

# FIREPOINT



IAAI JOURNAL



# Firepoint

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**FIREPOINT:    INTERNATIONAL WINNER OF THE IAAI**

**2001/2002 AWARD FOR THE OUTSTANDING PUBLICATION**

**OF A CHAPTER NEWSLETTER OR MAGAZINE.**

## EDITORIAL

At this stage of the year, Queensland and New South Wales have completed successful conferences (some articles included in this issue), and Victorian Committee members are finding themselves very busy with their work loads.

Running a voluntary organization with busy professionals is not easy. If you have some time to meet your professional colleagues, think about joining a committee, and putting something back into the organization.

The NSW memebtrs who recently volunteered to join this year's committee are:

Richard Woods (President)  
 Roger Bucholtz (Senior Vice President)  
 Paul Bailey (Junior Vice President)  
 Norm hewins (Secretary)  
 Trent Tosh (Treasurer)  
 Wayne Shaw  
 Keith Chavasse  
 Kel Hannon  
 Greg Hancock  
 Jim Munday  
 Carl Cameron  
 Mitch Parish  
 Barbara Bailey  
 Don Walshe  
 Ross Brogan  
 Wal Stern

*Wal Stern*



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# Sydney Conference Declared a Success!

*A report from newly re-elected NSW President Richard Woods*

On the 7 and 8 August 2003, the NSW AFI held their bi-annual conference at the Carlton Crest Hotel in Sydney. Over 120 delegates attended, coming from every state around Australia and from New Zealand. The conference theme was "Fire and Explosions: The Changing Scene".

This theme was selected in light of the current threat from terrorist elements currently faced by Australia and the focus was to allow delegates to become more familiar with the investigation of not only fires, but also explosions.

The key speakers for the Conference included Dr John De Haan, a Fire Investigation Specialist from the (USA); Mr Carl Adrian from the FBI's Visual Information Section (USA) and Mr Kirk Hankins, the current Second Vice President of the IAAI and a Special Investigator with Consolidated Forensic Investigations Inc (USA).



*Carl Adrian from the FBI addressing the Conference.*

Guest speakers from Australia included Det. Sgt. Bob Campbell from the Queensland Police Arson Squad;

Mr Paul Westwood from Forensic Document Services Pty Ltd.; Snr. Constable Danielle Holmes from the NSW Police Incident Reconstruction Unit; NSW Snr. Dep State Coroner Jacqueline Milledge; Mr Herman Metz of the Australian Federal Police Forensic Science Laboratory Canberra and Ms Tracey Green from Charles Sturt University School of Policing Studies.



*John De Haan presenting the latest in Fire Investigation procedures.*

Other topics covered included the analysis of fire scenes after explosions, the use of laser scanners, evidence collection in scene reconstruction, Childers Backpacker Hostel fire investigation, the Bali bombing investigation, document examination, required evidence for Coronial Hearings along with other related topics.

By all accounts, delegates obtained great benefit from attending the conference with particular mention of the high quality of the speakers and the information provided.



*Mr Ross Brogan is presented with his Life Membership from Association President Richard Woods.*

As part of the proceedings, a formal dinner was held on the Thursday evening during which our Association members Ross Brogan and Greg Hancock were presented with their Life Membership of the Association. Additionally the recently appointed Commissioner for the NSW Fire Brigade, Greg Mullins was the official after dinner speaker.

The success of the Conference is a great credit to the organisers from the Committee members from the NSW Fire Investigation Association.



*Mr Greg Hancock is presented with his Life Membership from Association President Richard Woods.*



*Some of the 120 attendees at the Conference.*



*NSW Fire Brigades Commissioner Greg Mullins addresses the Official Dinner. Greg provided a highly informative and entertaining talk.*



## MAJOR INVESTIGATION OF THE 2001/02 NSW BUSHFIRES

On the 26 June 2003, over 30 members and guests of the NSW Chapter attended a presentation at the Ryde-Eastwood Leagues Club, which was one of three recent information nights held by the Association.

The topic was the 2001/2002 bushfires and was the evening was conducted by Supt. Richard Woods of the NSW Rural Fire Service. As Manager Fire Investigation for the Service, Richard covered the 2001/2002 bushfire season and the impact of those fires on NSW during this major fire incident. Richard also spoke of the management of the

investigation process of some 150 fires around the State and presented comparisons with the 2002/2003 season.

The highlighted 2001/2002 season was one of the most severe on record in NSW resulting from major drought conditions affecting the State at the time. The complexity of the investigation process was a major challenge for the Rural Fire Service, the NSW Fire Brigade and the NSW Police through Strike Force Tronto.

The successful outcomes of these investigations required

a solid platform for investigations to occur in the future and indeed many of the processes and procedures that evolved were adopted through the 2002/2003 season.

The 2002/2003 season has provided a number of fire events impacting on NSW and the ACT and the investigation processes for these fires is still ongoing.

Following these three evening functions, the Association held its two day Conference in August. The final evening function for the year will be presented by Jim Munday, in October.

# ISRAPS

*A presentation to the NSW AFI Conference in Sydney on 7 August 2003  
By Danielle Holmes, Senior Constable, Forensic Services Group, NSW Police.*

## What is it?

- Interactive Scene Recording and Presentation System
- ISRAPS is a modern visual investigative tool to assist in the investigation, and subsequent judicial hearing of crime / incident scenes
- A computer based system that allows the user to 'walk through' the crime incident scene
- Assist during interviews of witness, victims and suspects
- High Risk Locations  
Airports  
Government Establishments
- High Profile Locations  
Darling Harbour  
Circular Quay  
Stadium Australia
- Production in Court  
Has been successfully used in Coroners, Local, District and Supreme Court matters

## How does it work?

- A digital camera attached to a virtual reality tripod is stationed at specific locations within the scene to record up to 360 degrees of images
- These images are then downloaded to computer to produce the linked panoramas that will allow the user to 'walk through' the scene on the computer monitor.
- Training Scenarios  
For crime scene and criminal investigators to examine simulated incident scenes  
For tactical operatives to simulate assaults on locations
- An 'Investigators Copy' CD can usually be provided within 8 to 72 hours.

