UK MAN Managers Group

Notes of Meeting held on 25 January 2006 at HEFCE, London

Present:
Dave Vinograd (Convenor)

Mike Byrne (Deputy Convenor)	LeNSE
Kit Powell (Secretary)	SWERN
Chris Cheney	"EastNet"
Paul Kentish	Kentish MAN
Tim Robinson	NetNorthWest
Ed Carter	YHMAN
David Hayling	Kentish MAN
Mike Whitehead	FaTMAN
Jason Bain	NorMAN
Joe Burns	NIRAN
James Hendry	MidMAN
John Linn	AbMAN
Mark Jameson	C&NLMAN
George Howat	EaStMAN
Ian Griffiths	EMMAN
Steve Percival	UKERNA (from item 5)
Denis Russell	UKERNA (from item 5)
Linda McCormick	ClydeNET
Roger Williams	WNL

Apologies were received from:

Barry Forde	C&NLMAN
Julie Snelson	North Wales MAN
Andy Mason	SWERN
David Stedham	North Wales MAN
Jem Taylor	UHI

1   Notes of previous meeting

1.1   Accuracy

There were no corrections to the minutes of the previous meeting held on 25 October 2005.

Linda McCormick added to her comment about the effort expended by RPANs in RPAN contract negotiations: when the possibility of getting external effort to assist in the negotiations had been discussed, it was agreed that this would not in fact be productive.

1.2   Replacement for Paul Kentish on the SLA negotiation team

Ed Carter had volunteered for this.

1.3   Optical Networking Workshop

This had been discussed with UKERNA, and the requirements of the RNs more accurately defined. UKERNA had announced a workshop **Practical Optical Networking** to be held on 16 March, but it was not clear whether its content might not be too general to meet RN needs. Further discussion was deferred until later in the meeting when Denis Russell was present *[see Minute 5.3]*.

1.3   RN reports of progress and problems

Those received well before the meeting had been circulated with the minutes; additional ones received before 1 February would be added and published with the minutes.

2   Report from RPAN contract changes team

The team comprised Mike Byrne, Ian Griffiths, Paul Kentish, and Dave Vinograd. It had been working with UKERNA in two areas: the changes to the current RPAN contract (RPAN2) to reflect the changes required for SJ5, and additional changes to the RPAN2 as part of the planned extension of RPAN2 ..

The negotiations had concentrated on the SJ5 amendment, now in its third draft and due to be further discussed with UKERNA by telephone on 30 January.

2.1   SJ5 Changes

Ian Griffiths summarised these as addressing:
* connection of the network to a second Regional Network Entry Point;
* implementation of IP resilience to Nominated Connections;
* testing of IP resilience;
* provision of IP transit to UKERNA equipment;
* additional SuperJANET5 services; and
* a transition plan.

A number of issues were identified by the Meeting and would be taken up with the team in the negotiations, and are noted here for the information of a wider audience.

1. **Timing.** It was noted that UKERNA wished RNOs to accept the amendment by 31 March 2006. However, there might be problems in implementing the changes required that did not become apparent until the developments were under way.

2. **Scope.** Only IP transmission was addressed in the context of resilience, with no requirement for resilience to be implemented for application protocols.

3. **Multicast.** It was pointed out that the IP services to be provided resiliently included multicast.

4. **Testing of IP resilience.** This was discussed at length. Whilst there was no dissent from the view that testing was important and should be done, there were concerns about:
   a. lack of clarity about which of the several components of the service against whose failure resilience was required (core router, link from it to RNEP router,

RNEP router, RNEP router connection to regional network…) would be test-failed during any test;

b. scheduling of the failover under live load test: it was expected that there would be strong, possibly widespread, resistance among institutions to jeopardising service during production time.

c. co-ordination of testing with the NOSC;

d. timetabling of tests.

5. **Implementation of resilience.** The amendment, at least in its current (third) draft did not make it clear (§3.12(b)) what components of the regional infrastructure were required to have their failure protected against. There was also the special case of nominated connections made directly to an RNEP router: if the RNEP router failed they would lose service despite all the rest of the regional traffic being successfully re-routed through the other RNEP.

6. **RNEP environment.** Many sites were both unable and, for safety reasons, unwilling, to provide fire suppression at the RNEP accommodation.

7. **Condition for ceasing SJ4.** The requirement that both RNEPs should have SJ5 connections in service before SJ4 could be disconnected was queried.

It was agreed:

to ask UKERNA for the date by which the functional guidelines for the RNs' routing policies (§3.14) would be published;

Action: negotiating team

to provide the negotiating team with suggested forms for §3.12 (a) and (b) to meet the expressed objections.

