

Solving Indiana's Backhaul Needs

Faced with high transport costs and higher-than-average cell site outages, AT&T Wireless (AWS) in the Midwest needed a solution for their backhaul network in Indiana. They asked CIC to analyze the situation and propose a plan. CIC developed a backhaul design, taking advantage of microwave to bypass telco interconnection, thereby reducing costs and increasing reliability. The six-month-long project created a new statewide system incorporating 75 sites at a cost of \$6 million and began paying for itself in less than three years. The network incorporated the tallest building in downtown Indianapolis as a hub site, concentrating microwave traffic from sites in all four directions and sending them to the Mobile Telephone Switching Office (MTSO). Using overstock in the AWS warehouse, the system also incorporated Lucent's PSAX product for T1 grooming and aggregation.



Lifting antennas onto the RDC roof.

To support the antenna and to provide for future growth, CIC installed a rooftop stub tower at the MTSO. To reduce mobilization time, CIC preinstalled and pretested all equipment in cabinets at their warehouse. CIC engineers also worked with AT&T staff to ensure that the new sites were integrated on a strict time schedule. Even when the closing of the Andrew antenna manufacturing facility delayed antenna shipments by two months, CIC completed the entire project—including engineering, design, installation, testing, and integration—two weeks ahead of schedule.

CIC's turnkey product included capacity planning, path engineering, designing, equipment procurement, permitting, leasing, installation, testing, integration, and hot cutover of the 75 sites. On top of Indianapolis's Bank One Center, serving as an aggregation hub, CIC installed 5 microwave dishes and routed a 3xDS3 path to the MTSO 17 miles north of the downtown location. Paths from 8 T1 to 3 DS3 were used to carry cell site traffic to their final destination at the MTSO.



Wiring cabinets before installation



The Assignment

AT&T needed a solution for their backhaul needs in the state of Indiana to combat high transport costs and provide system reliability.

The Plan

CIC proposed using microwave to bypass telco interconnection to save on costs and provide greater network reliability.

The Outcome

CIC designed and built a new statewide system with 75 sites for \$6M, using Indianapolis as the hub. All equipment was preinstalled and pretested in cabinets at the warehouse before field installation. The project was completed two weeks ahead of schedule.

"The work that CIC did on our Indianapolis project was flawless. They made my life easier, especially with the technical challenges that accompany a job of this size."

—Tom McLaughlin, AT&T Wireless
