

Customer type: Municipality

Country/Region: Cumberland Maryland, USA

Application: Municipal network & Metro Wi-Fi



The customer

The city of Cumberland has a population of 22,000 and is located in western Maryland, USA. The city is located 130 miles from both Pittsburgh, Pennsylvania, and Washington, DC, and is adjacent to three large state parks. The city of Cumberland is very progressive in its approach to municipal connectivity. It initiated and supported the creation of ALLCONET, an IP based, high speed Intranet wireless Infrastructure for schools government agencies and communities in Allegany County, where Cumberland is located



City planners in Cumberland needed to retrofit several city buildings and utility services. The project goal was to utilize modern technology to save on energy consumption and costs.

The proposed solution was centered on the creation of a wireless Wi-Fi layer on top of the existing ALLCONET wireless intranet infrastructure. The wireless network will be used for continuous connectivity of the required facilities and will enable automated control of lighting, cooling, heating, and ventilation. The solution will provide significant savings to the municipality and in addition, will serve as a broadband wireless infrastructure for the residents.

Highlights

The Customer

The city of Cumberland has a population of 22,000 and is located in western Maryland, USA.

The Challenge

Create a municipal Wi-Fi network that will service municipal facilities and, at the same time, offers business and residences broadband wireless connectivity. The Wi-Fi network should be integrated with the ALLCONET Wireless infrastructure.

The Solution

Wavion's Wi-Fi base stations provide broadband Wi-Fi coverage to a 7 square miles area in the city of Cumberland. The network provides a broadband, metro Wi-Fi service in the municipality. It is used to provide continuous connection to the municipal facilities for automated control of cooling, heating, ventilation and lighting.

The Result

Cumberland municipality gained significant saving on energy throughout the city. Its residences and business have gained a high quality, Wireless internet service.



The challenge

The Wi-Fi network for the city of Cumberland needed to meet a number of challenges:

- Coverage of a large metropolitan area of seven square miles consisting of multiple buildings and facilities that needed broadband connectivity.
- Provide simultaneous service to multiple applications including business connectivity and hot-spot services.

The solution

CONXX worked as the prime network integrator to create the wireless Wi-Fi network for the city of Cumberland. The company is also responsible for maintaining the ALLCONET wireless infrastructure.

Wavion's spatially adaptive beamforming base stations were selected for the deployment after a comprehensive and lengthy selection process and testing. The extended and improved coverage provided by Wavion's base station was significantly greater than that of a conventional access point.

The diagrams below show field results demonstrating of coverage area measurement using Wavion WBS-2400 and a conventional access point. Wavion Coverage area is greater by a factor of 3.7.

"We have tested the Wavion base station ...it has greater coverage than all other metro Wi-Fi equipment we tested. Its increased range and capacity are saving us about 50% of our deployment and operational cost" Jeff Blank, Chief Technical Officer, CONXX.

Wavion Benefits

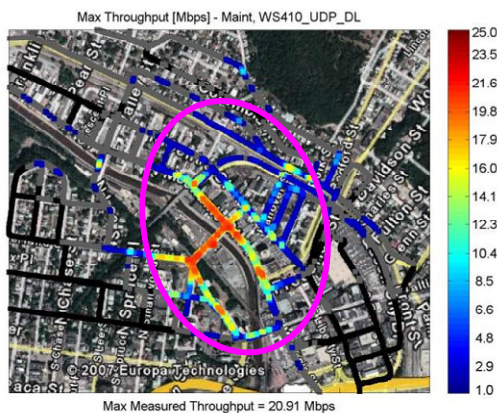
Wavion's Wi-Fi base stations provided a number of benefits

- extended coverage
- high capacity
- superior noise and interference handling

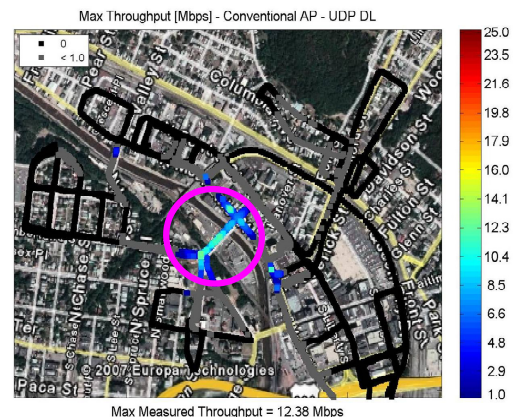
These technology benefits are translated to 50% saving on infrastructure and operation costs for the operator.

