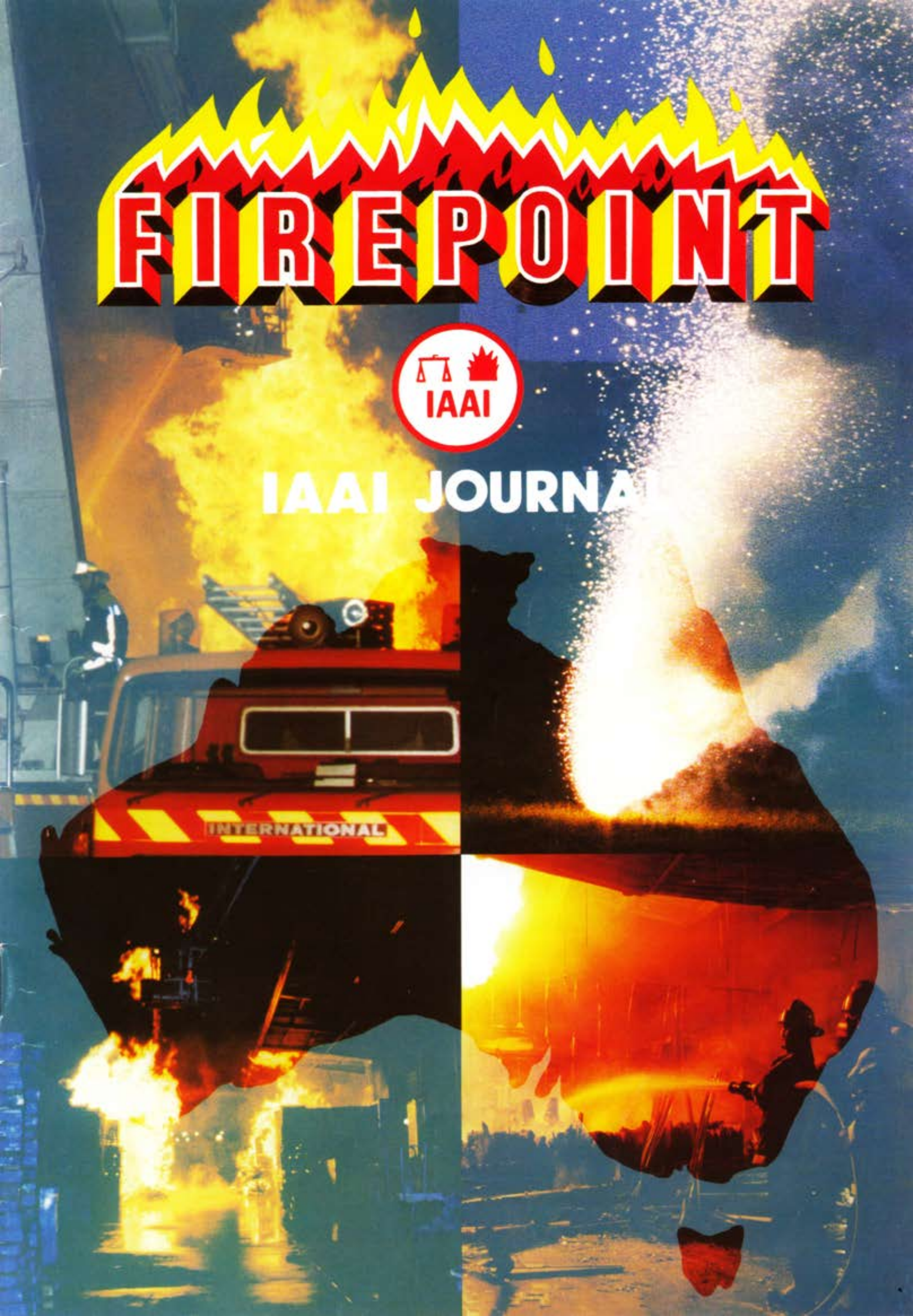


FIREPOINT



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.**

Reminder: If you have not yet paid your annual membership fee, please do so now

EDITORIAL

The Queensland Chapter held a major conference on "Commercial Motor and Machinery Investigation" on July 16 & 17, 2004, which was most successful.

During this Conference a meeting was held of our three Australian Chapter Presidents, Richard Woods (NSW), Alex Conway (Victoria) and Gary Nash (Queensland), with the IAAI President (Michael Schlatman) and the Australian IAAI Liaison Officer (Ross Brogan). They are all smiling at you from page 12.

During the Conference Michael Schlatman made a special presentation (also shown on page 12) to Ross Brogan, for his work for the IAAI over the past years.

Wal Stern



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Victorian Chapter News

New Look Website

The Victorian Chapter has a new website <http://vicfire.com> On the site it has information about the VAFI, Committee, membership, contacts and links. There is also a News & Update section which will display up-coming training sessions and items of interest for members. Add to the favorites list on your computer.

Have you entered the Victorian Chapter Photo Contest? Details on the website. The top ten photos will be displayed on the site.

Special thanks to Trevor Pillinger for his work in redeveloping and setting up of the website. Members who have any suggestions for additions or amendments to the website should contact Trevor. Remember this is your Chapter's website and any suggestions or articles will be considered.

Annual General Meeting

Due to some minor problems the AGM has been rescheduled for Monday 13th September 2004 starting at 1800hrs, at 6pm at Bells Hotel, Cnr. Morey and Coventry Streets, South Melbourne. There are 6 positions vacant that need to be filled on the committee. Anyone

interested should contact the secretary for a nomination form. Positions are Vice President, Treasurer and 4 Committee members.

Membership Fees

Note that fees for the Chapter are due 1st July each year and reminders have been forwarded to all registered members. If you have not received a reminder please contact Bob Hetherington to have a form forwarded. The cost is only \$30.00 per year.

Next Training Day

On 15th October there will be 4 hours of case studies and guest speakers including speakers from OGS & OCEI. Venue to be advised. For more information check the website.

Training Day

"Investigation Law"

On Friday the 18th June about 40 members attended a session on Investigation Law at the Victoria Forensic Science Centre at McLeod. A review of the legal aspects of investigations, interviewing, evidence and the court system

was only part of the session. Committee thanks to S/Sgt Phil Hubbard from the Victoria Police Arson Squad for his presentation and organization of the session.

Queensland Conference 2004

20 Victorian members attended the conference with some of our members as guest speakers :
Alex Conway – Fatal Fire Cranbourne – LPG
Russell Lee – Mercedes 500SLC Conversion
John Marshall – Brakes, Bearing, Tyres all start fires. Congratulations to the Queensland Chapter on another excellent conference.

Award

During the Queensland Conference the award for the most outstanding Fire Investigation Report for 2002 was presented to the MFESB FIA Unit by the International President of the IAAI Michael Schlatman. This was presented for the report on the Westgate Coldstore Fire Report.

