CN/DPG/91/MIN/6

THE CN DIVISIONAL PLANNING GROUP

Minutes of the Meeting held on 25th. November, 1991

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

- *MINUTES OF LAST MEETING (CN/DPG/91/MIN/5), AND MATTERS ARISING*

In the previous Minutes, under "Home Directory Server", it should have been stated that CERN did *not* have special requirements in this area.

AS group proposed J.Shiers as CERN's new representative on WG5 (for the work on the Fortran standard after Fortran 90). MM announced that a site license for the NAG Fortran 90 compiler/translator had been purchased.

SJ would report at the next DPG on the AIX introduction plans.

A report on updated tape mounts statistics (HRR) was not felt to be an urgent priority for the DPG.

Shift progress (LMR) had been reported on in several other meetings, and it was not felt necessary to review it at the next DPG.

JB said he had received several suggestions for future DPG agenda items, including X.500 Directory Services (to be presented by M.Dimou), 3490E plans (to be presented by J.–C.Juvet), and the future VMS RISC machines (to be presented by J.Bunn).

- *GIGABIT STANDARDISATION*

BC reviewed the current areas of Gigabit networks standardisation. He described how ATM, which was designed for telephony, might well be the successor to X.25. Prototype ATM switches would probably be available in 1992/1993. With an ATM adaptation layer designed to do packet switching like IP, one could run TCP/IP. BC was not optimistic about the prospects of realising a global ATM service in the near future.

He continued by describing HIPPI and FCS (FibreChannel), the latter being of greater interest for LANs and WANs. FCS products could be expected to be widespread in 1993.

Moving on to FFOL (FDDI Follow on), BC said that the scheme involved reusing existing FDDI fibres wherever possible. It was for this reason that twisted–pair FDDI was deprecated by CS Group. First FFOL designs specified rates of 600 Mbits/sec. BC believed that CERN should have some involvement with the FFOL standards committee, although he predicted it would be 1993 before it had made any progress.

Overall, BC pointed out that the fundamental problem with all the Gigabit planning was in the design of the switches in the network fabric itself.

RMcL then took the floor to describe the current activities and interests of people working in the experiments and ECP Division in the area of Gigabit networks. In particular he mentioned the important work being done on the NA48 experiment, which was expecting bursts of 75 MBytes every two seconds. For this experiment, an NSC HIPPI switch would probably be used to fan out the data to the level three workstation–based trigger. The complete online system was scheduled for operation at the end of 1993. He mentioned that, because HIPPI was seen by manufacturers as a "supercomputer solution", equipment prices were often prohibitive.

In the general discussion that followed, it was agreed that the planning of a Gigabit network at CERN was very hard; neither the types of fibre, nor their topology could be decided upon yet. In fact, experts were still arguing about which types of fibre connectors were the best.

- *ISIS*

FR presented the ISIS inter–process communication package, which AS Group were currently experimenting with for distributing GEANT. ISIS was available for Unix and VMS systems, and used TCP/IP for message passing between machines. It had installed trivially on all the machines of interest. One use of ISIS was to obtain quick results from a traditionally long–winded application, by distributing parts of the application over several machines. FR said that initial results with a distributed GEANT showed that the gain in "turnround" was proportional to the number of available "slaves" in the ISIS system. He mentioned that ISIS was very suitable for fault–tolerant computing, where the system could easily fail–over if one of the component slaves became unavailable.

The plans for ISIS were to use it to automate the distribution of the CERN Program Library, and for distributed PAW. The object code only ISIS license was quite cheap.

- *ASIS*

PD described the status and plans for the ASIS (Application Software Installation Server) system. The machine itself, and around 200 products, were available. A body of about seventy "customers" were already making some use of the machine, which currently allowed, for example, ftp access to the CERN Program Libraries. (But many of them were simply NFS mounting the ASIS disks.) PD showed screen snatches from the EPIP (Easy Product Installation Procedure), that enabled users to obtain software of interest, and install it, from a remote machine.

However, the service was still embryonic, and there was no consensus on issues such as how to decide on which public domain software to include, how to advertise, and what to do about disallowing unauthorised access to the server. In the near term, it was agreed that an ASIS User's Guide should be produced, that the existing procedures be refined, and that some advertising should be distributed.

- *MULTIMEDIA*

FF was obliged to rush through a presentation of Multimedia, since time was running short. He proposed the creation of a small "task force" which would watch the technology and gather information. A pilot desktop video conferencing facility on the CERN site had been proposed, which would address the sociological, as well as the technological, aspects of multimedia. Technical tests over an IP WAN were already underway between CN and ST Divisions. FF highlighted the first practical technique coming out of multimedia, being shared graphics windows. He believed that it would be inexpensive to equip standard workstations with multimedia facilities such as small CCD cameras and so on, simply because the technology is already so widely spread in the consumer marketplace.

It was suggested that FF give a Computer Colloquium on the subject of multimedia.

Table 1: Action Items

Name	Entry Date	Target Date	Task
David Williams	April 1991	Summer 1991	Produce cover note for Costs paper
Sverre Jarp	May 1991	End 1991	Manpower estimate for AIX/ESA introduction
Francois Fluckiger	November 1991	1992	Give Computer Colloquium on Multimedia
Maria Dimou	November 1991	1992	Present X.500
J.-C.Juvet	November 1991	December 1991	Present 3490E plans
Julian Bunn	November 1991	1992	Present VMS/RISC