

FIREPOINT



IAAI JOURNAL



Firepoint

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EDITORIAL

This issue presents two articles on interviewing techniques, one submitted from Victoria and another from South Australia, as well as a flier inviting you to hear one of the authors, currently on a lecture tour around Australia.

There are also two articles on forensic accounting, one from America, the other from New South Wales.

The aim of "Firepoint" is to present the best relevant educational articles from around Australia, and abroad.

At the same time "Firepoint" seeks to cover all aspects of the fire investigation team. The articles noted complement the regular reports from the Fire Brigade and the Police Service as a part of this plan.

Wal Stern

ARSON & FIRE INVESTIGATION BOOKS & PUBLICATIONS

In a recent issue it was recommended that NFPA 921 code be essential reading for all investigators. This is only one of many publications that deal with subject of fire investigation. The interest in that publication was that it had just been updated.

The following is a list of some books that may be useful reference material for fire investigation.

		RRP
Kirk's Fire Investigation	J.De hann	\$ 89.64
Practical Fire and Arson Investigation	J.O'Connor	\$144.81
Arson Investigation Step by Step	T.Bouquard	\$ 66.26
Electrical Fire Analysis	R.Yearance	\$128.95
Fire Investigation New Concept	C.Hobson	\$123.94
Investigating Arson	W.Bennett	\$123.94
Investigating the Fireground	C.Phillips	\$73.28
Investigating Motor Vehicle Fires 3rd	Lee Cole	\$50.08
IFE Guide to Fatal Fires	D.Lietch	\$34.00
IFE Principles of Fire Investigation	Cooke & Ide	\$31.40
IFSTA Fire Cause Determination		\$58.25
NFPA Code 921 Guide for Fire & Explosions	Inv.(1995)(D)	\$55.48
NFPA Code 1033 Qualifications for Fire Investigators (A)		\$41.22

This is not a complete list but gives some indication of the books available and their list pricing for Australia. The above are publications which have been listed in the current AFPA Catalogue Spring 1995 and would be available by ordering on (03) 9862 2800. You should also check your local book shop.

There is also a publication available from the IAAI International Office being :

IAAI Bound Copy of Selected Articles (approx. 250) from the "Fire & Arson Investigator"
Cost on Ordering from IAAI (US).

This list has been produced for the information of members. If anyone would like to present a review of any of these books it would be of value.

Brian Neal

Victorian Chapter Editor

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The Editor invites letters, reviews, and articles from members. Please forward same to the address shown on page 3.

QUEENSLAND PRESIDENT'S REPORT

(Highlights of the Annual Report presented by outgoing President, Peter Thomas, at the AGM on 7.2.96).

International Bid

The last 12 months has been a busy time, with the preparation of our formal bid to host the International Body's AGM on the Gold Coast. Perc Hartwell and I travelled to Los Angeles and presented the bid..

I would like members to be aware that their committee, more especially David Muir, Brian Asher, Charles Foley, Graham Jones, Perc Hartwell and myself spent "many" hours associated with preparing the bid. I take this opportunity to express my sincere thanks to those fellows.

Our bid was not successful. We have written to IAAI requesting an explanation of the decision, for the information of members and those that supported us.

Name Change

We finalised our name change during this past 12 months, to Queensland Association of Fire Investigators.

We did so to present a more attractive and appropriate name. The word "arson" was removed and substituted with the word "fire". At some time in the future, we ought to try and include the word "fraud". I believe, to be in touch with the local scene we should be the Association of Fire and Fraud Investigators. Other fraud offences form a major part of what the insurance industry faces daily.

Bi-Monthly Conferences

We have had a number of first class speakers at our bi-monthly

conferences. I wish to single out Mr. Paul Braddy, Minister for Police and Corrective Services, who assured us arson fraud and general fraud was being given adequate consideration and finances, to ensure the problem was being addressed 100%.

