NATIONAL
WIFI

CASE STUDY: COST-EFFECTIVE GIGABIT NETWORKS

An existing customer purchased a 486-bed student housing project that did not offer wi-fi as a community-wide service. The owner felt that current 3.0Mbps speeds would not attract and retain residents. National WiFi was asked to provide Gigabit services as well as property-wide wi-fi to allow the owner to use technology as a marketing tool to grow sales.

PROPERTY INFRASTRUCTURE

The property is a converted manufacturing facility initially constructed in the early 1900s. With this in mind, prior to our site visit, re-hab costs were a significant concern. However, the property was updated to include Cat5e runs from each bedroom and living room to a data closet. Upon further research, we were fortunate to learn that dark fiber was available less than three feet from the property.

INITIAL ANALYSIS

Upon testing, it was determined that the Ethernet cabling in place was found to be easily capable of supporting 1Gbps; however, the insulation in the walls between units presented a significant challenge to wi-fi signals.

WIFI COVERAGE

To ensure proper wi-fi coverage, it was determined that each living room would require a wireless access point. At default settings these access point most certainly over transmit, so detailed spectral planning would be required. Through proper selection of wi-fi frequencies, and by reducing the transmit power of the access points by more than 60%, National WiFi was able to deliver complete coverage in this manner.

SOLUTION

While several factors did play into the success of this deployment, in the end, National WiFi was able to reduce the owner's monthly data costs, while simultaneously upgrading resident service from 3.0Mbps to 1000Mbps and deploying a community wide wi-fi system in a community where none had existed previously.

GIGABIT DEPLOYMENT

The proximity of the dark fiber kept construction costs low. The building's existing Cat5e cabling allowed for the deployment of Gigabit service to each bedroom in a cost effective manner.

NATIONAL WIFI WAS ABLE TO REDUCE THE OWNER'S MONTHLY DATA COSTS. WHILE SIMULTANEOUSLY UPGRADING RESIDENT SERVICE.