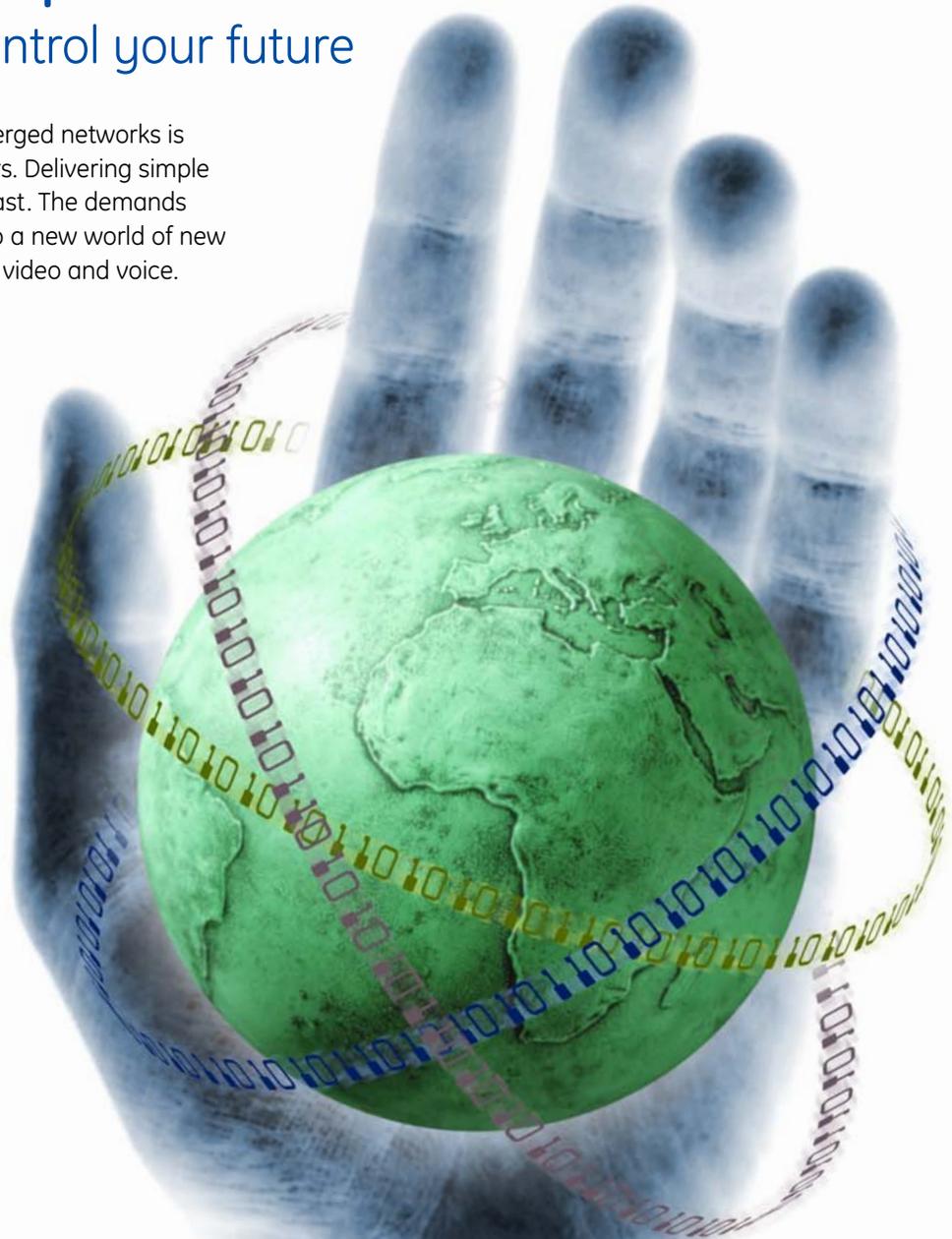


# Communications Solutions for Network Operators

Control your network, control your future

Delivering new services to customers over converged networks is defining the future for communications operators. Delivering simple voice to customers is becoming a thing of the past. The demands are now much greater as consumers wake up to a new world of new possibilities including the 'triple play' of Internet, video and voice.



imagination at work



# Changing the way that network information is managed throughout the business is the key to driving the future.

## Key to Driving the Future

Operators are now discovering that delivering these more complex and bundled services is not their only problem. The key to survival is delivering them more cost effectively, with success dependent on streamlining business processes and managing a single consolidated view of the network.

Consider what effect it would have on your business if everyone in the organization could see the network exactly as it is in the field. A seamless map-based representation of every aspect of your network from the precise location of all your assets and customers, to the detail of the equipment and the network infrastructure supporting the customer services. How easy it would be to make decisions and respond to the needs of your business and customers.

Imagine having an intelligent system to manage all your network resources. A system so strategically important to your business it is used by every department from network planning and engineering through to sales and marketing, helping them to perform daily tasks faster and smarter.

