Intergraph G/Technology Fiber Optic Works

Telecommunications network operators need a functionally capable network model that delivers accurate, current information across organizations. But computer-aided design (CAD) and conventional GIS tools fail to fulfill operational needs. Intergraph G/Technology Fiber Optic Works from Hexagon streamlines engineering processes and delivers an operations-ready network model for the enterprise.

The need for change

Operators must maintain current, accurate network information to support operations and integrate with other systems. The restrictive data management methods of conventional GIS result in obsolete records without the necessary capabilities. They lack the detail and ability to model the relationships needed to integrate with operational systems and coordinate the network's logical and physical elements.

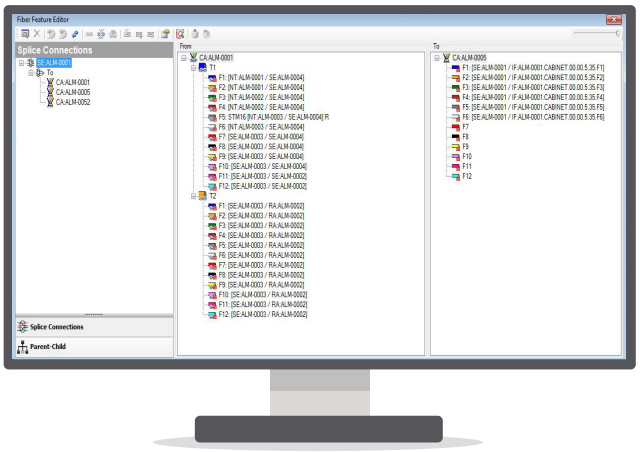
A new approach

Fiber Optic Works streamlines processes — from planning to maintenance — and maintains an operations-ready network model accessible across the business. The solution has been proven among thousands of users in diverse businesses, such as traditional telcos, new entrants, electric distribution networks, transportation infrastructure operators, and municipalities.

Key benefits

Supports operational needs

Fiber Optic Works delivers the technical capabilities and operations-ready network model needed to efficiently and reliably manage telecommunications networks.



Fiber Optic Works' Fiber Feature Editor is invaluable to designers managing fiber connectivity.

Leverage the rich, connected network model

Fiber Optic Works provides a rich communications network model that operators can use out of the box. They can also configure it to meet their specific needs. It models the connectivity of the complete network (from any device to its inside plant termination) and manages inventory and connectivity for fiber, copper, equipment components, and the civils network — all within a single database.

Model all features, relationships, and connectivity

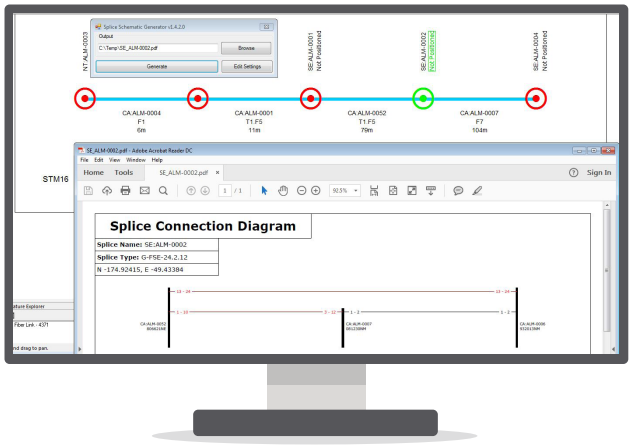
The network model is not limited by map-based capture or conventional GIS topology. With Fiber Optic Works, users can manage, model, and exploit all aspects of the network, including assets and services, component relationships, and physical and logical connectivity.

Match detail and rendition to need

A critical challenge is meeting the unique information needs of diverse business functions. The Fiber Optic Works model records asset details and relationships to support most functions. It filters and renders information in different ways, on the fly, as text, maps, schematics, or diagrams. This provides each user the right level of detail in the right way for their tasks, without the cost and risks of maintaining duplicated data.

Maintain operations-ready data

Edits within Fiber Optic Works are immediately available in the model and accessible via the database. Lower data latency and universal access allow Fiber Optic Works to support time-sensitive use cases, resulting in faster operations, greater efficiency, and enhanced capabilities.



From the selected splice in the geographic view or single line diagram, Fiber Optic Works generates the splicing diagram reflecting the current data (black and grey) and the new connections (in red).

Manage the asset life cycle

Fiber Optic Works provides the rich version management, analysis, tracking, and reporting capabilities needed to model and manage network engineering life cycles. By coordinating its engineering capabilities with other business systems, operators can streamline workflows and gain valuable insights, such as comparing alternative design proposals from both technical and financial perspectives.

Synchronize physical assets and logical services

With Fiber Optic Works, users can integrate with network resource management and operational support systems. This provides more robust asset management for the inside plant domain, as well as circuit design and provisioning. It also coordinates logical services with the network assets supporting them.

Scale to the enterprise

Fiber Optic Works can support thousands of concurrent users and supports adaptive working. It promotes consistency across teams by applying corporate design practices and standards.

