University of Edinburgh
Job Description

1. Job Details
Job title: Geo-data Manager/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 operation and maintenance of national services delivered via the Internet, providing access to geo-spatial data and used by students, staff and researchers in subscribing UK HE and FE institutions.
- Manages the geo-spatial databases underpinning the operation of geo-spatial services.
- Project manage or provide a technical lead for externally-funded and internally determined project activity in the geospatial arena.

3. Main Responsibilities

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<th>% of time</th>
<th>Description</th>
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<td>30</td>
<td>1. Ensure the correct day to day operation of national services in area of expertise to ensure the defined Service Level Agreements are met by identifying and performing necessary maintenance and data updates, analysing service faults. Provide operational cover for these services.</td>
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<td>2. Manage the geo-spatial databases underpinning the operation of geo-spatial services. This includes the design of database schema, configuration, optimisation of the databases and administration.</td>
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<td>3. Manage enhancement of services by specifying, and on occasions implementing changes, to the service specification.</td>
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<td>4. Performing data processing tasks for new and existing services. Converting data between different formats and processing the data to prepare it for service; updating data already in the services. Creating derived datasets from existing source data, including the design of cartographic representation and QA. Writing of technical documentation covering data and data processing.</td>
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<td>5. Provide technical advice and recommendations throughout the full project or service development cycle, from tender response, implementation planning and scheduling, design and testing of service components.</td>
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<td>6. Oversees the staff working in the Geo-data Management team.</td>
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<td>7. Responsible for small system support within EDINA.</td>
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4. Planning and Organising
The post-holder is required to work largely on own initiative within EDINA guidelines, with some direction from the Head of Geo-data Service Delivery. The post-holder also manages the Geo-data Management Workgroup, planning the best use of staff and supervising their workload.

Forward planning is required on an annual basis to ensure that new data is available for the start of the new session. Much of this work has to be conducted within short time-scales between the date of delivery and start date, therefore planning all stages of the work is essential to ensure that all tasks are completed. Longer term planning is also required in terms of upgrades to the services, and tracking of standards, data and software in determining in how these may impact on the operation of EDINA’s geo-services. As required reports have to be compiled detailing any critical impacts, for example, a change to the delivery format of data. Forward planning is required to ensure that the desired deliverables and milestones of projects are met.
5. Problem Solving
A high level of ability in analysis and support skills appropriate to delivery of data services via web-based technologies along with technical leadership for less senior members of the team. Typically, problems arise through complex interaction between software components, services provided by other organisations, interpretation and use of data and metadata, and subscribers accessing and using services in novel ways. The challenge being to identify where the problem actually lies and to initiate an appropriate response, either through escalation to those with direct responsibility or by investigating and identifying scalable solutions. Many problems require considerable experience and expertise to be applied.

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 majority of the day to day decisions, do not require upward reference, but are expected to be open to scrutiny and justification. The post-holder will take many decisions unaided and will be trusted to implement their recommendations after appropriate consultation.

7. Key Contacts/Relationships
EDINA staff in other technical teams and the User Support & Helpdesk team. The post-holder is also in contact with external data and software suppliers in order handle any issues or problems that have arisen. He/she will also be expected to represent EDINA at meetings with public sector organisations and private companies.

8. Knowledge, Skills and Experience Needed for the Job
The job is of a very technical nature. The post requires a good honours degree in a geo-spatial science with a minimum of 5 years experience of large scale management of geographic information (GI). Familiar with the concepts and use of ESRI and/or LaserScan GIS software within a UNIX environment; practical experience of programming in at least one language, for example, Java or Perl; Unix and/or Linux scripting; Tomcat, Apache, XML/XSLT related technologies. Practical experience of developing GIS applications employing good software engineering practice. The ability to solve problems in a timely and effective manner, often under pressure, is essential.

9. Dimensions
Leading a small team of between 2–3 staff providing a number of specific online services to staff, students and researchers from over 165 university institutions and 242 colleges. There are national and international dimensions, through engagement with formal partners or collaboration with other organisations. Several of the EDINA national services, such as Digimap, are core resources for subscribing institutions with some 26,500+ users.

EDINA services are available, usually through institutional subscription; some are freely accessible. They are formally measured by service level agreements, available 24/7.

The volumes of data managed by the Geo-data Management Workgroup are very large; one collection comprises 600,000+ data files. There are 20 GIS databases, the two largest of which contain over 300 million objects each. The post is mission as well as service critical.

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

The job is technically complex and challenging given the scale of use and the size of the databases. As new data and facilities come on stream, considerable effort is required to stay abreast of interdependencies between system sub components. The job requires detailed knowledge of the data, the specialised GIS software used store and manipulate the data and new developments in the knowledge domain. A wide range of data issues and problems have to be dealt with on a frequent basis. Individuals with expertise in this area are in very short supply.