All members need to visit the website to have up to date information regarding training sessions and information for the membership. Notification by mail will still occur and it is important to register your name for all sessions.



PRESIDENT'S REPORT

In preparing this report I would like to focus on the achievements of the Association of Fire Investigators over the last 12 months.

Our main achievement was the 2-day Conference held in 2003 on "Fire and Explosions: The Changing Scene" which came about as a result of an agreement by all Committee members that we needed to broaden our Conference topics when providing up to date information in this field. The Conference was well attended and provided our members the opportunity to be exposed to the latest trends in the examination of fire and explosion scenes.

We have also held a number of training nights over the last 12 months which has included:

- "Electrical Caused Fires" by John Gardiner
- "Emergency Management for Port Authorities" by Jim Pullin
- "Fatal Fire Investigations" by Dr Peter Ellis and Ross Brogan.

I am sure our new Committee will look to holding additional nights

over the next 12 months.

Another significant and ongoing development for our Association has been the upgrading and improvement to the website. This has allowed the NSWAFI to have greater exposure to specialists in the fire investigation field and has resulted in a number of enquiries from persons outside the Association wishing to join and also attend our Conferences and information meetings. The next stage in the development of the website is the enhancement of sponsorship arrangements and links to other specialist organizations in the fire investigation field.

The other major aim of the Committee over the last 12 months was to increase our membership and this has certainly occurred, in fact the membership since 2003 has risen by **14**

This is my last report as President as my 2-year tenure expires this year. I personally would like to thank all members of our Committee for their assistance and enthusiasm they have shown in developing our Association over the last 12 months. I believe you

all have achieved a lot over this period thus leaving the Association in a very strong position for the future. I would also like to register my appreciation to fellow Committee members Ross Brogan, who has assisted greatly in the development of our ties with the IAAI and Trent Tosh for his commitment to ensuring that our finances and member records are accurately and professionally maintained.

Furthermore I would particularly like to thank our Secretary Norm Hewins who over the last 2 years has assisted me greatly with the management of the Association – in recent times he has also had to face the challenges of some serious health problems. I understand Norm intends to stand down at this AGM and on behalf of all members I wish Norm all the best for the future.

I ask you all to assist your new Committee in any way possible to achieve our aims.

Richard Woods
RETIRING PRESIDENT
(Richard 's successful two year term ended at the August A.G.M.)

NSW AFI MEETING

Recording Techniques and Safety at Fire Scenes

Members of the Fire Services, Police, ANZ Forensic Science Society, Royal College of Pathologists (Aust.) and other interested guests welcome to attend – no cost! You are invited to a free educational evening involving a lecture and discussion, for members and guests. **Please book to ensure a seat **

Speakers – * Carl Cameron – former head of NSW Police Physical Evidence Section & now Forensic Consultant to NSW Police Forensic Services Group.

Venue : Ryde Eastwood Leagues Club – Ryedale Rd.
West Ryde

Time : Thursday 9th September 2004 – 6.30 pm

(refreshments)

The speaker will involve you in fire investigation, showing the methodologies and techniques used at the fire scene investigation through the eyes of the practitioners to assist you with the correct recording of the evidence at hand. Professionally and accurately recorded scenes lead to successful conclusions. *Correct safety procedures adopted at the scene ensure you are on hand to handle the next case that comes along!*

** Contact Ross Brogan - Ross.Brogan@fire.nsw.gov.au to book

NSW AGM ELECTIONS

The AGM of the NSW Branch was held on 12th August, 2004. The following members were elected to office:

President: Paul Bailey

First Vice President: Roger Bucholtz

Second Vice President: Jim Munday

Honorary Secretary:

Joanne Montgomery

Treasurer:

Trent Tosh

Ex-Officio Members:

IAAI Liaison Officer: Ross Brogan

Firepoint Editor: Wal Stern

Past President: Richard Woods

Committee Members:

Jennifer Dainer

Carl Cameron

Vanessa Kerr

Sonia Casamento

Belinda Jones

Subsequent to the meeting, Joanne Montgomery resigned as Secretary. That position has now being taken up by Belinda Jones and Sonia Casamento.

Investigation of Fatal Fires

The NSW Association of Fire Investigators conduct regular training and discussion nights to deliver education to members. On Thursday 1st July, 2004 the night was held at the Ryde Eastwood Leagues Club and drew an audience of over eighty (80) members and guests. The evening was provided free of charge to all attending, including supper.

The first session was presented by Inspector Ross Brogan of the NSW Fire Brigades and dealt with the investigation of fatal fires, specifically dealing with fire scenes and the results of the fire.

The second session was delivered by Dr. Peter Ellis, Head of the Westmead Institute of Clinical Pathology and Medical Research and dealt with the pathology and Post Mortem part of the investigation.

It is shown in statistics worldwide that more than 80% of fire deaths occur in the home environment – this leads to a warning – “Every fire investigator must be prepared to deal with fire scenes where there has been loss of human life”.

Of course all fires do not cause death and every injury incurred in a fire

does not lead to death – but – “Every fire that produces a serious injury of an occupant should be considered a potential fatal fire and treated accordingly!” Every fatal fire becomes a “*Team Effort*” and eventually involves many people; some of these are:

fire scene investigator, evidence technician, forensic practitioner, pathologist, odontologist, toxicologist, forensic chemist, radiologist + more (DeHaan 2002).

At the fire scene the following questions need to be answered when confronted with a fire involving a major injury or fatality:

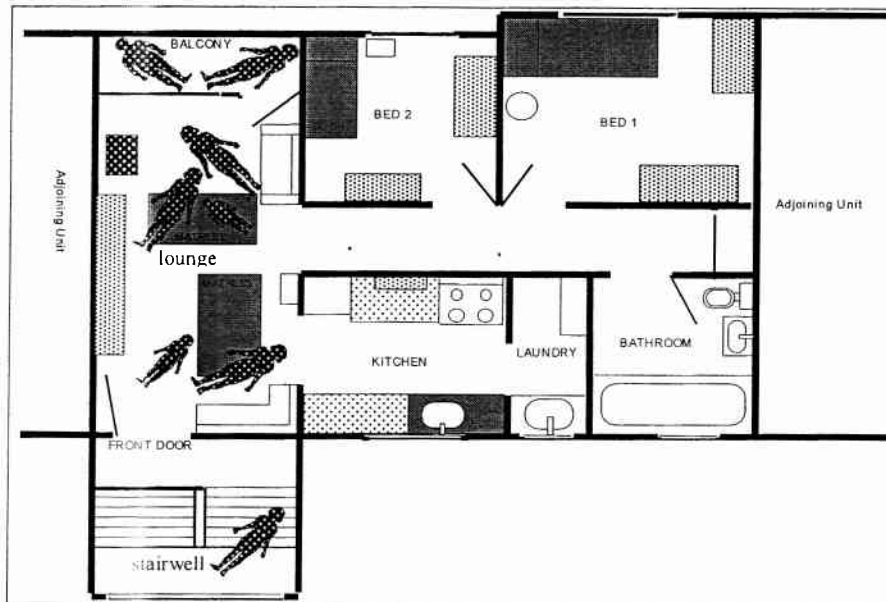
- Are the remains human?
- Who is the victim?
- What is the cause of death?
- What was the manner of death?
- Was the person alive at the time of the fire? If so – why didn't they escape?
- Was the fire death due to the fire – or – associated with it?

