

Solutions for Municipalities

Broadband wireless networks can help municipalities attract new business, increase tourism, improve public safety, and provide new services to residents. Wireless broadband access can also be a revenue generator for a city and can be carved out for various user groups, such as for public safety officials and city employees as well as for the general community. Once deployed, a wireless broadband network can be used to launch new services, such as VoIP, which can dramatically reduce telephony costs for the city.

Pronto's public WLAN solution has been deployed in many high-profile cities across the U.S., especially in underserved communities which did not have broadband access prior, and has helped cities provide secure, broadband access to all constituencies while generating revenue.

Below are just a few of the capabilities enabled by Pronto's solution for municipalities and hot zones:

- **Support for 'Mixed Use' Network and Public Safety:** Pronto's broadband wireless platform supports VLANs, which enable the network to be separated for both public and private use. For municipalities, this means that the police and fire department can be on their own separate network, whereas residents and visitors would be on another network while sharing the same infrastructure.
- **Brandable Splash Page:** Pronto's solution enables the initial splash page to be branded by the municipality and to include walled garden sites, or free unauthenticated access to certain websites, such as ones for the city, utilities, public school systems, etc. As Pronto's solution also supports multiple SSIDs, each user group (such as the police department, city employees, and residents) can have their own customized splash page.
- **Brandable Hotspots within a Hot Zone:** Pronto's solution enables enterprises, such as a local café or small business, to have their own customized splash page within a hot zone by simply setting up an access controller at its location with a



public IP address. This feature enables 'street corner' branding so that local merchants/businesses can also benefit from offering wireless service tailored to their business.

- **Flexible Service Plans to Generate Revenue:** Pronto's solution enables municipalities to generate revenue from offering the wireless service by setting up various service plans for various groups. For example, a municipality may choose to offer the Wi-Fi service for free to public safety officials and employees, but charge residents a monthly subscription and visitors a 24-hour pass. Pronto's solution also has the capability to support pre-paid cards in addition to subscription plans.
- **Zero Client Configuration:** Pronto's solution requires no re-configuration of the user's client settings, thus enabling easy, troublefree access. Pronto's solution, for example, automatically adjusts for settings that may be on a user's laptop, such as static IP and DNS proxy settings, which would normally hinder access to the Internet if no adjustment takes place.
- **Advanced Security:** In addition to supporting VLANs which secure city networks by keeping them separate from general purpose use, Pronto's solution provides a SSL-encrypted registration and authentication process and supports corporate VPN clients to allow secure, encrypted access to one's corporate LAN.
- **Access Control for Various User Groups:** Pronto's solution is capable of providing various levels of access to different user groups. City employees, for example, can be authenticated by the MAC address of their laptop or PDA, whereas residents and visitors can only be allowed access by supplying a user-name and password. Small and medium businesses with a static IP address can also choose to have automatic authentication without requiring a username or password for their employees. Finally, Pronto's solution can set what network privileges each user group is entitled to, such as simple internet browsing and corporate VPN access vs. network administrative privileges.

Figure 1: Metro-Scale Wi-Fi Network



This diagram shows Pronto Networks components configured in a metro-scale wireless network.

■ **Content Management for Virtual Community Bulletin Boards:**

Pronto's content management system allows content to be delivered to the splash page quickly and efficiently, enabling municipalities to keep a virtual community bulletin board of public service announcements, voter information, events happening in town, etc. Pronto's solution allows municipalities to write, edit and publish updates to the splash page within minutes and to update information numerous times throughout the day.

■ **Ad Management:** Pronto's ad management system allows municipalities to potentially generate additional revenue from local establishments and business partners by placing and charging for targeted ads on the initial splash page. Pronto's system tracks the number of impressions as well as the percent of click-throughs.

■ **New Services (such as VoIP) to Generate Revenue:** Pronto's standards-based platform allows municipalities to offer additional services, such as voice, on top of the wireless network. Providing voice in addition to data services can help municipalities significantly reduce their traditional telephony costs.

■ **Virtual Network Operator Ready:** Pronto's solution is multi-tiered, enabling municipalities to sublet its network, if desired, to other network operators. A large carrier, for example, may want to offer its own branded Wi-Fi service within the municipality's hot zone. Pronto's support for Virtual Network Operators (VNOs) as well as multiple SSIDs enables third party operators to offer their own branded service leveraging the existing wireless infrastructure of the city.

Whether a municipality's goal is to provide wireless broadband access to the community, enhance productivity or public safety, or introduce new revenue-generating services, Pronto's public WLAN solution can help. Pronto offers a secure, flexible platform on which services and local information can be tailored for specific user groups.

Benefits for Municipalities:

- Helps with public safety and with providing new services to residents
- Latest technologies can be integrated at a later stage
- Meet economic goals and augment economic development
- Additional services can generate revenue
- Automatic authentication for various user groups
- Create a secure city network



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