

## Computing Service Budget 2004 – 2005

### Proposed replacements, upgrades and enhancements

#### Notes:

- a. These PCs were given interim upgrades in 2002 but the hardware essentially dates from 2000 and the systems are now running slowly with the more recent versions of software. This is a straightforward swap-out of old for new. There are no furniture or estates issues.
- b. As part of our business continuity provision, we have potentially secured space in the roof-space of the HYMS building. DoFM are bidding to install the basis structure and services. The room will ultimately be able to accommodate 10-12 cabinets of equipment and provide some workspace. The budget is for the first phase of kitting out of the room; at a later stage we will need to consider desks/ tables/ chairs/ storage cabinets to make it a true “Disaster Recovery” control room
- c. A nearline storage platform provides enhanced service availability with significant business continuity benefits. Central filestore can be mirrored to the Nearstore, which can take over in the event of the failure of the filer, crypt0. Other critical systems e.g. YIMS or VLE can keep copies of important data spinning, reducing the data recovery period and downtime. Backups can be performed from the Nearstore rather than from the filer and greatly increasing the backup window.
- d. Growth in data requires an upgrade of our current tape library. Although a short-term fix would be the addition of up to two extension cabinets to attain the maximum configuration, the Scalar 1000 reaches the end of its supported life at the end of 2005 and will become increasingly expensive to maintain. The strategic solution is to purchase a SAN-ready Scalar i2000 with LTO-2 drives (twice the capacity of LTO-1). The configuration accommodates a full fibre solution with Brocade FC switch that allows us to back up to the library from the HYMS building.
- e. As more data is backed up the requirements for disk space on the backup host itself increase
- f. Equipment to accommodate incremental growth of network infrastructure
- g. With the new YHMAN feed, to be installed during the summer, running at 2Gbits we need to upgrade the enterprise firewall to gigabit speed
- h. Windows 2000 is a critical part of the infrastructure and some of our domain controllers have reached the end of their useful life. We propose to review our W2K server infrastructure more fully for 2005-06
- i. Volume and use of mail continues to grow. The current hardware and software configurations have inherent performance limitations that need to be addressed.
- j. The current webmail system operates on a single server that obviously leaves us vulnerable to downtime when the system fails or maintenance is required. We wish to increase the resilience of this service with the increasing load
- k. With the pilot of the Departmental Liaison service, we need to be able to undertake some activities arising from the contacts. A budget of £20k is proposed for the first year.
- l. We are currently reviewing the way in which we manage queries, fault reports etc. The present tracking system was designed in-house when suitable commercial products were not available. In line with our policy of using commercial products for operational systems wherever possible, purchase of a commercial system is likely to be an outcome of the review

- m. The identity management project will provide a secure and flexible basis for separating the identity of an individual from the roles they undertake in the University, thus enabling us to manage complex registration and access issues more easily. A system has been developed and requires server capacity to become operational
- n. As the web cluster load grows, additional capacity is required. The web cluster is designed to enable easy introduction of additional capacity and provide a resilient platform
- o. Provision of a service to handle online payments is required in several areas of the University, including payments for printing etc within the Computing Service. The budget is for a basic system which will be developed in association with the Finance Office
- p. This piece of third party software gives an inventory of all patches and fixes applied to W2K servers, an increasingly complex management problem for one of our critical services
- q. The current general purpose/ compute-intensive Unix systems, Tower and Ebor, are coming to the end of their supported life and hence are becoming increasingly costly to maintain. A conflation of tower/ Ebor into a single Unix box is proposed, pending the development of the e-Research programme
- r. A range of network management tools will support the effective operation of the campus network
- s. The IDS has been extremely useful in tracking down infected machines around the campus network. The increasing traffic requires a more powerful system
- t. The need for a more elegant solution to printer control terminals than recycled 486s gives us an ideal opportunity to experiment with thin-client solutions. Lessons learned from this could inform aspects of our service delivery project
- u. A more cost effective way of buying commodity 1u servers for various purposes. The number of such boxes has proliferated, causing various problems eg availability of power sockets, heat dissipation. These boxes are fully hot-swappable. Standby blades could be held ready for configuration for whatever function is required
- v. We have used the IPv6 tunnel down to London to gain experience of the next generation of network protocols. This link will soon be withdrawn. We need to build our own v6 pilot infrastructure which will give invaluable experience not least for Heslington East