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Research Article

DEVELOPING AN INTERACTIVE WEB BASED LAND INFORMATION SYSTEMS USING ARCGIS ONLINE PLATEFORM

*** LEONARD M.O AMINIGBO. (PhD), MNIS, MNES, MGEOSON, MNAHS.**

Department of Geography and Environmental Management, Rivers state University, Portharcourt Nigeria.

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ABSTRACT

There is an increasing awareness that land administration has a wider community and even global imperative landed properties in Rivers state are major sources of government revenue and requires a land information system. Establishment of LIS of portharcourt property layouts is an integral to the realization of that vision. The knowledge conveyed in this research has considerable potential support to the people of Rivers state in providing sustainable land relationship and information for decision makers (land administrators and revenue drivers) that will enable them to make decisions favourable to sustainable development in the context of efficient land administration and management. This study employed geospatial methods and techniques to document, design and populate land information of specific layouts in portharcourt. In the light of the observation drawn from the discussions and results of queries and analysis above, the use of the LIS will gradually improved efficiency and increased productivity in various aspects of services offered at the Ministries of Lands and Surveys and it is hereby recommend that.

Keywords: Urbanization, Headwaters, Flooding, Unmanned-Aerial-Vehiecle.

INTRODUCTION

Web GIS is the combination of the web and GIS. A new and promising field extending GIS to newer and broader applications. Esri Web GIS platform provides ArcGIS Online and ArcGIS Enterprise, supporting the cloud, on-premises, and hybrid deployment patterns Apps are the face of Web GIS Different user types have different privileges and can access different apps A web app is typically composed of base maps, operational layers, and tools Web services are the building blocks of today's Web GIS. ArcGIS Online is an integral part of the web GIS platform. ArcGIS Online provides access to vast amounts of geographic data including essential base maps, satellite imagery, and orthophotography. It also provides the robust data sharing and publishing technology that's key to successful local government GIS, relieving the strain on servers, data storage, and the IT department while delivering new capabilities. Users inside and outside the assessor's office, including the local business community and the general public, will be able to use the online maps and services to access current, authoritative tax and assessment information and other local government data.

Key Benefits of ArcGIS Online

ArcGIS Online is a protected online mapping system which gives the ability to portray and publish parcels and other data online. It also engage and inform taxpayers with dynamic apps for computers, smart phones and tablets, and use data to make maps and help analyze property values. The system combines data with thousands of layers and imagery and then explores maps. It manages maps, apps, and data through an easy-to-use catalog using folders and groups. Central to the solution platform, ArcGIS Online provides the computing infrastructure, data, and analysis capabilities for using GIS throughout your office.

***Corresponding Author: LEONARD M.O AMINIGBO. (PhD), MNIS, MNES, MGEOSON, MNAHS.**

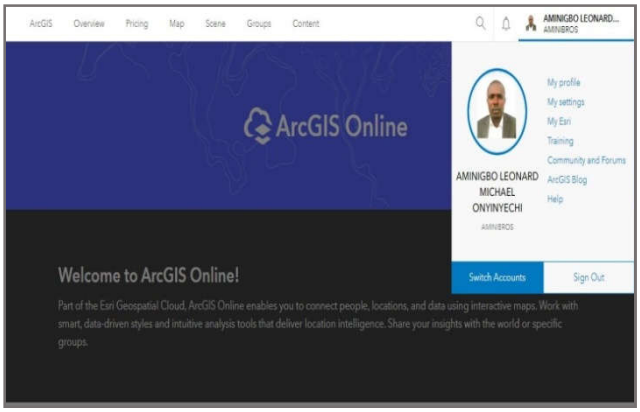
Department of Geography and Environmental Management, Rivers state University, Portharcourt Nigeria.

Users will be able to apply this data inside applications without having to maintain their own GIS infrastructure. Here are the main ArcGIS Online features:

- It is associated with making data widely available with reduced cost
- The users can deploy maps and data collection apps on IOS and Android devices with makes mapping dynamic.
- Map and other geospatial data are hosted and maintained by Esri to ensure high availability, performance, and security.
- The user organization retains all ownership of its data.
- Accessing the map data is available through online maps and applications.
- ArcGIS Online is included with desktop software and enterprise license agreements for effective services.

ArcGIS Online delivers cost-effective and speedy access to data from the field, in the office, via the web, or on mobile devices. This data can be shared across departments and with the public. ArcGIS Online combines cloud computing services and data storage with a wide selection of base maps and other mapping tools which enhances system value to government and the public.