Fire scenes are scenes of mass destruction and quite often not until excavation has been undertaken does the fact that a body exists in the rubble come to light. Care needs to be taken when excavating to ensure no further damage is done to the remains.

The main requirement in this exercise is the “Recognition” of evidence; there is no good finding evidence if you do not recognize the value of such evidence.

The objective of the investigation at the scene is to be able to tell the story of what occurred, how the fire started, where the fire started and where/how the victim died. To enable this to be successfully completed the important role of the investigator is to DOCUMENT the scene and the evidence found during the investigation.

It cannot be stressed highly enough that this is the most important aspect of the entire scene investigation – Document – Document – Document AND, if unsure, Document some more! Documenting the scene involves the taking of suitable photographs – a warning – you can never have enough photographs!



Floor plan and location of victims.

Remember, "you only get one opportunity – get it now or you may never get it".

Contemporaneous notes are valuable, sketches, plans, diagrams, measurements – all valuable – all essential. Without documentation your memory will fail you, and documentation assists you to compile your story at the end – the statement, report or presentation of your evidence in court, should it be required.

Fire damaged human remains require special care in removal and this should be taken into consideration prior to removal from the scene. The bone structure of the head and face is damaged early in the fire and can collapse if special precautions are not taken.

Special "super glue" is carried by Police Forensic Services personnel and this should be used, by pouring over the bones of the face, jaw and teeth to maintain the structure and prevent collapse.

Teeth are one of the main identifiers for fire damaged bodies and should be carefully preserved. Bubble wrap assists in preservation and guards against further damage.

Jewellery can fall from the victim and become lost if care is not taken to gather all available evidence from and around the body; this can be another valuable identifier. If the victim is on a flat, hard, surface such as the floor then clothing may be

protected beneath the body and be preserved, providing valuable identifying evidence for family of acquaintances who saw the victim recently prior to the fire.

Take care with the limbs as they are easily damaged by fire and are usually the first body parts to be destroyed; maintain the integrity of the body and carefully collect any body parts that may fall away from the body – all body parts and evidence found thought to have belonged to the victim should accompany the body once removed from the scene.

Evidence of where the victim was in relation to the fire and what caused the burns on the victim can be ascertained by

observing where on the body the burns have been suffered.

Just like "V" burn patterns and directional burns found on sections of the structure, the body can display burn patterns that can be used by the investigator to determine fire travel and intensity.

What fuel was determined as being the fire fuel source? Where was the main burning intensity?

What damage has been done to the structure? What damage has been done to the body? Is there a consistency in the intensity of the fuel versus burn damage on

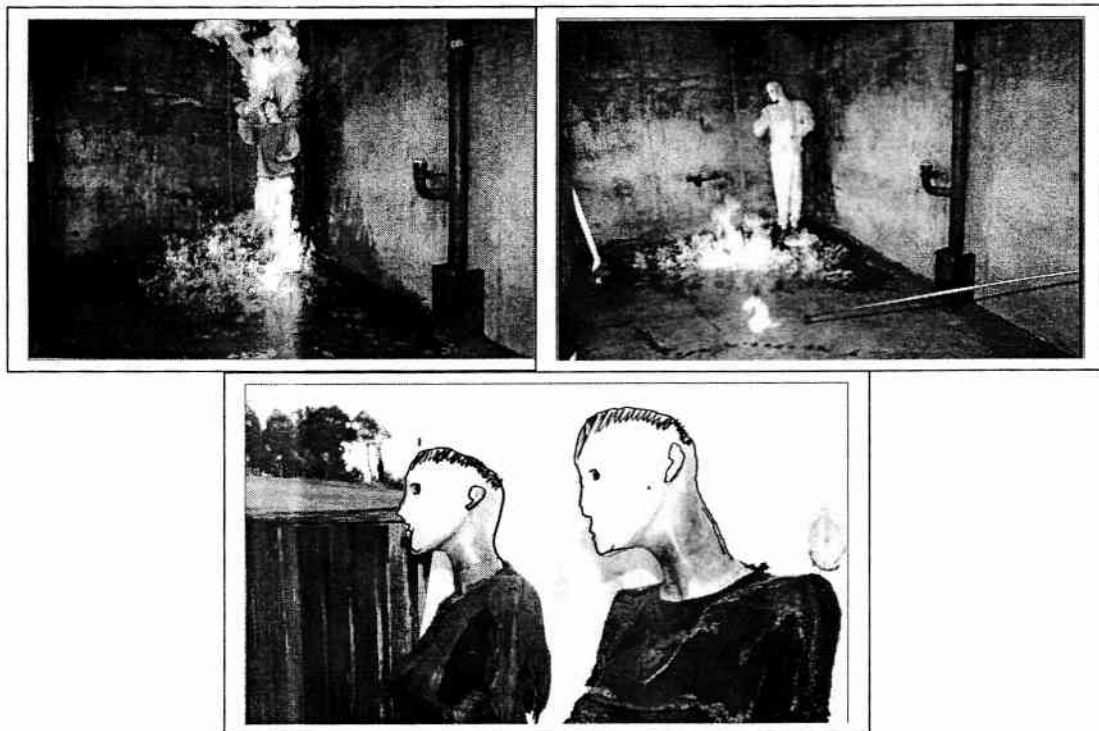
structure and/or body? Can the normal fuel available have caused the fire intensity found at the scene?

Once these (and many more) questions have been answered you can develop your theory or hypothesis of how/where/why the fire started and the victim died.

To ensure you are on the right track you need to test your hypothesis – actual tests – will this hypothesis withstand rigorous scrutiny and questioning of its validity on the witness stand?

Can you justify your determination, will your evidence be solid and complete and will your testing show that your theory has merit and is consistent with the collected evidence from the scene?

Once the fire scene has been documented, searched, photographed excavated, documented, floor plans drawn, diagrams completed measurements taken, scene documented and the body of the victim removed, the remainder of the team become involved and begin producing more evidence that becomes valuable to your investigation.



Fire tests and the results shown on mannequins used in the tests.

