

Blackfoot Communications Builds a Clearer View of Its Network to Support High-Speed Connectivity

With FNT Command and FNT GeoMaps, Blackfoot Communications is modernizing network management, improving infrastructure visibility, and laying the foundation for more efficient service delivery across fiber and fixed wireless networks.

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by Experts



Connecting Customers Across Montana and Beyond

Headquartered in Missoula, Montana, Blackfoot Communications has been connecting communities and businesses for approximately 70 years. Its services extend well beyond those of a traditional local telecommunications provider. The company supports residential subscribers, hundreds of cell sites, managed connectivity for banks across the United States, and long-haul transport over its optical network.

Today, Blackfoot is building on this experience with a clear modernization strategy. Fiber-to-the-home, fixed wireless, transport services, and high-speed connectivity are at the center of its plans.

Operating in Montana makes effective infrastructure management particularly important. The state’s size and rural geography create complex planning and service-delivery requirements. At the same time, building new fiber infrastructure is expensive. Blackfoot therefore needs to make the best possible use of the network resources it already has.

“Our biggest priority is getting the most value from our existing infrastructure,” says Ty Belnap, Network Engineering Manager at Blackfoot Communications. “As a rural telecommunications provider, we have to use our resources efficiently. That was really where our modernization journey started.”



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Moving Beyond Manual Network Research

Blackfoot’s existing network inventory platform had served the company for approximately two decades. Over that time, however, its network, technologies, and services had changed significantly.

Finding an available fiber route between two distant locations could involve reviewing multiple records and drawing on the experience of employees familiar with how connections had been constructed or spliced over time. That approach provided useful historical context, but it was time-consuming and difficult to scale as the network continued to evolve.

Some of the underlying network information was documented in AutoCAD, but important details were stored in free-text fields. Because entries had been created across many years by different teams and for different operational needs, their structure and terminology were not always consistent. Experienced employees could interpret the records, but the format limited Blackfoot’s ability to standardize the data or use it to automate network processes.

This made it difficult to answer essential questions quickly. Which fibers were available? How were two locations connected? Could an existing route support a new customer? Were two proposed paths truly diverse? Which customers and services would be affected by a fiber cut?

Blackfoot needed a modern network inventory platform that could turn its infrastructure data into a reliable operational resource. *“Our systems should be working for us,” says Belnap. “We needed tools that would help us automate and streamline our processes.”*



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Choosing FNT as the Foundation for Modernization

Blackfoot evaluated more than a dozen network inventory platforms before selecting FNT. The company chose FNT Command and FNT GeoMaps to establish a structured inventory of its telecommunications resources and provide a geographical view of its network infrastructure.

“We evaluated over a dozen different platforms and ultimately landed on FNT,” says Belnap. “The biggest difference was that FNT brought together the capabilities we needed in one platform. The direct integration of OSP data and ISP data was critical for us because we needed a single, connected view of the network. The graphical capabilities were another major factor. Managing complex infrastructure through table-based views had become limiting. FNT gives us visual representations where racks look like racks, and the equipment closely mirrors what is physically installed.

Finally, the fully open API was important because this tool needs to do more than store inventory. We need it to provide the data foundation that helps drive operational and business decisions.

I have not looked back. The team and the technical resources have been extremely supportive. For us, it has been a win.”

FNT Command provides the central foundation for documenting and managing Blackfoot’s network resources. FNT GeoMaps adds geographical context, enabling users to view fiber infrastructure, equipment, routes, and related data on interactive maps. The system is live and accessible to teams across the business. Its users include engineering, sales, the technical assistance center, and the network operations center. Blackfoot is now progressively enriching its data and integrating the platform with its wider operational environment.

