



CASE STUDY

## Trapp Family Lodge

A MOUNTAIN RESORT IN THE EUROPEAN TRADITION  
BY THE FAMILY THAT INSPIRED "THE SOUND OF MUSIC"

"Our guests expect the best from our resort – beautiful surroundings, luxurious accommodations, fine cuisine, and all the amenities. Today, that includes fast, reliable wireless Internet access throughout the property. Since NOWIRZ installed our Colubris wireless LAN, we and our guests have been completely satisfied with the quality and performance of the entire network."

Name  
Title  
Trapp Family Lodge



## Trapp Family Lodge

### About the Trapp Family Lodge

The Trapp family first started welcoming guests to their 27-room lodge in the summer of 1950. Thirty-three years later the family opened its doors to a new 93-room resort with the same Vermont country charm of the original lodge. The Lodge continues to be owned and operated by the Trapp family, the inspiration for the classic musical and movie "The Sound of Music." Today, the 2,700-acre 5-star resort with sweeping mountain views provides accommodations in an Austrian-style Main Lodge with an additional 23 new rooms and suites, and 100 Guest Houses. Talented chefs prepare European specialties in The Dining Room, The Lounge and the Austrian Tea Room, complemented by nightly entertainment. First-class facilities are available for meetings and weddings.

### The Challenge

As part of their commitment to providing all the services guests expect from a 5-star resort, the Trapp family wanted to make high-speed Internet service available throughout their 2,700-acre property via wireless LAN. However, the same features that make the Trapp Family Lodge such an attractive resort destination—rolling hills, abundant trees, and dozens of Guest Houses and Villas—also posed major WLAN design challenges. In addition, resort management wanted to ensure that their WLAN could support additional, bandwidth-intensive applications that are likely to be added later, such as VoIP and streaming video.

### The Solution

After considering several different approaches, the Trapp Family Lodge chose a WLAN solution based on Colubris Networks products provided by NOWIRZ, a networking solutions provider based in Waitsfield, Vermont. With 12 years of experience engineering, implementing, and maintaining a variety of wired and wireless networking solutions, NOWIRZ had the technical expertise required for the project. NOWIRZ also had extensive experience deploying WLAN hotspots at hospitality destinations throughout Central Vermont, Northern New York, and Northern New Hampshire. The company has been using Colubris products exclusively as their hardware of choice since 2003.

In establishing the design goals for the Trapp Family site, the NOWIRZ team determined that it had to support a minimum link speed of 11 Mbps for wireless clients. They also decided that the Wireless Distribution System (WDS) links they would use to connect buildings on the property would require a maximum bandwidth of 54 Mbps. Clients would need the ability to connect via 802.11b or 802.11g protocols, and to maintain the resort's Old World, up-country ambience, any exposed equipment could not be visibly obtrusive. It was decided that the



WLAN deployment would be a three-phase process, with wireless access in the Main Lodge to be implemented in Phase I, WLAN coverage across the 30 Guest Houses in Phase II, and the Villas to follow in Phase III.

The NOWIRZ team began the project by conducting a site survey using NetStumbler, laptop clients, and Colubris access points. For the Main Lodge, NOWIRZ specified Colubris InReach 320 multiservice access points for the guest rooms and a Colubris InMotion 3200 multiservice controller for the lobby and its immediate vicinity. This would provide guests with a Signal-to-Noise Ratio of 25 dB or better for each room.

Providing WLAN access for the dozens of Guest Houses proved to be a bigger challenge. Guest Houses at the Trapp Family Lodge are arranged in clusters throughout the site, surrounded by trees, and situated at lower elevations than the Main Lodge. The NOWIRZ engineers determined that they would need a WDS downlink to the Guest House area, and because of the obstructing trees, they had to perform a careful analysis to select which Guest Houses would act as the WDS backbone. They chose Colubris InReach 330 multiservice access points for the multiple 5 GHz WDS backbone links and InReach 320 multiservice access points to provide 802.11b and g access at the remaining Guest Houses. Other equipment specified included 5 GHz 14 dB panel antennas for all WDS links, dual b+g 8 dB omni antennas for the Guest House InReach 320s, and dual b+g 2—5 dB omni antennas for the InReach 320s in the Main Lodge. The InMotion multiservice controller interoperates with Alepo Radius/Billing software that NOWIRZ uses for a back-end system.

Deployment required a precise, painstaking process due to the large number of trees. The NOWIRZ team used a laser tool to perform antenna alignment, since a deviation of as little as a few degrees either way could obstruct a target antenna and compromise the reliability of the WDS link.

The first phase of the deployment at the Main Lodge was completed in December of 2004. The Guest Houses came online the following July, and at this writing, the Villa deployment is still pending.

For guests at the Trapp Family's Main Lodge, the Colubris WLAN means freewheeling, reliable high-speed access to the Internet and e-mail from anywhere in and around the facility. And now visitors to the Guest Houses—for the first time—can stay connected to the outside world via the Internet while enjoying all the scenic splendor of the Vermont countryside. For the staff of the Trapp Family Lodge, the Colubris WLAN represents something even more significant; it is an essential part of their strategy to maintain the resort's 5-star status and enable future service growth and expansion.

#### About Colubris

Colubris Networks is a global provider of intelligent, multiservice wireless LAN access equipment and management systems for service providers and enterprises. The company's award-winning products deliver seamless, secure access to broadband services and applications while integrating into existing network infrastructure, security and management systems. Colubris Networks' equipment is deployed by more than 1,000 organizations worldwide.



200 West Street  
Waltham, Massachusetts 02451  
Phone: +1 781 684 0001  
Fax: +1 781 684 0009  
E-mail: sales@colubris.com  
www.colubris.com

Copyright © 2000-2005, Colubris Networks, Inc. All rights reserved.  
All trademarks are the property of their respective owners.