



## Bringing the Network to the People: WLAN in Peñalolén

e-Government is a worldwide trend transforming government by applying private sector operational efficiencies and economies of scale to the public sphere. Chile, one of the economic powerhouses of South America, has committed significant resources to this movement, and the results are being seen at all levels of government.



Wireless LAN (WLAN), which allows organizations to quickly extend network access beyond the wired infrastructure, has been key to the e-Government build-out. So when the Municipality of Peñalolén, Santiago de Chile, decided to deploy pervasive Wi-Fi at their town hall, they looked for a flexible solution that could support the needs of multiple constituencies, from administrators using sophisticated backend applications to ordinary citizens accessing free internet in the plaza next door. The Extricom WLAN was what they elected to install.

### Making Government “Customer Friendly”

With the spread of e-Government, information technology promises to play an increasing role in the everyday lives of people across the globe. Whether something as exalted as online voting in a national election or as ordinary as contesting a parking ticket, easy and convenient access to government networks will help enhance the average person’s sense of participation and representation. This new, more “customer-friendly” approach directly benefits government’s bottom line as well, allowing it to automate operations and maximize the use of scarce resources.

Initially, government organizations concentrated on increasing access, investing in online portals that would allow anyone with an Internet browser to directly connect to public applications and databases. More recently, however, e-Government has focused on augmenting the actual network infrastructure to ensure that everyone has the same ability to use public IT resources. In this new paradigm, government has as much of an obligation to provide access to the digital highway as it does to provide clean, safe streets.

Implementing WLAN is an essential part of this e-Government evolution. WLANs can help extend infrastructure by cost-effectively bringing electronic resources to where people need them, rather than forcing people to go where the resources are. The mobility and flexibility of a WLAN opens up the potential to bring a variety of government services into public spaces, whether putting up a self-service kiosk in the

town hall or creating emergency networks to deal with a natural disaster.

### The Digital Community

For Chile, a technologically sophisticated society and the leading exponent of e-Government in the Caribbean and Latin America region, the utility of WLANs is evident. Since the late nineties, Chile has pursued a national mandate to deploy citizen-oriented, easy-to-use systems that promote constituent access, modernize government operations and advance democracy. Cost-effective WLAN can help governments quickly meet these mandated goals and enable a wide range of applications, from simple internet access to voice-over-WLAN (VoWLAN) and location-based services.

The municipality of Peñalolén, a prosperous suburb of Santiago de Chile, was fully aware of this potential. Led by a mayor with a strong telecommunications background, the Municipality was implementing an ambitious technological initiative, “Comuna Digital” (Digital Community), with the goal of enhancing every citizen’s “user experience,” including online government services, free Internet access to anyone in City Hall, VoWLAN communication for local officials, and wireless video streaming so that anyone with a web browser could participate in public meetings.

### Looking for the Right WLAN

As is often the case, success of such ambitious



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Jorge Oportot Opazo  
Wireless Business Manager  
I-Systems, S.A.

### Project Scope

Deploy pervasive WLAN to provide coverage for public areas of Chilean municipality's town hall. Implemented system had to be able to support data, voice, and video without performance tradeoffs.

### Solution

- EXSW-2400 WLAN switch and a full complement of UltraThin™ Dual-Radio EXRP-20 APs.
- System configured to support users on 802.11a/b/g standards.

### Results

- WLAN quickly deployed and placed into service without co-channel interference issues.
- System provides seamless connectivity to users everywhere in deployment area.
- WLAN will be used to support implementation of VoWLAN.

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strategic programs depends on key tactical decisions, so for Peñalolén, choosing the right WLAN was critical. The Municipality was looking for a system that would be flexible enough to meet multiple divergent requirements. "Providing pervasive Wi-Fi access throughout our facilities was absolutely essential for Comuna Digital" said Cristian López Vergara, Comuna Digital's IT Manager for the Municipality. "To achieve our goals, we needed a network that would support enterprise triple-play services; that meant one that could guarantee coverage and provide optimal Quality of Service without compromising on performance."

Peñalolén consulted with a trusted advisor, Jorge Oportot Opazo of I-Systems, who pointed them to the Extricom WLAN. The Extricom solution is based on an innovative next-generation Channel Blanket™ architecture which aggregates the signal of all APs operating on the same channel to create blankets of coverage, thereby ensuring seamless connectivity and guaranteed communications. Extricom's approach is a significant departure from conventional cell-based solutions, whose deployment complexity, interference, and channelization issues make them a difficult proposition for governments needing to get value from every budget dollar.

### "A Real Eye-Opener"

Peñalolén's IT department liked what they saw in a demo of the Extricom WLAN, and working with I-Systems decided to implement it at City Hall. The deployment was rapidly performed, with only two days needed to install and configure a system to cover a three-story building of over 3,750 square meters (40,365 square feet), as well as training the Municipality's IT staff. The physical installation of the system was effortless, since it avoided all the usual coverage, interference, and channelization iterations of alternative solutions. With the install complete, the system was rolled into production the same day.

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### Smooth Sailing

The Extricom WLAN immediately proved successful, easily meeting the municipality's stringent connectivity requirements of a 54 Mbps connection rate in key public areas and seamless mobility for municipal workers no matter where they moved in the building. Another objective was to provide a "guest access" network to ensure internet access for ordinary citizens inside City Hall and in the plaza next to it. Thanks to the unique Extricom architecture, which enables segregation of public/private networks onto separate channel blankets, there was no problem fulfilling this goal.

While ensuring connectivity is the most obvious criteria for success, an equally critical requirement is that the WLAN enable smooth interoperability to databases and applications once connected. Peñalolén had deployed Procera PacketLogic to shape and prioritize network traffic according to criticality. Since the Extricom WLAN solution is designed to be vendor-neutral and support any application, the system proved to be completely transparent to PacketLogic, enabling Peñalolén to maximize system performance from day one.

### The WLAN Foundation

The success of the Extricom system will bring both short-term and long-term benefits to Peñalolén. Confident that the system seamlessly supports mobility, the Municipality will enable more flexible operations by deploying a VoWLAN phone system. The system also offers one of the lowest total costs of ownership of any WLAN product on the market, so Peñalolén can count on a future-proof solution that will enable any application they choose to use it for, without hidden costs or add-on modules that might overwhelm their budget.

"A well-functioning wireless LAN is like a well-functioning government," Cristian López summarized. "It provides a basic foundation from which the many diverse objectives of public policy can be accomplished. The Extricom WLAN is exactly that: basic, simple, and effective."