Action: all

2.2 RPAN version 3

Dave Vinograd made the following points:

- it would be a completely new contract, not a development of RPAN2
- its content would reflect the output of the sub-group of the Chairs of MANs set up after the November meeting to discuss future RNO partnership relationships with UKERNA. Its membership is Tony Rybacki, Brian Gilmore, Tim Phillips, Ed Carter, Terry Hanson, Julie Snelson, and Andrew McCreath
- it behoved us to ensure that our Chairs were fully briefed on issues likely to be addressed by the sub-group, and that they kept us informed of their proposals before they were formally made.

3   Report the SLA negotiation team

Ed Carter reported that the direction the JISC-UKERNA SLA was taking was away from a detailed breakdown of the performance of the individual components used to deliver the service, and towards a "black box" view of the service over-all. This resembled the approach already adopted in the RPAN2 SLD. However, this did not

reduce the level of monitoring of component performance by UKERNA (and the RNs) required.

4   Report from JDAG

Mike Byrne had circulated the documents *Joint Development Programme 2005/06, Communications Strategy,* and *Summary of Development Process* (all by Henry Hughes).

Jason Bain reminded the Meeting that he had asked RNs for information on their plans to deploy IPv6 and QoS last October and requested replies in addition to the eight he had so far received.

Sponsors then reported on the individual projects.

Phase II QoS: Tim Robinson
The QoS Phase 2 project got underway with a kick-off meeting in London on 29 September 2005. There have been two further meetings of the Architecture group (which includes Mike Byrne and Tim) on 26 October 2005 and 12 December 2005. The next meeting is on 26 January 2006 by VC/Access Grid.

Steady but slow progress is being made in defining the activities that will be undertaken during 2006. Mike and Tim are trying to move activities away from Computer Science towards real applications running over real networks.

As noted in the JDAG papers it is unlikely that any form of production service will be required before 2008/9.

Mike expressed concern that some of the contracts for work related to the project remained unsigned. He also pointed out that the suggested extension of the term of RPAN2 could mean that QoS might form part of the services RPAN2 covers, rather than being introduced as part of RPAN3 as expected.

Multicast beacon service upgrade: Roger Williams
The following written report from Chris Price was provided after the meeting.

WNL enabled multicast across the SWMAN some time ago. Institutions have the option of MSDP peering their site access routers with the RNO's dedicated multicast `router on a stick` or with a MSDP rendezvous-point on the JANET Backbone Access Router. In terms of use of multicast across the SWMAN, the largest community of users are people participating in video-conferences, although there are some specialist groups at Cardiff, Swansea and Aberystwyth Universities carrying out research using network applications that require multicast. For WNL the main focus at this point in time is to manage the implementation of multicast on the Welsh Assembly Government's Lifelong Learning Network (LLN) ahead of a technical migration of both Welsh MANs onto this backbone. This migration planning of HE/FE sites onto the LLN is underway, and once completed will offer the HE/FE community in Wales an interim solution until the likely procurement and delivery of an All-Wales Public Sector Network in mid-2007 under the Assembly-led strategy for Public Sector Broadband Aggregation in Wales.

IPv6: John Linn

John said that AbMAN's experience was that v6 implementation was straightforward. He noted that as they were running v6 native they had not had to implement tunnel-brokering, and could not therefore comment on any issues relating to its implementation. Use of v6 was low.

Mark Jameson endorsed John's view, but added that there were second order issues relating, for example, to Netflow, monitoring, and ACLs.

David Hayling noted that when using a dual stack the use of IS-IS routing might be required if it was not acceptable to use different versions of OSPF for v4 and v6.

In the subsequent discussion it emerged that although the implementation of v6 within institutions was outwith the RN's remit, several RNs were interested in guidance to institutions being made available, notably in the area of v6 addressing schemes. A new version of the document already produced by Tim Chown was being written by him, and Mike Byrne undertook to ask Tim whether he could make the current draft available to the Group.

Action: Mike Byrne

JDAG would take note of the different aspects and implications of v6 for RNs and for institutions.

It was noted that there were issues relating to multicast in v6.

Performance Measurement: David Hayling

The group had met in December. Steve Williams's intention was to use routers and IP SLA. There had been some discussion on the possibility of making repositories of Netflow data more widely available to avoid the same data being collected, and held, at several locations. UKERNA were using Crannog software to analyse data gathered by Netflow. Andrew Cormack was drawing up guidelines on the privacy aspects of network traffic data, and it was noted in passing that IP addresses were deemed to be personal data.

5 UKERNA issues

5.1 SJ5 regional development funding

Denis Russell reported on progress on finalising bids made for funding under the Regional Networking SJ5 development initiatives. Two or three English bids were still being discussed, and two Scottish.

