

## **Using the web to provide real time fire information to the community: The TFS Experience**

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### **ABSTRACT**

People at risk from bushfire who are prepared for bushfires need good up to date and accurate information when bushfires threaten.

While most fire services have websites, the Tasmania Fire Service (TFS) has developed a “current bushfires” area on its site that provides up to date information on location, size, and situational information for bushfires across the island. Tasmania recently experienced its most challenging fire season for many years which provided the opportunity to “road test” and enhance its web service.

Originally the information provided in materials and education programs related to property protection and actions to be taken in the event of fire. However this was generic in nature.

With increasing acceptance of the stay and defend strategy, people at risk needed information tailored to their own situation and their current local fire behaviour.

Houses protect people and people protect houses.

TFS strongly supports this position and successfully utilised the web to reinforce the message during Tasmania’s many campaign fires last summer.

Tasmania’s media and public now rely on the TFS website as a means of obtaining consistent, timely and accurate advice on where fires are and how to prepare for them.

TFS experienced many challenges in the collection of intelligence and the interpretation of the material to provide useful and concise public information.

The past season was a great test for this innovative service and received outstanding feedback, and undoubtedly helped to minimise losses.

### **INTRODUCTION**

The impact of the internet upon people’s lives is extensive and still increasing. The rapidity of the development of the impact of this technology is probably unprecedented. If fire services mirror the communities they serve, the impact of the internet is and will be profound upon them as well.

Within the last 10 years most fire services have developed increasingly sophisticated web sites. Prior to 1997 most fire services had perfunctory internet presences at best. As internet technology has evolved, so have fire service websites. Content and functionality has become more dynamic, allowing active communication and interactions between the sites and communities.

This paper relates the experience with the TFS website during recent major fires and discusses some of the unique features and future prospects for the TFS website.

## BACKGROUND

The current TFS website became accessible by the public in December 2003. The site was developed by an external provider on behalf of the TFS who used an internal project team to guide its development. The site was designed to be dynamic and responsive and to replace an earlier web presence which was static in content and with limited detail.

During significant fires in the 2002/03 fire season there was considerable interest in the TFS website. In particular, a major fire at Broadmarsh in southern Tasmania occurred during the week after the Canberra fire disaster in January 2003. During this fire TFS undertook a number of innovative activities:

- Using a major media briefing and with the assistance of the print and electronic media, the TFS Chief Officer told the people in the south of the State to stay home and prepare themselves and their properties for imminent bushfire attack.
- TFS prepared a one page bushfire “what to do when the fire comes” handout, generated maps of impact areas and enlisted the aid of the State Emergency Service to door knock and deliver the handouts to 3000 households.
- TFS advertised a fire information freecall number to provide callers with local updates for the fire area.
- TFS put fire updates on its usually static website.

In debriefing the community safety outcomes from the Broadmarsh fire, internet usage was not even considered for the questionnaire design because so few people were expected to have internet access. Nonetheless, encouraged by relatively high visitation statistics, internal consideration was given to how to increase the community safety utility of the website.

THE TFS WEBSITE: [www.fire.tas.gov.au](http://www.fire.tas.gov.au)

The TFS site, in common with many other fire service sites, includes a comprehensive suite of areas including corporate information, human resource and recruitment, and structural and bushfire fire safety information. While the visual design is different, the architecture of the page is based on the Victorian Country Fire Service site technology.



Key design features for the front page of the site are:

- (a) Prominence to be given to the seasonal fire safety message on the front page.
- (b) A Member Login for all TFS members to access the TFS Intranet and all its resources.
- (c) A direct link to media information (via the Latest News Stories tab).
- (d) A direct link to Current Bushfire Information

TFS has a strong commitment to the alternation between summer = bushfire and winter = house fire community safety campaigns. This is supported by highlighting the campaign on the first page entered. The timing of the changeover is usually aligned with the summertime daylight saving period – which has been six monthly for many years. On days of Total Fire Ban the home page displays a flashing banner alerting people to the Total Fire Ban.

The provision of intranet access for all career and volunteer members of the TFS was thought by many to be a “nice to have” feature of limited utility. The explosive growth of internet usage by ordinary Australians was not expected but providing online access for brigade members has proven to be a successful investment. Brigade and individual reports along with the ability to page is available in the intranet area.