CREATING AN ARCGIS ONLINE ACCOUNT



Web Based Geospatial Database for Eagle Island Residential Layout in Portharcity

ArcGIS online provides a robust set of data management assets for all types of geospatial data which includes imagery, base maps, and parcels. Land parcel data is vital in local government administration and is widely used by many organizations across the world, including those that support disaster response and management, public health and safety. Others include engineering, and public works, as well as planners, real estate professionals, and developers. Government authorities strive to support other public organizations organizations, they are charged to provide authoritative data which includes timely, accurate parcel information. The Landowners are also important users of these parcel information, therefore with these information available to public 24 hours a day, citizens can then scrutinize online property data for any possible transaction and there are however new expectations as a result. The geospatial data on government ArcGIS online sites is generally accepted as authoritative when compared to other aggregated online mapping and valuation data. For department credibility and it has become crucial to maintain land parcel property characteristics and positional accuracy that overlay correctly on high-quality base maps. Esri provides a land parcel records solution as a core part of the ArcGIS online platform to help users: Produce web maps from a variety of ArcGIS data sources.

- Implement efficient data management workflows.
- Incorporate best practices from the land records industry.
- The ArcGIS Parcel Editing Solution, included in ArcGIS, helps users improve the

integrity of parcel data, increase its usefulness throughout the organization, and increase parcel editing efficiencies.

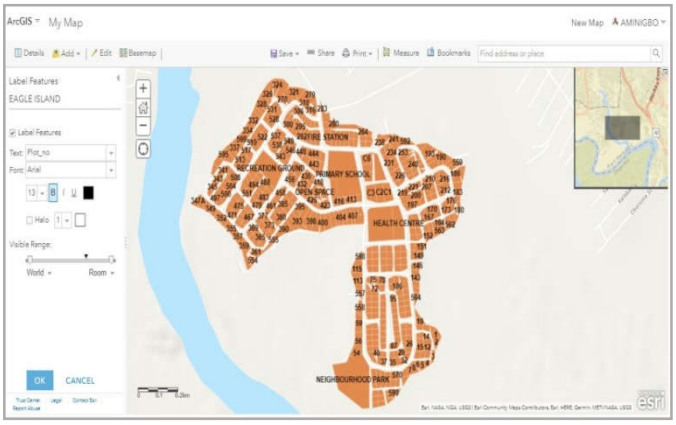


Fig 2: Web based Eagle Island Residential layout

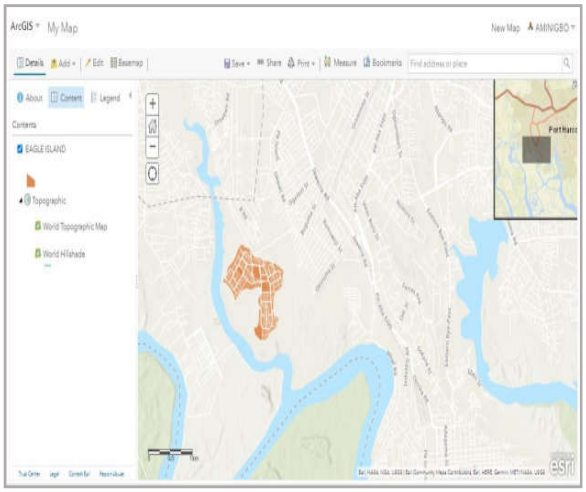


Fig 3: web based Eagle Island Residential layout showing parcel Id.

This project is available on the web through this link; https://www.arcgis.com/home/webmap/viewer.html?webmap=c6bd5c0df4704b6e92bcc 6baae024ca4.

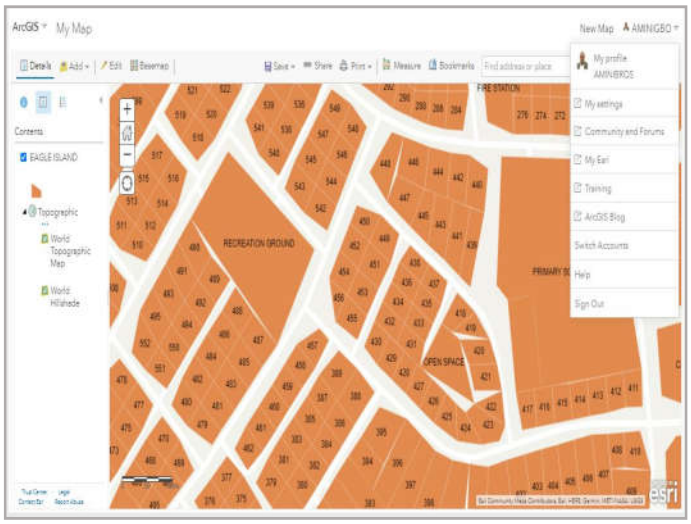


Fig 4: web based Eagle Island Residential layout showing parcel Ids.