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Turning Network Routes into Visible Business Value

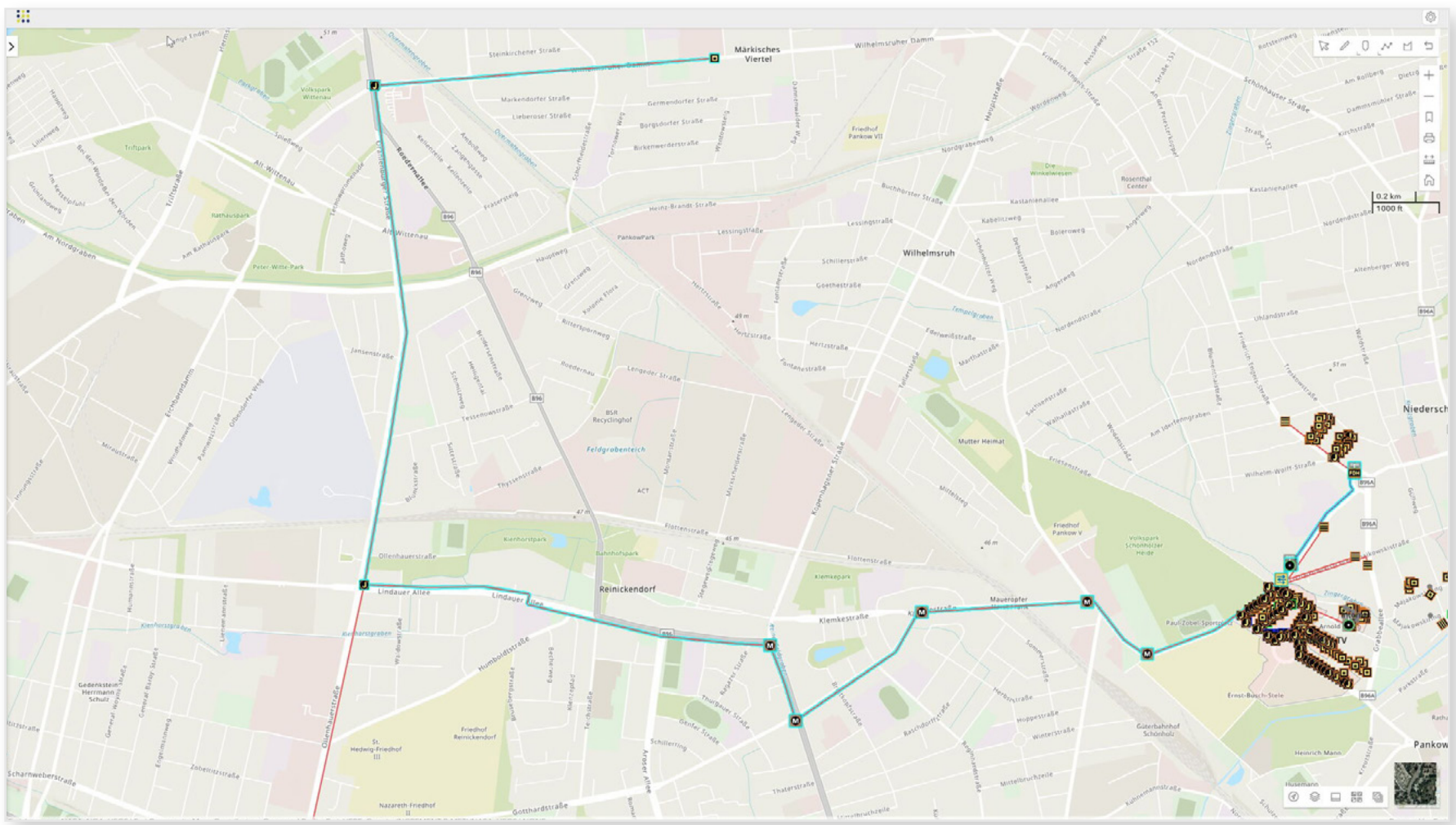
One of the most immediate advantages for Blackfoot is the ability to visualize its infrastructure geographically. This visibility is especially valuable when the company needs to explain the strength of its network to customers. Blackfoot recently activated a connection between its Helena data center and Salt Lake City. Viewing the route in FNT GeoMaps makes the geographical advantage of Blackfoot’s path through Montana immediately apparent.