The reality is, that is not correct. I am personally aware that the Arson Squad is grossly undermanned and overworked. We as an association have a responsibility to support the Squad and have the situation reviewed.

Commissioner, NSW Bush Fire Service.

Mr. Koperberg, the Commissioner, is a high-profile, pro-active member of the Emergency Services. He has consented to present a paper at our bi-monthly conference on 16 April, 1996, on "Bush fires, the cost to the community and how the community and insurance industry can assist to combat same".

Claims Management.

There is no doubt that litigation for just about everything that happens today is rapidly becoming the norm.

It is reasonable to think the day may come when a disgruntled policy holder or a co-insured sues a claims manager as a consequence of a decision involving a particular claim.

I raise this scenario because of my personal involvement in suspect and/or fraudulent claims. I have become increasingly aware of the problems facing claims managers. They are the person "ultimately in charge" of the claim, and the final decision is and will remain theirs.

There is a growing need for them to be supported by totally professional service providers and consultants, with sufficient expertise in their



individual disciplines to ensure the best possible evidence is gathered.

In Conclusion.

The Queensland Association of Fire Investigators is a very worthwhile organisation, comprising insurance personnel, lawyers, police, firemen, private investigators and loss adjusters.

Each category (with the exception of Police and Firemen) has a specific and individual role to play in the insurance industry, and require individual areas of expertise. Despite the roles being specific and individual, in fact *because* they are, it is important that each service provider be a team member, and work together to achieve the best result and ensure the right decision is always made.

The association has a strict Code of Ethics, which I applaud. As the association grows and becomes a more and more important resource to the insurance industry and community in general, the Code of Ethics will remain an utmost priority for all members to abide by.

Once again I thank the members generally and my committee of the past two and a bit years for their continued support and loyalty. I look forward to continuing my involvement in the capacity as Immediate Past President and thereafter.

New Office Bearers.

President: Terry Casey
1st Vice President: Brian Asher
2nd Vice President: David Muir
Secretary/Treasurer: Charles Foley
Hon. Solicitor: Michael Green
Committee: Tom Dawson, John Porter, Jon Capper, Anthony Williams, Peter Thomas, Adrian Barry, Greg Reynolds, Keith Spanswick, Peter Moriarty, Mark Silverland, Bernice Norman.

VICTORIAN PRESIDENT'S REPORT

As this is my first official correspondence of the year I would like to take the opportunity to wish everyone a prosperous and contented 1996.

The new year brings an exciting program for the Victorian Chapter with the proposal of a number of learned guest speakers booked for discussion evenings. The first of these is being arranged by Colin Cortous for Tuesday, 26th March.

In light of the success of our "House Burn" at Carrum Downs last year the Chapter as part of its training mandate will be providing another practical day and associated demonstrations. Details of the day will be advised by newsletter.

The Committee is excited by negotiations currently being undertaken to stage a two day Seminar in October featuring high profile guest speakers from the United States. Further details will be published as soon as negotiations are finalised.

Can I say in closing that the Victorian Chapter is looking to enhance the membership roll in 1996 and to this end myself and Terry McCabe will be presenting to interested parties in Hobart, on the 27th February.

Could I remind members that should they wish to bring a friend or business acquaintance along to any function throughout the year they would be most welcome and would more than likely leave as the proud recipient of an application to join the Chapter.

ADRIAN EDWARDS PRESIDENT

Membership

The committee welcomes the following new members to the Victorian Chapter:

Michael Proud
Rob Prideaux

Membership of the Chapter is currently being reviewed. It is expected that by the end of March, members will receive a current list of financial members.

Members who have not received a Chapter Certificate or have changed their address please notify the Secretary or contact Adrian Edwards on 9865 2468.

Membership of the Victorian Committee.