Role Model

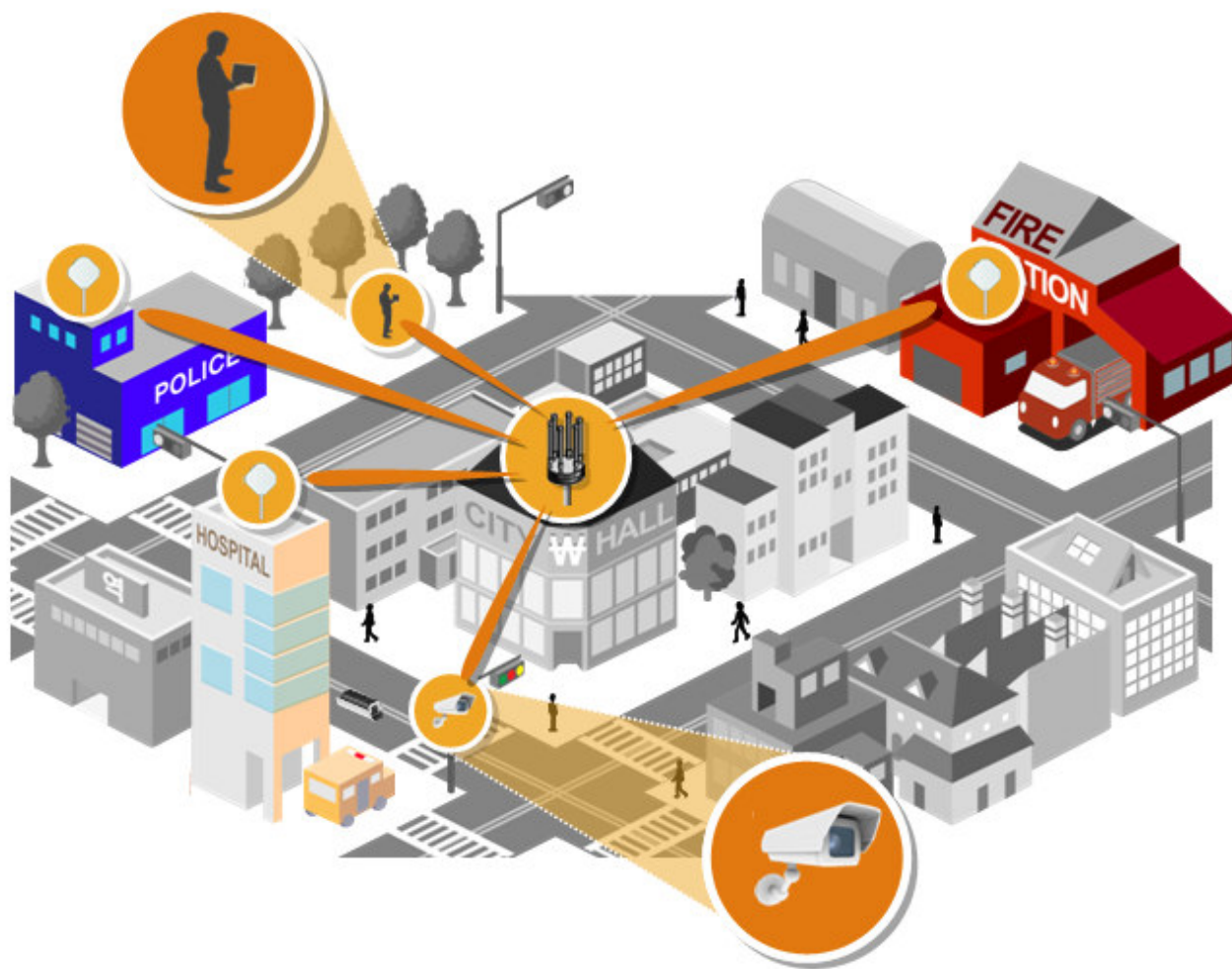
The city of Cumberland project is a great example for the approach that municipalities are taking as part of their effort to optimize their facilities and offer better service to the business and residences. Working together with partners, such as CONXX, Wavion is well positioned to offer municipalities the best broadband Wi-Fi network.



Wavion Base Station



Standard Access Point



Municipal Deployment Diagram