Instead of describing the route in abstract terms, sales teams can show customers how their traffic will travel and explain how the connection may avoid less direct routing. This makes it easier to demonstrate the potential performance and latency advantages of Blackfoot’s network.

“When you look at the route in GeoMaps, the value becomes very clear,” says Belnap. “That is much easier for us to communicate to customers.”



Campus infrastructure and connection routes visualized in FNT GeoMaps.



End-to-end geographic view of a large fiber run in FNT GeoMaps.

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The maps also help connect network construction more closely with commercial activity. Previously, a newly built fiber route might appear as a simple line in a CAD drawing before going through a lengthy process to become part of the company’s operational records. By documenting new infrastructure directly in GeoMaps, Blackfoot can create an up-to-date record as the network develops.

Engineering gains a current view of construction progress, while sales teams can see when fiber becomes available in a particular area and begin approaching prospective customers sooner.

“Having live maps is a big win for us,” says Belnap. “It is useful not only for engineering, but also for sales teams that want to see construction progress and engage customers as soon as the fiber is complete.”



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Making Route and Redundancy Analysis Easier

Blackfoot also serves mobile operators and other customers with strict resilience requirements. A mobile network operator connecting a cell site, for example, may require two physically diverse fiber paths. The routes cannot share a common segment that could create a single point of failure.



Without an integrated geographical view, verifying this level of diversity can require teams to trace routes manually across separate maps and records. GeoMaps makes the relationship between the proposed paths much easier to understand.

Users can display the relevant infrastructure, examine how each route travels through the network, and identify points where the paths may intersect. This allows engineering and sales to evaluate redundancy requirements more efficiently and respond to customer requests with greater confidence.

“Before we could visualize the network, determining whether two paths were completely diverse involved a lot of manual tracing,” says Belnap. “Now we can pull the routes up in GeoMaps and see them directly.”



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Preparing for Faster and More Targeted Restoration

The combination of detailed connectivity data and geographical visualization also has important implications for service assurance. A major fiber cable may serve many different customers and services. If that cable is damaged, repair teams need to understand not only where the break occurred, but also which services have been affected and in what order they should be restored.

By documenting connections down to the fiber and port level, Blackfoot is building toward the ability to trace a signal through the network and identify the customers and services supported by a particular resource. This information could help restoration teams prioritize essential services such as hospitals, banks, and law enforcement following a major outage.

The geographical data in FNT can also support the use of optical time-domain reflectometry, or OTDR. An OTDR measurement calculates the distance from the test point to a fault in an optical fiber. When that measurement is combined with accurate route data, teams can translate the distance into a location on the map.

“In GeoMaps, we can use an OTDR trace to place the fiber cut on the map,” explains Belnap. “Instead of sending a crew out to search along the route, we can direct them much closer to the actual location.”

This has practical financial value. Field crews and truck rolls are expensive, particularly when they must cover long distances. More accurate fault location can reduce unnecessary travel, accelerate the start of repair work, and help Blackfoot use its field resources more effectively. The long-term opportunity extends beyond locating the fault. With complete connectivity and service data, Blackfoot aims to give operational teams the information they need to see which customers are affected and restore the most critical services first.