He emphasised the importance of UKERNA being advised of any possibility of RNs spending below their agreed profile as soon as possible, and in any case well before the end of the funding bodies' FYs (English: end of March, Scottish: end of July). Underspends reported late in FYs could result in serious problems.

He was not in a position to report on progress in Northern Ireland.

Slow but steady progress was being made in Wales.

5.2   SJ5 fibre routes

Denis had given RNOs as much information as he had on the routes that MCI (now Verizon) were using for the collector arcs, though in some cases this was incomplete and he would try to rectify this. He asked RNs to let him know of any concerns they had about the planned fibre routes.

More information was requested about whether MCI expected (or were willing) to use existing institutional duct resources. Concern was expressed about the intention of MCI to install additional racks at some sites, where they already had racks with, apparently, ample unused space. It was noted that MCI had changed their power supply and connector requirements.

Denis was reminded that RNs had been asked if they were interested in acquiring fibre for regional use as part of the SJ5 build in their region, and asked if the expressions of interest that had been made had had any outcomes. He asked RNs to contact him again if this possibility was of interest to them.

Action: all

5.3   Optical networking workshop

Denis said that the emphasis in the March workshop was regional networks, and RNOs' staff would get priority if there was any shortage of places.

Mike Byrne expressed concern that the published programme appeared a little too general and may not address all the elements discussed at JDAG. He undertook to discuss the programme with Rina Samani and asked everyone to tell him by the end of the week what they wished the workshop to cover.

Action: all

5.4   Routing between RNs and SuperJANET5 core

Jason Bain asked what progress there was on the publication of the guidelines to RNOs for the configuration of routing to the SJ5 core to provide the required resilience. Denis undertook to check the status of this.

Action: Denis Russell

5.5   RPAN payments

Steve Percival said that he was conscious of the apparent anomaly of RNOs being asked to provide a spending profile for next year's BAP two months before the amount available had been notified. He thought that it would be better to ask for a preliminary profile based on the current BAP, modified by any changes made during the current RPAN year, by the end of July followed by a final version at the end of the following February.

All RNOs were asked to make any objections to this proposal to Steve within the next weeks, in the absence of which he would assume that it was acceptable,

Action: all

John Linn enquired about the continuation after its initial three years of the £55,500 annual funding to support RN development. Steve said he was not aware of any plans to cease the funding.

5.6   Other matters

Linda McCormick asked what the status of the procurement of PoS interfaces for SJ5 RNEPs by UKERNA for RNs was. Denis Russell said he would enquire and report the mailing list.

David Hayling asked for information on the specification of the interface to which RNs procuring their PoS interfaces themselves would connect them. Denis undertook to enquire and advise.

Action: Denis Russell

6   Liaison with Chairs of MANs Group

Ed Carter reported on the meeting between the Chairs and UKERNA as follows.

* UKERNA gave an update on the SJ5 procurement and related issues.

* Tim Marshall and Bob Day also provided clarification of perceptions and the evolving demand for JANET Network Services:

- DfES desire for a "common digital infrastructure" or single National Education Network (NEN) based on JANET
- A user base extending to post-16, pre-16 (ie. schools) and, possibly, to a wider public sector in the future
- The need to provide consistency in network services across the UK
- The need to retain and strengthen a consistent brand
- The need to demonstrate auditable, subject to benchmarking, vfm
- Central vs. regional division and collaboration to improve quality and the timely introduction of new services/applications to the sectors within budget constraints

* It had been agreed to set up a small sub-group *[membership: see minute 2]* to define the issues and report back to the Chairs.

The importance of those concerned with the day-to-day management and development of RNs keeping informed of, and informing, the deliberations of the Chairs of MANs and its sub-group was re-emphasised.

Linda McCormick asked if the minutes of Chairs of MANs meetings were published. Ian Griffiths undertook to look into this.

Action: Ian Griffiths

7   UCISA-NG

Tim Robinson provided the following written report after the meeting.

The UCISA-NG committee met on 26-Oct-2005, the day after the UKMMG meeting. It next meets on 09-Feb.

The committee had a presentation from Hetesh Morar on 'New thinking in regard to the JANET SLA'. Hetesh commented that a root and branch review of the SLA is required to cover the issues of resilience both in the core and also for the RNOs. Having noted this nothing was raised that has not been discussed previously by UKMMG. Discussion was mainly around end to end and qualitative as opposed to quantitative measurements.

Denis Russell was also at the meeting and reported on the same set of issues he had discussed at UKMMG.

