

Land Information System



A Single Source for your Registry
and Cadastre Information

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Our scalable Land Information System benefits registry and cadastral offices by providing an integrated solution for the maintenance and delivery of real property information.

CARIS database, administrative, desktop and Web-based products are integrated with your current business applications to provide a complete enterprise solution. By streamlining and integrating business processes within centralized data services, your agency will facilitate the creation of a complete, secure, authoritative, accurate and open electronic register of land ownership with geospatial cadastral data. Our solutions will provide your staff and clients with access to reliable, current and accurate information.

An Enterprise Solution

The CARIS Land Information Solution (LIS) solution provides a comprehensive and rigorous methodology for describing the current or future structure for an organization's processes, information systems,

personnel and department relationships, so that they align with the organization's core goals and strategic direction. CARIS' LIS mandate is to provide more than information technology by also addressing the practice of business optimization through the implementation of a sound business architecture that addresses performance, productivity and service delivery.

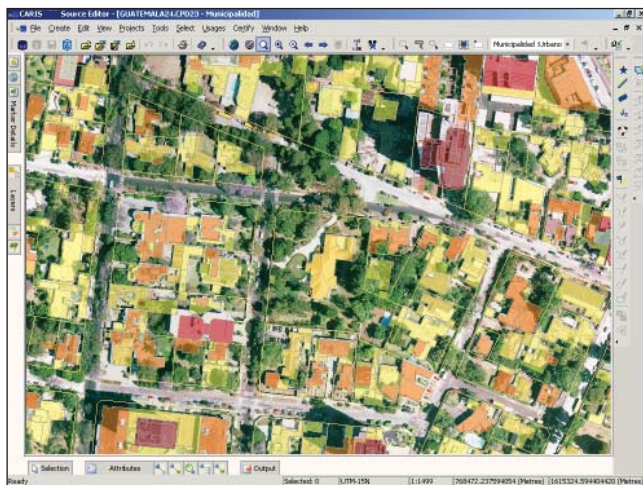
Centralized Data Services

Create and maintain your land title and cadastral data within an integrated, centralized Oracle® Enterprise and Spatial database environment. By doing so you are able to improve system administration and access to your data. Through the employment of an open architecture you also have the capability to integrate existing or third party database applications such as assessment, financial and other land administration data.

Though data services are centralized, you are able to access these services online in a distributed environment utilizing Oracle® client and Internet browser applications. Information is available through a single common interface for all of your clients.

Adaptable Domain Models

LIS adheres to the principles and objectives of Cadastre 2014¹. Land administration is based on Torrens title where a register of land holdings is maintained by the state and guarantees indefeasible title to those included in the register. Property mapping is based on the FIG Core Cadastral Domain Model. While LIS integrates these judicial and geospatial models and provides the tools to facilitate a smooth transition from existing environments, the solution also provides an open architecture that can be adapted to the leg-



isolation of the state and to local standards related to spatial data infrastructures.

Ensure Quality

LIS includes a comprehensive set of data production, maintenance and validation tools. These ensure the integrity and quality of source data, as well as the resulting products and services that utilize these data sources.

Quality assurance is further enhanced with the introduction of CARIS Workflow Management which models all the business processes within the registry and cadastral offices. Workflow Management removes the complexities associated with integrated technologies by focusing staff on business processes.

Secure Access

LIS products utilize a role/privilege model that is integrated with security assurance capabilities offered by Oracle®. System administrators are able to establish accounts for staff and clients based on a predetermined level of system functionality, as well as defining the content of data accessed by end-users.

Transaction Management

All CARIS LIS applications maintain transaction logs. This information can be periodically reviewed to evaluate system use and improve performance. In addition, client transactions can be associated to a number of cost models allowing registry and cadastral offices to achieve a sustainable business environment based on the services they provide.