## What can it record / do for the user?

- Crime / Incident Scenes  
Scene familiarisation for investigators  
Record scene 'in-situ' with physical evidence in tact.

## What you need to use it?

- Hardware:  
PC Computer or Laptop with a CD-Rom drive
- Software:  
QuickTime Player 5.0, supplied by ISRAPS and must be installed prior to viewing the Interactive Scene

### Welcome

Welcome to the third edition of Firepoint for 2003.

This report provides a full update on what has transpired over the past six months and what is in stall for the remainder of the year.

Following a false start, the 2003 Executive Committee was finally installed and are extremely motivated having already agreed on the project theme and set the dates for our 2004 Conference/Major Project.

The 2003 Committee has expanded since our last report which is very encouraging for the Chapter. All members are welcome to contact committee members and participate in the various sub-committees and we encourage your involvement.



# I.A.A.I.

International Association of Arson Investigators

### Fire & Explosion Investigation Workshop - Review

The QAFI, in Association with the IAAI, had the pleasure of hosting a Fire and Explosive Investigations Training Seminar on 27 March 2003, presented by David M Smith, President of Associated Fire Consultants Inc, Tuscon Arizona USA.

David's career in fire investigation began in 1971 as the first member of the Arson and Bomb Unit Tuscon Police Department where his duties included arson and explosive investigations and the rendering safe of explosive devices. Since 1981, David has conducted fire and explosive investigations for the insurance industry, business and government agencies throughout the US, Canada and Mexico. David's main areas of specialisation are arson motivations, explosions and fuel gas matters.

David's first presentation was titled Manufactured Home Fire Investigation. David discussed manufacturing techniques,

construction materials and spatial arrangements in relation to fire development. This was contrasted with fire development in early and contemporary standard dwellings. David applied the theories discussed to a full scale fire test involving the burning of a fully furnished manufactured home. Unfortunately the data derived from 200 thermocouples had been corrupted on transit to Australia. Nonetheless the video was a practical demonstration of the effect of ventilation and spatial arrangement being leading factors effecting fire spread.

David also discussed a number of fire facts and fiction including a number of misnomer indications of fire origin such as crazed window glass and the lowest level of burning. These were discussed in the context of fire origin and cause determination and the importance of a systematic elimination of causes.

In the afternoon session, David presented a paper on Fuel Gas Fire and Explosion Investigation. David discussed various fuel gases and their reactive properties and the physical basis of fuel gas investigation. Techniques were

demonstrated through actual case histories from common domestic system failures to the catastrophic explosion of a plant used to manufacture rocket fuel for NASA. This plant was ironically located beside a marshmallow factory. The explosion was dramatically video recorded by an innocent bystander. David described his investigation into the explosion and together with an analysis of the video formed the opinion that the explosion occurred as a result of a carelessly discarded cigarette butt.

A total of 78 delegates were fortunate to attend the training seminar, the first of its type in Queensland. The success of this seminar will ensure that the IAAI continues to support its regional chapters in providing the latest information and technology to its members. We encourage all attendees to show their support by joining the IAAI. Application forms for the IAAI are available from Julianne Foley at the QAFI, other Australian Chapters or join online at [www.firearson.com](http://www.firearson.com)



## Marine Fire Investigation Conference



This year's Major Project held at the Royal on the Park Hotel in Brisbane on 28 & 29 March 2003 was an outstanding success. The marine fire investigation conference, the first of its kind in Australia and was attended by **76** delegates from Queensland, New South Wales, Victoria, South Australia and Western Australia. Delegates included fire services personnel (QFRS, NSWFB, MFESB, CFA and FESA), police (QPS, SAPOL), private fire investigators, forensic consultants, insurance industry representatives (Club Marine Limited, IAG, Lumley General Insurance, QBE Mercantile Mutual), loss adjusters and marine surveyors.

We were privileged to have Captain Arthur Diack (Director, Maritime Services, Maritime Safety QLD, Queensland Transport) officially open the conference. Speakers included:

- David M Smith (Associated Fire Consultants Inc., Arizona U.S.A.) "NFPA 921: THE US PERSPECTIVE & THE UK, CANADIAN & AUSTRALIAN EXPERIENCES"
- Michael Fisher (Thynne & Macartney Solicitors) "FIRE AND THE ODD WORLD OF MARINE HULL & LIABILITY INSURANCE"
- Professor Brian Gray (B.F. Gray Combustion and Scientific Consultants) "MARINE FIRES CAUSED BY SELF-HEATING"
- Phill Cribb (District Manager, Fire Investigation and Analysis Unit, Fire and Emergency Service Authority of Western Australia) & Maurie Tong (Managing Director, QED Group Pty Ltd (Investigators and Consultants) WA ("The Dynamic Duo from the West") "PROJECT X - LUXURY YACHT FIRE - OCEANFAST BOATS, HENDERSON, WA 29 FEBRUARY 2000 - A CASE STUDY"
- Terry Casey (Forensic Services Australia) "FROM THE SUB-LIME TO THE RIDICULOUS: ASPECTS OF

MARINE FIRE INVESTIGATION INCLUDING A CASE STUDY ON REEF LINK II"

- Peter Foley (Senior Transport Safety Investigator, Marine Investigation Unit, Australian Transport Safety Bureau) "FIRE INVESTIGATION IN THE AUSTRALIAN SHIPPING SCENE, INCLUDING CASE STUDIES NEGO KIM, SPIRIT OF TASMANIA, AURORA AUSTRALIS".
- Ross Brogan (Inspector, NSW Fire Brigade, Fire Investigation & Research Unit) "MARINE FIRES AND FIRE INVESTIGATION ON THE WATER"
- Ted Beitz (Fire Investigation Co-ordinator, Queensland Fire & Rescue Service) ("INVESTIGATIONS INTO PLEASURE CRAFT FIRES"

Delegates also enjoyed a boat cruise on the *Lady Brisbane* before conducting an inspection of the *HMAS Diamantina* at the Maritime Museum.