Remember – by introducing a body to a scene – you are introducing more evidence to assist in bringing the investigation to a successful conclusion.

Once the body of the victim enters the realm of the pathologist the post mortem process begins in an endeavour to identify cause of death, manner of death and identification of the victim. X-rays are taken to identify any unusual objects in/on the body, identifying objects such as prior medical procedures/prostheses, and teeth for identification purposes.

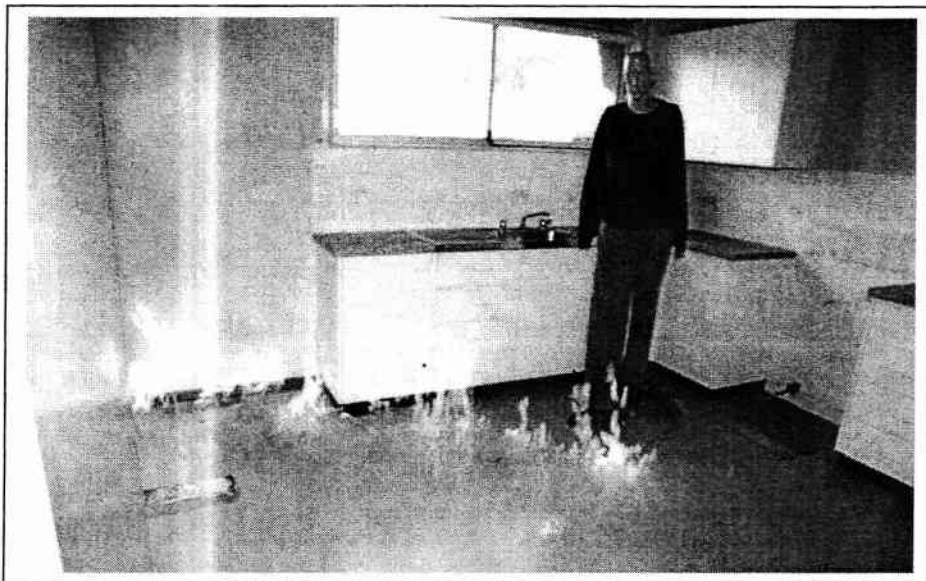
Body fluids samples can provide evidence of alcohol, drugs and chemicals, either ingested or as an intake from fire gases and smoke; after analytical testing. Remains of clothing can contain liquids that may prove to be foreign to the scene and valuable evidence assisting in showing the fire to be of a deliberate and malicious nature.

During the post mortem it may be determined that the victim suffered injuries pre-fire, or was deceased prior to the fire; injuries may be found to have been caused by the action of the fire, or due to inhalation of heated

gases and smoke whilst in the fire involved structure.

All of the findings from the pathological testing can be disseminated to investigators and detectives to assist with the overall evidence structure for the case – this is where the team gains cohesion and all the evidence comes together to provide value to the investigation and the eventual successful outcome that we are all seeking.

This report kindly prepared by Inspector Ross Brogan, NSW Fire Brigades



Does your test reflect the scene and the evidence that was recovered and documented?



Ross Brogan, Alex Conway, Mike Schlattman, Gary Nash, Richard Woods



Mike Schlattman's presentation to Ross Brogan

AN ENGLISH CASE STUDY

This is a slightly abridged version of an article first printed in the Britain's Guardian Newspaper on 13 December, 2003. It deals with a fire which occurred in England, but the problems encountered in the investigation, are universal problems.

by

Nick Davies

Andrew Chubb devoted most of his working life to justice, first as a lawyer in the merchant navy, then as a barrister. Then he died. And justice deserted him.

To be more precise: the police failed effectively to investigate his death; two forensic experts produced reports the conclusions of which owed more to guesswork than to evidence; a pathologist conducted a postmortem examination which came up with a cause of death which was not proven; a coroner returned a verdict which does not stand up to scrutiny; and so, the truth was lost - because the system failed on almost every front, even when it was required to investigate the possible murder of a judge.

Our systems for detecting and dealing with serious crime are unreliable. Sometimes they succeed but then again they fail, because, oddly, we do not train our detectives to detect; or because we now filter our forensic science

through a privatised marketplace; or because we

have left the most important decisions about death in the hands of coroners with ancient and arbitrary powers; or because, when things go wrong, we still rely on some of the most powerful institutions in the country to arbitrate on their own behaviour.

Systems like these invite the manufacture of false evidence, they provoke guesswork and phoney logic, they stimulate the crudest of prejudices, because they fail consistently to deliver the most important element in any criminal justice system, which is the truth. It can happen even to a judge.

Andrew Chubb spent the last few minutes of his life in the garden of the old farmhouse where he lived with his wife, Jenny, deep in south Somerset, near Ford Abbey. It was a blissful summer's evening, Friday July 27 2001. A couple of hours earlier, he had driven home from Portsmouth, where he lived during the week, and now he was in the rickety wooden shed where he kept his mowers.

It was just after a quarter to nine when there was a thumping explosion inside the shed, flames poured through the upper walls, a mountain of dark black smoke shot 20 feet into the sky, and fire enveloped Andrew Chubb.

They all came to the scene: the fire engines with their crews and then the fire

investigation officer; the uniformed police and the detectives; the scenes of crimes officer and the Home Office forensic scientist. The experts studied the shed and the house and the garden and wrote reports. The body was taken to Yeovil hospital, where a pathologist examined its charred remains and wrote another report. Over the following weeks, the police interviewed witnesses and other interested parties and they produced sworn statements.

And, just over four months later, all the evidence was placed in front of a coroner who held a one-day hearing at the end of which he declared that a thorough investigation had taken place and formally recorded a verdict of accidental death. The case was closed. Justice was satisfied.

Now look more closely. Look, for example, at the incident log which records the messages sent back to their control room in Taunton by the fire officers who arrived in Andrew Chubb's garden 20 minutes after his shed burst into flames. As they reached the scene, at 21.06: "Shed in the open on fire".

As they saw that the fire was not spreading, at 21.07: "Third pump not required." And as they took stock of how the fire started, at 21.10: "Fire investigating required, as cause of fire very suspicious." An hour later, at 22.08, having found the dead judge's body, they underlined their concern: "Confirm one fatality.

Incident being treated as a crime scene and being passed over to police."

The suspicion of the fire officers was provoked by one very simple worry: they could not see how the fire had started. There was no known source of ignition in the shed - no electrical supply, no gas switch, no cigarette or burning pipe. Had somebody gone in there and deliberately started it? Neighbours reported that, around the time of the explosion, they had seen a light plane flying low over the area with its canopy open and had heard the sound of car tyres squealing in the lane. Was it possible that a former client or defendant was taking revenge on Andrew Chubb?

