



Chairman's Conference Report

Introduction

Tangent Link held their second Australian aerial firefighting conference at the Novotel Hotel in Melbourne Victoria on 25 August 2011. The conference focus was best practice approaches to aerial firefighting with the opportunity to network and develop relationships and partnerships with fellow operatives in the close knit aerial firefighting industry within Australia.

A full conference program of eleven speakers was organised with speakers from Australia, USA and Russia to discuss their experiences and lessons learned as well as a panel discussion. In addition a number of specialist providers demonstrated their wares in the exhibition room next to the conference hall. Exhibitor products included aircraft tracking, aerial firefighting aircraft accessories, flight crew protective clothing, specialist mapping and communication, and not forgetting specialist aircraft providers from Australia and Canada.

A very full room of delegates was achieved by Tangent Link with a number of overseas countries represented including, USA, Japan, Canada, United Kingdom, Russia as well as the host country of Australia. Including exhibitors, over 90 delegates were registered for the full and comprehensive program targeting aerial firefighting.

There was diverse and well represented group of delegates with many from aviation related industries, aircraft contractors, and government agencies at both a federal and state level.

The conference program ran to time and with enthusiastic interchange from delegates with the speakers and the Chairman, the conference can be considered a resounding success for such a targeted audience. Many delegates approached me after the speaker sessions commenting the value of the day's program and to hear presentations given specifically for the aerial firefighting industry. The drink reception following the day sessions was well attended further giving delegates a chance to discuss matters and to chat informally with delegates about future opportunities.

The Conference Program in Review

As Chairman, I welcomed delegates and exhibitors and then provided an overview for effective business networking during a conference program. Hints for networking with colleagues on-line and defining a networking goal for each delegate was part of the presentation.

The Conference welcome address was given by the General Manager of the National Aerial Firefighting Centre (NAFC) Australia, Mr. Richard Alder. Richard's address discussed the role of NAFC in Australia and the emerging uncertainty with funding and the role of fire agencies in other emergencies such as flood relief. Best practices develop through collaborative approaches domestically and internationally and with the formation of the International Fire Aviation Working Group, which Richard chairs, a framework is building where these relationships can be fostered and developed. Another key point is that information is developing as a high priority for emergency managers and aircraft could play a key role in this future and a renewed emphasis on wildfire prevention may influence new directions for aerial firefighting management. Richard discussed projects of significance including the CASA standard air operations manual and finally reinforced the role of safety in reducing the statistically high number of aerial firefighting related fatalities.

The second speaker Mr. Euan Ferguson, Chairman of the first aerial firefighting conference in Australia, discussed the role of NAFC and how Australia could support aerial firefighting across the Asia/Pacific region in the future. Euan as a NAFC Board Member and Chief Officer of the Country Fire Authority in Victoria, gave a detailed insight into the evolution of NAFC to its current state and how it has formed a coalition of aerial firefighting support across Australia with safety and cohesive risk management as key points of excellence. Euan further discussed the development of technology within the defence industry and how as civilian operators we could seek opportunities for application or interoperability. He compared the civilian capability within NAFC compared to the Australia Defence Forces capability to get into action for emergency response, and challenged the group to think how Australia could support its near neighbours in the Asia/Pacific region for aerial firefighting and emergency response.

Mr. Dennis Hulbert a retired Regional Aviation Officer from the USDA Forest Service was one of the key overseas speakers at the conference. With Victoria trialing the use of night vision technology (NVG) for aerial support activities, Dennis' presentation was timely as he spoke on the application of NVG in USA and Canada and how its has changed significantly since the early 1980s when first applied. Dennis described his involvement of night flying with the recent Coulson Airplane and their Firewatch S76 helicopter trials. He demonstrated by video and photography the difference between Infra red imagery and NVG application, and how fire bombing aircraft could be safely guided during fire bombing trials at night. Dennis also discussed how the application of technology can assist accountability and more effective use of scarce aviation assets. The implication of cost, safety, politics, media and policy require aerial fire management to demonstrate effectiveness and efficiency however he intimated that you can't manage what you can't measure and the use of technology can assist with this assessment.

A very stimulating and engaging presentation was given by Mr. Phil Richards, a very experienced air attack supervisor in South Australia and company owner of The Life Zone which focuses on the tactical development of individuals and teams. Phil through audience participation described how human skills and human factors can give you the edge in aerial fire management team performance. He stressed the potential impact of human behaviour in high risk operations and how the development of human skills and factors require communication that is direct, open, constructive and consistent. This can be applied at an individual, team and an organisational level. Phil described how organisations concentrate on systems, policy and procedures but often overlook the human element in performance management. This presentation was challenging in that he questioned how would we address our communication issues for effective team performance to uncover opportunity and innovation in aerial firefighting.

