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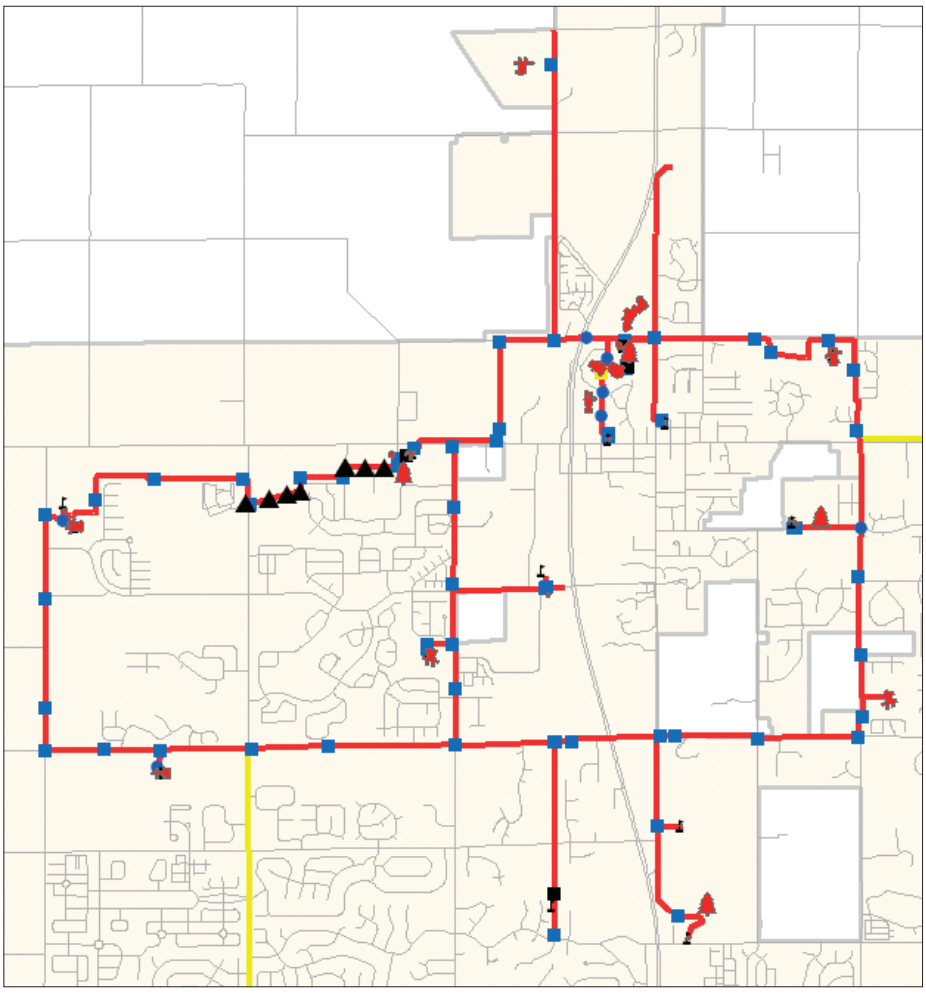
City Leverages GIS to Jump-Start Fiber Marketing Initiative

By Susan Harp, ESRI Writer

Economic opportunities are scarce these days, so when administrators for the City of Westfield, Indiana, identified a way to encourage business retention and growth in the community, they acted quickly. They saw a chance to leverage an existing—but mostly unused—fiber network to offer local businesses more diverse and cost-effective access to high-speed Internet. In developing a marketing plan, they devised a way to leverage the city's existing GIS datasets to generate potential customer leads.

Westfield, a city of more than 23,000 residents, is located just north of Indianapolis in Hamilton County and ranks as the fastest-growing county in the state. Its original fiber network was established by Westfield-Washington Township School Corporation to provide district schools with economical access to broadband communications. The 72-strand fiber system delivered fast connectivity, but 35 percent of its capacity remained unused because of the small number of clients (10 schools and four municipal and public safety buildings). In addition, the outside plant design was linear, which could not provide redundant backup connectivity should one of the branches go down.



This shows the locations served by the original fiber network established for area schools.

To remedy this design problem, in 2008 the city and school system formed a joint venture, Westfield Connects, with plans to update the network to a 15-mile-long hub-and-spoke, local loop design that would improve service reliability.

The improved design and available dark fiber created an opportunity to offer dependable voice, video, and data services to local businesses through broadband service providers. The challenge was to present an economic opportunity that would entice service providers to participate. This was accomplished by making the city's dark fiber available to the service providers, forming partnerships with them through an open service-provider network and devising a marketing plan that generated confirmed sales leads.