As the fire officers quelled the flames, Chubb's wife, Jenny, volunteered to a uniformed police officer that, less than an hour before the fire, she and her husband had had an argument. Indeed, he had told her that he wanted a divorce.

It transpired that, for more than two years, Andrew Chubb, who was 58, had been having an affair with a much younger woman and that, four weeks earlier, Jenny Chubb had found out. She had thought their marriage would survive and, that evening, she had planned to try to find a solution with him, but instead, he had announced that it was over, they would have to sell the house, and he would live with his lover.

She had felt worried and betrayed and had remonstrated with him and then followed him out to the garden where she had found him in the garden shed. She

told police they had stood in the driveway, arguing, and then she had walked back into the house where, a little later, as she sat down to eat scrambled egg in front of the television, she had heard the explosion. None of this meant that a crime had been committed. All the fire officers knew was that there were questions that needed answers.

Then ... nothing happened. The fire officers had put out the fire and called up a lighting unit so that nightfall would not obstruct the police. But no detectives started an investigation. No scenes-of-crime officer photographed the scene and collected samples for testing. No forensic experts examined the wrecked shed.

If the mysterious low-flying plane or the squealing tyres were important, they would not be pursued that night. If it was important to swab Mrs Chubb's hands or the soles of her shoes for petrol or to check her clothing or to interview her while the facts were still fresh, none of that happened. Those who might have come, were busy elsewhere. The fire officers waited and, finally, at about two o'clock in the morning, a scenes-of-crime officer turned up and said they would start work during the day.

So, at 2.20am, the fire engines finally left the garden and the smouldering remains of the shed, with the judge's charred body still lying in the ruins, while a lone constable stood by in the darkness.

It was the next morning before the investigation began. A forensic scientist, Bob Bell, went through the

house, looking for displaced furniture or any other sign of a struggle. It was now about 12 hours since Andrew Chubb had died, and Bell found nothing out of place. He was joined by Andrew Quinlan, a specialist investigation officer from the fire service. Together, they checked for odd footmarks in the garden and then studied the ruined shed, the scorched corpse and the burned-out shell of a Honda sit-on tractor mower.

Bell and Quinlan could smell petrol. They found a residue of petrol around the body and the scorched remains of a petrol can which had no cap. Perhaps petrol vapour had built up in the shed and then - for some reason - ignited. But, after such an intense blaze, there was no way of knowing for sure how it had happened.

As Quinlan later recorded in his report, petrol vapour could have caught fire if the judge struck a match or started the mower, releasing a spark from the engine; he said he had no proof for either theory, but both were possible. In his report, Bob Bell later suggested that the judge might have been actually handling petrol at the time and then ignited the vapour with a spark from the mower engine or with "an accident involving some other item within the shed".

He, too, recorded that he "had no direct evidence to support such a scenario" but he went further than Quinlan and considered that an accident was "very much more probable" than foul play.

Now, this was a crucial moment - and one which reveals the kind of structural

crack that makes the system so unreliable. The detectives at the scene wanted to know what these two experts thought, and yet the two experts relied on the police to tell them what had happened and, crucially, had no right to interview witnesses, such as Mrs Chubb and neighbours.

Lacking key information, the experts were expected to establish the cause of the fire, and yet the law insisted that it was then for the police alone - to decide whether this was an accident or foul play. The reality was that there was no proof of what had caused this fire and so, based on the little they knew, the two experts did all they could: they came up with their best guess to try to help the police.

Quinlan's theory that the judge might have struck a match was speculation. He had been told, as he later recorded in his report, that "Mr Chubb may at certain times have carried a box of matches to light garden fires etc". He had no way of knowing whether this was true. And even if it was, why would an intelligent man suddenly take into his head to strike a match in a shed full of petrol?

Bell's theory that the judge might have been handling petrol was similarly speculative; nobody had seen the judge doing that, he did not normally fill the mower because that was the gardener's job, and the gardener, who was interviewed by police later that day, said he had left the mower two-thirds full, so there was no need for it to be filled. But Bell didn't know that.

In the same way, the idea, which was floated by both experts, that the judge might have released a spark by trying to start the mower was also pure speculation. They had been told by the police that the judge had gone out to mow the lawn, but - unable to question anybody - they did not know that he was not in the habit of using this mower because that was the gardener's job; or that there was no need to use the mower because, as the gardener told police that day, he had cut the grass two days earlier.

The starter motor was so damaged by fire that they could not tell if the key had been turned; and, even if the judge had tried to start it, there was no evidence that the mower produced sparks in a way which would jeopardise the lives of gardeners in sheds up and down the country. The experts' theories might be right, or they might be wrong.

The truth might have been that it was foul play. Quinlan studied the hinges of the shed door and concluded that both had been closed when the shed caught fire - an odd thing on such a hot day and with such limited light inside.

The gardener said he had left the tops on all the petrol cans, and yet the experts had found one without its top, lying not at the far end of the shed, where the judge's body lay, but just by the door. And it was odd that a healthy man had not been able simply to batter his way through the flimsy wooden walls of the shed as the fire took hold - unless he was unconscious or even dead before the fire began.

Perhaps the truth was that somebody had gone into the shed, hit the judge over the head, scattered petrol over him, thrown a match on him, shut the doors and left him to burn until the heat built up enough to explode through the upper walls and roof.

Both experts, however, leaned towards accident. They could see no clear sign of foul play. They had taken samples of debris to test for petrol and they had scraped up a spot of blood from the conservatory in case it was the judge's, but it would be days before the results were known. They had checked the body for signs of injury and seen nothing in the charred remains, now the body would go for post mortem examination, but that too was several days away.

Neither expert claimed to have proof for their theories. And yet, that Saturday morning, gathered around the burned-out shed, the police listened and concluded that the fire was an accident. From this moment, everything changed.

Having come to this conclusion, the police prepared a brief statement for the press, saying that they were investigating the judge's death, but they were not treating the incident as suspicious. Accordingly, that same weekend, when Jenny Chubb told the police she had visitors and asked quite logically if it was all right if she bulldozed the remains of the shed, the police said that was fine, thus losing whatever evidence might yet remain in its ruins.

So, too, instead of asking for a special post mortem

examination by a Home Office pathologist (the normal course when a death is suspicious) the police and the coroner agreed on a routine examination by a pathologist at the local hospital in Yeovil, who concluded simply that the judge had died from burning. And when Jenny Chubb then asked if, in the normal way, she could hold a funeral and cremate her husband's body, the police said that, too, was fine, thus losing whatever evidence might yet remain there.

Following this line, the police never challenged the clearly speculative conclusions of the two experts and commissioned no further expert opinion. They accepted that the fire might have been started by a spark from the mower, without sending the mower's starter motor for testing to see whether the key had been turned in it; they did not even keep the starter motor, which was buried in a landfill site with the rest of the ruined shed.