All delegates received a copy of the conference papers on cd-rom along with an attendance certificate. Those delegates that sat and passed the examination were issued with successfully examined certificates.

Putting together a two-day conference is no easy feat. The Major Project sub-committee (consisting of Kate Ridgway, Gary Nash, Michael Holohan and Trevor Pohlmann) worked on it for 9 months and are to be congratulated on their efforts. Their commitment, enthusiasm and support is acknowledged and appreciated.

A special thank you must also go to Ted Beitz for providing and setting up the props that set the scene for the duration of the conference.

## Additional Committee Members

At subsequent committee meetings over the last two months additional members have joined the committee. These include

## QUEENSLAND CHAPTER REPORT

**Ted Beitz, QFRS**

**Aldo Pirlo, Wyatt Gallagher Bassett**

**Sean Remedios, QPS Scientific**

On behalf of our members, I wish to thank these dedicated members for their support of our Association and wish them a successful tenure in their elected roles.

### Retired Committee Members

A number of long standing committee members retired from the Executive committee this year. These members have given an enormous amount of their knowledge and time over many years to the QAFI.

On behalf of our members, I wish to sincerely thank-

**Alan Faulks, DIR-Electrical Safety Office**

**Charles Foley, Zurich Australian Insurance**

**Greg Reynolds, QFRS-FIRU (Immediate Past President)**

I would also like to thank **Kate Hitchens, Kennedy's Forensic** and **Mike Shield, LAC Loss Adjusters** for serving on the Committee during 2002/03.

### Diary Dates

#### Friday 24<sup>th</sup> October 2003

##### **"Childers Investigation" - Symposium**

This full day symposium will concentrate on the various investigative techniques employed as a result of the Childers Backpackers Hostel tragedy including -

- ♦ Scene Examination
- ♦ Investigation
- ♦ Fire Safety Aspects
- ♦ Computer Modeling
- ♦ Litigation arising
- ♦ Victim Identification

The symposium will be held in the QPS Conference Room. Full details will be advised shortly. Numbers will be limited due to room capacity.

### 16<sup>th</sup> & 17<sup>th</sup> July 2004

#### **2004 QAFI Conference / Major Project**

The conference theme for the 2004 Conference / Major Project will be "Commercial Motor & Machinery Fire Investigation".

Once again it will be a two day conference encompassing theory sessions on day 1 and practical demonstrations (*must have a burn*) and static displays on day 2. The QFRS - Training Academy at Whyte Island has been booked for day 2.

The committee will be calling for expressions of interest from sponsors, speakers, exhibitors etc. We will also need to secure some heavy machinery/vehicles for the project. If you are able to assist in this area, please do not hesitate to contact Gary Nash on 3352 6077 or email [gary@forensicservices.com.au](mailto:gary@forensicservices.com.au)

### **QAFI Polo Shirts**

New supplies of the QAFI Polo Shirts (white with maroon logo) have arrived.

The shirts are \$25 each and can be ordered by contacting Julianne on (07) 3822 4700 or [admin\\_officer@qafi.asn.au](mailto:admin_officer@qafi.asn.au)

### **"Train-the-Trainer" Grant Recipient**

Ted Beitz, QFRS was the Queensland Chapters recipient of the IAAI Education Foundation grant which assisted with his costs in attending 2003 IAAI Conference & AGM in Reno, USA.

Ted provided an overview of the conference presentations and workshops that he attended especially "Terrorism Awareness".

## **WHAT EVIDENCE IS REQUIRED**

### **Senior Deputy State Coroner Jacqueline Milledge**

A paper presented to the NSW AFI Conference in Sydney on 8 August 2003

Coroners deal mostly with fire investigations into structural fires such as homes and other types buildings including industrial sites. Over the last few years however, wildfires have been very much on our agenda due to large numbers of Bush Fires requiring investigation.

Generally, most fire inquiries end in 'open findings' and this can prove extremely frustrating for the investigators as they have usually spent a great deal of time piecing things together.

The coroner relies on police to report fires and to prepare the brief of evidence.

Of recent times, the overwhelming number of wildfires caused the State Coroner and the New South Wales Police to rethink their protocols for reporting fires to the coroner.

Now police will only report bush fires to the coroner in the following circumstances:

Where there is death or injury to any person

When the circumstances of the fire are unclear

When criminality is suspected

At the request of the Minister or State Coroner

Reporting by police will not be required in the following instances:

When there is no death or injury to any person

Damage is restricted to bushland and the circumstances of the fire are clear

When damage relates only to property (of any value) and the circumstances of the fire are clear

Simply because there is public media interest

The reason for the revised protocol was quite simple. The issues are mainly the same in many wildfires

and have been canvassed extensively in this jurisdiction and many recommendations by coroners have been made over the years.

### **The Coronial Jurisdiction**

The State Coroner is John Abernethy, I am his Senior Deputy and he has two other Deputy State Coroners. We are 'executive coroners', three of us working at the State Coroner's Court, Glebe, the other Deputy State Coroner working at Westmead Coroner's Court. The four of us are magistrates, however we work full time as Coroners. There are 124 part time coroners throughout the State.

Section 13 of the Coroners Act 1980, gives the coroner jurisdiction to inquire into sudden, violent, unnatural and suspicious deaths. If a person dies within 24 hours of an anaesthetic, or had not seen a medical practitioner within three months prior to their death, their demise must also be reported to the coroner. There are other instances

where death must be reported. The Coroner's primary concern is to detect and deter secret homicides.

Section 13A provides for the State Coroner or his deputies to conduct **mandatory** inquests where they are deaths in custody or deaths during the course of a police operation.

Section 22 sets out the finding to be made by a coroner at the end of an inquest. The coroner is to determine the person's identity, date and place of death and manner and cause of death.

Samuel Johnson once said "*It matters not how a man dies, but how he lives*". Coroners, on the other hand, not only care how a person dies, but why they died and who or what may have been responsible.

