago concerning the need to redirect one of the SJ5 incoming circuits to the new Library Building at Queens University (QUB). The two circuits were originally delivered to the one RNEP at QUB because Queens were in the middle of demolishing their main Comms room to replace it with a brand new facility in the newly built Library. NIRAN would like to effect this change in late June or early July, well in advance of the UCAS procedures in August. There has been little progress on the JANET(UK) side.

5. IPV6

NIRAN has started the process of investigating what is required to meet the JANET(UK) October 2008 deadline for implementing IPv6 over NIRAN. David Nelson is currently accessing the situation, and it is predicted that the software on all NIRAN routers will need updating. These upgrades will require downtime, but the NMA will keep the community informed.

Chris Kelly

YHMAN Report

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On-Call JPA arrangements
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Ed Carter

SWERN

RNEP Upgrade to 10Gb/s
We have complete the upgrade of our Clifton RNEP to 10Gb/s, at have also increased the bandwidth on our two inter-RNEP cross Bristol circuits to 10Gb/s but are still awaiting confirmation of a date for receiving the upgrade of the JANET feed at our Frenchay site.

Following discussion with Cisco have agreed the upgrade of our two RNEP 7609 routers to the 7609 S chassis. Quotations from suppliers for this equipment are now to hand and we will be placing an order imminently

IPV6 Multicast
We understand that IPv6 multicast will be supported in 12.2(33)SRB3, version Cisco IOS for their 76xx range routers, which we will be implementing in due course.

HE & HEI Backup circuits
As part of our development programme we are in the process of installing backup circuits to all HE and HEI institutions that do not already have them.

Connecting Commercially owned Halls of Residence We have received a preliminary notice from JANET in relation to connecting a commercially owned student residency in Exeter, with the circuit supplied by Cablecom. We asked JANET for clarification of the status of such links and how they should be administered and have now seen Rolly's Email in response.
Whilst his advice is most helpful, we would like clarification in a couple of other areas and hope to raise these with JANET(UK) at either the JDT meeting or if not then at UKMMG.

FE college bandwidth upgrades
We are in the process of upgrading or provisioning 100 Mb/s circuits to 8 FE sites under the FE upgrade scheme, and have one pending clarification and acceptance of costs. These upgrades are scheduled for completion in August and early September.

JPA
SWERN has signed the JPA.

Andy Mason

CANLMAN REPORT

Network Health

The CANLMAN core continues to be in good health with no major outages this year. During a prolonged power cut affecting the Lancaster University campus, the backup generator protecting the RNEP kicked in successfully, assuring service to CANLMAN continued without outage.
Unfortunately the generator worked so well that resilient routing via the second RNEP was not needed.

Personnel

Barry Forde has now finished his duties with CANLMAN. His vast experience, expertise and no-nonsense style of management will be much missed. He continues to work at Lancaster University on the CLEO RBC project and is also on the JCN.

Mark Jameson, the Head of Technical Infrastructure Group at Lancaster University will be taking over, along with Craig MacDonald who will be the CANLMAN operational manager, provisioning contact, and JDT member.

Projects

FE College Upgrades

As with other MANs, CANLMAN will be increasing the connection bandwidths of FE colleges. The first of these is currently being progressed.

IPv6

Resilient IPv6 unicast is enabled in CANLMAN and available to sites on request. v6 multicast will be investigated later in the year.

Building moves

A number of end sites have requested circuit shifts in response to upcoming building work.

Craig MacDonald

EMMAN Report

Circuit Enhancements

In December JANET(UK) agreed to a proposal to upgrade all the FE Colleges in the region to 100meg. Because of the topology of the EMMAN backbone this is cost neutral in terms of ongoing costs. The project has also included the expansion of the three PoPs based within hospitals. The final two connections are due to be completed this month.

Commercial activities

Accelerate Nottingham is leading a "consortium" including the "blue light" services and the local authorities that have received and accepted a report from the Community Broadband Network recommending use of EMMAN as its "platform for the future".

We have provided a service to a commercial hall of residence in Nottingham following a request from JANET(UK). The project and its administration has been fraught with issues. The concept of connecting commercial halls of residence has caused some angst between EMMAN and its members.

A similar issue concerning Subtv has just surfaced.

Other Activities

Router enhancements as part of SJ5 Phase II started rollout in June. These new routers affect all the major PoP sites and involve scheduled maintenance most Tuesday's and Thursday's for approximately a month.

A project to look at fibre diversity including fibres to the RNEPs has shown a number of possible issues. Work in re-routing in Nottingham and Leicester is due to take place in early Autumn.

Shared Service

EMMAN completed in May a feasibility study under the HEFCE initiative on the provision of a network anomaly service for the region. We await reaction from HEFCE for funding for a pilot service from 2008/9. All the Universities in the region have signalled their support to the project.

Management Audit

The PKF/JANET(UK) audit took place on 20 March and there are no recommendations from the review.

Ian Griffiths

FaTMAN Report

FaTMAN is concentrating on paperwork while waiting for delivery of some new circuits held up by wayleave paperwork.