The direct link to media information deliberately seeks to improve accuracy and consistency of TFS messages.

The ‘current bushfire’ information linkage provides text describing the location, size and current status of fires across the state. As a minimum each fire is updated twice per day. When fires are moving and likely to impact on property the fire information is updated much more frequently. In addition map images show the distribution of fires across the State. The map can be manipulated and fire information obtained by selecting the fire on the map. The status of the fire and other details are automatically generated from the TFS Fire Incident Resource Management (FIRM) database which is primarily used for call taking and dispatch functions.

The advantages of providing the ‘current bushfires’ section include:

- The public are provided with information relevant and important to their own situation (their own place at the current time)
- It becomes the single point of reference for public information. Tasmania’s land management organisations Forestry Tasmania and Parks & Wildlife Service also provide their fire information.
- TFS personnel use the same reference when staffing fire information phone lines
- The website and its frequent updates keeps the media advised with current, consistent and accurate information (the TFS message)
- Since the introduction of the service there has been a great improvement in the quality and consistency of information delivered by the media
- Assists to reduce emotional and or sensationalised language (fire balls, evacuations etc.)
- There has been a significant reduction in number and length of time used to manage media enquiries (as their information is provided)

#### | CASE STUDY – MEEHAN RANGE FIRE OCTOBER 12 2006

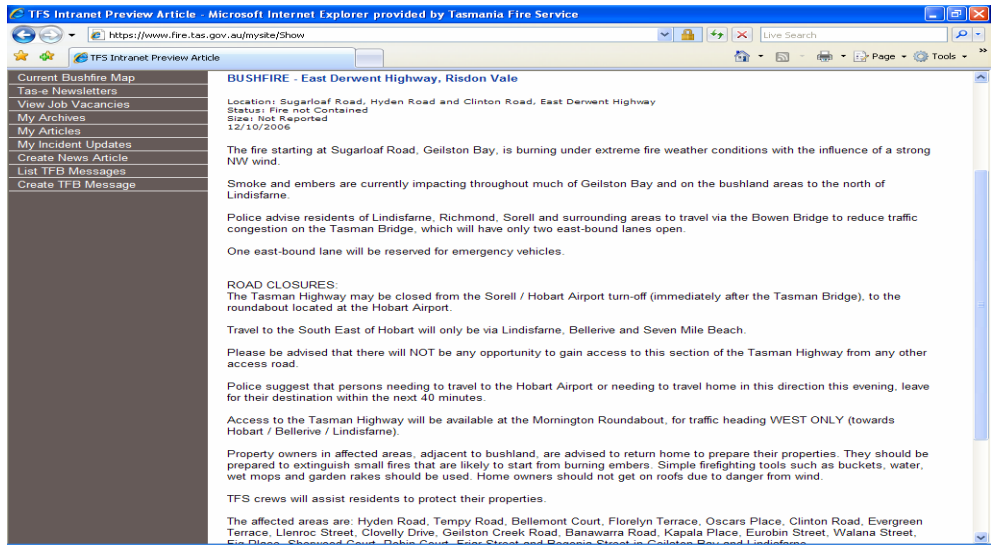
In common with much of Australia the TFS was expecting the 2006/07 fire season to be early and difficult. Much of Tasmania was in drought and there had been several fire danger days in spring. In early October there was a succession of warm to hot days with notably low humidities. On October 10 the fire weather forecast was sufficient for a Total Fire Ban to be declared for the following day, the second earliest Total Fire Ban day of the year in the 44 year record (only September 27 1987 was earlier).

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October 12 experienced two periods where the FFDI was over 100 for over an hour and a half, in the late morning (peaking at FFDI 123 at 1130h DST at Hobart Airport) and then again in the afternoon (peaking at FFDI 117 at 1500h DST at Hobart Airport). The FFDI at Hobart Airport was above 50 from 1100h DST to 1930h DST. The length of time that the periods of extreme FFDI Ratings were experienced was unprecedented in Tasmania, far worse than during the 1967 Black Tuesday bushfire disaster.

