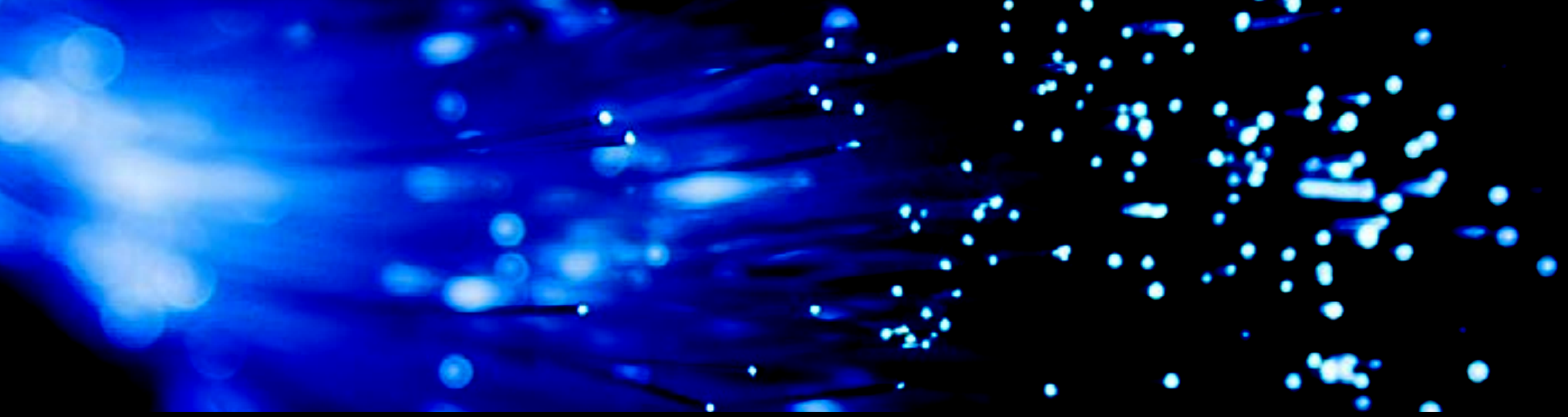

NATIONAL
WIFI
MANAGED WI-FI & ETHERNET SOLUTIONS
FOR THE MULTIFAMILY INDUSTRY



SERVICES

SUBSCRIPTION BASED
Direct to Resident Wi-Fi and Ethernet Services with Individually Customizable Speeds and Network Structures.

COMMUNITY-WIDE INTERNET SERVICES
Management Provided Solutions Offering Residents Internet Access Throughout the Community.

AMENITY SPACE WI-FI
Amenity Area Services Providing Regulatory Compliance and Integration with Property Technology Features.

MANAGED SERVICES
Management of Property Staff Networks Delivering 24/7 Monitoring, Proactive Bandwidth Management, and Centralized Accounting Functionality.

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WHAT WE PROVIDE

ACTIVE NETWORK MONITORING
Immediate notifications of network outages.

CLIENT ACCESSIBLE DASHBOARDS
Client accessible dashboards that provide real-time insight into network conditions.

EASE OF ACCESS
Technical support is available to our clients 24/7.

CAPEX/OPEX FLEXIBILITY
Custom financial solutions tailored to allocate costs into the preferred budget.

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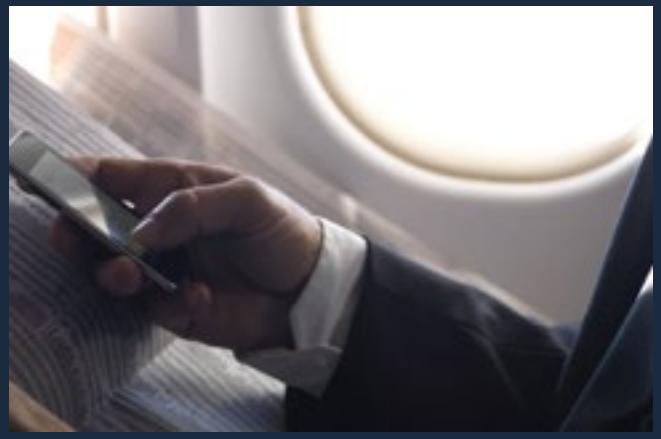
TECHNOLOGY

WI-FI CALLING

Go ahead and route your calls over our wi-fi systems. Our low latency networks are ready.

MAXIMUM UPTIME

We employ multiple divergent providers to hedge against the risk of outages via load balancing and fail-over.



SEAMLESS ROAMING

Our centrally managed networks allow users to roam seamlessly from access point to access point with zero handoff.

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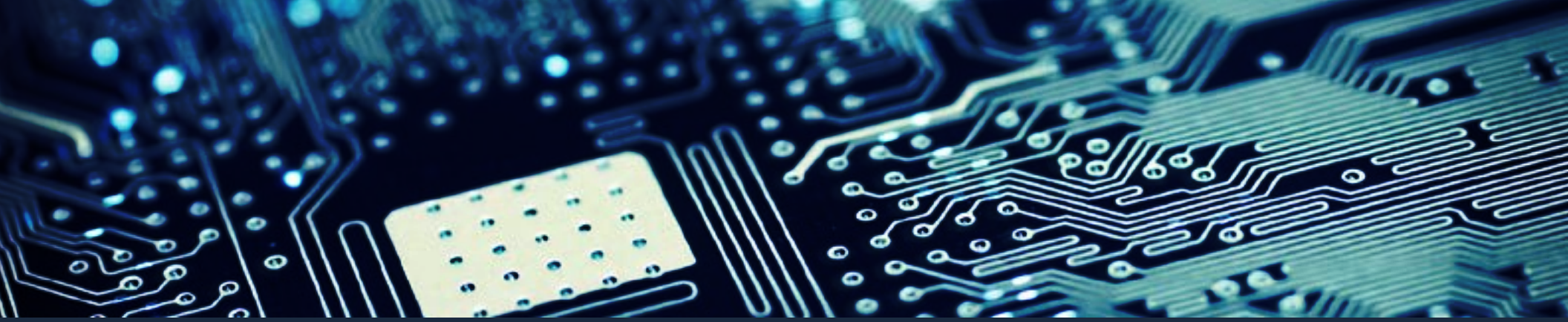

