

Town of Isla Vista

It's Everywhere in Isla Vista, and it's Free.



More than 20,000 people live in Isla Vista, a picturesque, 2.1 square mile community adjacent to the University of California, Santa Barbara (UCSB). Most are students of the University or other local educational institutions, and as such, the town is heavily populated with users of laptop computers and other mobile information devices. However, Isla Vista had no public wireless Internet access. Until, that is, Incipient Technologies found a way to cost-effectively deploy free wireless Internet access throughout the town while leveraging a new Firetide™ wireless instant mesh network to build revenue-generating, location-specific information services.

Organization

Incipient Technologies (www.incipient.net)

Industry

Wireless Internet Service Provider

Challenge

Provide cost-effective wireless Internet access to downtown area of Isla Vista, California

Solution

A network backbone was needed to connect all of the wireless access points that were planned for the downtown area Hot-Spots. Installing a wired backbone was too cost-prohibitive and invasive to neighborhood streets and buildings. Wireless point-to-point and point-to multipoint backbones could not provide the broad coverage needed without adding very complex management and interference problems. The Firetide Instant Mesh Network provided a simple, reliable, and affordable wireless network backbone that quickly covered the entire area with a self-forming-self-healing wireless mesh.

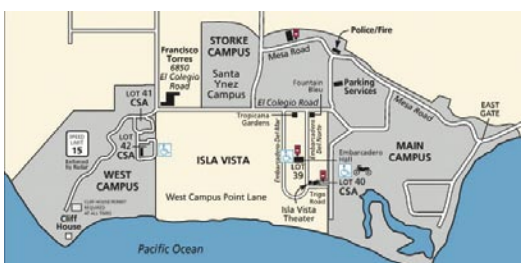
Creating a Potential Showcase

Isla Vista is an interesting little town within a city. One of the most densely populated communities in California, it accommodates over 20,000 people within 2.1 square miles, most of whom are students attending the University of California at Santa Barbara (UCSB). Downtown, a range of businesses provide services targeted to a student population—restaurants, coffee shops, quick print, and entertainment—but none provided wireless Internet access for their tech-savvy customers.

“Here, students tend to go to coffee shops, libraries and other public locations to get work done,” explained Steve LeBoeuf, vice president of operations for Incipient Technologies, Inc. Incipient provides wireless services and solutions nationwide. As a member of the Wi-Fi Alliance, the company adheres firmly to industry standards to ensure high service quality.

“Students need wireless Internet access,” he continued, “and we viewed this as an opportunity to serve the community with free quality Internet service, and to provide a foundation for delivering location-specific paying services in the future.”

Through the process of defining the project scope, LeBoeuf and his team evaluated several alternatives for delivering this service. Instead of limiting Internet access to only one or two locations in town, surveys indicated that expanding coverage to numerous locations would better serve the target population. The town configuration lent itself to installing wireless access points on the building exteriors. However, the costs of equipment, cabling, and recurring broadband connection charges associated with traditional point-to-point or point-to-multipoint wireless access implementations were prohibitive.



Case Study: The Town of Isla Vista



In addition, LeBoeuf found that to achieve the range or output required, point-to-point solutions frequently required that dual radios and antennas be installed next to each other, which created interference issues. Other point-to-multipoint solutions either lacked range or power or were exceedingly complex to install and manage.

"We also wanted to purchase only one broadband connection to minimize recurring costs," says LeBoeuf. "We met with representatives from Firetide and found that we could cost-effectively use a mesh topology to cover our area without the expense of a traditional wired backbone."

An Instant Network

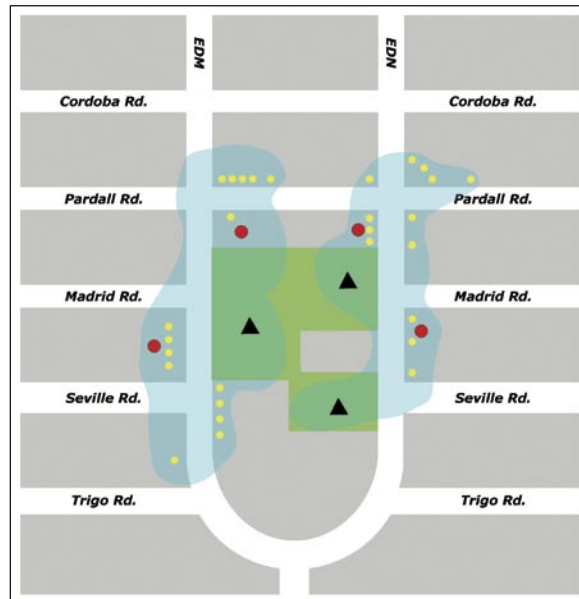
LeBoeuf and his team chose a Firetide Instant Mesh Network to enable fast deployment of the wireless network. The Firetide mesh provides standard

Ethernet connectivity to any location over a wireless backbone. This eliminates costly backhaul wiring for wireless access points and HotSpots and even allows other networking devices such as computers, printers, surveillance cameras, and Ethernet switches to operate on the wireless backbone.

The Incipient team installed a weatherproof Firetide outdoor mesh node on the town's tallest building. The outdoor mesh node features a NEMA enclosure, two weatherproof Ethernet ports, and a high gain antenna capable of spanning the entire downtown area. The team then mounted three Firetide indoor mesh nodes outfitted with custom-designed external enclosures to three downtown buildings. Upon power up, all four mesh nodes automatically discovered each other, instantly forming a wireless mesh network that blanketed the entire downtown area.

Incipient engineers then connected third-party access points to the Firetide mesh nodes to provide Wi-Fi coverage throughout the area and inside key buildings. "The Firetide mesh network allowed us to effectively cover 26 businesses and three parks—almost ten acres of commercial downtown area," said LeBoeuf. "With Firetide we simply put the equipment together and turned it on—the configuration was quick and easy.

Management and operations are much easier than point-to-point or point-to-multipoint solutions, implementation costs were low, and the Firetide wireless mesh network provides a solid, resilient network our customers can rely on."



● Firetide wireless mesh node

Internet To Go

The new Isla Vista network was turned on in February 2005. After initial testing and refining specific coverage areas, the service was officially launched at the end of March 2005. For users, connecting to the service is as easy as opening a web browser, and an increasing number of users are discovering and actively using the service.

For Incipient, the network provides solid proof of the company's ability to provide wireless data services across wide areas and diverse locales—libraries, parks, harbors, coffee shops, and downtown areas. Future plans include launching local information services that can be highly targeted to an area's specific demographics. Businesses can purchase advertising with assurance

that their messages are reaching the desired audience. In addition to the free Isla Vista service, Incipient also delivers successful pay Wi-Fi services in southern California and Hawaii.

"With Firetide, we can now offer cost-effective solutions to a much greater range of clients who want to offer wireless capabilities," said LeBoeuf. "Firetide is our first choice for locations where we must cover a wide area and don't want to dig trenches, disturb historic sites, or cut through building interiors to run cable."

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