1. Job Details

Job title: Senior Software Engineer/Workgroup Leader
Planning Unit: EDINA
Unit (if applicable): Research and Geo-data Services
Line manager: Head of Research and Geo-data Service Delivery

2. Job Purpose

- Lead development, operation and maintenance of national services delivered via the Internet, based on geo-spatial data, used by students, staff and researchers in subscribing UK HE and FE institutions.

- Project manage and/or provide a technical lead for externally-funded and internally determined project activity through technical investigations and development of demonstrators in the geo-spatial arena.

3. Main Responsibilities % of time

1. Ensure the correct day to day operation of national services in the area of geospatial data to ensure the defined Service Level Agreements are met by identifying and performing necessary maintenance and updates, analysing service faults and ensuring service is secure from illegal access. Provide operational cover for these services. 20

2. Manage or provide a technical lead in the design and development of project software components and systems; produce supporting technical documentation and represent EDINA when reporting project progress and presentation of outcomes. 30

3. Provide technical recommendations throughout the full project or service development cycle, from tender response, implementation planning and scheduling, design, development and testing of software components. 20

4. Directing software engineers working in the Research and Geo-data Services team. 10

5. Maintain up-to-date knowledge on emerging technologies and best practices, and bring those into EDINA as appropriate. Establish best practices in the technical arena. 10

6. Provide a technical lead in the implementation (consult, specify, design and create) and maintenance of internal EDINA support systems, such as shared document or software repositories, intranet, subscriber databases and help desk systems. 5

7. Liaise with external companies who supply software in use by the team in order to request changes and track new developments. 5

4. Planning and Organising

The post-holder is expected to take a technical lead/manage the development and timely delivery of a full service or project. This involves exploring appropriate technologies for a project, consulting within and outside EDINA on best practices, and ensuring compliance with appropriate national, international and industry standards. A large degree of initiative and planning is required in order to meet agreed service and project milestones and deliverables. This needs to be balanced with the often immediate demands of keeping EDINA’s services operational. The post-holder should be able to prioritise their work to meet these needs. The post-holder also manages the Software Engineering Workgroup, planning the best use of staff and supervising their workload.
5. Problem Solving
The post-holder needs a high degree of ability in problem solving on three major fronts: service operation and delivery, project management to meet commitments within and external to EDINA, and technical leadership of the software engineering staff to ensure service and software quality as well as the adoption and use of best practices.

The post-holder also has to keep abreast of emerging technologies, and evaluate and propose them for use when they may be of benefit to EDINA.

6. Decision Making
The development and maintenance of services requires decisions in respect of changes which will affect all users of these services, or decisions on technology deployment that will have resource and/or skill implications. The post-holder would be expected to be able to assess risks, the timing of changes, consider resource constraints (both staff and financial) and provide recommendations to senior colleagues.

The post-holder needs to ensure that decisions made are communicated as appropriate, and justified if senior colleagues deem that to be necessary.

7. Key Contacts/Relationships
The post-holder maintains contact with: EDINA staff in other technical teams and the User Support & Helpdesk team; project and service collaborators in other HE or FE institutions, public sector organisations and/or private companies. He will also be expected to represent EDINA at conferences, technical meetings (UK and abroad) and meetings with public sector organisations and private companies.

8. Knowledge, Skills and Experience Needed for the Job

Education: A good honours degree in Computing Science or equivalent subject.
Type of Post Education Experience: At least 5 years’ experience in two areas: the provision and maintenance of operational software services, and in the development of software for such services.
Specialised Experience Required: Object/Relational Database Design, Development, Administration, Tuning and Maintenance skills.
Standard Technical Skills Required: Java, JSP/Servlets/Applets/Javascript development. Unix and/or Linux scripting; Tomcat, Apache, XML/XSLT related technologies. Industry standard software development, testing and deployment tools. Object Oriented Design and UML.
Other Skills: The ability to solve problems in a timely and effective manner, often under pressure, is essential. Also need staff management and strong communication skills.

9. Dimensions
Leading a team of 8 staff supporting a number of specific online services. Several of the services are core resources for over 165 university institutions and 242 colleges. The number of users of the services is of the order of 30,000+. The volumes of data managed are very large, the largest database contains over 400 million objects.

EDINA services are available, usually through institutional subscription, to all UK HE and FE institutions; some are freely accessible. They are formally measured by service level agreements, available 24/7, 365.

Services are managed on behalf of external bodies where the reputation of EDINA and ultimately the University is at stake.

10. Job Context and any other relevant information
The activities of EDINA and its performance have high profile, nationally and internationally.

The post requires a wide ranging knowledge across a number of core topics. The job is technically complex and challenging. Web standards, usable technologies, and user expectations are all constantly evolving and significant effort is required to maintain and apply relevant, up to date knowledge.