

Picturing Fire

Video Aids Wildfire Management in San Diego County

BY SARA DIAZ

On Sunday, October 21, 2007 the first of many wildfires began burning out of control in the Portero area of San Diego County. Fueled by high off shore winds, multiple fires were tracked and managed over the course of 10 days.

The Regional Command and Control Communications (3Cs) system, implemented as a pilot in March 2007, provided a crucial means to distribute information between public safety agencies managing the incident, including briefing information and video streams of impacted areas. 3Cs is a public safety data network in San Diego and Imperial counties. The pilot program includes San Diego County Sheriff Department, San Diego Police Department, San Diego County Office of Emergency Services, San Diego City Office of Homeland Security, San Diego Fire-Rescue Department and CalFire, all of whom worked to fight the firestorm. The pilot network is currently running two applications, Tandberg video conferencing and VBrick distribution of real time video feeds from regional helicopters.

VIDEO CONFERENCING

Video conferencing was used heavily during this event. A conference bridge was assigned for the incident and participants were contacted via email daily with briefing times and information. EMS Medical Operations Center, County Environmental Health, and Office of the Governor called into 3Cs using ISDN. During briefs, agencies would briefly provide a summary of what they are focusing their efforts on, where they needed assistance, offered available resources to other agencies and

answered questions from other agencies. Briefings lasted between 5 - 20 minutes depending on events.

Additionally, a solution for connecting video calls over IP from outside the 3Cs network was engineered and piloted. It was composed of a Codian Video Conferencing Bridge on loan to the project from Tandberg, a router with EVDO [Evolution Data Optimized – a form of wireless broadband. – ed.] wireless access, a second EVDO modem, and a Tandberg Tactical video conferencing system purchased by the project in Phase 1. With this equipment, command staffs were able to call out to the Tandberg Tactical in the field, establish audio and video, and connect the call into the 3Cs conference used for briefings.

VIDEO STREAMING

Due to the location of the fires, the existing 3Cs regional antennas were not able to pick up transmissions from City of San Diego helicopters. Because video from the helicopters was considered critical, 3Cs staff worked with City Communications and used 3Cs equipment not yet in service to develop a downlink receiver site at SDFD Fire Communications Center.

This downlink site differed from existing 3Cs regional receiver sites, because it used a directional antenna instead of an omni-directional antenna. City Communications manufactured an antenna mount in their shop, and SDFD Video Productions provided a tripod. The benefit of this solution was that we were able to receive clear pictures from helicopters at distances up to 20 miles (existing 3Cs antennas average 8 miles).



SAN DIEGO COUNTY EOC

The San Diego County Emergency Operation Center as it appeared during the 2007 firestorms. The EOC's video wall displayed a combination of 3Cs video conferencing, WebEOC for incident tracking, and local news.

WHAT WORKED WELL DURING THE EVENT

Because of the nature of a wind driven firestorm, a rapid integrated response was key to saving lives and property. The Regional 3Cs network provided command and operations staff immediate access between the various operations centers. The affect was a virtual fusion center, where the centers were able to work together, despite being located in many different physical locations. Regular inter-agency briefings provided not only a chance to disseminate information, but also allow for question and answer between agencies ensuring everyone had a clear understanding of the current situation and what their roles and priorities were.

THE FUTURE OF 3CS

The Regional 3Cs project is currently constructing the next phase of the network. The goal is to connect local, tribal, state, and federal agencies operating in San Diego County, as well as providing links to 3Cs for similar networks in Imperial, Riverside, and Orange counties as they are developed. [PHOTO](#)

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