

1. TERMS OF REFERENCE (TORs) FOR HIRING OF GIS MANAGER

PBS an attached department of Statistics Division is the premier statistical organization responsible for planning and execution of decennial Population and Housing Census and release of its data for public and private use.

Duties & Responsibilities

Under the overall supervision of the Member (Support Services) and in close coordination with the GIS Lab (Geography wing, PBS), the incumbent will have the following duties and responsibilities:

- Responsible for providing technical assistance to senior management and managing GIS/IT activities of all PBS GIS Labs (Islamabad, Karachi, Lahore, Peshawar, Quetta, Multan, Muzaffarabad and Gilgit)
- Responsible for efficient GIS/IT infrastructure design, implementation and deployment in all PBS GIS labs with the support of GIS/IT staff.
- Responsible for System Study and reviewing existing technologies of GIS Labs of all PBS offices
- Review and suggest changes in GIS/GPS Basic and Advance Training Manuals for PBS offices Staff
- Provide technical support and supervisory role in conducting GPS survey of Urban and Rural area block level verification and collection of POIs.
- Provide technical support in Revenue maps scanning and digitization of whole country and suggest best practices in this matter.
- Provide GIS technical vision and assistance to conduct training sessions for PBS technical staff associated with GIS at PBS office
- Responsible in managing/monitoring of all PBS labs GIS officer and IT staff. Support GIS Officers/IT staff in GIS technical issues.
- Provide GIS leadership role and assistance to GIS/IT staff to upgrade the existing software and hardware infrastructure of PBS GIS labs in this matter.
- Responsible to deploy Centralize Geodatabase physically in all PBS GIS labs Servers with the support of GIS/IT staff
- Prepare strategy to backup Centralize Geodatabases and recovery plan.
- Responsible for the maintenance and tuning of Islamabad Centralize Geodatabase on regular basis using MS SQL Server 2008 R2 and ArcSDE technologies.
- Responsible to provide leadership role in the designing and implementation of ESRI ArcGIS Server Census web application with consultation of PBS senior management and technical staff.
- Build capacity of Govt. PBS GIS Lab staff in the ArcGIS, ArcSDE, Google Earth, GIS Geodatabase
- Work in close coordination with Federal, Provincial and Regional PBS Census technical GIS Lab staff to incorporate new trends and requirements.
- Coordinate and assist Geodatabase consultant for the Census Geodatabase up gradation and development
- Conduct Census Data Analysis and Integration methodologies of spatial datasets with the support of GIS/IT staff of all GIS labs.
- Design Templates for GIS Mapping Layouts of different sectors and indicators

- Develop Map Catalogue and CD for further dissemination of GIS datasets with the technical support of GIS/IT staff
- Develop GIS business awareness and linkage of GIS Census data with other organizations;
- Prepare reports of GIS related activities
- Follow up of census project Work Plan and activities according to agreed plan.
- Responsible for Monitoring and field visits to all PBS GIS Labs as required
- Perform any other task assigned by higher management of PBS Islamabad

Required Qualification & Experience

- Master degree/BS (Sixteen years of education) in Geography / GIS / RS / IT / Computer Science/Space Science or equivalent with minimum 10 years relevant experience.
- Experience of Census enumeration GIS database development is major advantage.
- ESRI international trainings in ArcGIS Server and Geodatabase management is highly desirable.
- Good working knowledge of MS SQL Server, Oracle 10g/11g, ArcGIS Desktop, ArcGIS Server, ArcSDE enterprise level implementation, Google Earth, Global Mapper and Data Import/Manipulation.
- Enterprise level ArcSDE practical implementation of at least two successful projects is preferred.
- High level project implementation experience of various projects including ArcSDE geo database design & implementation.
- Strong previous experience within an enterprise level GIS, ArcSDE, multi-user editing, and versioning concepts.
- Strong understanding and experience of Project Management process to manage projects and teams.
- An understanding of the range of GIS and information management software products, from desktop to server applications and development tools.
- Working knowledge of database utilization including the use of quality assurance procedures, database management, and data conversion.
- Excellent time and resource management, interpersonal, business communication, negotiation skills.
- Excellent interpersonal and communication skills.

2. TORs FOR HIRING OF DATABASE ADMINISTRATOR

Database Administrator/Web Developer will work to develop GIS applications and tools such as web dashboard and maintain software programs to support the needs of PBS GIS Labs. Additional tasks may include analyzing land and aerial imagery or using databases to create specialized maps such as population-based maps. He may also help PBS interpret data, identify trends and highlight patterns.

Database Administrator/Web Developer will also provide technical support on GIS programs, maintain and troubleshoot existing system as well as upgrading of software. Additional duties can involve project development, management and budgeting.