The solution is the powerful Smallworld Network Inventory\* product portfolio provided by GE Energy. It is used by global leaders in the communications industry to strategically control the deployment of their network and establish a 'service ready' network that is in the right place at the right time to meet their customers needs.

Smallworld's intelligent inventory is critical to the long-term success of service provider's businesses. The combination of spatially accurate inventory, integrated design intelligence and strategic decision support helps service providers to manage the full life-cycle of investment and renewal of the network to reduce network capital and operational expenditure.

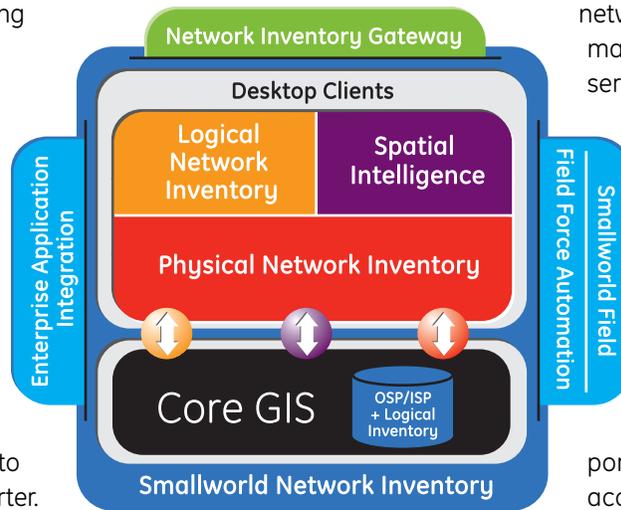
## Intelligent Inventory

The Smallworld Network Inventory product provides a consolidated cross-technology end-to-end view of telecommunications networks upon which services are delivered to customers. This comprehensive and integrated view of the entire network combines the fully connected, inside and outside plant of the physical network, with the connectivity and circuits of the logical network.

Exploiting GE Energy's leading-edge capability to capture and visualize complex spatial data, this powerful technology enables you to plan, build, and maintain your network infrastructure and to effectively manage the capacity available to provide services to your customers. As a result, you are able to utilize your network resources more cost effectively, providing and maintaining services to your customers more quickly and efficiently.

The Smallworld Network Inventory system is an integral part of the Operations Support Systems (OSS) environment supporting business processes. Open data access to the comprehensive physical and logical network model plays a vital role in the planning and engineering, service fulfilment and service assurance processes.

In addition, this valuable data can be made accessible across the enterprise to support functions such as marketing, customer relationship management, finance, and regulatory reporting. The result is a Carrier Grade solution that allows service providers to fully leverage the valuable investment made in their network infrastructure.



## Proven Track Record Delivering Benefits

Our highly scalable product set supports an impressive list of over 100 high-profile customers across 37 countries worldwide. This includes large and established national telecommunications operators, cable multi-service operators, competitive service providers, long haul carriers and mobile operators.



The Smallworld Network Inventory solution succeeds in challenging environments where competitive products fail. True scalability means that the Smallworld Network Inventory system performs for large incumbent telecommunications operators with vast databases and

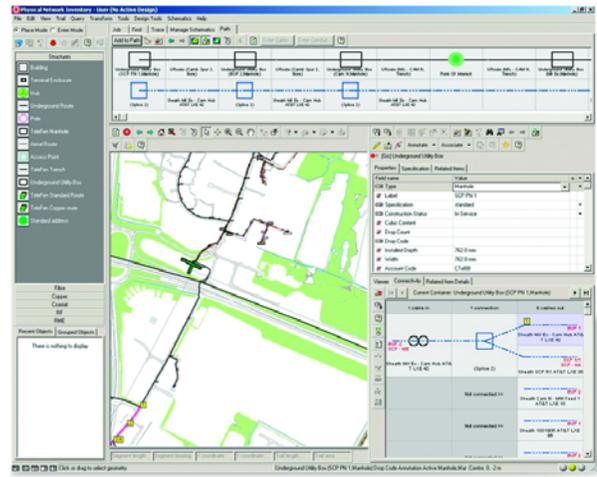
hundreds of system users. The product performs equally well for smaller operators.