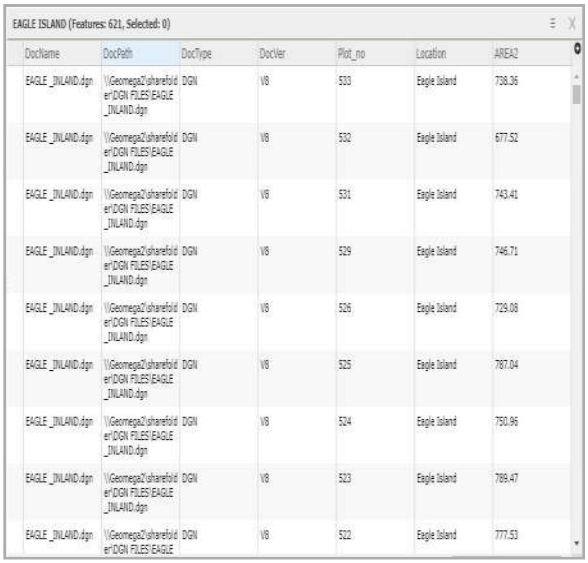


Fig 5: Attribute table of Eagle Island Residential layout.

Access to land records information on the web remains an essential element in land resource management objectives. An ArcGIS online support web standards and is the most common technology used amongst practitioners globally. ArcGIS online can be used by the public for applications designed which helps locate polling units, reserve a tourist site, report traffic conditions within a metropolis, locate a landed property for lease or sale, record crime statistics within a region, identify planned development sites, and show location and impacts of emergency events etc. ArcGIS online makes geospatial online interaction more dynamic and powerful tool which presents data in different compactable format for easy access. Governments across the world are increasingly using the ArcGIS online platform to build mapping algorithms that engage the public, deliver transparency, and enhance policy making. ArcGIS online has the capacity to integrates geospatial services in the cloud with near real-time data, public generated content, mobile tools, and social networking instruments to promote government practices that leaders and the public expect. This online interaction engages the public thereby encouraging improve data and services and infrastructure. For instance it is possible for a citizen to easily overlay

accurate georeferenced imagery with parcels and locate any discrepancies in the parcel data which can be communicate accordingly.

CONCLUSION

Web based GIS do not require specialized client software however, web browsers are compactable platforms for web GIS. It uses JavaScript, Java, plug-in and differing degrees of support for different graphics formats etc. It is a map-based system that is delivered via a web browser and thus has some degree of interactivity above and beyond a simple static map. That interactivity may be closely or weakly coupled with the map. A 'true' GIS might include Analytical functions and control over display of layers. web GIS is the combination of the web and GIS. It is a new and promising field extending GIS to newer and broader applications. Esri Web GIS platform provides ArcGIS Online and ArcGIS Enterprise which supporting the cloud, on-premises, and hybrid deployment patterns and Apps are the face of Web GIS. Different user types have different privileges and can access different apps A web app is typically composed of base maps, operational layers, and tools which provides Web services and building blocks of today's Web GIS. Hosted feature layers are the most common type of operational layers and they can be created from existing data or from the scratch, using ArcGIS online or simply a web browser Layer configuration typically includes styles, pop-ups, and other properties. Smart mapping adds meaningful visualization to your web maps and apps. It is an expression language that can be used across the ArcGIS online Platform for Storytelling. Using web GIS provides intuitive ways to explain where, when, and what ArcGIS Story Maps is the new generation of story maps. can meet today's challenges — from doing more with less, defending commercial appraisals, modernizing systems, and delivering expected customer service with ArcGIS online for Land Records, its solution is built on maintained, sustainable technology. It provides

- Tools and workflows that increase efficiency.
- Analytical capabilities for more effective decisions.
- A robust collection of algorithms that are easy to implement and use to meet business requirements.
- Online resources which are delivered as ready-to-use content and services.
- A tool for collaboration and communication of geographic information.

ArcGIS online for Land Records is a dynamic geospatial platform for land records management and has shown capacity in delivering increased productivity through purpose-built algorithms and workflows that support the daily needs of the public,

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