



Project Summary

Organization:

IZZI Telecom

Solution:

Communications

Location:

Santiago de Querétaro,
Querétaro, Mexico

Project Objective:

- Reconstruct the existing communications network in the city of Santiago de Querétaro.
- Apply Fiber Deep architecture to achieve competitive service levels and customer density.
- Incorporate the latest technology to achieve performance goals for bandwidth, data transfer rates, network availability, and internet speeds.

Products Used:

Bentley Coax
Bentley Fiber
Bentley Map

Fast Facts

- Cablevisión and Cablemás, two of the largest telecommunications companies in Mexico, united under the IZZI brand to modify and expand their 100,000-kilometer network.
- The expansion extended triple play services to 8 million new customers, plus 7.5 million existing customers.
- The intelligent network model built using Bentley communications applications generated precise documents that simplified construction logistics and reduced time and costs.
- IZZI's wide range of products, superior performance, and high-quality customer service improved customer retention and reduced cancellations.

ROI

- Bentley Coax and Bentley Fiber reduced overall design time and costs by up to 25 percent.
- IZZI completed the FTTC network for Santiago de Querétaro ahead of schedule.

IZZI Brings Triple Play Services to 8 Million More Customers with New Network Design

Bentley Communications Reduces IZZI Telecom Design Costs by 25 Percent

Telecom Giant Takes Fiber Deep

Televisa's telecommunications division is a leader in the Mexico market, providing digital cable TV, digital telephone, and high-speed internet to homes and businesses through its subsidiary IZZI Telecom. As part of a fiber-to-the-curb (FTTC) initiative that improved and expanded triple play services provided by the IZZI brands, Cablevisión and Cablemás, IZZI completed a USD 48.5 million reconstruction and expansion of the fiber optic network serving Santiago de Querétaro (Querétaro City), a dynamic metropolitan area in central Mexico. The project team mapped existing infrastructure in Bentley Map®, then designed a modified network with Fiber Deep architecture in Bentley Coax and Bentley Fiber. The Bentley Communications applications reduced IZZI's overall design time and costs by up to 25 percent and enabled the team to complete the project ahead of schedule.

Antiquation Inhibits Expansion

Founded in the mid-1960s, Cablevisión and Cablemás provided telecommunications services to more than 7.5 million customers

over a network covering more than 100,000 kilometers. The network combined fiber optic and hybrid fiber-coaxial technology, allowing the companies to offer varied products and services in an effort to stay competitive. In 2014, IZZI replaced the Cablevisión brand nationwide and in 2015 absorbed Cablemás in Mexico's interior. Under the IZZI brand umbrella, the two service providers formed a strategic alliance to modify and extend their antiquated networks using the most current technology available. Their goal was to provide customers with premium quality services for at least the next 20 years.

IZZI's initiative called for the total reconstruction of the Cablevisión and Cablemás networks and the rollout of triple

play services to millions of new customers throughout Mexico. Santiago de Querétaro, one of the fastest growing cities in Mexico and the capital of the state of Querétaro, was one of the first service areas targeted for the upgrade.

The challenge was to implement a Fiber Deep architecture that pushed fiber closer to customers to deliver the best service in central Mexico. In addition, the project team needed to design a network infrastructure capable of reaching the dense metro-area population of more than 1 million people at competitive rates.

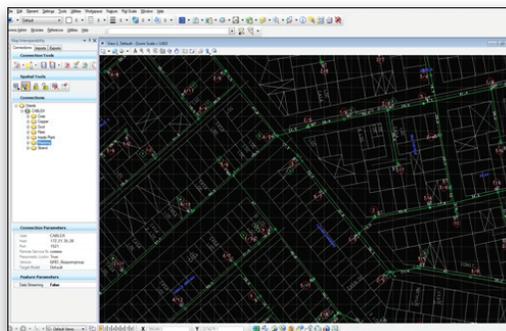
Intelligent Network Model

IZZI's project team reviewed current services in the area to determine the health of the existing network. This information provided a starting point for next steps and what type of architecture to apply. Bentley communications applications were used to create an end-to-end network model with integrated design and documentation of the inside and outside plant. IZZI specified the use of latest generation

equipment to achieve performance goals for bandwidth, data transfer rates, network availability, and internet speeds for each customer.

Based on information gathered from a survey of existing infrastructure, the project team used Bentley Map to digitize the area maps, street layouts, and addresses for residences, businesses, and commercial buildings. The team designed

and documented the new coaxial network with Bentley Coax, implementing the latest active and passive equipment. Then the team traced the corresponding fiber optic routes using Bentley Fiber. Field checks assured that the network design conformed to field characteristics before documents were sent to the construction team.



Existing telecommunications infrastructure was mapped out using Bentley Map, and then a modified network was designed with Fiber Deep architecture in Bentley Coax and Bentley Fiber.

“Bentley technology allows us to improve the quality of both the design and construction of our infrastructure, preparing us to face the new telecommunications challenges in Mexico.”

– Dante Frías, Operations Supervisor, IZZI Telecom

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Bentley Comms Boost Productivity

IZZI saved significant time using Bentley applications to complete verified layouts in a rich GIS environment, then built a precise end-to-end network model. The common design environment allowed work with remote personnel and third-party contractors to be conducted more efficiently; the near real-time engineering calculations updated automatically in response to layout changes by any authorized party. Real-time access to remote information and data allowed documentation to be generated instantly, eliminating delays.

Overall, Bentley's network engineering software succeeded in making design personnel 10 percent more productive when compared to the previous software. As a result of using Bentley communications applications, the Santiago de Querétaro project team met an ambitious schedule's tight deadlines and completed the project earlier than expected.

25 Percent Lower Design Costs

By forming a strategic alliance to upgrade its network technology under the IZZI brand umbrella, Cablevisión and Cablemás extended premium quality triple play services to 8 million new customers, plus the 7.5 million existing customers. Bentley technology contributed to lowering design costs by 25 percent because of a streamlined design process and the production of accurate documents from the intelligent network model. This reduced construction times and costs and simplified logistics.

The expanded network not only reached more customers but also offered a wider range of products and services to more households and businesses in Santiago de Querétaro. Superior customer service also came alongside these services due to the sophisticated network technology. Bentley communications applications enabled IZZI to efficiently manage its network with a unified model of inside and outside plants. These improvements enhanced customer satisfaction and reduced the number of service cancellations.