Database Administrator/Web Developers shall design, revise, document and test applications for GIS using the Environmental Systems Research Institute (ESRI) suite, ArcGIS Runtime SDK's, Eclipse/Android Studio, Visual Studio and other IDE's as necessary to create and maintain field data collection applications for local and national enterprise geodatabases.

- Development of Web Dashboard
- Work to develop and maintain systems for mobile GIS field data collection.
- Use Android Studio, Visual Studio and ESRI suite of tools to make standard Enterprise GIS data collection and modification in remote locations more user - friendly while maintaining metadata and standards.
- Work under the direction of the GIS Manager to develop systems in an integrated mobile GIS application, test, pilot and deploy to field offices.
- Develop user requirements and upgrade or develop mobile, desktop and tablet tools as needed to meet the requirements.
- Train and provide support to field staff in the use of Mobile GIS.
- Train and provide support to PBS IT staff to develop web and GIS applications.

Successful candidate should possess the following skills and abilities:

- i. BCS/ BS/ BSc (Computer Science/GIS), or Years MS/ MCS/ MSc in Computer Science/ Software Engineering / IT/GIS or equivalent from local or Foreign HEC recognized University.
 - ii. At least 10 years post qualification experience as Database Administration, SQL Server installation, managing and administration. Complex Query Concept and practical experience as database administrator.
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3. TORs GIS Officer

Population Census Organization (PCO) was attached department of Statistics Division now PBS, ACO and FBS have been merged and formed Pakistan Bureau of Statistics (PBS). PBS is the official agency of Federal Government which is responsible for planning and execution of decennial Population and Housing Census and release of its data for public and private use. Population Census Organization process and disseminate data in the form of regular census reports and a number of supplementary reports based on analysis and research of demographic data.

Duties & Responsibilities

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- Responsible for System Study and reviewing existing technologies of GIS Labs of all PBS offices
- Review and suggest changes in GIS/GPS Basic and Advance Training Manuals for PBS offices Staff
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- Responsible for Monitoring and field visits to all PBS GIS Labs as required
- Perform any other task assigned by higher management of PBS Islamabad

Required Qualification & Experience

- Master degree/B.S (Sixteen years of education) in GIS/RS/IT/Computer Science/Space Science or equivalent with minimum 5 years relevant experience
- Experience of Census enumeration GIS database development is major advantage.
- ESRI international trainings in ArcGIS Server and Geodatabase management is highly desirable
- Good working knowledge of MS SQL Server, Oracle 10g/11g, ArcGIS Desktop, ArcGIS Server, ArcSDE enterprise level implementation, Google Earth, Global Mapper and Data Import/Manipulation.
- Enterprise level ArcSDE practical implementation of at least two successful projects is preferred
- High level project implementation experience of various projects including ArcSDE geo database design & implementation.
- Strong previous experience within an enterprise level GIS, ArcSDE, multi-user editing, and versioning concepts.
- Strong understanding and experience of Project Management process to manage projects and teams.
- An understanding of the range of GIS and information management software products, from desktop to server applications and development tools
- Working knowledge of database utilization including the use of quality assurance procedures, database management, and data conversion.
- Excellent time and resource management, interpersonal, business communication, negotiation skills
- Experience in emergency and post disaster area is preferred
- Excellent interpersonal and communication skills

Required Competencies

- Ability to work under pressure and difficult conditions
- Demonstrates integrity by modeling the UN values and ethical standards
- Ability of work effectively and harmoniously with colleagues
- Displays culture, gender, religion, race, nationality and age sensitivity and adaptability
- Treats all people fairly without favoritism
- Ability to lead strategic planning, results-based management and reporting
- Ability to go beyond established procedures and models, propose new approaches which expand the range of programmes

- Ability to work with minimal supervision
- Focuses on impact and result for the client and responds positively to critical feedback
- Builds strong relationship with clients and external actors

Required Languages

- Proficiency in English and Urdu is essential. Knowledge of local languages is an advantage.
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4. TORs FOR HIRING OF IT NETWORK ADMINISTRATOR

PBS an attached department of Statistics Division is an official agency of Federal Government responsible for planning and execution of decennial Population and Housing Census and release of Census Data for public and private use. PBS processes and disseminates data in the form of regular Census Reports and a number of supplementary reports based on analysis and research of demographic data.