Our final speaker of the morning session was Mr. Tim Vercoe of 3rd Man Innovation. Tim has been involved with the Australian Bushfire Research Cooperative Centre and was their research scientist in the recent Multi Engine Air Tanker trials in Victoria. Tim's presentation was not on the Convair CV580 trial but more a literature search on the evaluation and research of aircraft testing and effectiveness in Australia. Tim described the past research/findings both published and unpublished and then examined the variability of outcomes produced due to operator effectiveness, and the difficulty in objectively evaluating drop effectiveness outside of a live fire environment. Tim said what was missing were testing objectives with a good baseline for comparison across some basic parameters. He suggested for future evaluations a number of key points should be considered including: knowledge of the effects of suppressants and retardants on fire behaviour (not aircraft based); providing consistent and standard scenarios; benchmarking everyday aircraft currently in use rather than new or large aircraft; development of productivity measures; nationally coordinated testing; use of more than one aircraft type during testing for comparison; benchmark subjective evaluation testing criteria; and finally download the experience of people who could assist with knowledge and relevant skills for an effective testing regime.

After the lunchtime Exhibitor Showcase, Mr. Keith Mackay of the New South Wales Rural Fire Service (RFS) presented the effects on aviation incident investigations on systems of operations for aerial firefighting. Keith discussed the scope of work in the RFS which involved accidents and incident investigations. His role was not like that of the Australian Safety Transport Bureau investigations and more about reviews of contractor performance in accordance with agency standard operations procedures. From the lesson learned from the review, procedures and practices have been duly modified. Keith made no apologies to say that a government agency should be seen as a client of the contractor, however due to circumstances beyond their control, they have to be more proactively involved in management of aviation more than they wish to reduce their agency's risk exposure. To be

effective in safety the aerial firefighting industry needs to be self regulating to a high standard however due to the competitive nature of the industry, many players are unwilling to come to consensus for improvement in safety performance and reliability.

Breaking up the first afternoon session was Mr. Todd McDonell, CEO of TC Communications, Australia. Todd's commercial presentation promoted the suite of satellite communication products that could support the role of aerial firefighting in Australia. Through use of the latest version of Inmarsat satellite technology, TC Communication could support seamless communication across the breadth of Australia and as such cited examples of the Victorian State Aircraft Unit line scanning aircraft for delivery of imagery to emergency managers remotely from the aircraft. Todd discussed how the emerging technology for satellite communication had rapidly increased the capacity for data transmission yet at significantly less cost, as much as 40% in some instances. With increased data transmission capability there has been a subsequent reduction of size in infrastructure support requirements and size of hardware fitted to aircraft to make an effective solution feasible for many aircraft types.

Leading on from Keith Mackay's presentation was Mr Mark Ogden, Aviation Advisor for YBTN Services, Australia. Mark has assisted with consultancy services to the New South Wales Rural Fire Service and addressed developing standards in aerial firefighting. He deliberated over the development of standards noting that an operations manual "off the shelf" does not adequately reflect the business and had not been tailored for the specific work an operator was to carry out. Procedurally based manuals can be very narrow however and that a series of guidelines to follow seems a more practical solution. Mark debated that an incident event not only can severely dent business but also that of the contracting agency like a fire service, and many of the developing guidelines were about conservation of assets to ensure their aircraft and pilot availability during times of need rather than being off line. Operating aircraft he discussed was on many occasions was about minimising the bad news as result of entrenched behaviours and practices. Some good discussion with delegates ensued about the differences between call when needed operators and contracted providers and the variation between standards and operational practices.

The second commercial presentation of the conference was by Mr Bruno Evans of Lockheed Martin of the use and application by the fire industry of LADAR technology. This laser based system was using a multi-spectral LADAR, known as the Terrain Mapping LADAR: T-Map LADAR, and Bruno demonstrated the application for highlighting post incident damage assessment and mapping applications. This presentation complemented Euan Ferguson's comments of how military applications of technology could have civilian uses to assist with the capture of intelligence and therefore community information applications.