They did not trace the pilot of the light plane which was reported over the judge's garden. Jenny Chubb was not interviewed by a detective; her statement was taken by a local uniformed PC whom she already knew.

The case might now have rolled gently downhill to the inquest and into oblivion, had it not been for one simple obstacle - the judge's lover. Kerry Sparrow, then 32, worked for a firm of London lawyers, had been spending most nights with him during his working week in Portsmouth, was aghast at the official response.

When she started to complain that the case was not being properly investigated, a police officer told her: "I am beginning to dislike you, Miss Sparrow." So, she went to a lawyer, who agreed to represent her at the inquest.

On December 12 2001, the case of the death of Judge Andrew Chubb came to the court of the East Somerset coroner, Tony Williams, sitting at Wells. The police sent a detective constable who explained: "A fire that involves a fatality - that will be investigated to the nth degree, by the CID".

He then conceded that nobody had checked the skin or clothing of the only other person at the scene of the fire; that he did not think this had ever been an issue; and that "there were no concerns" about the argument between the judge and his wife. The coroner, nevertheless managed to conclude: "I accept that as a result of the police inquiry, there was nothing further for them to consider either with regard to suspicious circumstances or with regard to foul play."

The inquest focused on one central question: what could have ignited a fire in that shed? The theory of the fire investigation officer, Andrew Quinlan, that the judge had struck a match, was dismissed: Jenny Chubb confirmed he was carrying no matches. In the absence of any other candidate, there was only one possible source of accidental ignition left - the Honda ride-on mower. But had Andrew Chubb tried to start it?

The forensic scientist, Bob Bell, admitted that the switch

had been too badly burned for him to tell and that he did not even know what had happened to it. But even if Chubb had tried to start it, would it have produced an open spark? Bell told the coroner that, although he was "not an expert on Honda mowers", he thought the switch in the starter motor "would probably not be flame-proofed, and therefore that spark could ignite any vapour present in the shed."

The only witness who could claim to be an expert on these mowers was Peter Sherry, who had sold one to Andrew Chubb and who repaired them for a living. He told the coroner that you could not start it unless you sat on it - and the judge's body was found lying behind it, with his legs partially underneath it. And as to whether it would produce a spark, he differed from the forensic scientist. Whatever the situation, he said, "there shouldn't be an open spark, no."

Pressed by one of the lawyers, he conceded: "If the plug cap was loose or something like that, you could have a spark." But he said that was unlikely and that he had never heard of a Honda catching fire.

And yet, the coroner concluded that, on the balance of probability, Andrew Chubb's death had been an accident. He explained that he placed "a great deal of reliance" on the evidence of Bob Bell, even though Bell himself had told the court that "all fatal fires are murders until one either finds any concrete evidence or indeed evidence that it isn't".

Kerry Sparrow's lawyer had urged the coroner to return an open verdict on the legal basis that the evidence did not "fully disclose the means whereby the cause of death arose". The coroner, however, sitting without a jury, was allowed by law to come to his own conclusion. As the coroner declared his verdict, Kerry Sparrow called out from her seat in the court: "Absolute rubbish."

So, officially, the case ended. Anybody who has ever found themselves at odds with the criminal justice system will say that there is a horrible momentum about its decisions. A single error or a single act of malice can push an entire investigation off course and once it reaches court and receives the blessing of a verdict, from a jury or from a coroner, doors slam closed all over the system, and it becomes enormously difficult to reopen them.

Kerry Sparrow commissioned her own experts to review the evidence. Their conclusions were startling. She went to Dr Chris Foster, one of the world's leading specialists in the investigation of fires. He considered the work of Bob Bell and Andrew Quinlan. He observed that "none of the photographs show a systematic clearance of debris in a manner that I would expect"; he dismissed key findings because they were "not warranted on the evidence" and because they failed to answer basic questions; and, on their central suggestion, that the fire was an accident, Dr Foster concluded simply that both experts had been speculating.

Kerry Sparrow also commissioned a report from a Home Office consultant pathologist, Michael Heath, the kind of specialist who is supposed to be involved whenever there is a suspicious death. Dr Heath noted that the local pathologist had said that there was no blood to analyse and no airway to examine but he suggested - on the evidence of the same pathologist's report - that this was wrong. The tests could have been done, he said, to find crucial evidence about whether the judge was dead or alive when the fire started.

But since there were no tests, the local pathologist was not entitled to come to any solid conclusion. The idea that the judge had died of burning, he said, was "not proven".

These two reports kicked away the props on which the police had relied for their conclusion that there was nothing suspicious about the death. They made nonsense of the idea that the police inquiry had been thorough. They contradicted the very evidence on which the coroner said he had relied for his verdict. But it was too late to go back to the night of the incident and do things differently; too late now to re-examine the body, which had been cremated; or to go back to the scene, which had been bulldozed; or to go back to the inquest, which was now closed.

Kerry Sparrow bombarded the system with letters and emails and, up against a wall of silence, she found one door which opened. The chief constable of Avon and Somerset police agreed to set up a second inquiry into

Andrew Chubb's death. Whereas the original inquiry had been led by an inspector from the local division, this was run by a chief inspector from the central pool of specialist CID.

This inquiry dug out the remains of the mower from the landfill site, sent the starter motor off to be examined by experts, checked with Honda to see if the mower really did produce a dangerous spark and commissioned its own experts, who duly confirmed the thrust of Kerry Sparrow's reports, that there was scant reliable evidence of accident. On May 30 2002, 10 months after the incident, they arrested Jenny Chubb on suspicion of murder and also perjury, in relation to a discrepancy in her evidence at the inquest.

Jenny Chubb was interviewed and consistently denied playing any part in her husband's death. She also denied perjury. The police sent a report to the Crown Prosecution Service (CPS), who concluded that there should be no prosecution. For Mrs Chubb the ordeal was over. And since the second police inquiry had also found and cleared the pilot of the light plane which had flown over Andrew Chubb's garden, the detective work had now reached a dead end.

While this was going on, Kerry Sparrow had been to the high court to seek judicial review of the coroner's verdict that Andrew Chubb's death was an accident. They had presented the evidence of her experts, but the coroner said his verdict was justified on the evidence available at

the inquest. He said it was for him to decide what documents to admit and what witnesses to call, and he quoted a 1995 judgment by the Master of the Rolls: "The coroner fails in his duty if his investigation is superficial, slipshod or perfunctory. But the responsibility is his. He must set the bounds of the inquiry. He must rule on the procedure to be followed."

The high court agreed. Now, the police reported their new findings to him, but still he allowed his verdict to stand.

