1. Job Details

Job Title: School IT Services Manager

Line Manager: Head of School

2. Job Purpose

To develop and drive forward pro-actively the School’s IT strategy and manage the School’s IT services and infrastructure.

3. Main Responsibilities

1. Strategic long term (5-7 year) planning, medium term and capacity planning. Initiate efficiently scalable service developments. Maintain awareness of developments within UoE and technological advances. 20%

2. Budgeting and procurement (5-year plan, c£240,000 pa). Software (many annual rentals), maintenance and rolling hardware provision (recycle times vary from 3yrs (lab PCs) to 7yrs (network kit)). To approve all IT purchases, irrespective of funding source. 20%

3. Teaching. Initiate procedures within the team and negotiate with academics (wrt to software packages) to ensure that the teaching policy objectives can be met. Specifically: 1. To ensure that not one single laboratory timetabled slot is missed (due to service or application failure). 2. Ensuring that all software used in taught classes is also accessible to be used by all students 24/7 through the Microlabs. 3. Capacity planning, annual audit of requirements and developments, timetabling (15% change year on year, 20 student-year cohorts, several classes/groups per cohort) 30%

4. Research: Advising PIs of suitable IT solutions to meet their future plans. Provide a worry-free service base eg, adequate replicated redundant networked file store, printing services etc. Provide a (limited) compute farm for research pump priming purposes. Attempt to harness the capital investment in teaching labs for background compute farm use. 20%

4. Planning and Organising

- Establish overall service priorities.
- Facilitate strategic change in IT provision.
- Annual and 5-year budget planning.
- IT team management: staff deployment and development.

Example: When and what strategy should be used to combine University and College (schools’) IT teams’ resources to provide effective management for 64-bit Linux and Windows systems? [NB Significant development effort (man-years) is required. These systems have been available for a year, de facto are in use but unsupported, and in two years time will dominate research desktops in the College. This matter was first flagged by the postholder 18 months ago to the College Computing Committee. The response from which and EUCS has so far been zero.]

5. Problem Solving

A high level of ability in analysis and support skills appropriate to computer systems problems, with technical leadership to other members of the team.

- Assess and evaluate long term strategies within the IT service.
- Analyse and remedy structural and process problems, eg why did a service failure go unnoticed (audit failure) or cause widespread disruption (single point of failure with unforeseen consequences and not covered by redundancy) - can be technical or human.
- Interpret and determine application of University policy or procedure.
6. Decision Making

Strategic decisions to guide the School through the next 5-7 years are required. Purchasing decisions will have 3-7 year legacy. Marshalling the team resources to meet the short, medium and long term objectives.

Deciding when to adopt or adapt University procedures and when to produce an in-house solution that better matches the needs of academic and support staff.

**Example:** The school team has been involved since the outset with the creation and development of the EUCS lab managed desktop, and indeed for it’s first year in pilot service, SEE was the only School deploying it (the best option for the newly formed School at the time despite the ensuing heavy time investment required by SEE IT staff to implement within an evolving framework). However, this did not address the needs of a staff/PG(R) Windows desktop, nor, now, does it provide the functionality required. One of the main draw backs of the "AD" deployment strategy used by DST is the imposed necessity, in the case of this School, to devote 6-man-months every year packaging each application to be deployable using the "AD" method. [Over the past 4 years, this restriction has been a consistent complaint from this school in its annual reports to CCC.] Foreseeing these restrictions persisting, an evaluation of the alternatives, led to an interim solution which could be deployed very quickly. Thereafter, one senior computing officer was committed to a systems management development project for 18mmts@50%, resulting a product called “Machination”. This has been applied to all new Windows client installations for the past 6 months. With a further 6 months development this product will be deployable in other Schools very much in the same way that SEE, DST(EUCS) and Geosciences manage Linux systems using "LCFG" which has been a major development of many years by Informatics.

[The decision in this case was at what point would the then current "make do and mend" actual prevent us being able to deliver the services needed to properly support those research and admin users based with MS-Windows (32-bit) clients, what were the suitable alternatives and what were the likely 7 year costs.]

7. Key Contacts/Relationships

Internally, customers range from students to Head of School. Liaison with Senior IT Staff and serve on interview panels in other parts of the University. Academic staff in the College.

**Example:** The current postholder, is an active member of the C&ITC Working Group on Authentication and Authorisation. Also served on Desktop Consistency WG and the College Computing Committee until recently disbanded. Deputised for College representatives at ITC/C&ITC. Regular attender of SciCOs-DST Thursday meetings wrt desktop management (Windows/Linux/Mac/Applications).

Established and maintain good links with our major systems suppliers. On three occasions, personally invited by Sun Microsystems to work on beta-test programmes (only UK site).

8. Knowledge, Skills and Experience Needed for the Job

The job is of a highly technical nature requiring a good honours degree or equivalent with a minimum of five years experience managing or supervising an IT team. Experience of managing staff, budgets and large scale operational projects in an IT environment. The ability to solve problems in a timely and effective manner is essential along with good foresight.

9. Dimensions

The School has 1200 undergraduate and taught MSc students, 400 research students and staff, altogether 2100 registered user accounts.

The School operates three managed and maintained platforms:

a. Solaris: 206 installations (incl 74 seat partionable teaching lab, 42 servers),

b. Linux: 548 installations managed via LCFG; 15 turnkey 64-bit servers.

c. Windows XP: 400 installations (265 "SEE" managed, 145 "AD" managed in five labs with UG compatibility). [*]390 are dual boot Linux/Windows (technology developed in SEE and now exported to DST for the Microlabs)

d. In addition we provide network services (filestore, printing etc) to a further 40 personally managed machines (mainly user laptops) and a similar number of lab-experiment turnkey systems throughout the School.
Filestore: 42 Solaris servers, 14 Linux NAS boxes (cross replicating) (>100TB total). 90 network printer queues (60 printers). Web sites for 33 registered domains (hosted on 3 servers), mailservers for 16 domains (3 servers).

The School has designed, manages and operates a fibre network linking 13 buildings spread over the KB site together with a cat5E distribution to 2800 circuits in offices and labs. The School "backbone" centres around two Cisco routers connected directly to Edlan and Informatics respectively, 32 network switches (up to 168 ports each) with hot-spare inter-links. 25 WAPs provide wireless coverage throughout for mobile users and visitors. In three buildings, the data network also carry phone circuits (130 in total) for which connections are also managed by the IT team.

Applications: c240 Solaris, c30 Linux, c40 MS-Windows (25 MSIs for teaching labs), 20 licence servers of various types. Only applications that run on all three platforms are eligible to be classed as core applications within the School. There are 9 of these including basic maths and officetools: Matlab, Maple and OpenOffice.

The user help-desk uses the EUCS CMS with calls filtered by the college support team, and runs at between 150 and 200 open calls for the School team to resolve. All members of the team take a half-day duty turn, assigning jobs to the appropriate team member. The School’s IT help web site contains 204 pages (and about 2500 links).

Manage between 8 and 9 IT staff.

10. Job Context

The post requires a wide ranging knowledge across a number of core services. The job is technically complex and challenging, as the technology, and hence the service requirements of our researchers in particular, are constantly evolving before any support infrastructure is available from the University. Issues arise often that have not been encountered before and the IT team is always at the leading edge, frequently advising EUCS on such matters.

In order to ensure continuity of service, especially for taught laboratories for which rescheduling is virtually impossible, we have to develop back up for those central services that we normally rely on. Where practical, these are hot-swap, but inevitably many require on-the-fly manual reconfiguration.

11. Verification

I agree that this job description conveys an accurate description of the job.

    Job Title    Name    signature    date