THE CN DIVISIONAL PLANNING GROUP

Minutes of the Meeting held on 5th. April 1993

PRESENT: R.Brun, J.J.Bunn(Secretary), B.Carpenter, F.Fluckiger, D.Jacobs, S.Jarp, C.M.S.Jones, J.–C.Juvet, M.Metcalf, A.Osborne, J.Richards, L.M.Robertson, J.D.Shiers, A.G.Silverman, D.O.Williams(Chairman)

- *MINUTES OF LAST MEETING (CN/DPG/93/MIN/2), AND MATTERS ARISING*

The Minutes were accepted. Action Items on "MS Mail" and "Work Group Services" are now removed.

- *CHAIRMAN'S REPORT*

D.O.Williams reported on the following items:

1. The Cray had been successfully shut down. He thanked the everyone who had been involved with the decommissioning, in particular F.Hemmer and J.–P.Baud, who had migrated the tape services onto the RS6000.
2. He reminded the DPG that anyone thinking of making an ESPRIT proposal should notify him beforehand.
3. He announced that J.J.Bunn and T.Whibley were investigating the possibility of replacing the VXCERN service by a mixed architecture VMS Cluster of Alpha and VAX workstations. Work had started on a sizing experiment which it was hoped would indicate how many interactive VXCERN users could be supported on a properly configured single workstation node. A paper would be presented to the DPG later in the year.
4. DOW had received a memorandum from the L3 collaboration, requesting support from CN in running their computing facilities. L3 had until the end of April to make precise proposals. DOW said that S.V.Jarp would coordinate the work.

- *APPLETALK*

B.Carpenter previewed a paper on Appletalk futures that would be presented to the HEPNET committee (copies of his slides are attached). Appletalk traffic currently accounted for 10–15% of the packets travelling on the Backbone, but around 90% of the multicasts. Since CERN ran a bridged, rather than a routed network, the site was at the mercy of Appletalk problems, since packets could travel unhindered through all the bridges. It was therefore often very difficult to locate the source of "bad" packets. There had been several rather serious network incidents recently, specifically caused by Appletalk problems.

BC told how his group continued to hotly debate the merits of a routed, rather than a bridged, network at CERN. The issue was rather complex, and there were significant financial implications if it were ever decided to move to a routed network. Part of the problem for Macintosh computers was that they used Appletalk to communicate with each other, but TCP/IP to communicate with different computers. Shiva FastPath boxes routed Appletalk, but simply forwarded IP packets. These devices were in widespread use at CERN; they were also used as the means of indirectly providing IP access to Apple LaserWriter printers, a very popular facility with the users.

Finally, BC came to the options outlined in the paper. Briefly, these were as follows:

1. Phase out Appletalk on Ethernet. This implied replacing the QuickMail product with something else, having a new remote printing protocol, using TCP/IP for remote Mac file sharing.

There was an enormous manpower cost involved, and the option was thus unrealistic, despite its attractiveness from a networking point of view.

2. Do nothing. No new Macs or FastPath boxes should be purchased, and existing FastPath boxes should be upgraded to the latest revision levels (at a cost of 100 kSFR). This option did not, however, prevent future problems of the types seen recently.
3. Modest growth. This involved appointing a Mac Coordinator who would oversee the purchas–ing of new MACs and their installation on the network. The option also would involve updating the FastPath boxes (100 kSFR).
4. Route Appletalk. This involved logically splitting the Appletalk network away from the exist–ing network. It would limit problems to a small geographical area. The cost would be around 400 kSFR, including option 3, which would have to be completed beforehand.

DOW commented that the network problem seemed to be multicast storms, so why not block Appletalk multicast storms in the bridges? BC replied that that was worth thinking about. Dow said that, in any case, the FastPath boxes should be upgraded, and that the Operators should be told how to reboot them and monitor their status.

It was agreed that no one should be forced off their Macintosh, but that they should in the medi–um term be encouraged to move towards the PC, since the application base they use is largely available there.

- *UNITREE*

J.D.Shiers described the current status of the commercial distributed file server market, with partic–ular emphasis on the UniTree product (copies of his slides are attached). UniTree was a product that had been developed from a file server system written at Lawrence Livermore for the LINCS operating system. It had been ported to Unix in 1990. It was based on version 2 of the IEEE Mass Storage System model.

There were a small number of sites actually using UniTree in anger. There were many different versions available from various vendors, none of which seemed to be compatible. The standard version supported only ten thousand tapes maximum (one hundred thousand in the Amdahl ver–sion), which was an order of magnitude too small for CERN. JDS said that the product seemed to suffer from poor performance and reliability, with three hours downtime per day! The design was now completely outdated. There were no tools provided with the product to monitor the sys–tem, and there was no integration with AFS.

A new company, OpenVisions, now owned UniTree, but JDS was pessimistic about its future due to their lack of clear understanding of the product, and their rather wide and confused product spread. Competitors to UniTree included something from Los Alamos, and a project underway at the Pittsburgh Super Computer Centre to integrate AFS, UniTree, Cray etc..

Overall, JDS expressed his dismay and despondence at the dearth of decent mass storage system products around.

J.Richards shared his view, and commented that, unfortunately, the POSIX tape standard seemed to be petering out.

- *ANY OTHER BUSINESS*

It was proposed that DECnet Phase V be included on the Agenda for the next meeting.

- *NEXT MEETING*

  The next meeting will be on May 10th., at 10:00 in Conference Room 1, Building 600.

Table 1: Action Items

This list is intended to show the items which are currently awaiting treatment by the DPG. The Entry date is the date of the meeting at which the action item arose, and the Target date is the date by which the action item should have been dealt with.

Name	Entry Date	Target Date	Task
F.Fluckiger	Nov 1991	1993	Give Computer Colloquium on Multimedia
A.Osborne	Nov 1992	1993	Session login sources
MPP Steering Group	Nov 1992	1993	Amdahl's Law relevance
M.Marquina	Nov 1992	Dec 1992	64 bit CERNLIB
J.Altaber	Nov 1992	1993	Use of VSAT for poor countries
D.Heagerty	Apr 1993	May 1993	Present DECnet Phase V plans