Kerry Sparrow continued to batter at the doors of the Home Office, which reviewed the work of Bob Bell and concluded that there was nothing wrong with it, and at the CPS which declined to discuss the case.

She pursued Avon and Somerset police and became bogged down in a bizarre argument. From the start of their second inquiry, she understood that, apart from trying to find out the truth about Andrew Chubb's death, they were also investigating her complaints about the weakness of the first inquiry.

She was told in writing by the head of the complaints division that the original inquiry would be reviewed. She was told in writing by the chief inspector who led the second inquiry that his report was being considered by the head of complaints.

And yet, the police then told her that she had not formally registered her complaint as a complaint, so they would not recognise the second inquiry as a complaints

inquiry, so no action would be taken against any officer in the original inquiry.

Infuriated, she carried on battering, threatening to go to the press unless the police accepted that she was complaining. The police asked her for samples of her complaints. She offered two and - to her horror - discovered they were planning to set up a complaints inquiry which was limited to the two samples.

Finally, six months after the second inquiry ended, they agreed to set up a formal complaints inquiry into all of her concerns.

Ten months later, in October 2003, the Police Complaints Authority concluded that the original inquiry was "far from thorough". They accepted that the senior detective understandably had "relied on the experts at hand" but they found that "the clues from the outset were clearly suspicious", that it was clear at the time that neither accident nor suicide were likely, that the judge's argument with his wife "should have become a prominent focus of the inquiry".

They catalogued a list of failings not only by the senior detective but also "a failure by the forensic scientist to make a more systematic examination of the scene." However, they said, the detective responsible would not be disciplined. The reason: so much time had passed since Kerry Sparrow first complained, that he had retired from the force. So the system closed its final door.

Avon and Somerset police have reviewed the original inquiry and apologised that it had failed to come up to the expected standard. They told us: "However, we do not believe that the findings of the initial investigation would have been different had the investigating officer completed the actions which were highlighted as omissions in our subsequent review." They emphasised that the senior detective did not set out to conduct an incomplete investigation.

The Forensic Science Service also reviewed the work of Bob Bell and found that he had worked to the correct guidelines; that he had found no evidence of any third party's involvement; that he had not ruled out this possibility but had concluded that an accident was more likely.

Given the extent of the fire, the review noted, it was unlikely that any solid evidence of its cause would have been found: "The overall conclusion from the review is that the original scene examination and the conclusions derived by the scientist were sound, based on the information available to him at that time."

The truth may be that Andrew Chubb spilled petrol in his garden shed and somehow created a spark which enveloped him in flame. Or it may be that somebody attacked him in the shed and then burned his body. Andrew Chubb is not the only victim.

His wife too suffers from a system which treated her as a suspect but which deprived her of the facts. She, at least, emerges without a stain on her

character. The same cannot be said of the system. It lost the truth in this case just as for years it has lost the truth about IRA bombers, Stephen Lawrence, the Yorkshire Ripper, Dr Harold Shipman and a back catalogue of smaller cases which never reach the public eye. In each case, the failure is blamed on an individual - look at how the Shipman inquiry has dumped almost all the weight of failure on one hapless detective inspector.

The reality is that failure in the investigation of serious incidents is simply not unusual. It is not unusual in the specific case of death and damage by fire.

We have spoken to senior fire officers and forensic scientists who say that it is commonplace for arson to be mistaken for accident: ordinary fire officers have no training in investigation; specialist fire investigation officers have only six weeks training which is not normally updated; the fire service as a whole has no statutory power to investigate a suspicious fire but has to hand over to police who have no arson training at all.

Four years ago, the Home Office commissioned a "scoping study" which recognised that arson was routinely slipping through the net. Senior detectives have told us privately that arson generally is hard to investigate and tough to prosecute and that, given the chance, they will record it as an accident.

A specialist investigator told us that the CPS has an "appallingly lackadaisical attitude" to the few cases

which are pursued, failing to hold case conferences to get to grips with technical detail (although this was not an issue in the case of Andrew Chubb).

Beyond that, these kinds of errors are not unusual generally in the detecting of serious crime. There is an extraordinary hole at the centre of police training of detectives and those who supervise them. One senior police source with long experience of training told us: "We provide superb training in driving, surveillance, firearms, self-defence.

But our management training is crap - nothing to do with skills, just passing on lists of words. And our detective training is non-existent. We train detectives in data systems and law and admin and procedure. But we don't train them in detection. There is no model for detection. We expect detectives to use some unconscious model."

A study on quality control in CID for the 1993 Royal Commission on Criminal Justice warned of the built-in fallibility of CID work: most cases were not investigated at all; in those which were investigated, error was widespread; small errors could damage whole cases; CID, generally did not recognise, record or attempt to learn from their errors; "it is remarkable that no training or supervision seems to be in place to avoid them".

And yet this "fallible error-prone system" was expected to prove cases beyond reasonable doubt with life-changing results for defendants and victims.

Within this unreliable system, the role of forensic science nationally has become compromised by commerce. The Forensic Science Service now charges police for its work and is allowed to keep the profit it makes.

Middle-ranking detectives routinely find themselves, for example, with DNA traces from burglars or car thieves but no money to pay the £1,375 fee to have each one checked. And no detective at any crime scene gets brownie points for keeping a forensic scientist working at a cost of £115 an hour.

This is not a defining factor: if the job is worth it, the police will find the money. But it is a limiting factor, a constant background pressure, particularly when police decide that a particular crime is "a rubbish job" - one that will give them more trouble than joy.

And all this is surrounded by the fact that the handling of serious crime, like the whole criminal justice system, is now driven by targets and business plans.

Everybody involved has a vested interest in speedy conclusions. In many cases, untrained and often inexperienced officers arrive at an incident and come up with a plausible story which then defines the response of everybody else down the line: to attack that plausible story may be an essential requirement for the discovery of the truth, but it flies in the face of the new values of criminal justice.

ELECTRICAL FIRES

This is the final section of a talk given on 1 April 2004 by John Gardiner to the NSW AFI. John is an electrical engineer, who has been involved for some years with the electrical aspects of fire investigation. The first section appeared in the last issue (June, 2004) of "Firepoint".

4.0 WHERE ARE ELECTRICAL FIRES LIKELY TO OCCUR

Electrical fires in a building can start in a number of locations, some of them more prone than others because of the number of connections or risk of damage.

It should be noted:-

- That electrical fires will not generally occur in continuous runs of cable unless something has caused NB physical damage to the insulation.
- Water alone will not cause the PVC insulation on cables to break down.
- Electrical fires most commonly occur at "weak points" in the system, these are where the cables have been cut and joined, or where they have been cut and connected to a power point, light or similar. These points can enable moisture or dirt to build up across "live" terminals, or, the connections may loosen with time and localised heating will occur.