As well as the investigative role, Section 22A allows the coroner to make recommendations at the end of an inquest that may prevent a death from occurring in the same circumstances.

Coroners can claim 800 years of history with certainty, but it is believed that the office of coroner has existed for at least 1000 years. Coroners have always been tasked with a duty to the dead, but it is only the 'modern' day

coroner that has been required to inquire into the circumstances of fires and explosions.

### **Jurisdiction to deal with Fires and Explosions**

There was never a 'common law' power for the Coroner to concern him/herself with fire investigation. It was not until 1861 in New South Wales, that a statutory provision

*"to empower the Coroners of this Colony to inquire into the cause and origin of fires by which property may be destroyed"* was enacted.

Section 15 of the Coroners Act 1980 states:

*a coroner has the jurisdiction and the duty to hold an inquiry concerning a fire or explosion where the coroner is informed that the fire or explosion has destroyed or damaged any property within this State*

This subsection not only confers jurisdiction but imposes a **duty** on the coroner to hold an inquiry into the

circumstances of a fire or explosion.

Jurisdiction to inquire into 'explosions' was given to the Coroner in 1994, as it was realised that there could be substantial property damage caused by an explosion without any resultant fire.

Section 15 continues:

*Where after consideration of any information in his or her possession relating to a fire or explosion, the coroner is of the opinion that the circumstances of the fire or explosion are sufficiently disclosed or that an inquiry concerning the fire or explosion is unnecessary, the coroner may, subject to subsection (3), dispense with the holding of an inquiry concerning the fire or explosion.*

Two important things in this subsection. Firstly, it is the 'circumstances' of a fire or explosion that must be considered. The earlier Act governing the investigation of fires stated it was 'the cause and origin' that was to be determined. The use of the word 'circumstances' broadens the inquiry to embrace a wide range of issues. For example, in wildfires, issues such as 'back burning' could be examined to gauge the effect a build up of forest

fuel had on the spread of the fire.

Secondly, this subsection allows the coroner to use his/her discretion whether to hold or dispense with an inquiry, if they feel the 'circumstances' of the fire or explosion are sufficiently known. However:

*A coroner shall not dispense with the holding of an inquiry concerning a fire or explosion if the coroner has been requested to hold the inquiry:*

*(a) in the case of a fire or explosion occurring within a fire district within a meaning of the Fire Brigades Act 1989, by New South Wales Fire Brigades or*

*(a) in the case of a bush fire within the meaning of the Rural Fires Act 1997 by the Commissioner of the NSW Rural Fire Service, or*

*(a) by the Minister or the State Coroner*

Simply put, if the coroner is asked by one of those class of persons to conduct an inquiry into the fire or explosion, the coroner **must** conduct an inquiry.

Section 18 subsection (4) makes it **mandatory** for the coroner to conduct an

*inquiry with a jury 'if the Minister or State Coroner so directs'.*

Whilst 'inquests' with juries are extremely rare, I am not aware of any 'inquiries' ever being conducted with a jury. But the provision is there to be activated if it is considered necessary.

### **Reporting Fires and Explosions to the Coroner**

Whilst Section 12A imposes on a 'person' 'an obligation' to report an 'examinable' death under the Coroner's Act, there is no duty on anyone to report a fire.

Protocols have been developed between the NSW Police and the State Coroner to ensure that fires and explosions where the property damage exceeds \$100,000 are reported. Naturally if someone is killed, the matter would automatically be reported to the coroner as it would be a 'sudden death' and would be required to be reported pursuant to Section 13. In that instance the amount of property damage would be secondary.

### **The Difference between an 'Inquest' and an 'Inquiry'**

The term 'inquest' relates to a 'death' and 'inquiry' attaches to 'fires and explosions'. Both inquests and inquiries are conducted in court.

The 'inquest' is to determine, amongst other things, the 'cause and manner' of death. An 'inquiry' will be used to determine the 'circumstances' of the fire or explosion.

Both the inquest and inquiry will determine if a '*known person caused the death or the suspected death or the fire or explosion*' – Section 19.

If a person dies as a result of a fire or explosion, both an inquest and inquiry may be conducted concurrently.

### **Civil and Criminal Jurisdictions**

In civil courts, the standard of proof required to 'prove' a matter is '**on the balance of probabilities**'.

In criminal courts, the standard of proof is much higher, that is, it is '**beyond a reasonable doubt**'.

The coronial jurisdiction adopts the 'civil' standard and '**the balance of probabilities**' applies.



If, during the course of an inquiry or inquest, the coroner intends to make 'blameworthy statements', a higher standard of proof attaches to the evidence that will cause the coroner to apportion 'blame' to any individual or organisation. The standard to be applied here is **the Briginshaw standard of proof** that is more than 'civil' but less than 'criminal'. The reason for this is obvious.

### **The Coroner's Court and the Rules of Evidence**

Section 33 provides '*A coroner holding an inquest or inquiry shall not be bound to observe the rules of procedure and evidence applicable to proceedings before a court of law, but no witness shall, except in accordance with Section 33AA, be compelled to answer any question which criminate the witness, or tends to criminate the witness, of any offence.*'

This section allows the inquest or inquiry to be 'inquisitorial' rather than 'adversarial'.

Ordinary rules of evidence are put aside to allow the coroner a relatively unrestricted method of discovering the truth.

I use the term 'relatively unrestricted' because rules

of **procedural fairness** must still apply.

