

➔ Making decisions on the fireground

A Bushfire CRC project is looking at how decisions are made on the fireground

Bushfire CRC researchers have had ample opportunities to further their field research over last summer attending several major fires that occurred in New South Wales and Victoria.

The Project D2.3 Safety in Decision Making and Behaviour team, led by Mary Omodei from La Trobe University, is looking into the human factors that affect decision making on the fireground.

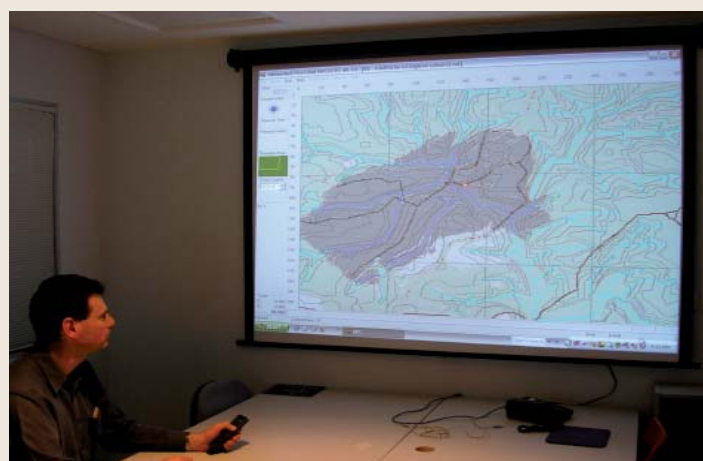
In the field

The team interviewed 77 firefighters ranging from Crew Leader to Incident Controller at 14 separate fires. Most of these confidential interviews were able to be conducted within two days of the fire, with locations ranging from within the cabin of a fire truck to a firefighter's farm.

In most cases the researchers were able to be deployed safely, under a fire agency appointed escort, to the fire. At times the enthusiasm and support for the project afforded by the fire agency escort extended to providing the researchers with the opportunity to directly experience the demands of working on the fireline.

Dr Mary Omodei said: "The initial aim here was to recruit firefighters to be interviewed. However, it also provided a most valuable opportunity for the researchers to gain first-hand experience of the fire and how it was being managed, such experiences proving particularly useful for later analysis of the interviews."

The interviewing team were also impressed by the enthusiasm shown by the firefighters for the project and their willingness to provide very honest information. With the end of the fire season the project team are now conducting detailed analyses of the large amount of information provided by the interviews.



Early outcomes

One of the many interesting findings to emerge from a preliminary analysis of the interviews is the importance of personal knowledge, not only of the area in which the fire is occurring, but of other personnel involved in managing the fire. The importance of such trust in others, both up and down the command chain, has many implications for crew safety. Another interesting finding, particularly for those in senior roles, is the difficulty experienced if the incident develops in such a way that current plans have to be abandoned.

The research team has also commenced travelling to fire stations to investigate the decision making of firefighters in controlling computer-generated fires. For this they are using the Networked Fire Chief simulation program, which has already been evaluated by experienced wildfire instructors as "very realistic". "Our aim here is to be able to get direct evidence for some of the more interesting ideas raised in the interviews," said Dr Omodei.

Using a fire scenario in which a second fire outbreak required a major change in plans, almost half the research participants were found to be reluctant to abandon their earlier plans. This raises the possibility of some degree of planning inflexibility. These early results with Networked Fire Chief suggest that not only is the underlying fire spread model sufficiently realistic but that it is also suitable for investigating decision making errors.



▶ LEFT: BUSHFIRE CRC D2.3 RESEARCHERS VISITED MANY FIREGROUNDS OVER THE SUMMER AND ABOVE: THE NETWORKED FIRE CHIEF PROGRAM IN ACTION.