Rapid return on investment can be achieved from the use of the Smallworld Network Inventory system:

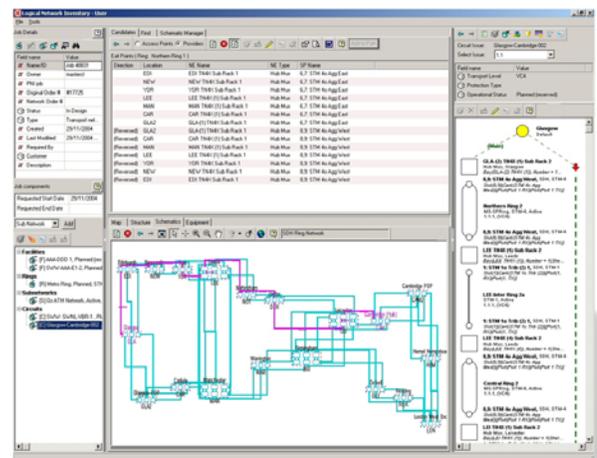
- Reduced capital expenditure on network infrastructure through targeted build and better utilization of network resources
- Reduced operational expenditure through efficient planning and engineering and increased workforce productivity
- Faster return on investment for new network build due to targeted network expansion to areas of high demand/revenue
- Faster provisioning with fewer errors and reduced risk of failure due to accurate network data
- Reduced network downtime due to rapid and accurate location of faults in response to network alarms
- Reduced repair time due to rapid location of fiber breaks and faulty equipment
- Significantly improved customer satisfaction by meeting demand for services and reducing network downtime.

## Planning and Engineering

The Smallworld Network Inventory system transforms the accuracy of your network planning, design, and engineering processes. It enables decisions to be made on the basis of complete, integrated, up-to-date information about your entire network, both physical and logical. Integration with a Field Force Automation system also provides you with a distinct advantage when it comes to installing new equipment in the field by more effectively managing your mobile workforce.



The **Physical Network Inventory\*** application provides a complete, end-to-end view of your physical network, supporting multiple communications technologies and equipment from multiple vendors. The network is modelled from the customer's premises, through the distribution network, and into the core transport network. Inside and outside plant data are combined to represent the entire system from ports on rack-mounted equipment to the external cable network (both fiber and copper). Design tools aid the rapid layout of new network while the Job Manager handles the engineering workflow. The system outputs essential reports for construction including splice connectivity reports, bills of materials and work orders.



The **Logical Network Inventory\*** application provides the ability to document, model, and manage the logical network including network elements, facilities and rings as well as the bearer circuits, customer circuits and services that run over your physical network. You can plan capacity, allocate bandwidth, and assign circuits to ensure that your network keeps pace with the demand for new services and new connections, while utilizing capacity as efficiently as possible.

**Field Force Automation** capability is provided to address mobile workforce management, advanced scheduling, route optimization, and field installation and verification activities.



# An intelligent inventory system strategically controlling all your network resources to meet customers needs.

## Supporting Mission Critical Operations

Integration is the key to providing continuous process flow-through in the OSS environment. The Smallworld Network Inventory system provides industry standard interfaces using XML-based data exchange across an Enterprise Application Integration framework, giving access to physical and logical network data for applications operating across the TeleManagement Forum's enhanced Telecom Operations Map® (eTOM).

**Service Fulfilment.** The Smallworld Network Inventory system can be integrated with service provisioning and activation solutions. Integration with these systems is achieved using a generic pre-configured interface adaptor to significantly reduce deployment times providing a unique solution in the marketplace. This allows operators to provision new services based on an accurate knowledge of the underlying network, both planned and as-built. The result is more efficient service fulfilment and a faster return on network investment.



**Service Assurance.** Through integration with network management systems, the Smallworld Network Inventory application enables you to visualize the position of network faults in a geographic context, identify precisely which services will be affected by the network outage, take steps to avoid

customer impact and ensure that repairs are completed quickly and efficiently. The result is improved customer service, increased customer satisfaction, and a greatly strengthened competitive advantage.

## Enterprise-wide Access

Smallworld Network Inventory becomes a strategically powerful business resource by providing users access to comprehensive, up-to-date network information. Designers, planners, field engineers, marketing, network operations, and customer care can access the data in whatever form is most appropriate, from geographic maps to spreadsheets or database reports via desktop, laptop, field systems, intranet and Internet.

**Network Inventory Gateway\*** makes Smallworld Network Inventory data available throughout the enterprise over the Internet or company intranet. Users with specific tasks can access inventory data via process-oriented GUIs designed specifically for their job function. For example, customer services representatives can use Network Inventory Gateway to respond rapidly to customer requests about the availability of specific network resources.

**Smallworld Field Information System\*** provides field engineers with access to Smallworld Network Inventory data remotely in the field, assisting the fault location and repair process. Working in a detached mode with a subset of the attribute and map data, these mobile users have the ability to update information about the network directly in the field. The updated information is then uploaded directly to the Smallworld Network Inventory central database without impacting the integrity of the central data repository.

Our **Smallworld Spatial Intelligence\*** product enables non-technical users to combine Smallworld Network Inventory with other data, such as demographics, for analysis and reporting. The results can be used to support marketing campaigns, produce regulatory reports and plan new network build to areas of greatest revenue potential.



For more information about this product, contact your GE Energy sales representative, visit [gepower.com/communications](http://gepower.com/communications) or email us at [gens-info@ge.com](mailto:gens-info@ge.com).

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