Kevin Waller, our first State Coroner, writes in 'Coronial Law and Practice'

*"Ordinary rules of procedure and evidence are eschewed in favour of a system which allows a coroner to endeavour, by fair means, to discover the truth.....Of course, a general knowledge of law relating to evidence and procedure is desirable. The recognised formula of examination, cross-examination and re-examination is usually followed. Irrelevant material, comment in the guise of evidence, inexpert opinions, prejudicial hearsay evidence and evidence the prejudicial effect of which outweighs its probative value will not usually be allowed: but the coroner may take advantage of hearsay evidence to pursue a previously unexplored line of inquiry"*

*"The inquisitorial nature of a coroner's inquest is expounded by Lord Lane CJ in Reg v South London Coroner; Ex parte Thompson ...adopted in McKerr V Armagh Coroner*

*(1990) WLR 649 at 655 as follows:*

*'Once again it should not be forgotten that an inquest is a fact finding exercise and not a method of apportioning guilt. The procedure and rules of evidence which are suitable for one are unsuitable for the other. In an inquest it should never be forgotten that there are no parties, there is no indictment, there is no prosecution, there is no defence, there is no trial, simply an attempt to establish the facts. It is an inquisitorial process, a process of investigation quite unlike a trial where the prosecutor accuses and the accused defends, the judge holding the balance or the ring, whichever metaphor one chooses to use'*

Hearsay is a very good way of getting information that may be relevant to the investigation. However, hearsay evidence is severely restricted in criminal courts.

Opinion is often allowed from 'non experts' in the coronial jurisdiction, but again there are rules that apply to the use 'opinion' evidence whether it is expert or lay opinion, in the criminal arena.

There is a very big difference in receiving

evidence in the coronial jurisdiction as opposed to the criminal forum.

First of all, the coroner is supplied with the full brief of evidence before proceedings commence and it is 'tendered' into evidence at the beginning of the hearing. In criminal courts, judges and magistrates are not supplied with statements.

Because of the 'inquisitorial' nature of proceedings, the coroner can question the witness. In criminal matters, where the proceedings are 'adversarial', the judge or magistrates are simply umpires of law.

The coroner can determine the witnesses he/she wishes to hear from, judges and magistrates are at the mercy of the parties involved such as the prosecutor or defence counsel and their own witness list.

'Suspects' are determined to be 'persons of interest' at inquests and inquiries, but they are 'defendants' in the adversarial forum.

Whilst the rules of evidence do not apply, and the taking of evidence appears to be relatively 'unrestrained', the weight of the evidence must be carefully considered before determining any matter.

Whilst hearsay evidence can be vital in establishing some facts in a case such as identity of the deceased, when considering the evidence to establish a 'prima facie' case against a 'known person' responsible for the death, fire or explosion, only evidence that would be **admissible at trial** can be taken in to account.

Section 19 states:

*This section applies if:*

*(a) before an inquest or inquiry commences or at any time during the course of an inquest or inquiry, it appears to the coroner that a person has been charged with an indictable offence, or*

*(a) at any time during the course of an inquest or an inquiry, the coroner is of the opinion that, having regard to all the evidence given up to that time"*

*(i) the evidence is capable of satisfying a jury beyond reasonable doubt that a known person has committed an indictable offence, and*

*(ii) there is reasonable prospect that a jury would convict the known person of an indictable offence, and the indictable offence is one in which the question whether the person charged or the known person caused the death or suspected death or the fire or explosion is in issue.*

If the identity, date and place of death or the date and place of the fire or explosion are fully disclosed, the inquest/inquiry must be terminated.

It is at this stage that things change and the evidence must be weighed according to the rules of evidence, to see if the evidence could satisfy a jury '**beyond reasonable doubt**'.

Once the coroner is satisfied that the Section 19 criteria is satisfied, the inquest/inquiry is 'terminated' and the papers and depositions referred to the Director of Public Prosecutions for his adjudication. It is the Director who will decide if the matter should go before a jury.

Not all inquests/inquiries return a solid finding. At times an 'open finding' is the end result. That is a death may remain 'undetermined' or the 'cause' of the fire or explosion cannot be

determined when examining 'circumstances'. It is rare for arsonists to be identified, and even rarer still, that they go to trial.

If a coroner has held an inquest/inquiry and new facts or evidence is found, Section 23A allows the State Coroner to hold a fresh inquest or inquiry.

### **Fire/Explosion Investigation**

The NSW Police is the investigative arm of the State Coroner. Section 17B subsection (2) states

*'The State Coroner may give to a member of the police force directions concerning investigations to be carried out for the purpose of an inquest or inquiry into a death, suspected death, fire or explosion, whether or not the inquest or inquiry has commenced'.*

The coroner also benefits from investigations conducted by other investigative authorities and bodies into deaths, fires and explosions. More recently, the WorkCover Authority has been providing us with copies of their investigations and the NSW Fire Brigade investigative arm has always worked hand in glove with the State Coroner and has proved to

be an extremely valuable resource.

Whilst we welcome input from other expert bodies, there is no legislative base for doing so.

### **Participating at Court**

Permanent and retained fire fighters have the very clear responsibility to put out the fire. That is the most important task for them. In doing so, however, they may find themselves as witnesses in coronial proceedings or elsewhere.

That was very much the case at Rutherford, NSW, in December 1999 when fire fighters were called to a silo overheating at a seed processing plant.

Efforts to deal with the overheating had tragic results when a fireball engulfed fire fighters and plant operators, killing three workmen and seriously injuring a fire captain.

I conducted inquests into the deaths of the three men and at the same time considered the circumstances of the fire and explosion during the course of an inquiry.

The issues to be considered in this matter were extensive and often complex, the presentation of evidence however was surprisingly simple.

A model of the plant was made by police and used extensively throughout proceedings. Photos were tendered. Fire fighting manuals and Fire Brigade educative material was also used. A number of experts were called to proffer their opinion particularly as to the cause of the explosion and resulting fireball.

Exhibits used through the hearing could not have been considered 'sophisticated' by today's standards. No clever 'interactive scene recording' or 'computer aided drafting' were used, however I have no doubt that there is room for these remarkable advances in technology in the coroner's jurisdiction.

The use of digital photography is still regarded somewhat suspiciously by some legal practitioners who question the integrity of the process and feel the images can be too easily manipulated. For that reason, standard photography is preferred by some where a negative can always be relied on to prove the certainty of the image.

Everything is open to challenge in any judicial arena. Even 'expert' witnesses are often challenged by way of cross-examination and the production of another 'expert' to contradict the first.

The most important thing to remember is that the coroner is the person who will determine the value or otherwise of a witness or exhibit.