CASE STUDY

OVER BUILT STUDENT HOUSING

A Private Owner of Student Housing (POSH) contacted National WiFi to solve a problem: an existing wi-fi network on the property was not delivering expected speeds to residents. The management office was receiving frequent complaints from residents reporting poor wi-fi service.

NATIONAL WIFI WAS ABLE TO IMPLEMENT A WI-FI NETWORK THAT ALLOWS FOR COOPERATION BETWEEN ACCESS POINTS AND ZERO HANDOFF ROAMING OF STUDENT DEVICES.

INITIAL ANALYSIS

National WiFi replaced the existing property router with a network controller that would report bandwidth and network processor utilization. During a 24-hour data collection period, analysis showed the property's peak consumption was 12% of available bandwidth, confirming that the increase of bandwidth to the property would not resolve the issue.

FIRST STEPS

Disconnected half of the building's access points, in order to investigate the possibility of wireless interference. The network was monitored for an additional 24-hour period. Almost immediately, network utilization increased by 174% and students began to report significant increases in network speeds.

CONCLUSION

It seemed clear that wireless interference was the root cause of network degradation. The lack of central management of the existing access points was causing competition between them.

SOLUTION

Through the redeployment of a centrally managed Wi-Fi system, National WiFi implemented a network that allows cooperation between wireless access points. This change increased network utilization by over 300%, and students reported dramatic improvements in service.

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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.

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

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.

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.

WIFI COVERAGE

To ensure proper wi-fi coverage, each living room required a wireless access point. At default settings these access points over transmit, so a detailed spectral plan was required. Through proper selection of wi-fi frequencies, and by reducing the transmit power of the access points by more than 60%, we were able to deliver complete coverage.

SOLUTION

While several factors did play into the success of this deployment, 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 where none had existed previously.

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CASE STUDY

SERVICE TO A "LOCKED OUT" MARKET

National WiFi was contacted by the owner of a community in a micro-market where one provider controlled all telecommunications services. Further, that company was not focused on the multifamily market space, had little to offer in terms of flexibility, and had no reason to be competitive — or so they thought.

NATIONAL WIFI WAS ABLE TO SUCCESSFULLY DELIVER COMPETITIVE BANDWIDTH TO THIS COMMUNITY WHEN NO ONE ELSE COULD.

INITIAL ANALYSIS

It was clear that delivering bandwidth to the property would be the biggest challenge. National WiFi's nearest point of presence was 35 miles north of this community. Delivering service via a wireless backhaul seemed to be the only option.

FIRST STEPS

Through an outstanding relationship with our equipment vendors, within a period of 21 days, National WiFi was able to obtain two experimental Non-Line of Site Radios. In addition, we partnered with a local tower operator willing to allow experiments to evaluate the possibility of establishing a link.

CONCLUSION

Our experiment was successful. By establishing two wireless links, one from our point of presence 35 miles north to our partner's relay tower, and another Non-Line of Site 2-mile link from that tower into the community. National WiFi was able to deliver competitive bandwidth to this community when no one else could.

SOLUTION

With backhaul in place, a local point-to-point network was constructed. Wireless access points were deployed on the terraces, delivering wi-fi service into the unit. Residents can connect with an ethernet cable via a wireless subscriber unit that can be purchased separately.

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CASE STUDY

BRINGING NEW TECHNOLOGY TO OLD PROPERTIES

National WiFi was contacted by a property manager that was losing sales to new communities. During exit interviews, residents were citing new technologies available in other communities as a reason for leaving. Delivering community wide Wi-Fi seemed to be a great way to make a statement that this community was determined to match the features of its competitors.

BY ADDING AN INTERNET SERVICE FEE TO EACH NEW LEASE, THIS PROJECT HAS SUCCESSFULLY TURNED INTO A PER-DOOR REVENUE GENERATING SYSTEM.

INITIAL ANALYSIS

We found un-insulated interior walls which made Wi-Fi signal penetration less of a challenge. We determined that a checkerboard style deployment would allow a wireless unit to serve two apartments. Aesthetics were very important, so we proposed a crown molding solution for the hallways that would work nicely to cover data cable runs horizontally in the hallways.

FIRST STEPS

Cabling was installed behind the crown molding and ran the length of the halls with penetrations into every other unit allowing us to mount a wireless access point inside the units above the entry doors. These cable runs then led back to the abandoned trash rooms which had been converted into data closets.

CONCLUSION

With this deployment in place, and backhaul established by a wireless connection to the rooftop, the community wide service was successfully rolled out with each new move in or lease renewal.

SOLUTION

We were able to deploy this system with no capital costs to the owner. By adding an Internet service fee to each new lease, this project has successfully turned into a per-door revenue generating system.

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