Egyptian Survey Authority
Geographic Information Management System
(ESA GIM)

By: Kholoud Saad Salama
Egypt

Agenda
- About Egyptian Survey Authority
- ESA GIM Business Requirements
- System Concept
- System Data Flows
- System Architecture
- System Modules

About Egyptian Survey Authority

- The Backbone for supplying data to the Egyptian society.
- The Only governmental organization responsible for the coverage of Egypt with topographic maps
- Responsible for supporting national cadastral and land registration (in cooperation with Real Estate Office in Ministry of Justice)

ESA GIM Business Requirements

- Efficient Information Management
- Improve Competitive Power of ESA
- Establish unified access to Nation-wide Geo-Information
- Business Process Re-engineering
- System Scalability
Data Model

- Building a data model is the foundation of the system
- Merges cadastral and topographic data models into a rather simplified data model
- Designed to support fast data access and inquiries

Web Services

- Provide access to GIS content and capabilities – on demand, when needed, via any web-enabled application
- Adhere to standards, such as SOAP/XML and WSDL
- Allow integration with various entities, whether public or private

GIS Portal Toolkit

- A toolkit developed by ESRI to support implementation of one-stop web sites for the discovery, transmission, and use of geographic data and mapping services
- A technology and services solution for implementing spatial data infrastructure (SDI) portals

GIS Portal Concept

- Portal Catalog
- GIS Data
- GIS Users
Metadata fuels the GIS Portal

- The GIS portal is based on a Metadata catalog that describes and references the geographic information at ESA.
- Metadata is a summary document providing content, quality, type, creation, and spatial information about a data set.
- Can be stored in any format such as a text file, Extensible Markup Language (XML), or database record.

What does Metadata Do?

- Helps with finding information
  - Think of metadata as the information content that populates a Card Catalog
- Allows informed decisions about accessing and using the data
  - Legal statements regarding resources liability protect investment
- Data organization and provides management decisions of the resource

System Data Flows

Data Access via ESA GIM Web Portal

Spatial Requests (ESA Inquiries)

Front Desk Activities
1. ESA GIM Web Portal

ESA GIM web portal allows both the public and governmental entities of navigating metadata and sample maps published via the portal, in addition to using a number of functionalities as stated below.

---

2. Metadata Search

---

ESA GIM Web Portal home page, displaying available categories of metadata

---

Search form for specifying criteria to search for metadata

---

Displaying search results for Administrative and Political Boundaries category

---

Display selected metadata details
Display sample map for selected metadata

ESA Inquiries

General Inquiry Form

A request number is generated to allow the user of inquiring the status of his request

Map Generation Request

ESA Cadastral Data
2. ESA Front Desk Web Based Application

- A spatially enabled application that serves ESA users
- Handles requests coming for the public or other governmental entities
- It avails the following spatial capabilities:
  - Map Display
  - Map Navigation

3. ESA Monitoring Web Based Application

- The monitoring application provides top-level management with tools for:
  - Following up the progress and status of requests
  - Provides an alert in the event of a problem
  - Perform basic analysis Generate various performance related reports

Thank You

For more information please visit the ESRI booth in the exhibition