Other matters discussed included

- Convergence of data and telephone networks - UCISA-NG will be holding a voice event early in 2006.
- Rating of fibre
- Results of the use of NTP and Usenet News survey
- JCN and JCN Development Group activities
- UCISA top ten concerns which include
    - Network security
    - Extended hours
    - Network Technologies (wireless, SANS)

I reported on the UKMMG meeting

8   Dates of future meetings

Thursday 27 April 2006, HEFCE London (EMMAN to pay for catering)
Monday 26 June 2006, Edinburgh

9   Other business

9.1   FE upgrades: boundary router maintenance arrangements

Ed Carter outlined the problem. New routers had been supplied to some FEs as part of the upgrade programme. These were owned by UKERNA, and maintained under a contract between UKERNA and TNS which provided for faults to be fixed by the supply of a replacement to site within 24 hours. This was a long time for a site to lose connectivity and he suggested that each RN should be provided with spare router to hold and deploy when needed to fix a fault at an FE.

Steve Percival observed that there were wide variations in practices between regions. In general FEs should report problems to JCS, though in many cases the RSCs were also willing to handle them. Whilst many at the Meeting expressed enthusiasm for the RN being responsible for FE devices connecting to it, there were strong reservations about the use of these for other functions such as firewalling.

9.2 Publication of minutes

It was agreed that there was no objection to the minutes of the Meeting being openly available on the LMN web site, and no objection in principle to them being made public.

9.3 UK MMG annual report

The last report, for AY2003-2004, had been produced in February 2005 by Mick Kahn from contributions from the RNOs. It was agreed that the intended audience and the benefits from its publication were not clear enough to justify the effort required to produce it in the future.

9.4 Venues for future meetings

It was agreed that the present venue at HEFCE should continue to be used.

9.5 RSCs

Ian Griffiths said that the Duke & Jordan report on the RSCs had been extremely positive: all stakeholders had expressed themselves strongly in their favour. Although funding after 2007 was not yet clear, there was agreement in principle to the continuation of the RSCs.

9.6 N3 JANET Gateway Working Group

Tim Robinson provided the following written report after the meeting

There have now been three meetings of this group with further meetings scheduled for 06 Feb 2006 and 06-Mar-2006. As may be seen from the attendance list below the group has senior representatives from JANET and N3, as well as NHS and HE members.

Mark Ferrar (chair)
(MF) Director of Infrastructure Architecture, Security & Information Governance
        NHS Connecting for Health
Geof Smith (GS) Deputy Technical Manager   Cambridge University Hospitals NHS Trust
Tim Robinson (TR) Technical Director
Head of Communication Services Net North West Manchester University
Trevor Fitchett (TR)   N3 Technical Director BT
Bob Day (BD)   Chief Technology Officer   UKERNA
Adrian Williams (AW)N3 Technology Consultant   NHS Connecting for Health
Chris Glover (CG)   Information Governance Team   NHS Connecting for Health
Malcolm Teague (MT)NHS-HE Coordinator UKERNA

The ToR of the Group are

Background assumptions

1.   A Gateway between N3 and JANET in England is part of the N3 contract with BT as a "requestable" item.
2.   The discussions and output from the Working Group are therefore "without prejudice" and "subject to contract" with BT.
3.   NHS-HE Connectivity solutions have to be agreed through the Security Board.

Terms of Reference

1.   To assess and document existing and future user requirements for NHS-HE connectivity as far as is possible.

2.   To assess and document existing NHS-HE connectivity and whether this is likely to remain as part of the longer term solution.

3.   To agree the likely scope of requirement for an N3 JANET Gateway or series of Gateways. This may involve assessing the range of potential connectivity solutions that are likely to be approved by the NHS Security Board.

4.   To specify the requirement for the N3 JANET Gateway:
a.   such that it can be used as the Contract Change Note to formally request an implementation architecture and implementation plan from BT.
b.   Such that it can be used by UKERNA and UKERNA partners to deliver the HE side of the plan.

5.   To advise on locations of the solution(s) and any phasing required.

6.   To publish a set of guidelines for different NHS-HE user scenarios

7.   To produce a Framework for the agreement and exchange of access agreements, security policies and other relevant documents e.g. Statements of Compliance, Acceptable Use Policies.

8.   To recommend a funding model to the relevant funding bodies for the costs of implementation and on-going support and maintenance.

Excellent progress has been made in understanding the issues. The presence of Chris Glover at the last meeting allowed a clear understanding of the Governance (Security) issues to be fed into the technical solutions being considered. Bob Day and Trevor Fitchett are developing a solution around one or more gateways (possibly in London and Manchester)

A survey of the exact requirements of the user community has been developed by the group. This has just been issued to the NHS-HE Forum members. This will inform the level of interconnectivity between N3 and JANET that is required.