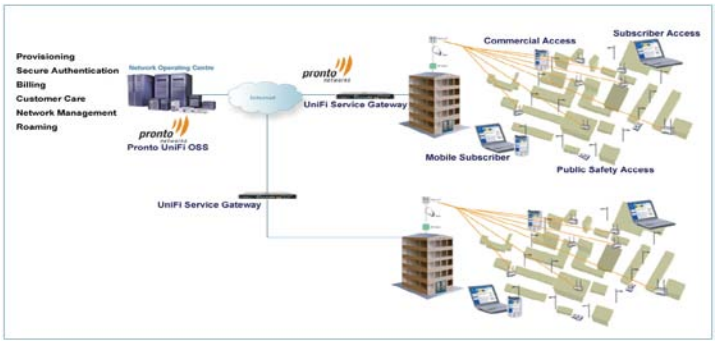
Pronto's UniFi OSS in "Muni Wi-Fi" Networks

Communities face challenges from various fronts in deploying a wireless access network. These include regulatory, technology choices, network planning and network operational issues. There are three primary drivers for Muni Wi-Fi networks. They are Public Safety, Public Works, and Public Access. Network operational issues now include designing and maintaining a network that is more than a "single-use" private enterprise network that happens to be wireless. This expands the scope of requirements related to customer management, accounting and billing, network and service guarantees. Among other challenges faced by the communities, the IT staff now has to consider customer support issues, billing and trouble ticketing issues, and bandwidth and service level guarantees for the various users of the network.

Integrating with external applications, roaming partners, etc. provide an additional level of complexity to the community network. The need for providing flexible business models that can adapt to the changing network and commercial dynamics also provides fresh challenges to the community, each with its own level of support requirements from the network.



Pronto's UniFi OSS solution allows communities to have a centralized control on the solution by placing the servers required to provide service at the central NOC where all the access and management functions can be controlled. The figure nearby shows a deployment scenario where the servers are installed at the central NOC that manage service controllers and gateways in the network. This management functionality can also be extended to the management and monitoring of the mesh APs that are connected to the controller using SNMP and other API-based methods, thus simplifying the operation and management of the network.

Pronto has successfully deployed its UniFi OSS solution in a number of Muni Wi-Fi networks throughout the US. Our initial work with the Corpus Christi, TX and Chaska, MN deployments, starting in early 2004 has been extensively documented, and testimonials and case studies are published at www.prontonetworks.com. A current listing of some our Muni Wi-Fi deployments is provided here.

As our customers will attest to, the Pronto UniFi solution enables a community to start their deployment based on Public Safety, Public Works, or Public Access requirements. Recently, some of our Muni Wi-Fi deployments have started implement "drinking fountain" models, and "ad-revenue" based models that allow communities to deploy Wi-Fi networks for underprivileged areas to bridge the digital divide, and offer a means of subsidizing the cost of deployment and supplementing revenues based on context-sensitive ads displayed on user's browsers.

Using Pronto's UniFi OSS Solution, communities can leverage the benefits described above. Besides a UniFi OSS software license purchase, Pronto offers a Managed Services Platform (MSP) option to its customers. In the MSP model, Pronto provides the back office operations functions, including network

monitoring, 24/7-customer service, billing and revenue distribution, reports, and system maintenance. Depending upon their preferred business model, communities may wish to either invest one's time and take complete ownership, or spread the ownership over time and seek Pronto's services in the maintenance and management of the network. Communities may also choose to purchase the UniFi OSS license and carry out the NOC operations for their own internal users as well as for the commercial customers thus adding other means of revenues. Corpus Christi, TX, as an example started off on the Pronto MSP platform, and after approximately 18 months, is now running the Wi-Fi network from their own data centers.

Deploying a services platform that can leverage any Wi-Fi mesh network can help cities in easy implementation of broadband applications and services such as centralized control over services and applications for “Mixed-Use” networks, virtual partitioning of wireless network for different types of users, secure access and bandwidth guarantees for each user including ruthless pre-emption capabilities, in-session intercepts for public service announcements, community alerts, and other location-based messages. It also enables multi-media applications and content-based services for a wide range of users. Pronto Networks solution is designed to migrate to upcoming WiMax, UMA, and IMS related convergence technologies.

Pronto has successfully deployed the Pronto UniFi OSS Solution with mesh network players such as BelAir Networks, Cisco Systems, Motorola, Nortel Networks, Strix Systems, Tropos Networks, among others.