¹ Kaufman, Jürg and Steudler, Daniel, July, 1998, *Cadastre 2014 – A Vision for a Future Cadastral System*, Working Group 1 of FIG Commission 7.



E-Government

CARIS Land Information System (LIS) enables e-Government through the application of information and communication technologies that enhance the effectiveness of legislation, as well as jurisdictional and administrative policies. The objective is to improve efficiency or change the relationship between citizens and government or do both. The primary delivery mechanism is the Internet and corporate networks (Intranet).

Deployment Models Include:

- Business-to-Enterprise (B2E) access by land registry and cadastral office staff through the use of secure Web-enabled database client applications designed to meet the business workflow within departments.
- Business-to-Client (B2C) access by clients to land registry office and cadastral department information and services through a single Internet application.
- Business-to-Business (B2B) access through connectivity of external databases to the land registry office, business database(s) and cadastral database, thus presenting the data and services to clients via business partner portals.

Land Information Network (LIN)

- Torrens land titles and/or deeds-based registry. Also provides the means to migrate from a deeds-based registry to land titles
- Provides a public portal for Internet services related to registry data
- Supports electronic submission of documents and plans
- Provides document and plan imaging capabilities
- Supports the establishment of a land gazette
- Provides financial front counter capabilities that can be integrated to existing third party ledgers
- Provision of web services supporting the development of business-to-business applications
- Modular-based supporting a phased-in approach
- Provision of extensive security, administrative and customization tools

CARIS Parcel Database (CPD) and Source Editor

- Tools provided for creating, modifying and maintaining object oriented cadastral data models
- Support of raster backdrops that include GeoTIFF, TFW, IGA, BSB, HCRF and CRL formats
- Powerful editing tools for the creation and maintenance of land objects
- Tracking and viewing of data processing history
- Data tools that validate the geometry and associated attributes of land objects
- Certification of feature attributes and geometry
- Feature locking during edits
- Data publication to facilitate access via Internet map browsers

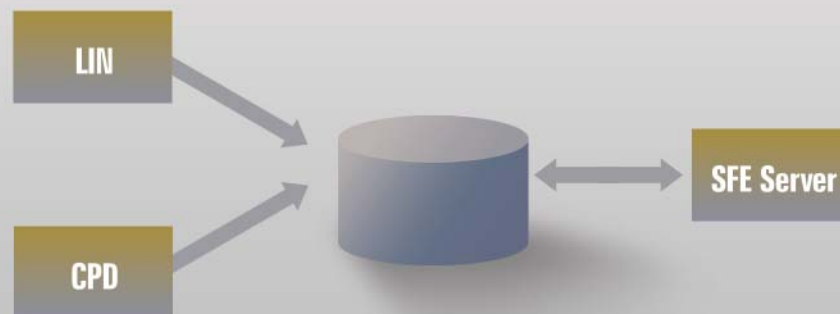
Spatial Fusion Enterprise (SFE)

- Enhances CARIS LIN Public Portal to include Internet-mapping
- Supports two browser-based clients; lightweight HTML client or a full featured Java Applet
- Supports Open Geospatial Consortium, Inc.™ (OGC) WMS and WFS requirements
- Supports a distributed multi-threaded architecture that allows systems to scale up without modification to the application
- Support of high-resolution plotting from the client based on customizable templates
- Supports customizable database reporting
- Supports multiple native data formats including MID/MIF, Shapefiles, DXF, DWG, DGN, S-57, Oracle® Spatial, CARIS, TIFF/TFW, GeoTIFF, MrSID®, BSB, and ODBC compliant databases with geospatial point features

Workflow Management

- Models business processes based on the inclusion administrative tasks as well as the use of underlining technologies
- Internet-based
- Allows for the prioritization of business processes
- Users can take responsibility of tasks assigned to a group
- Allows supervisors to reallocate resources in order to balance operations or to cancel a workflow
- Records transactions within a database for periodic review of system use and performance
- Publication of reports and metrics

Land Information System Components



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