H2O has delivered one circuit installed through the Dundee sewers and this is working cleanly. It attracted the BBC to visit the "high-fibre" city of Dundee which is soon to get all its sewers filled with cable. Rory Cellan-Jones broadcast live from one of our student bedrooms and were astounded by the exceptionally high speed of response. I tried to get them to mention JANET but broadcast slots are too short for such subtlety.

H2O is also delivering a 30km dark fibre of which about 22km is a slot cut. Wow that's a long slog of grinding up tarmac and is taking longer than planned partly because a <deleted> farmer claims the council don't have the right to grant wayleave along a cycle track thereby causing the route to detour along the main road with restrictive digging conditions. Today's update is that the farmer also claims ownership of the main road!

Public sector (NHS) is taking months to decide if our telco can put a duct through 15m of their grass outside a building we lease from them. This apparently requires the services of a substantial legal team and advisors.

We intend to deploy WDM when these new fibres are delivered.

We have signed the JPA and are working to meet its requirements.
In co-operation with Clydenet we are revising our Consortium Agreement.

Mike Whitehead

NWMAN report

Logicalis have installed CPE routers at five sites. This marks their full transition to the PSBA network, although helpdesk support is still provided by NWMAN. The remaining sites are held up for a variety of reasons including lack of fibre interfaces, circuit delivery times and delays in the LLU project.

Installation of 2.5G WaveStream circuits and new core routers is progressing. Logicalis will complete construction and test the new core over the summer. If all goes well, traffic will be moved onto it in September and the old core dismantled soon after.

Planning for a new management and consultation structure for HE and FE connections in Wales is progressing and it is still NWMAN's intention that our RPAN contract will terminate at the end of September.

David Stedham

Net North West Report

LSC Funded Upgrades

The project to increase the bandwidth to FE Colleges to 100 Mbps is at last underway. JANET(UK) have ordered upgrades to 22 colleges which will take the number of colleges with a 100 Mbps link up to 41.

JANET(UK) are yet to hear from the other 21 colleges.

SURFnet 2007

Our project to replace the existing SURFnet, not the Netherlands NREN but the Staffordshire University Regional Federation network, based on ATM/SDH delivered over microwave with a fibre/Ethernet based network is effectively complete. Orders for 16 new 100 Mbps and 1 Gbps links were placed with a target date of service by the start of the 2007/8 academic year. Due to the usual Telco issues - wayleave, capacity, distance etc, none of these were delivered on time.

Thus/BT have now delivered all the circuits that BT were prepared to provide and all the new links are in operation. We have had major issues with BT reporting that links with physical distances of less than 30 km were outside the range (70 km) of their products! The worst of these had BT making the on fibre distance 117 km for a link with a radial distance of 30 km and a road distance of 42 km.

The final link we require is from Shrewsbury to Stafford. This is being provided by NTL:Telewest using a combination of their own network and a BT tail. I'm confident that BT will provide this final tail as the same link is also required by JANET(UK) for MidMAN3.

SuperJANET5 Exploitation

Planned and live 'tests' of our resilience, caused by Verizon losing the RNEP-1 link to planned maintenance by their Telco, showed that the IP resilience happened as planned but that there were capacity issues between RNEP-1 and RNEP-2. A dark fibre link between RNEP-1 and RNEP-2 has been procured and is operating as a grey-light 10 Gbps Ethernet link. The link is some 79 km on the fibre but has worked without dropping any packets using ZR Xenpaks.

We are also using the same ZR Xenpaks on our Manchester - Liverpool dark fibre to provide a 10 Gbps link. The distance is some 100 km but the measured dB losses are very similar to those on the Manchester - Preston link.

We are in the process of procuring the final dark fibre links required to move all our core network to (multiple) 10 Gbps. The major issue is the convoluted routes taken by telcos so that for example the on-fibre distance from Liverpool to Preston is 126 km, when the road distance is only 47 km. Discussions are also underway about upgrading our Merseyside Ring and G-MING in Manchester to 10 Gbps.

The board of NNW has also agreed to fund dark fibre links to all our members, replacing 1 Gbps Ethernet circuits, so that all members are in a position to take advantage of JANET Lightpaths and to run at 10 Gbps as and when this becomes a requirement.

Netsight is showing peaks on our link to JANET of around 4 Gbps so it may not be too long before we need to consider 2 * 10 Gbps from each RNEP.

We held a successful workshop with BTiNet to discuss MPLS. We are looking at this as one possible way of providing a 'structuring layer' for the JANET Lightpath Service, i.e. a way of breaking a 10 Gbps wavelength into multiple 1 Gbps circuits. An alternative approach being considered is using 'Carrier Class' Ethernet as a replacement for SDH.

e-Research Network

Plans to deploy dark fibre to allow an e-Science network to operate between Manchester, Liverpool, Daresbury and Jodrell Bank are progressing well. All the necessary dark fibre has been obtained.

The first 10 Gbps DWDM link was between Manchester and Daresbury. It proved much more complex to bring 10 Gbps wavelengths into service compared to 1 Gbps. We had extensive discussions with our supplier, Transmode, about power levels, amplification, attenuation etc.

A second 10 Gbps DWDM link between Manchester and Jodrell Bank proved much easier to bring into operation - experience definitely helps in this area.

Tim Robinson