

San Diego supercomputer team backs firefighters in recent 'Horse' wildfires

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Firefighters facing fast-spreading wildfires, especially in remote areas where communications and other resources are scarce, can now add "cyberinfrastructure" to their firefighting arsenals.

Such combined hardware and software proved useful in the recent "Horse Fire" in California's Cleveland National Forest, when experts from the San Diego Supercomputer Center (SDSC) at the University of California, San Diego, responded to the urgent request of state firefighters for quick and reliable wireless communication among widespread teams.

That communication was speedily provided by the High Performance Wireless Research and Education Network (HPWREN), a resource supported by the National Science Foundation and staffed by researchers at the SDSC, UC San Diego's Scripps Institution of Oceanography (SIO), and San Diego State University. Within a day, SDSC experts were on the scene, establishing high-speed wireless data links.

HPWREN teams are no strangers to wildfires and catastrophes, but this was the first time that vital communication lifelines used Voice-over-Internet-Protocol (VoIP) technology – allowing wireless links from the Horse Fire command post to the Internet and to deployed firefighting teams.

Hans-Werner Braun, principal investigator on the program, and SIO seismologist Frank Vernon, co-principal investigator, lead the SDSC

effort for HPWREN, and both recognize the value of cyberinfrastructure in responding to crises.

"Reliable communication is absolutely essential in emergencies and disasters," said Braun, "especially when response teams may be spread over a wide area, where some forms of communication aren't available or won't work. The wireless links to the Internet we provide through the HPWREN collaboration can keep everybody talking and responding effectively – a practical, lifesaving application of our research that we find especially gratifying."

Vernon agrees. "Although our primary roles are research and education, very important in themselves, we never forget that the ultimate aim of science, scholarship and study is improving people's lives – sometimes even saving lives."

To help support the firefighter's command post, the HPWREN team worked closely with the California Department of Forestry and Fire Protection, the U.S. Forest Service, Viejas tribal leaders, and the San Diego Sheriff's Department.

Source: University of California - San Diego

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