The following is an example of the major components of typical "fixed wiring" or permanent wiring in a house (which can also be extended to larger buildings) and some comments in regard to potential fire risk.

4.1 Service lines - The overhead wiring from the street to the "Point of Attachment" on the front of the house.

Fire risk

Unlikely; can occur when tree branches fall through them but the fire would generally be outside.

4.2 Point of Attachment - junction box or terminals on the front of the house which connect the "Service Line" to the "Consumers Mains".

Fire risk

Unlikely in newer houses with separated insulated connectors, more likely on older houses with metal junction boxes. Water entry and aging insulation can cause insulation breakdown, arcing can occur inside the conduit and burn through to timber roof material.

ELECTRICAL HAZARD-

As an important aside and word of warning:- An even greater risk from electrical breakdown at the metal junction box is not from fire but from electrocution. The metal conduit is always connected to the house earth system, which is also always connected to the water pipes. When an electrical fault occurs in the junction box the conduit becomes "live" and so does the household plumbing system. To make matters worse the power in this case comes directly from the street so it cannot be disconnected by turning off the main switch on the switchboard.

4.3 Consumers Mains - these are the cables that run from the **point of attachment** down to the switchboard, in many cases via the roof space and then down inside the wall cavity.

Fire Risk

Unlikely on newer houses (1970's say) because they are reasonably heavy duty cables with thick insulation, higher risk with old wiring.

Some possible causes of damage:-

- rats or other vermin in the roof chewing the insulation.
- deliberate act, attempts to bypass electricity meters by cutting into the mains (it happens).
- heat from a nearby chimney or combustion heater flu.
- insulation deterioration with age and heat (under tin roof) - older wiring.

4.4 Main switchboard - contains meters, main service fuses, and fuses or circuit breakers for light and power circuits.

Fire Risk

Low on newer houses with circuit breakers and possibly earth leakage "safety switch", high on old houses with rewirable fuses, and old wiring behind the panels

Possible causes (some only):-

- Loose connection to fuses, not so likely with circuit breakers because they have a better connection arrangement.
- Faults usually start with the smaller light and power circuit wiring (BUT NOT ALWAYS).
- Overloaded circuit and overheated wiring causes the PVC insulation to melt and burn into other wiring insulation as wiring is usually tightly bunched behind the hinged panel.
- Old style porcelain fuse holders lose spring tension and start to overheat, eventually heat is conducted back through wires behind the panel.

4.5 Sub circuit wiring & connections - (PVC insulated & sheathed cables) - Comprises the circuits for lights, power points, water heaters stoves, air conditioners etc. and is usually rated at 15 to 20 amps, or 32 amps for stoves.

a) Wiring Above the Ceiling

Fire Risk

Unlikely without mechanical damage, such as rats, possums etc., and is also

prone to damage by other heat sources such as fire place chimney or combustion heater flu.

NOTE: ALWAYS LOOK FOR OTHER POSSIBLE IGNITION SOURCES ABOVE THE CEILING BEFORE CONCLUDING THAT AN ELECTRICAL OR WIRING FAULT OCCURRED.

IF MULTIPLE ARC DAMAGE IS FOUND ALONG A LENGTH OF WIRING AFTER A FIRE IT SUGGESTS THAT THIS WAS A RESULT OF THE FIRE AND NOT THE CAUSE.

b) Connections to Light Fittings

Fire Risk

Highly likely "weak point" as a result of:-

- loose connection into the top of the lamp holder, or heat from the lamp below causing deterioration of the wiring insulation. Often occurs over a long period of time.
- accumulation of dirt or moisture on top of exposed terminals, eventual "tracking" between terminals - eventual ignition. Particular likelihood near bathroom or laundry exhaust fans that vent into the ceiling, or roof leaks.
- mice, possums, rats - nests often built above surface mounted lights which warm the underside of the ceiling, also can also cause wiring insulation damage.

NOTE:- LOOK FOR ARC DAMAGE TO BRASS CONNECTORS OR SCREWS AT THE BACK OF THE LIGHT AFTER THE FIRE.

c) Connections to Junction boxes in the ceiling

Fire Risk

Highly likely, as for light fittings, as a result of:-

- Loose connection on "BP" connectors causing high resistance connection which generates localised heat,

burns through other insulation and eventual ignition

- Accumulation of dirt or moisture inside junction box "tracking" between connectors - eventual ignition. Particular likelihood near bathroom or laundry exhaust fans that vent into the ceiling, or, roof leaks.
- Rats also like to eat plastic covers.

NOTE:- LOOK FOR ARC DAMAGE TO REMAINS OF BRASS CONNECTORS OR SCREWS WHICH WILL PROBABLY INDICATE THE CAUSE OF THE FIRE. (IF IT IS FOUND IN THE AREA OF FIRE ORIGIN).

d) Ceiling Exhaust Fans (Unducted)

Fire risk

Likely but not common, as a result of the motor overheating, which can be caused by accumulation of dirt from roof space mixed with or powder and moisture residue from the shower below.

d) Sub Circuit wiring and connections in walls

Fire Risk

Unlikely without mechanical damage

- If arc damage is found in a number of locations along the cables it usually suggests that damage was caused by a fire, and not the cause.

f) Power Outlets

Fire Risk

Not likely because the connections are less exposed than those in the ceiling, but could occur due to:-

- moisture running down wall and then behind the power outlets in bathrooms or kitchens.
- Ants and termite nests which have a high moisture content, built up on the back of the outlet can cause "tracking" (carbonisation which becomes conductive) across the terminals, eventual heat build up and ignition of flammable material

5. ELECTRICAL FIRES INSIDE THE HOUSE.

5.1 Appliances

Television sets

Fire Risk

Likely, due to internal faults in high tension circuit, or fault in standby switch or relay. In TV fires it is difficult to diagnose the exact cause as there is usually too much internal damage

Refrigerators

Fire Risk

Not likely, but if they do occur will usually be caused by moisture or deterioration of the compressor relay, defrost element or thermostat. Mostly "tracking" faults through insulating material.

5.2 Power cords on all appliances

Fire Risk

High, caused by "arcing" to metal cabinet due to damaged cord at cable entry or, cord damaged by having objects placed on them, chewed by rats, or too close to heat source.

5.3 Extension cords

Fire Risk

Very high due to, overloading (they are usually rated for 10 amps maximum), mechanical damage eg being caught on or underneath furniture

5.4 Multiple Outlet Power boards

Fire Risk

High, due to overloading, old ones with no inbuilt circuit breaker, faulty construction.

Note - Diagnosis After Fire

See if suspect item is in the area of origin, was it plugged in and connected, if so usually arc damage would be found somewhere on the cord, - *THIS STILL DOES NOT MEAN THAT THIS WAS THE CAUSE OF THE FIRE.*