Many of you would be called on to give expert evidence in coronial proceedings. The best advice to any witness is to be honest and open when answering questions. If in hindsight you believe you may have done things differently or formed a different opinion, say so. If under cross-examination you're taking a bit of a hammering, don't feel worthless or discouraged, maintain your dignity and simply answer the questions honestly. By all means feel embarrassed but learn from the experience.

If you have approached the investigation with integrity and commitment to do the best you can, it will show through every time. The integrity of the investigative process is every bit as important as the integrity of the court process.

Section 32 allows for any person who, *'in the opinion of the coroner holding the inquest or inquiry, has sufficient interest in the subject matter....'* to be represented at the interest or appear personally in court and examine any witness.

Many different parties can be at the bar table at once such as counsel for Police, Fire Brigade, Local Council, WorkCover Authority and legal representatives of individual witnesses.

#### **Preservation of the Crime Scene and Observations**

Crime scene preservation is paramount. The police will always be in charge of the crime scene on behalf of the coroner.

If you have been called to the scene to put out the fire, or make observations on behalf of an insurance company, please share your observations with the investigating police.

In the case of fires/explosions the colour of smoke and flame can be important, if you have discovered an important witness or

item, tell the investigator. Don't wait for them to necessarily seek you out, approach them and make yourself known to them.

Make contemporaneous notes of all you observe as you may be required to make a statement at a later date when your memory is not so fresh. I can tell you every little bit helps when trying to piece together the reasons for a fire or explosion. The fine detail is extremely important.

Naturally, coroners need to understand where and how the fire started. It's as simple as that. Accelerants, seat/s of the fire and the fire investigator's opinion of whether the fire is a suspicious fire or not, whether an arsonist has been or could be identified are all matters that the coroner will consider when determining how far the investigation should go. The amount of damage is also a consideration as I mentioned before.

*(We hope to present some further articles from the NSW AFI Conference of 7-8 August, 2003, in the next issue of "Firepoint".*

*However some of the issues concerning terrorism have not been released for print.*  
- Ed.)

## Investigation of Pleasure Craft Fires (Part 2)

*A paper presented to the QAFI Seminar "Staying Afloat" in March 2003 by Ted Beitz  
Fire Scene Examination Co-ordinator  
Queensland Fire & Rescue Service*

*The first part of this paper was printed in the last issue of "Firepoint". In this concluding segment, the author presents a detailed Case Study.*

### The "Gambler" who Played and Lost

On the morning of August 7<sup>th</sup> 2002, The Gambler lay at anchor at Tippler Passage 15 kilometers north of the Gold Coast. The skipper and his wife rose and discussed the events for the day. The skipper started the generator and turned power on to the vessel and went down to the galley to do a little maintenance while his wife decided to have a shower. The main switchboard was located at shoulder height on the starboard side of the vessel as you came up the stairs from the rear main cabin. As Mrs. XXX stepped from the shower and dried herself she could smell something burning. Mrs. XXX casually yelled out to her husband, admonishing him for burning the toast, his reply was that he had not started to cook breakfast. With that Mrs. XXX who was still drying herself went to investigate the smell. As she climbed the stairs she saw fire on the curtains next to the main switchboard. Mrs. XXX immediately yelled out that there was a fire and ran back into the bedroom to get some cloths.

The skipper came up out of the galley and saw the fire and ran out of the port side door to the rear of the vessel to obtain a fire extinguisher and tried unsuccessfully to re-enter via the starboard door. Meanwhile the wife realized she did not have time to grab any cloths so she ran up the stairs naked and sustained burns to her right shoulder as she ran past the fire. Mrs. XXX exited the boat through the port side door and dived overboard.

