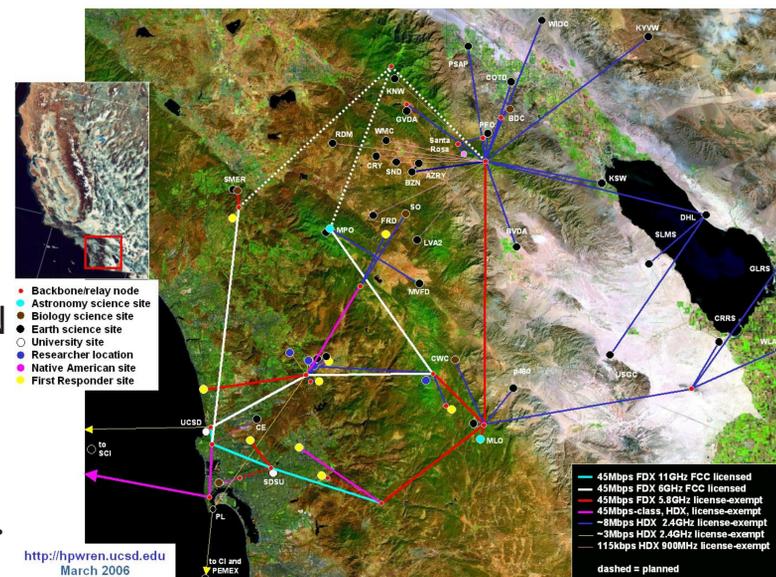




December 28, 2003: 360 degree view from HPWREN cameras on Mt. Laguna of the Cedar Fire approaching from the Cuyamaca Mountains.

# Wildfires - a Fact of Life Living in Southern California

The High Performance Wireless Research and Education Network (HPWREN) team is creating, demonstrating, and evaluating a non-commercial, proto-type, high-performance, wide-area, wireless network in San Diego, Riverside, and Imperial counties. The National Science Foundation (NSF) - funded network includes backbone nodes at the University of California, San Diego (UCSD) and San Diego State University (SDSU) campuses, and a number of hard to reach areas in remote environments. Not only is HPWREN used for network analysis research, but it also encompasses a high-speed wireless Internet collaboration with field researchers from various disciplines (such as astronomy, ecology, and geophysics), as well as for educational opportunities related to rural Native American learning centers. An additional strong emphasis is on networking requirements for first responders in remote areas.



Volcan Fire of September 2005

In Collaboration with the California Department of Forestry & Fire Protection (CDF) and the San Diego Sheriff's Department (SDSD), HPWREN provided Incident Command Post (ICP) connectivity to support fire fighting activities for five large wildfires:

- Coyote Fire, July 2003**
- Eagle Fire, May 2004**
- Mataguay Fire, July 2004**
- Volcan Fire, September 2005**
- Border 50 Fire, October 2005**

Connections were created from radio tower sites on mountain tops via temporary relays into the Incident Command Posts.



Due to the nature of repeated use on Incident Command Post sites, three designated ICP locations have been established for immediate use to support fire fighting efforts.



Volcan Fire antenna relay site

In 2005, a joint exercise with CDF and SDSD demonstrated the ability to deploy an ad-hoc high-speed data communications relay site in not accessible areas via helicopter.