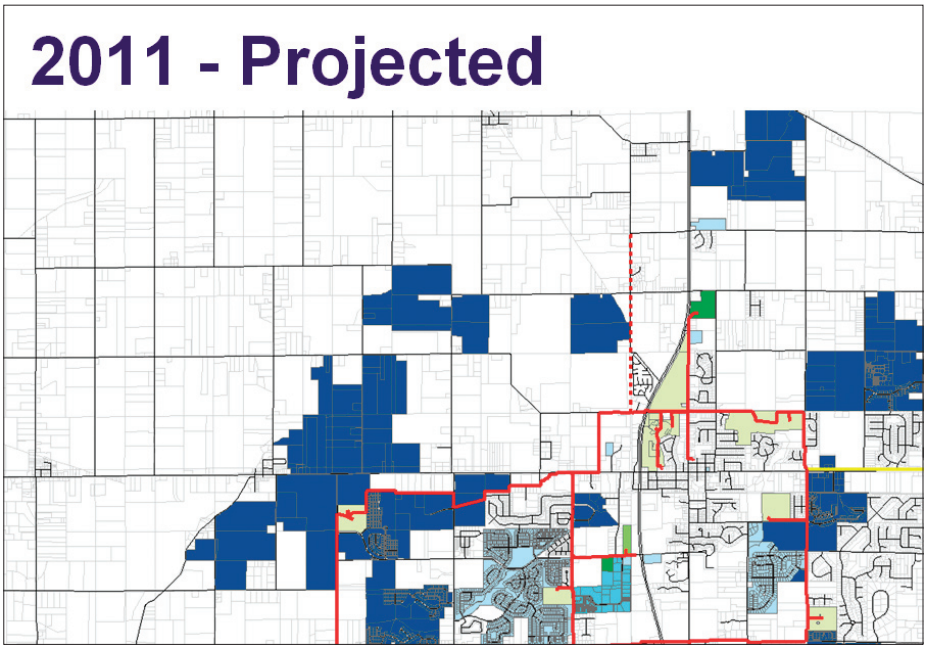
"This created a win-win situation," said Eric Bishop, Westfield Connects fiber marketing coordinator. "Service providers avoid the expense of installing and maintaining the fiber network, so they gain customers with very little asset investment. Businesses gain by having access to fiber broadband services in a competitive market." The city also gains by recovering the cost of the new fiber infrastructure through revenue sharing agreements with service providers.

To generate sales leads, Westfield Connects personnel needed a marketing plan to identify potential customers near the fiber network and create a list of their addresses and phone numbers.

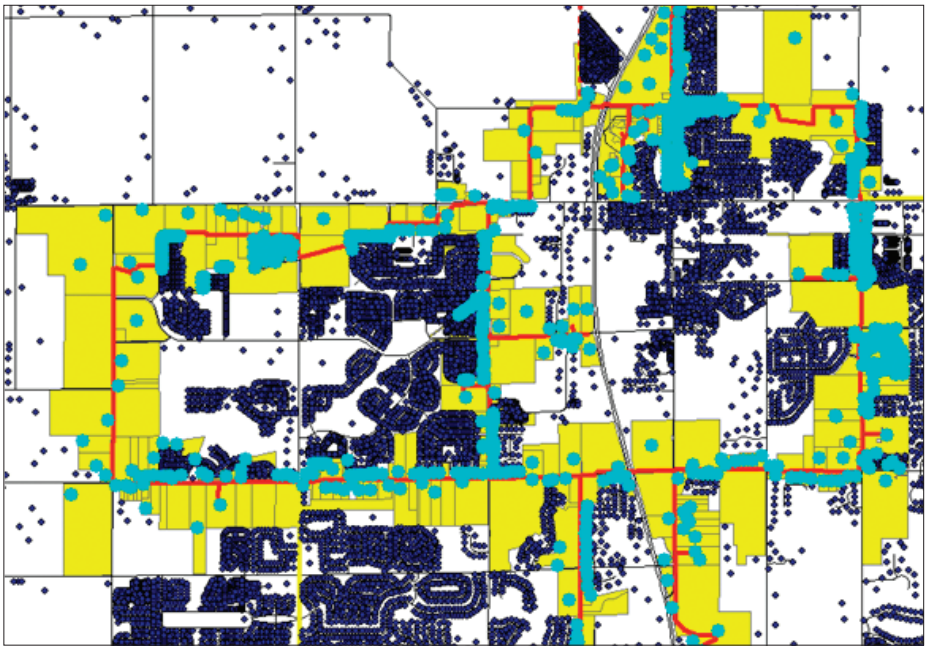
The city's Informatics Department already maintained a GIS, based on ESRI's ArcGIS Desktop and ArcGIS Server, to track fiber infrastructure assets and manage land parcel information. The department works in tandem with city officials, departments, staff, and community partners to advance the mission of the city, its departments, and citizens. Leane Welsh, a GIS technician in the department, devised a way to use GIS to merge data from several sources and generate the contacts list.

Viewing the infrastructure and parcel datasets on a map showed that existing fiber was near approximately 650 parcels. Commercial buildings would provide the highest density of target customers. Using GIS to establish a connecting network of parcels on each side of the network, 750 serviceable address points were identified. The next step was to match phone numbers with the addresses so sales calls could be made.

The city also used a water and sewer utility billing management system, which provided an account database containing both addresses and phone numbers. The solution was to merge the parcel and utility databases by matching the address fields, which would align phone numbers with addresses. The city's parcel dataset held E-911 address points, which made it a reliable dataset, and the merge produced an 85 percent match on the addresses. The remaining phone numbers were obtained by making online searches using owner/business names.



Near-term projections for service expansion are shown in light blue, with possibilities for future growth in dark blue.



A map combining the fiber network and city parcels identified 750 serviceable address points.

ESRI technology also enabled shared access to the data online and through Microsoft SharePoint. Through ESRI's ArcGIS Server technology, the Westfield Connects team could view the information online as interactive maps. "We also developed a database site on Microsoft SharePoint, which we call Fiberforce, that uses the GIS data to aid in sales leads and customer relationship management," said Welsh.

The contacts list brought the team to the next step, contacting first-tier targets (building owners) to offer service for an entire building. The premise was that the owner would see the advantage of providing broadband access as an added value to tenants. Second-tier marketing efforts were directed to individual businesses. All confirmed sales leads were passed on to the participating service providers for further action.

In just one year of operation, Westfield Connects attracted three service providers that are now using the network, and two other competing providers have shown interest. City businesses using the network are already reporting savings. IMMI, an international company with corporate headquarters in Westfield, found it could reduce monthly costs by about $1,500 by switching to VoIP phone service and thereby converging data and voice services onto the fiber.

For more information on Westfield Connects, contact Eric Bishop at ebishop@westfield.in .gov or visit the Public Works Department's Fiber Division page at www.westfield.in.gov.

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