FOCUS GROUPS FOR WORKSHOP ON GIS

20th Feb 2015,
NeGD

GROUP 1
BUILDING GIS PLATFORM FOR EMBEDDING GEOSPATIAL TECHNOLOGIES INTO GOVERNMENT PROCESSES AND CITIZEN SERVICES

BUILDING A FEDERATED GIS PLATFORM FOR EMBEDDING GEOSPATIAL TECHNOLOGIES INTO GOVERNMENT PROCESSES AND CITIZEN SERVICES

- National GIS to be Federated Service Delivery platform
- Collaborative framework for Govt, Private Enterprises, Citizens & Developer community
- Web/Cloud Based Platform to host various government processes & citizen services
- Single Window access for users to both spatial and non-spatial data as service
- Capability for Sharing content based services and applications for use.
- Generic geospatial services and APIs
- Services hosted on platform to be consumed by multiple computing and mobile devices
- Available 24x7 on demand: anytime, anywhere and on any device

BUILDING A FEDERATED GIS PLATFORM FOR EMBEDDING GEOSPATIAL TECHNOLOGIES INTO GOVERNMENT PROCESSES AND CITIZEN SERVICES

- Participating agencies to own & host data on their servers in turn accessed by platform for rendering services
- User Departments/Ministries to run own GIS systems for internal operations and to have access to the National GIS
- States to implement a similar GIS platform for their Dept needs using a Federated Architecture so that to allow access to NGIS also
- Availability of Geo-Apps: A set of DSS appl + planning and monitoring functions
- To facilitate economic, social, political, or environmental indicators using maps
- Integrate the GIS with core IT systems including Core Government Processes and Citizen Services

TASK FOR THE FOCUS GROUP 1

- Create a high level functional architecture
- Use cases and technology for depicting integration of GIS systems
- Case study if any available can be discussed

GROUP 2
CREATION OF GIS ASSETS;
USER EXPECTATIONS, CONCERNS AND WAY FORWARD

CREATION OF GIS ASSETS; USER EXPECTATIONS, CONCERNS AND WAY FORWARD

- Existing Datasets need to be made GIS Ready
- Data should be standards based to facilitate integration across disparate sources
- Ability to add non-spatial data
- Database to be Extensible and Scalable
- Adhere to Common Data Framework

CREATION OF GIS ASSETS; USER EXPECTATIONS, CONCERNS AND WAY FORWARD

- All National Mapping Agencies should expose their content to the platform
- National Mapping Agencies encouraged to use contemporary technologies for:
  - data acquisition
  - adopt a workflow based data production and dissemination system
- Evolve a harmonised ecosystem
- Encourage private sector for data acquisition, production and dissemination

CREATION OF GIS ASSETS; USER EXPECTATIONS, CONCERNS AND WAY FORWARD

- Ownership of the data with data creating agencies, update & maintenance
- Conflict of data ownership to be identified & addressed → single source of truth
- Undertake data asset inventory and review of existing datasets
- Action Plan to be evolved to migrate the existing data to a common platform
- Issue of multiple representation problem in spatial databases
  - Same spatial object may be considered as a point in one application as a polygon in other
- Aggregation & Consolidation of data from sources where different representation is followed

TASK FOR THE FOCUS GROUP 2

- Identify the data requirements
- Requirements of Line Ministries/Departments and States

GROUP 3
ENABLING POLICIES FOR NATIONAL GIS

ENABLING POLICIES FOR NATIONAL GIS

- Comprehensive policy for data acquisition, access, sharing and use to provide for:
  - Data acquisition through multiple techniques such as LiDAR, Aerial Photography, UAVs and High Resolution Satellite Imaging
  - Hosting of content on a Web/Cloud platform
  - Involvement of Private Sector in data acquisition, production and dissemination
- One Regulatory authority to oversee all aspect of spatial data acquisition, production and dissemination
- SLA among all stakeholder agencies for data sharing, access and services
- Direct purchase of imagery and other geo content from the producers

ENABLING POLICIES FOR NATIONAL GIS

- IPR of the spatial data will reside with the creator, who will also be responsible for updation and maintenance
- Due deliberations are required for:
  - Licensing Policy
  - Open Data Policy
  - Creation of Task force
  - Encompassing private players such as Google
- National Map Policy -2005 - “addressing security and defense concerns”

ENABLING POLICIES FOR NATIONAL GIS

Remote Sensing Data Policy : 2001 and 2011

- ISRO/DOS positioned RSDP-2001, which governed how satellite images were acquired and distributed from 2001 onwards.
- RSDP-2011 embeds the concept of a High Resolution Image Clearance Committee to address the need of various users for 1m images.

CAR, 2010 for Aerial Survey

- A single window clearance system for all aerial survey tasks. DGCAs responsibility to obtain internal approvals/clearances of various ministries and determine a "collective" clearance for the application.

National Data Sharing and Availability Policy (NDSAP), 2012

- The NDSAP, 2012 is designed to promote data sharing and enable access to Government of India owned data for national planning and development

ENABLING POLICIES FOR NATIONAL GIS

The Delhi Geographical Spatial Data Infrastructure (Management, Control, Administration, Security and Safety), Act, 2011.

- Delhi state has created a state GI content that includes about 48 lakh buildings, 3 lakh manholes and nearly 17,000 kilometres, demographics of the capital and utilities like storm-water drains, sewer lines, infrastructure projects and urban planning details under a Delhi State Spatial Database

GROUP 4
STANDARDS FOR CREATING, MANAGING, SHARING AND USE OF GEOSPATIAL DATA

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- GIS technology illustrates relationships, connections, and patterns that are not necessarily obvious in any one data set, enabling organizations to make better decisions based on all relevant factors.
- Share, coordinate, and communicate key concepts between departments within an organization or between separate organizations using GIS as the central spatial data infrastructure.

STANDARDS FOR CREATING, MANAGING, SHARING AND USE OF GEOSPATIAL DATA (CONTD..)

- Share crucial information across organizational boundaries via the Internet and the emergence of Web Services.
- "Open GIS :
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- Cost of Program Development – Need to reduce the need to develop interfaces for different data formats, Operating Systems etc

STANDARDS FOR CREATING, MANAGING, SHARING AND USE OF GEOSPATIAL DATA

Data Standards:

1. Data converters (DLG, MOSS, GIRAS)
2. Standard interchange formats (SDTS, DXF™, GML)
3. Open file formats (VPF, shape files)
4. Direct read application programming interfaces (APIs) (ArcSDE® API, CAD Reader, ArcSDE CAD Client)
5. Common features in a database management system (DBMS) (OGC Simple Feature Specification for SQL™), Non SQL – Cloudant/MongoDB
6. Integration of standardized GIS Web services (WMS, WFS, ArcIMS)

GROUP 5
CAPACITY-BUILDING FOR ADOPTION OF GEOSPATIAL GOVERNANCE SYSTEMS

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- Educate the User Organisation in order to consume services hosted on the GIS platform.
- Short-term courses customized to cater to individual user departments.
- Capacity building in departmental training institutions like FTI, NPTI to conduct refresher courses for serving officers.
- A separate cadre Geographic Information Officer (GIO) to be created to build and retain geospatial competencies in the departments as a central resource.

Strengthen existing Geospatial education infrastructure in academic institutions.

Skill up gradation programme for faculty in order to align their knowledge base to current and new technologies.

Robust internship programme for merging domain and GIS technology skills.

Engage private sector in continued augmentation of GIS resources.

Policy framework to support the development exchange and application of GeoSpacial data existing in some countries

Institutional arrangement to facilitate produxtion and exchange of harmonised GeoSpatial datasets

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THANK YOU