Manage real-world processes

Fiber Optic Works enables you to plan, execute, and track projects, equipment, and connections and coordinate with other business systems to manage the complete network life cycle.

Network planning

Network construction is capital intensive, so operators should assess proposals to minimize financial risk. When planning major network expansions, operators can use their network maps in spatial analysis to target locations that offer high revenue potential and are viable to build. Fiber Optic Works can reduce financial risk by assessing high-level costs of proposed plans. It enables planners to design and assess alternative proposals for buildout, including the siting of distribution points, service areas, and deployment methods. Operators can also use spatial analysis to lessen financial risk when assessing new connections.

Design and documentation

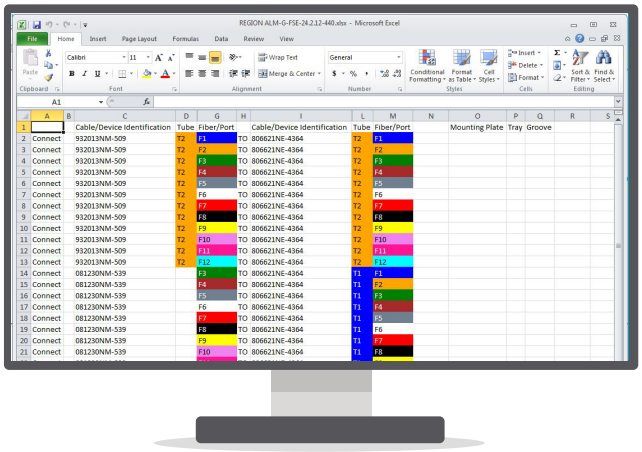
Fiber Optic Works delivers CAD-level placement tools within a robust life cycle network model management environment. It improves design and documentation while removing latency and errors from network records.

Field automation

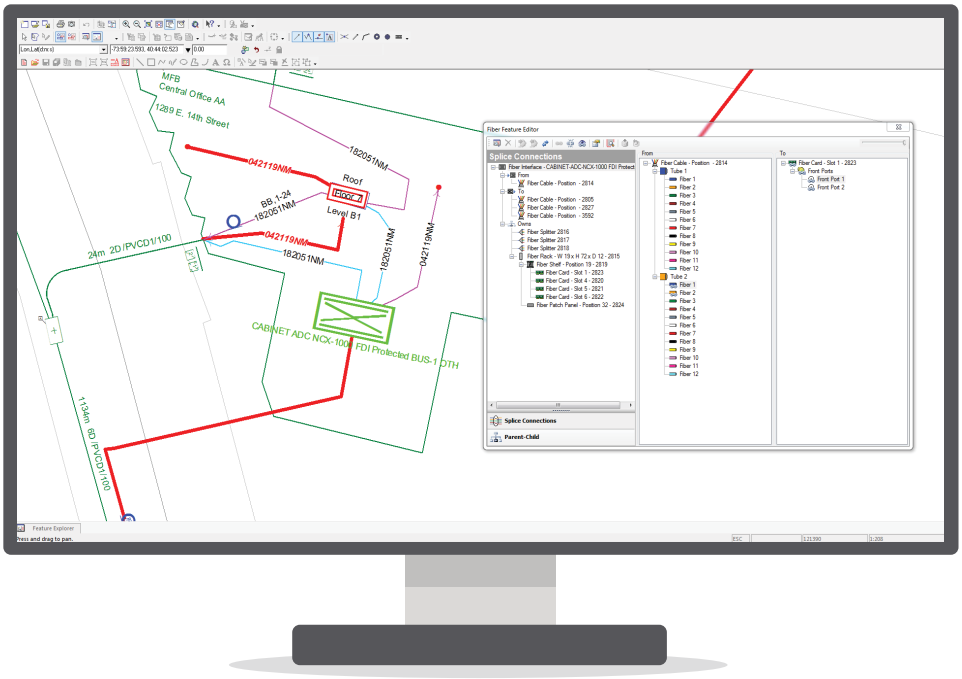
Operators can transform workflows by improving coordination and information flows between the field

and office. Supporting a range of mobile clients, Fiber Optic Works provides engineers with the right tools and data for each task.

- **Maintenance and operation –** Field access improves installation and repair processes. It delivers better, more accurate information for terminal and device locations, equipment, and materials. It also enables engineers to locate faults and match services to fibers and ducts.
- **Construction and deployment –** Involving hand-offs between multiple users, construction offers many opportunities to improve performance. For example, enabling planners to provide contractors bills of material and designs improves the reliability of quotes and schedules. Providing field engineers detailed, accurate site information and a way to update records upon completion fast-tracks closeout, reduces data administration and improves quality.



The splice report provides great value to field technicians.



Intergraph G/Technology Fiber Optic Works streamlines processes – from planning to maintenance – and maintains an operations-ready network model accessible across the entire enterprise.

Hexagon is a global leader in sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity and quality across industrial, manufacturing, infrastructure, safety and mobility applications. Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Safety & Infrastructure division provides software for smart and safe cities, improving the performance, efficiency and resilience of vital services.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.