



CASE STUDY

GiGstream Designs Fiber Networks Four Times Faster With iBwave FiberPass™



Frustrated by the slow nature and opportunity for manual errors of traditional computer-aided design (CAD) software, **GiGstream turned to iBwave Fiberpass** and after a year of collaboration and co-development, **now produces dozens of accurate and professional network designs** with complete bills of materials every month.



Overview

Manual Design Process Limited GiGstream's Productivity

GiGstream provides broadband internet and digital TV streaming services to home owners, property owners, and businesses across more than a dozen U.S. states nationwide.

As part of the company's primarily fiber-based service offerings, GiGstream's engineers design fiber networks for greenfield and brownfield multi-dwelling units (MDUs), such as apartment and condominium buildings. The fiber network designs encompass indoor and outdoor plant installations, and range in scope from single-buildings to dozens of MDUs in a neighborhood.

Nick Sharp, GiGstream's engineering manager, designs networks and reviews designs created by the engineering team to ensure they're accurate and fully optimized. However, when he joined the company, he could see the rudimentary CAD software being used to design networks was stopping the engineering team, and GiGstream, from reaching its full potential.



The Challenges

1 A Slow, Manual Network Design Process

With the legacy CAD software, Sharp and his team had to manually create all of the infrastructure in network designs, from basic representations of buildings to colored lines for cabling. A single, large-scale design with dozens of multi-floor buildings could easily take a week to create. Reporting capabilities were non-existent, and there was little consistency across designs, making them difficult and time-consuming for contractors to interpret.

2 High Risk of Errors and Version-Control Issues

Ensuring smooth handoffs and quality control on network design projects was also very difficult. If one team member forgot to advise the others of a change they'd made to a design, it could easily be overwritten by someone else working on the same file. There was considerable risk the network design handed over to the construction team included errors and was not the latest version.

3 Budget and Schedule Overruns

Changes to a network design after it was released to contractors often took three to five days to complete. Sharp estimates the deployment delays could easily cost \$2,500 US per day in contractor costs and tens of thousands of dollars in idle equipment costs. Each project delay had a domino effect on other projects waiting to be completed.

“Before we partnered with iBwave FiberPass, we were stuck in the never-ending loop of getting one design out the door so we could start the next one. Now a single engineer can work multiple designs simultaneously, helping significantly reduce our process budget and more easily adjust to changes in customer needs and priorities.”

–Nick Sharp,
Engineering Manager at GiGstream



The Solution



iBwave FiberPass is a powerful site survey and network design solution for fiber network deployments. The complete solution includes:

- > **iBwave FiberPass for PCs**, which provides automated network design capabilities and a database of nearly **30,000 vendor-modeled parts to choose from**.
- > **iBwave FiberPass Mobile**, which gives technicians a guided and standardized approach to capturing site survey measurements and supporting materials using a tablet in the field.
- > **iBwave Unity**, which synchronizes all of the work completed using the PC and mobile applications in the cloud to enable efficient, low-risk collaboration.

Together, the iBwave FiberPass components automate and accelerate every aspect of planning, designing, and maintaining in-building fiber networks so engineers can design more networks, faster, with higher accuracy and lower risks.



The Results

4 Times the Number of Network Designs in the Same Time Period

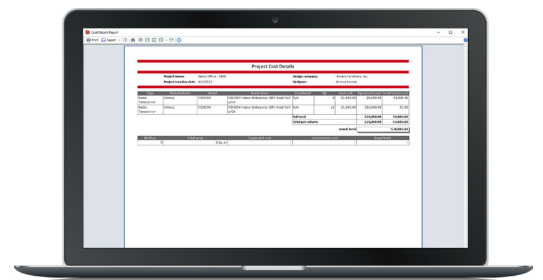
Each GiGstream engineer now works on four to five network designs each week, including reviews and modifications, instead of just one. Recently, each engineer on Sharp's team can complete over 10 designs each month.

The automated fiber network design software lets engineers easily drag-and-drop fiber network components where they're needed, identifies design errors in real time, and validates that engineering rules are being followed.

Automated Bills of Materials and Reports

Instead of trying to navigate a massive spreadsheet of components, estimate required cable lengths, and manually create and track reports, Sharp's team can now quickly generate:

- > Customized bills of materials (BOMs) for construction crews and component vendors
- > Property owner reports with 3D network models and workflow schedules
- > Compliance reports
- > Project cost reports
- > Site survey reports



Risk-Free Collaboration and Efficient Handoffs

With **iBwave Unity**, Sharp and his team can efficiently collaborate on network designs and never have to worry about version-control issues. Each version of a network design is stored in the cloud, and each user is prompted to save their changes before exiting the file.

Standardized processes and uniform, visual network designs mean Sharp now spends much less time coordinating with his team, reviewing designs, and briefing construction teams. Design handoff briefings with construction teams are now typically about 30 minutes instead of a half or full day.

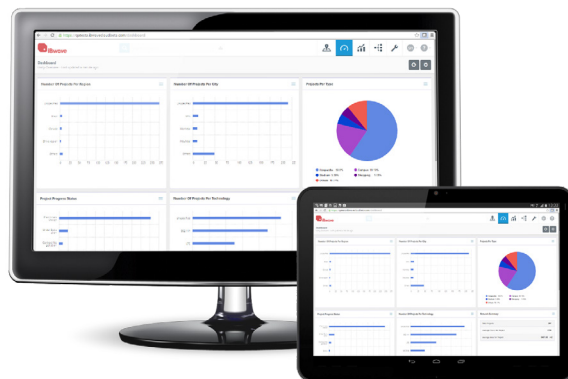


Easy Access to Accurate, Detailed Site Surveys

Previously, site surveys often took two or three days to complete. With **iBwave FiberPass Mobile**, that time is typically reduced to a half day. Technicians in the field can easily capture precise measurements on a tablet using written or voice notes, and include site photos. And the engineering team can access completed surveys in the cloud to immediately start the design phase.

Higher Network Quality Long Term

Because **iBwave FiberPass** provides access to historical network designs, documentation, and site surveys, it's much easier for Sharp and his team to plan network maintenance and upgrades, and to troubleshoot network issues.



FiberPass is a fantastic program that's proven its value at GiGstream and now is considered a crucial tool in our survey and design process. It's made us even more efficient and we're constantly finding new ways to use iBwave FiberPass to drive value for the organization and our customers"

–Nick Sharp,
Engineering Manager
at GiGstream