Inevitably a fire was started on the urban interface. Not surprisingly it grew rapidly and caused great concern.

The fire directly bounded some 690 homes on the interface of Hobart's eastern shore and more than 40 crews worked on the fire in the 24 hour period.

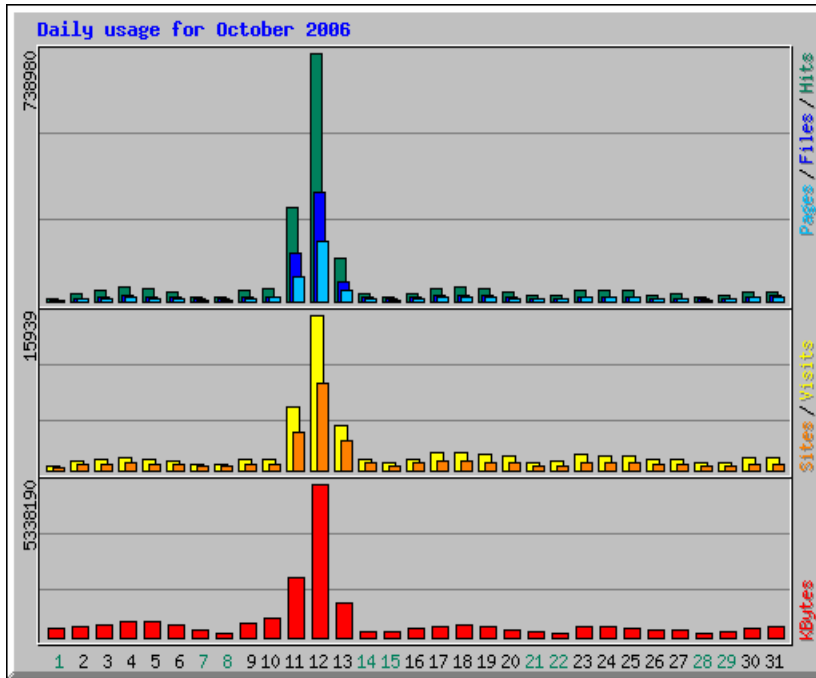


The media and others were hitting the website fairly consistently and as the load grew TFS staff were actively managing the servers and increasing the capacity so that the site did not crash. Other staff were updating the content as sireps came back from the field.

A requirement for the success of the site has been ensuring TFS staff have a range of skills for both managing the site and updating the more dynamic sections.

Normal usage of the website (eg day to day) usual hits:

	July	June	Last 12 months
<b>Total Unique Visitors</b>	44,660	42,664	623,828
<b>Highest 1 Day Max</b>	1,684 (17 <sup>th</sup> )	1,724 (4 <sup>th</sup> )	15,939 (12 <sup>th</sup> Oct)



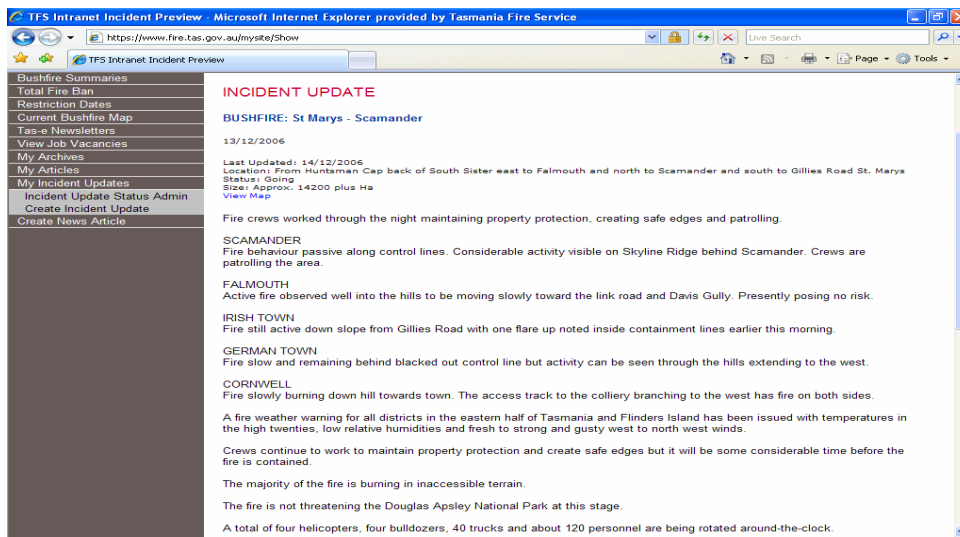
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### ST MARYS / SCAMANDER FIRE DECEMBER 14 2006