Our final presentation was from Mr. Andrey Eritsov, Deputy Chief of the Aerial Forest Fire Center, Russia. Andrey astonished delegates with the size and scope of the fire problem in the Russian Federation in their fire season of 2010. Despite the size and number of ground based resources in the Federation, noting over 30,000 fire engines and over 200,000 firefighters, the number of aircraft accessible to the Russians was comparatively small. The largest numbers of aircraft in use in Russia were the Antonov AN-2, which Andrey described as the best aerial firefighting aircraft. From his experiences described it appeared the problems and issues with aerial firefighting were little different to those experienced throughout the world, however of note was the huge areas to be managed and the dramatic climatic differences between these regions. Issues of cost from use of retardants was discussed with foam suppressants being the main form of attack in their forest areas

The last session of the day was a panel session to debate pathways for the future of aerial firefighting operations hosted by the Conference Chairman. There were three panel members, Ms. Maryanne Carmichael, New South Wales RFS Manager Aviation; Mr. Barry Foster, Chief Pilot Woorayl Air Services; and, Mr. John McDermott, Chief Pilot McDermott Aviation. The panel members provided their vast experience and background to discuss how we could develop pilots in Australia in light of current Australian contracts that call for prescribed hours on aircraft type or function. Questions included:

- Is it difficult for operators to find pilots with the required hours and skills?
- What does a contracting agency do when an operator presents a pilot with insufficient hours?
- Does specifying hours get you the right person for the job?
- How difficult is it bringing new pilots into the current contract arrangements?

- Is there a better way to demonstrate competency?
- How do overseas pilots fit in?

Discussion and debate from the delegates continued within an environment that respected the operators' demands, and the expectations of government agencies not to compromise contractual requirements. All panel members reached a common understanding that the industry with agency support should develop a fire bombing rating or guidance to the Australian Civil Aviation Safety Authority (CASA), rather than CASA defining the requirements in isolation. More importantly there seemed to be a genuine desire by Australian operators leading up to a new NAFC contract period, that an industry derived fire bombing rating maybe a positive way forward to achieve a pilot career developmental pathway.

Conclusion

The one day aerial firefighting conference really demonstrated the need for a targeted stream in this field of interest. A high delegate turnout combined with positive feedback and feeling on the day was a successful way of bringing the industry players together in the Australian aerial firefighting community.

The positive and constructive manner in which delegates, speakers and exhibitors presented themselves and shared information, highlighted the developing national maturity of aerial firefighting in the Australian Region. The opportunity presents itself in a couple of years' time to expand the conference and debate and discuss developing and emerging aerial firefighting issues that confront aerial firefighting internationally.

With the recent effects of the country debt crisis now impacting governments in North America and Europe that are also considerable users of aerial firefighting resources, a better comprehension of the long term impacts on international resource availability will be clearer. Aspects of better use of resources, interoperability and how an all hazards approach to aerial operations management may also emerge.

For Australia, an opportunity to share and grow from such a future conference can only enhance the national development of aerial firefighting in Australia and its neighbouring regions.

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Chairman

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At GFMC Archive (<http://www.fire.uni-freiburg.de/>)

Athens Conference (2008): http://www.fire.uni-freiburg.de/course/meeting/2008/meet2008_09.htm
Athens speakers booklet direct: <http://www.fire.uni-freiburg.de/course/meeting/2008/AFFC-Athens-2008-Speaker-Booklet.pdf>

Athens report direct: <http://www.fire.uni-freiburg.de/course/meeting/2008/AFFC-Europe-2008-Summary.pdf>

Anaheim Conference (2009): http://www.fire.uni-freiburg.de/course/meeting/2009/meet2009_09.htm
Anaheim report direct: <http://www.fire.uni-freiburg.de/course/meeting/2009/AFFC-Anaheim-2009-Report.pdf>

Rome Conference (2009): http://www.fire.uni-freiburg.de/course/meeting/2009/meet2009_17.htm
Rome report direct: <http://www.fire.uni-freiburg.de/course/meeting/2009/AFFC-Italy-2009-Report.pdf>

Vancouver Conference (2010): http://www.fire.uni-freiburg.de/course/meeting/2010/meet2010_06.htm
Vancouver report direct: http://www.fire.uni-freiburg.de/course/meeting/2010/meet2010_06.htm

Malaga Conference (2010): http://www.fire.uni-freiburg.de/course/meeting/2010/meet2010_19.htm
Malaga report direct: http://www.fire.uni-freiburg.de/course/meeting/2010/meet2010_19-Dateien/AFFC-Malaga-2010-Report.pdf

Washington Conference (2011): http://www.fire.uni-freiburg.de/course/meeting/2011/meet2011_06.htm
Washington report direct: http://www.fire.uni-freiburg.de/course/meeting/2011/meet2011_06-Dateien/AFFC-Washington-2011-Report.pdf