

# CONNECT RADIO LISTENERS WITH WIRELESS LAST LINK BROADCAST



"Broadcasting down time is unacceptable in the radio business. We need to hold our listeners' attention 24/7. We need a Last Link Broadcast solution that makes that a reality all day every day."

Andy Laird, Vice President and CTO, Journal Broadcast Group

## SITUATION

Recently the FCC changed the Part 101 Last Link Rule for broadcasters, and opened up the opportunity to replace low bandwidth T1 and 950 MHz links connecting studios to transmission towers with high throughput wireless connectivity. A single HD radio channel can require up to 5 Mbps of throughput, which challenges the capacity of the older technology licensable for use by broadcasters. Journal Broadcast Group was looking for a 100 Mbps or higher full duplex link that would provide a magnitude higher throughput enabling them to transport four HD and one standard radio station from new studios to a broadcast tower key to the radio cluster. The transition to wireless had to be flawless: they could not go dark and lose listeners and advertisers. They decided to use Part 101 11 Gig links in Omaha, Nebraska as the pilot for their studio/transmitter link solution (STL).

## SOLUTION

With the help of Cambium Networks™ partner Double Radius, Journal Broadcast Group deployed a Cambium Networks PTP 800 licensed microwave solution. Using the Cambium free Link Planner tool, they were able to model

the exact performance of the network over hops up to 11 miles, and selected to deploy the full duplex network with each link having better than 99.999% reliability. As an extra measure of security, Journal Broadcast Group implemented an optional double stack 1+1 redundant link on separate antennas.

## RESULT

When comparing the costs with leased lines, which run an average of \$1,600 per month without redundancy, the PTP 800 solution deployed by Journal Broadcast Group with full redundancy is tracking to about a three year payback. The links have performed flawlessly since installation, and there is bandwidth to spare to support offsite server backup, pan/tilt/zoom video surveillance of facilities and a redundant ring when required. In addition, Journal Broadcast Group owns their network, and does not have to rely on a service provider for the reliability of leased lines. In two other radio markets there are plans to roll out similar deployments later this year, and to test a similar deployment for television broadcast services.

## CUSTOMER PROFILE

Journal Broadcast Group owns and operates 35 radio stations and 14 television stations in 12 states. Headquartered in Milwaukee, Wisconsin, it is the broadcast business of Journal Communications Inc., a diversified media company with operations in publishing, radio and television broadcasting and interactive media.

"Service providers and integrators who want to do wireless call us. Double Radius is a full engineering company with deep RF expertise that makes the conversion to wireless work right the first time. We need reliability and we use the Cambium Networks PTP 800 for the Last Link in Broadcasting."

Jeff Holdenrid, Sales Engineer,  
Double Radius