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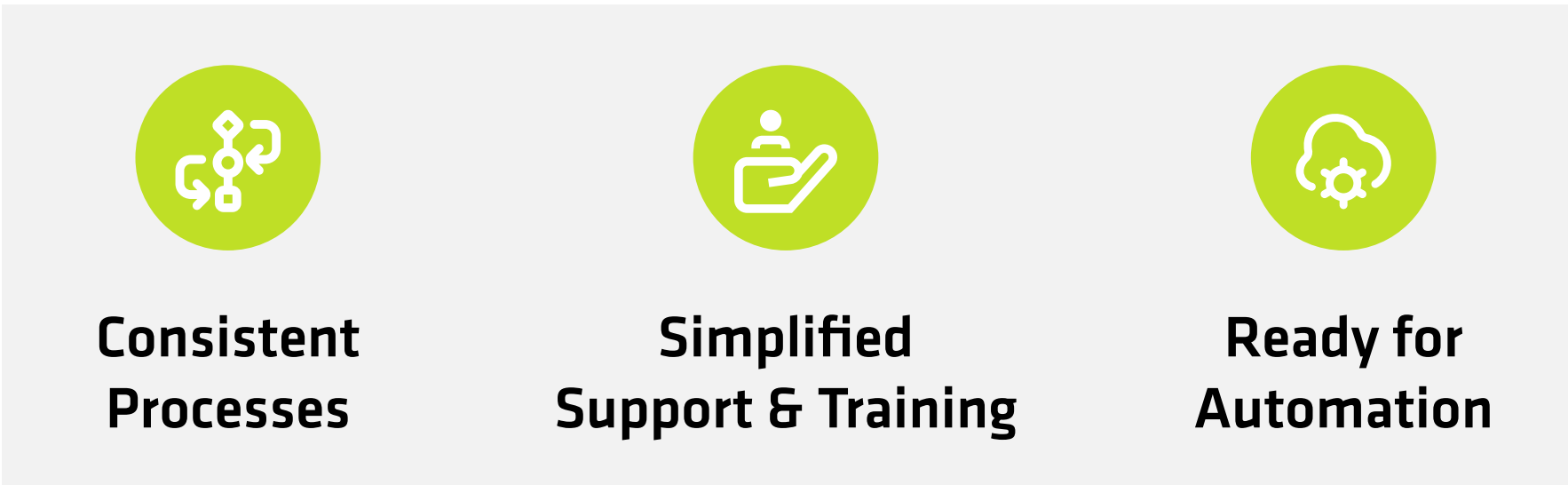
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Establishing Consistent Processes Across Fiber and Fixed Wireless

Blackfoot’s modernization strategy is not limited to fiber. The company is also investing in next-generation fixed wireless to extend high-speed connectivity, particularly in rural areas where different access technologies may be appropriate.

To support this hybrid network, Blackfoot made a deliberate decision about how its services would be documented in FNT. Its GPON fiber-to-the-home and fixed wireless services follow the same underlying information structure, with the access medium being the principal difference.

This gives Blackfoot’s technical teams a consistent way to locate and interpret service information. When the technical assistance center receives a customer call, employees do not need to follow one process for fiber services and a completely different process for fixed wireless.



“We strategically structured fiber and fixed wireless in the same way within FNT,” says Belnap. “When our technical assistance team receives a call, they can follow the same process regardless of the technology delivering the service.”

The standardized model can simplify training and troubleshooting while creating a stronger basis for future workflow automation. It also supports Blackfoot’s wider objective of managing modern network technologies through consistent, repeatable operational processes.

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Transforming Network Data in Phases

Replacing a long-established inventory environment is a significant undertaking. Blackfoot’s fiber network extends across thousands of miles, and some of the information required for a comprehensive connectivity model was not available as structured data in its previous system.

The company has migrated its fiber cable information into FNT and is now progressively adding detailed splice and connectivity records. Because much of the historical information is contained in manually entered AutoCAD text fields, it must be reviewed, standardized, and documented in a form that the new system can use.

Rather than allowing this challenge to delay the modernization program, Blackfoot is taking a phased approach. The company is

prioritizing fiber because it represents a rapidly changing and strategically important part of the network. Data quality will continue to improve as teams document existing infrastructure and capture new construction directly within the modern environment.

The next phase focuses heavily on integration. Blackfoot plans to connect FNT with systems supporting workflow, billing, service management, and construction management. These integrations will allow the company to relate customers and services to specific network resources and connect inventory data more closely with end-to-end operational processes.

The result will be more than a replacement for the previous inventory platform. It will be a foundation for coordinating network, service, and business information across the organization.