PBS has launched a development project on Updation of Rural Area Frame in the country which includes the identification and bifurcation of big rural blocks into smaller size, verification and updation of mauza and block boundaries, collection of points of interest through GPS devices and digitization of collected information on the google images. In order to develop database for these blocks and develop linkage with all the GIS Labs of the country, hiring of six (06) Network Administrators one in each GIS Lab of PBS has been proposed with following functions/responsibilities:-

Duties & Responsibilities

The incumbents will work under the overall supervision of Member (Support Services), Project Director, Project Coordinator, Senior GIS Officers and in close coordination with the PBS GIS Lab officials. The incumbent will have the following duties and responsibilities:

- Responsible to configure, maintain and trouble shoot all IT equipment and Server machine
- Responsible for PBS/GIS Lab of Client Computer's Hardware & Software - Support, maintain and administrate client machines/Desktop/Laptop's hardware and software systems
- Responsible for installation of windows operating system on new and old corrupt system along with de-installation of corrupt software
- Responsible of Network Security - Pro-actively administrate the security of server systems, messaging, mail server, firewalls and hosted systems against any kind of threats which can destroy the data, under the supervision of Senior GIS Officer.
- Responsible to efficiently create and maintain the VPNs secure connection through Juniper SSG-140 firewall with all Provincial and Regional PBS GIS labs
- Responsible for installation, configuration and maintaining Juniper SSG 140 Firewall/Router
- Responsible for installation, configuration and backup of MS SQL Server database
- Responsible to build the IT capacity of PBS GIS lab focal person.
- Responsible for installation of GIS application ArcGIS desktop etc.
- Responsible for creating, deploying and maintaining window server domain network and client machine user rights
- Responsible for installation, configuration and backup of MS SQL Server database
- Ensure proper installation and functioning of UPS at all PBS/GIS Lab Offices
- Responsible for maintenance of disaster recovery preparedness for systems and critical data relate to database and mapping solutions
- Responsible for suggesting and implementing suitable virtualization scenarios in PBS GIS labs
- Handle all internet connectivity issues with ISP to provide internet access and availability to GIS Lab staff

- Provide help desk Support for the Lab staff to resolve any technical issues under the supervision and guidance of GIS Officer.
- Install Antivirus/ Anti-spam including Multi tier Software
- Test and ensure of the GIS Lab Network setup and furnished Data entry, maintenance and cleaning under the supervision and guidance of GIS Officer at PBS GIS Lab
- Perform all additional technical or non-technical responsibilities and duties assigned by Senior Management of PBS Lab within IT/GIS domains
- Prepare IT related user manual on requirement basis
- Perform any other task assigned by the supervisor

Required Qualification & Experience

- Master Degree/BS (Sixteen years of education) in Computer Science/IT or equivalent with minimum 5 years relevant experience as Network Administrator in any organization having more than 100 networked computers.
 - Experience of post disaster information management situations is an advantage
 - Strong experience of Network (LAN/WAN) Administration
 - Experience in proper management of Juniper SSG-140
 - Practical Installation experience of MS SQL Server,
 - High exposure to Microsoft Windows (Window7, 2008/2012 Server), Intel based desktops, laptops, hardware and computer peripherals like printers, plotters and photo copiers
 - An understanding of the range of GIS and information management software products,
 - Working knowledge of database utilization including the use of quality assurance procedures, database management, and data conversion.
 - Excellent time and resource management, interpersonal, business communication, negotiation skills
 - Advanced computing skills including MS-Office applications
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5. TORs FOR HIRING OF FIELD MONITORING OFFICERS

The proposed TORs of the Field Monitoring Officers to be hired for the purpose are as under:-

Duties & Responsibilities

- i) The Field Monitoring Officers will work under the direct supervision of the Project Coordinator and Member (Support Services).
- ii) The Field Monitoring Officers will be based at Provincial Offices of PBS, Islamabad.
- iii) The Field Monitoring Officers will be responsible for Development of Field Operation Plan of the areas under their jurisdiction for Updating of Rural Area Frame i.e. mauzas and block boundaries through GPS devices for launching of this activity in the field including manpower, financial and logistic arrangements
- iv) Preparation of working programmes for the field staff ensuring of required equipment, number of questionnaires and manual maps etc before deployment of staff in the field.
- v) Designing of pre-testing activity in the field to check the adequacy of the performa developed for the purpose and conduct of pre-testing in the field.
- vi) Incorporate amendments in the questionnaires based on the observations/experience gained during pre-testing.
- vii) Launching of field activities in the field keeping in view the available field force in the respective offices.
- viii) Monitoring of the updation activity in the field by getting feedback from Field Supervisory Officers of respective province.
- ix) Preparation of consolidated progress report for the higher authorities and periodical review of the progress made in the field and to discuss bottlenecks if any.
- x) Submit comprehensive progress reports to higher ups in respect of their area jurisdiction for consideration.
- xi) Prepare final report on the activity at the end of the project cycle.

Required Qualification & Experience

- i. Master Degree/BS (Sixteen years of education) in Statistics/Economics/Sociology/Geography OR equivalent from Local or Foreign HEC recognized University with minimum 5 years relevant experience.