A large bushfire in Tasmania's north east ultimately burnt more than 30,000 ha over a period of almost four weeks. On the afternoon of December 14 gusty winds and very dry air reaped havoc with the fire causing the loss of 26 houses and 28 outbuildings along with damage to 4 businesses and 2 orchards.



### FEEDBACK

As provided by similar websites the TFS website offers a 'contact us' facility. The vast majority of feedback has been positive. Examples include:

- Thank you for the excellent job keeping information up to date on your website over the last few days. Living in Cambridge and seeing the smoke it was the difference between panic and informed knowledge. Great job and to the firefighters, you folks are amazing for doing what you do.
- I would just like to compliment you on the website. We moved from the Blue Mountains in NSW over a year ago, where bushfires were quite common, and we had to be ready to evacuate three times in the space of 2 years. The control centre was only 2km from us, yet the website was useless as far as information went. We could see the smoke and flames coming towards us and there was still no info online. Your site is informative and kept up to date, and it has already helped us when travelling into town, knowing which roads to avoid etc. Thank you for the great service you are providing.
- Many thanks for an informative useful web site. It's good to be able to have accurate timely information about what's going on always only a click away. Our prayers are also with all those men and women risking their lives to look after our communities.
- It has been very beneficial to be able to get regular updates from this page. A good job well done.
- BRILLIANT I am a property owner with animals (5 acres) at Molesworth and I work in Hobart city, this web page will help me during the summer for monitoring bush fires in my area. WELL DONE again TFS :)
- This would have to be one of the most informative web sites I have ever visited. Although present conditions are mean TFS is being pushed to the extreme, this website is being updated on a regular basis, and we have recommended it to many people, so that they are aware of the current situation in this area. WELL DONE
- According to my Tasmanian relatives I am now a mainlander who grew up in Fingal, went to school at St Marys, spent holidays on the coast and still have family and friends living in these areas, I find your site to be exceptionally informative and helps ease my stress factor. Keep up the good work ... it's a site to be proud of
- Great to have it to read saves ringing the phones thank you
- Thanks Folks...I have been using this web site at work to keep an eye on the East Tamar fires. Your updates are gold Cheers

## CHALLENGES IN MAINTAINING THE SERVICE

Operating real time public fire information has its own challenges.

Once the service is running both the media and the public will expect quality information and there are real costs to providing this facility including:

- Incident Management Teams (IMT) are generally focussed on fire operations, planning and tactics. Providing information relevant and in a language suitable for the media and public is not necessarily high on their priorities. It will mean that the IMT may need to be supplemented with an information officer or a roving officer may need to be specifically appointed.
- People with the right skills (training requirements) will be needed to staff the website desk often for long periods at times of high activity.
- Care must be taken to ensure the correct language is used and that fire locations are accurate and easily understood.
- Business rules / service standards must be prepared and maintained.
- Website technology must be able to manage periods of infrequent, but very busy demand.

## IMPROVEMENTS FOR THE FUTURE

Above everything else it is important that clarity and accuracy are a high priority. While the overwhelming response to the TFS website has been favourable there have been examples of feedback asking why fires hadn't been updated or questioning the accuracy of maps or fire descriptions.

- Media outlets have advised that more informative morning updates are required. While there may not be much activity through the evening as firefighting and fire behaviour generally

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eases, the morning is a prime opportunity to advise the public on anticipated fire activities and property preparation priorities.

- Mapping provision should be enhanced to provide more information on fire edge potential, likely impact and spotting, smoke plume etc.
- Improvements on the frequency of updates (business rules).
- Capacity of technology issues (server capacity and the ability of portable devices – PDA's to access and read the web pages).
- Provision of non text enhancements such as video streaming and still photos of fires.
- The ability to provide maps / video and photos direct from air to website.