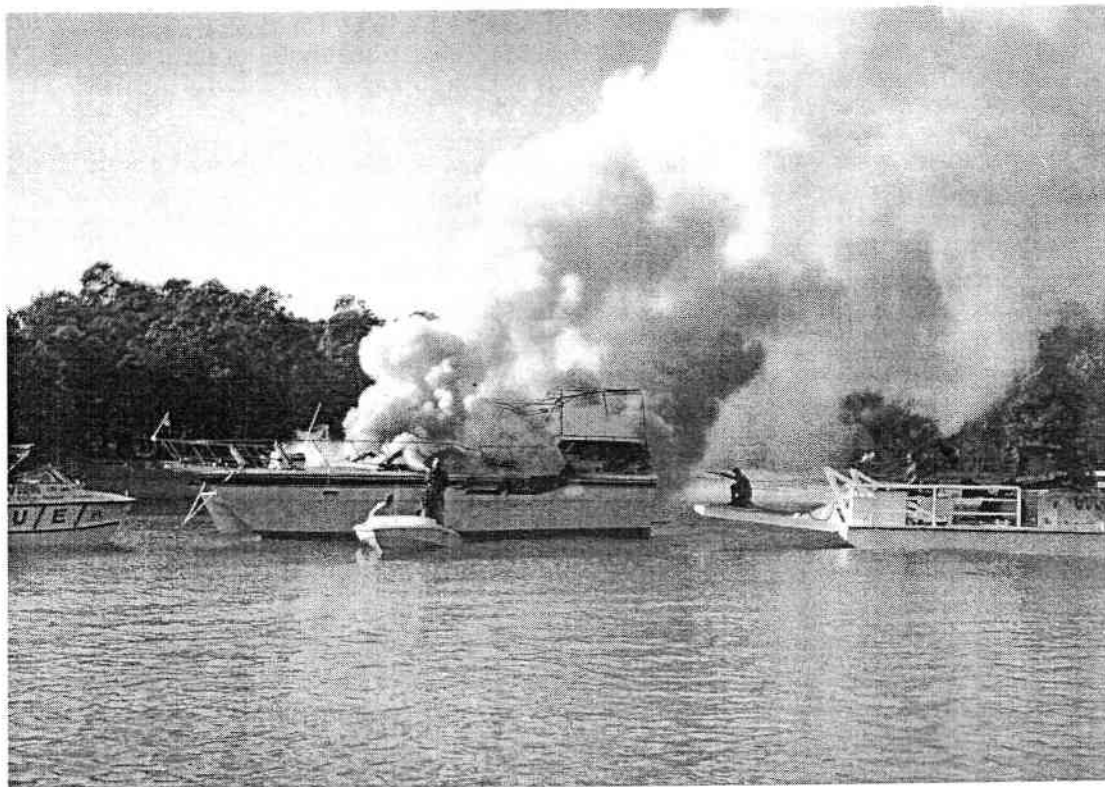
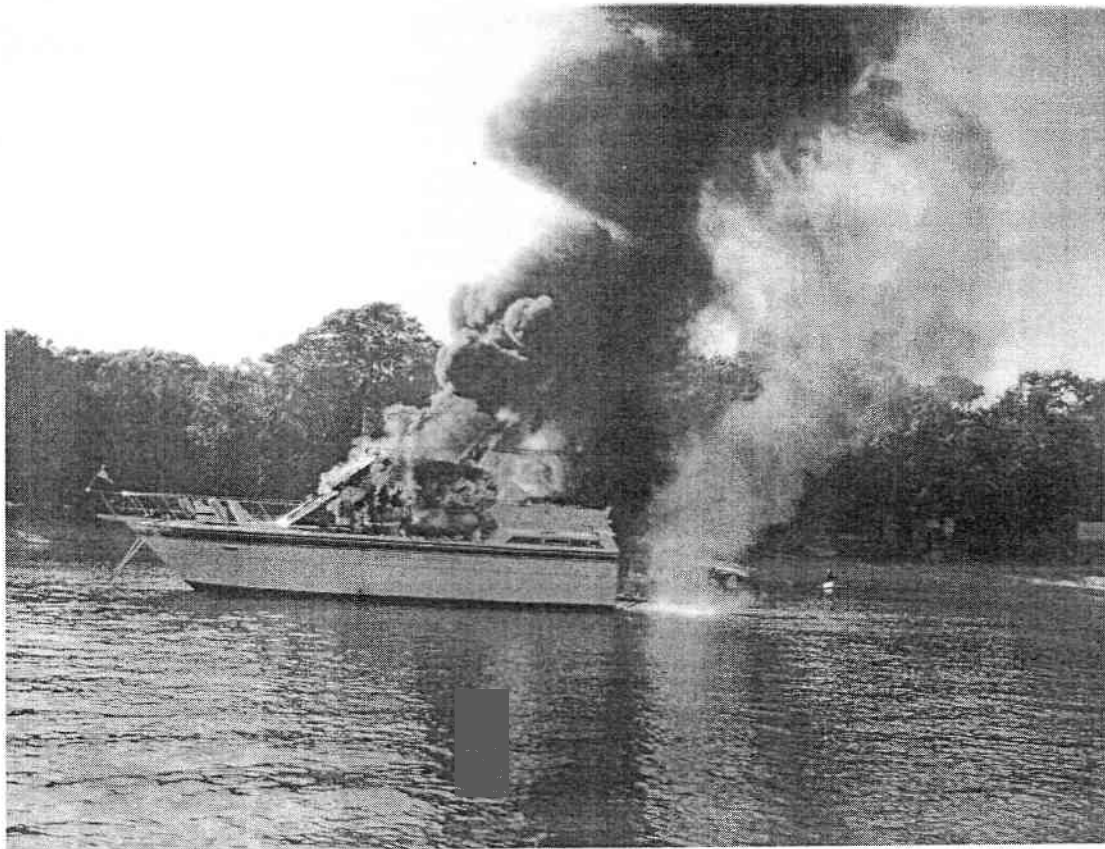
The skipper meanwhile went to the port side door and realized the fire was out of control. He had not seen his wife dive overboard so thinking she was still inside he went to the rear of the vessel and attempted to open a hatch to the rear cabin, it was at this point that he heard a call from behind him and saw his wife in the water. The skipper untied the dingy and rowed out and picked up his wife and sat and watched his pride and joy burn.

Despite valiant efforts of fellow boaties the Gambler lost the battle.

I was requested to investigate the cause of this fire and was transported to the scene by Gold Coast Water Police. On arrival I found the Gambler beached on the western shore of South Stradbroke Island. The vessel super structure was totally burned away and there were several holes in the hull at the water line.

The Department of Transport Officers were in action valiantly trying to stop the egress of the incoming tide by blocking various utility service holes in the hull. The plan was for QPS and QFRS to carry out an appraisal of the situation and develop a plan to refloat the vessel and tow it to Gold Coast City Marina.

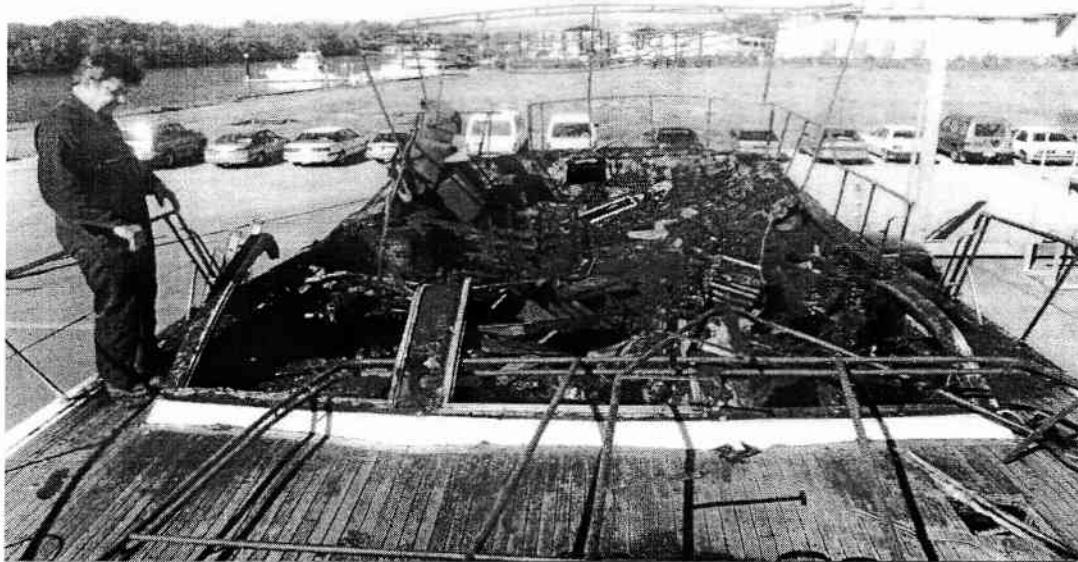




The plan went together and the vessel was plugged and refloated and towed to the Gold Coast City Marina on the following day where it was lifted from the water and placed on hard standing.

