GE
Energy

Smallworld Electric Office*
## Powered by Oracle

fact sheet

Utility market trends show that many utilities are under pressure to lower their cost of ownership for IT systems, including geospatial asset management. In many cases the utility's internal IT staff or outsourced IT provider is being asked to provide increased support for more complex applications with fewer resources. As a result, companies increasingly seek products to meet their needs with minimum customization, ease of deployment and minimally disruptive upgrades.

In response, GE Energy has collaborated with Oracle® to expand GE Energy's Smallworld geospatial product portfolio by developing network design and maintenance applications based on Oracle Database™, Oracle Spatial™ and Oracle Fusion Middleware™. Oracle is providing the geospatial database and application server mapping technology. This includes key components of Oracle and Oracle Spatial that are necessary to deliver a standards-based utility product—including Spatial Indexing, Network Data Model, Oracle Workspace Manager™, and Linear Referencing.

In addition to Oracle Spatial, GE Energy's Office technology incorporates standard Java® architectural patterns for heavyweight clients, lightweight clients, and integration services found in Oracle Application Server™ 10g, including Oracle TopLink™ and Oracle MapViewer™. The Java® desktop client application provides high-performance geospatial applications for the end user, and includes both the user interface and application logic in the same "tier" to provide highly interactive and responsive graphical applications.

The result is a standards-based solution designed specifically to meet the needs of the small- to mid-size North American electric distribution market. In this space, an application that fully utilizes Oracle technology addresses the growing demand for software products that leverage standard IT technology in order to lower the cost of ownership.
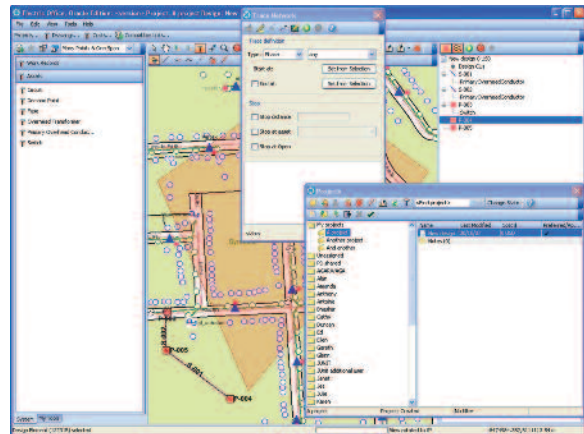
Functional Overview

The primary utility business processes addressed in this release include:

- **Engineering Design**

  The Smallworld Electric Office* product manages the complete workflow from design layout, cost estimation, approval process, construction prints, and ultimately as-built data updates and job closure. It provides a unique capability to create user friendly tools that automate the design layout and automatically manage the work point/span model that collects compatible units and costs at each work location. Standards-based integration to work management systems is a key aspect of the product, which includes a rich compatible unit model and workflow modeling to work seamlessly with leading systems. Furthermore, the Electric Office includes a sophisticated drawing environment that captures all the detail necessary for construction crews to accurately build the network facilities as-designed.

- **Network Maintenance**

  Once the network is in service, Smallworld Electric Office provides all the tools necessary to manage ongoing changes to the network. Map maintenance is facilitated through asset editing tools that allow add, update, delete, and move operations. They also offer audit history, network tracing, QA/QC checks, and the ability to resolve conflicts and publish data to the operational database. Predefined and ad hoc queries and reports help users monitor the network assets.

- **Administrative Tools**

  As part of the focus to lower the cost of ownership for geospatial tools, Smallworld Electric Office provides a rich set of administrative tools to configure the product to customer requirements without having to customize the product. Project types, state models, coordinate systems, map units, compatible unit libraries, condition factors, symbology, printers queues, drawing tools, templates, and user groups are examples of the tools available to the administrator for customizing the product to specific utility business processes.

Key Benefits

The Electric Office provides a range of benefits to utilities seeking standards-based geospatial asset management solutions. Key advantages include:

- Automated asset design tools including CAD-based precision placement tools that reduce labor costs by shortening the time required to layout designs, while improving design accuracy.

- Enforcement of the workflow process, particularly in an organization where many designers with varying skill sets are planning networks in the system.

- Robust cost estimation tools allow designers to accurately check costs at anytime during the design workflow without having to leave the system, accelerating the design process and making the ultimate cost assessment process more accurate because errors are detected early during the layout process.

- An overall workflow paradigm that is focused on the utility business process—from planning and design through the as-built process—and seamless integration with operational systems to provide more timely delivery of approved designs for the operational network.

- Standards-based integration with the IT enterprise. Since Electric Office is developed using standard Oracle, Oracle Spatial tools, and Java®/J2EE, utilities can easily deploy the system throughout their enterprise by taking advantage of IT standards such as web services, SQL, XML, and supported mapping standards (e.g., OGC standards).

The Smallworld Electric Office powered by Oracle is a result of GE Energy's ongoing efforts to meet customer requirements and respond to industry trends, particularly the increasing demand for standard products that lower the cost of ownership and integrate easily into existing IT infrastructures. Now utilities can deploy a geospatial asset management system that does not rely on proprietary GIS technology. It provides more rapid installation and upgrade, easier maintenance and configuration, and an integration platform that allows geospatial information to be easily accessible throughout the organization. By using the Electric Office, utilities can take advantage of the experience GE Energy brings to the development of industry leading software applications.
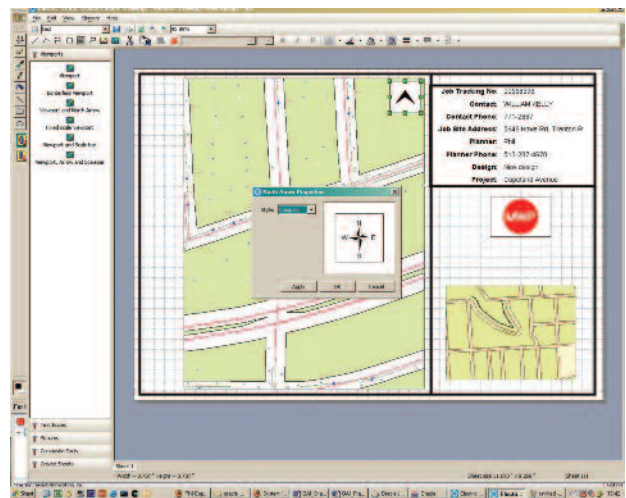
To learn more about the Smallworld Electric Office powered by Oracle, please contact your GE Energy account executive, GE Energy sales director, or email us at energy.tdsolutions@ge.com.

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