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Creating Value Before the Transformation is Complete

Blackfoot’s modernization program is ongoing. While the company has not yet established formal performance metrics, the platform is live and already delivering value while data enrichment continues.

Engineering teams have a clearer geographical view of infrastructure and network expansion. Sales teams can understand construction progress and assess potential customer routes. Technical and operational users are gaining a more consistent way to access network information. Blackfoot can also visualize redundancy requirements and use detailed geographical data to support more targeted fault location.

FNT gives Blackfoot greater network visibility and a strong foundation for automation.

Over time, the company expects the increasingly complete inventory and planned integrations to support further improvements, including:

- **More efficient customer activation**
- **Faster route and serviceability analysis**
- **Greater utilization of existing fiber infrastructure**
- **Improved identification of customers affected by outages**
- **Better prioritization of critical services during restoration**
- **More targeted field crew dispatch**
- **Consistent processes across fiber and fixed wireless**
- **Increased automation across network and service workflows**

These capabilities will help Blackfoot move away from manual research and isolated records toward a network environment in which reliable data supports faster operational and commercial decisions.

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“We see the vision of where this can take us,”

Building the Foundation for the Next Generation of Connectivity

Blackfoot is modernizing its network operations while remaining focused on its central mission: delivering high-speed connectivity to communities, businesses, mobile operators, and other customers across a large and demanding region.

FNT Command and FNT GeoMaps give the company a platform for bringing infrastructure information together, visualizing its network, and establishing consistent processes across multiple access technologies. As Blackfoot continues to enrich its data and integrate FNT with its wider systems, that foundation will support greater automation and a more streamlined customer and service lifecycle.

“We see the vision of where this can take us,” concludes Belnap. *“FNT is helping us build the foundation to automate and streamline how we deliver and support high-speed connectivity.”*



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Blackfoot Communications at a Glance

Organization:	Blackfoot Communications
Headquarters:	Missoula, Montana, USA
Industry:	Telecommunications
Services:	Fiber-to-the-home, fixed wireless, optical transport, cellular backhaul, managed services, and high-speed connectivity
FNT solutions:	FNT Command and FNT GeoMaps
Primary users:	Engineering, sales, technical assistance center, and network operations center

Key benefits

-  Centralized and geographically visualized **network information**
-  Greater **visibility** into fiber routes and construction progress
-  Easier analysis of **serviceability** and **physical route diversity**
-  Better **support** for fault localization and restoration planning
-  Consistent **operational processes** across fiber and fixed wireless
-  A scalable **data foundation** for integration and automation



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About Blackfoot Communications



Blackfoot Communications connects businesses, homes and communities. Using the latest technology in network, security and voice solutions, Blackfoot Communications delivers a suite of reliable managed services and fiber internet offerings to carrier service providers, enterprise organizations and small businesses. Its home WiFi and phone solutions offer homes and communities the ability to connect families and constituents around the world. Founded in 1954 and headquartered in Missoula, Montana, Blackfoot Communications has offices across Montana and Idaho.

www.blackfootcommunications.com



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About FNT Software

FNT Software, headquartered in Ellwangen (Jagst), Germany, simplifies the management of highly complex digital infrastructures in companies and public authorities with its FNT Command Platform. With the cloud-enabled “Software made in Germany”, IT, telecommunications and data center infrastructures can be efficiently recorded as digital twins and documented across all levels from buildings to digital services. The software also offers open interfaces and numerous functions for planning, implementing and automating transformations and changes in an integrated manner. FNT’s customers include more than 500 companies and government agencies worldwide, including more than half of the DAX-40 listed corporations. FNT* operates offices in several locations in Germany as well as in New York, Singapore and Timisoara and has an international partner system with market-leading IT service providers and system integrators.

*Refers to FNT Software GmbH, including its subsidiaries, and FNT Services GmbH.



Transparency Note:
Written by AI, Expert Enhanced

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