The investigation commenced with two investigators, myself for the Fire Service and Murray Nystrom for the Insurer who in this case was Allianz.

#### **Murray Nystrom – Australian Forensic, onboard The “Gambler”**



We networked the information we had both gathered prior to the investigation and decided to commence our examination on the starboard side of the vessel where the fire was first noticed by the owners. Recorded fire patterns on that side of the vessel indicated this was the lowest point of burn on the vessel.

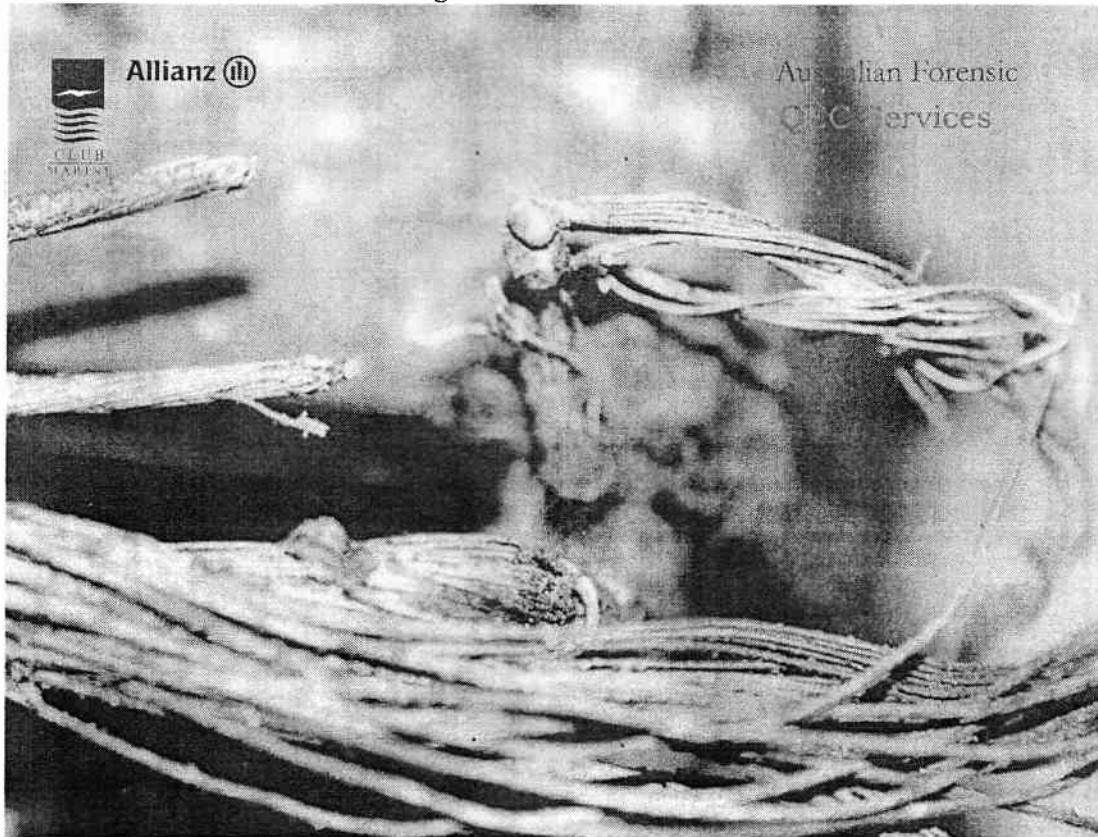
We commenced a layer search using a battery powered Dewalt Reciprocating Saw to neatly cut away fiberglass walls and flooring. We soon uncovered the remains of the main switchboard that had been located at head height on the starboard side of the vessel. A section of the outer wall of the vessel had collapsed on top of the switchboard during the fire and gave it some protection from the fire. The switchboard was in covered in soot but was still in recognizable condition. Close inspection clearly revealed arching in electrical wiring attached to the switchboard. As Mr.Nystrom and myself are not experts in the electrical field it was agreed that we remove the switchboard for examination by an expert.

Mr. Marty Denham who is the Principal of QEC Services was selected by the insurer for the examination. The Dewalt saw was once again used to sever the cables that came and went from the switchboard. The smooth efficient action of the saw severing copper cables over 50mm in diameter allowed the switchboard to be removed in intact without breaking up as is often the case. Every investigator should have a saw like the Dewalt as it allows

so many efficient operations in regard to removal of debris and the collection of samples for analysis.

Examination of the switchboard By Marty Denham from QEC Services revealed that a circuit was unprotected and that the resultant arcing inside the switchboard was the cause of this fire.

Arching inside switchboard.



**Teamwork** is an important consideration in any major pleasure craft fire as there will be several agencies involved in determining the **Act, Defect or Omission** that came into play to start the fire.

You will have the opportunity to work with trained professionals in many fields including Queensland Police Scenes of Crime and Scientific Officers, Queensland Fire and Rescue Service Investigators, Engineers, Forensic Investigators, Marine Engineers, Insurance Investigators and Loss Adjustors.

It is beneficial to all investigators to develop relationships with all agencies. Workloads can be shared, costs of possible test burns can be shared, different points of view can be analysed and most importantly workplace health and safety requirements can be met with minimal staff.

My Motto for Fire Investigation  
**NO ONE OF US IS AS GOOD AS ALL OF US**