In the past six months the committee has had some resignations and this has lead to casual vacancies which have been filled. To update members, the following is a list of the current committee:



Adrian Edwards Arson Squad
(President)
Phil Harris Ex-MFB (Hon. Secretary)
Peter Hawkins GAB Robins Australia
(Treasurer)
Scott Staunton Godfrey & Stewart
(Legal Officer)
Committee
Neil Barnes CFA
Alex Conway MFB
Colin Cortous Arson Squad
John Kelleher SFSL
Terry McCabe NZI
Tony McIntosh ICA
Brian Neal CFA
Garry Nealon
Fire Investigation Services
Trevor Pillinger MFB

The committee has received a letter confirming that Tony McIntosh will be retiring in January, 1996, and has identified a replacement. The committee wishes Tony all the best for his retirement and thanks him for his dedication and contribution to the committee, Tony being one of the inaugural members of the Chapter.

Program of Events, 1996.

Dinner Meeting 26th March 1996
"Photography"
Venue to be advised
Contact: Colin Cortous
Arson Squad 9865 2468

Due to the holiday break and the Seminar in October the program for the rest of the year is still being finalised. All members will be advised as soon as possible. All events will have a committee contact for information, and to make bookings.

Change Of Victorian Chapter's Postal Address.

Please note the new address for the Secretary of the Chapter:

IAAI VICTORIAN CHAPTER
P.O. BOX 4083
FRANKSTON HEIGHTS
VIC 3199

All correspondence and payments should be forwarded to the Secretary.

VICTORIAN PERSONAL NOTICES

This section is designed to notify members of staff transfers and movements. Please send notices to the Editor of any relevant staff moves.

Ian Moore is now with Scientific Services Laboratory (SSL), after working for the last year as Project Manager for the experimental phase of Stage 1 of the Fire Code reform Centre project "Design Solutions For the BCA", and on behalf of the FCRC on the development of the "Fire Engineering Guidelines. As a Senior Fire Protection Engineer with SSL, Ian will be performing fire investigations, engineering failure analyses, product liability and personal injury investigations, as well as designing the fire safety systems for industrial plants, shopping centres, etc. using a wide range of fire and risk engineering procedures.

RECALL NOTICES

Members are advised of the following recall notices:

1. Vulcan Quasar and Pyrox Gemini Gas Wall Furnace

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FREECALL: 1800 067 265.**

2. ASKO/ASEA Dishwasher

Model Numbers 1253, 1403, 1473, or 1503, purchased between January 1992 and October 1995.

Some door switches may enable water from the functioning appliance to enter the switch which may cause an electrical short.

Owners of these models should immediately cease operating them, check the model number (printed on a sticker on the inside of the front door) and contact the Free call Information Line to arrange for a Free Service Call to check the switch.

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Fifth International Symposium on Fire Safety Science.

Papers and posters are now called for the above conference, to be held in Melbourne, 3-7 March, 1997. For further information contact:

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Albert Park
Victoria 3207



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- | | |
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| - FIRE MODELLING | - REVIEW OF EXPERT REPORTS & EVIDENCE |
| - INDUSTRIAL ACCIDENTS & OCCUPATIONAL SAFETY | - GLASS FAILURES & MATERIALS TESTING |
| - METALLURGICAL & ENGINEERING FAILURES | - PERSONAL ACCIDENTS & PRODUCTS LIABILITY |
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| | - NOISE LEVEL EVALUATIONS |

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THE 1996 BIENNIAL CONFERENCE OF THE NSW ASSOCIATION OF FIRE INVESTIGATORS

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DETAILS WILL BE AVAILABLE SOON.



NSW PRESIDENT'S REPORT

(The first report for 1996 from our re-elected President, Roger Bucholtz).

I give welcome and wish a happy and prosperous New Year to all our members.

The NSW Chapter held their AGM on 7th December, 1995. The election of office bearers took place with the 1995 Committee re-elected with one exception. Due to other commitments in 1996 our Treasurer, Ms Claire Wivell did not seek re-election. Mr. Alex Penklis was duly elected to fill the vacant position.

The State Coroner, Mr. Derrick Hand, was our guest speaker and provided a brief overview of the role of the Coroner in New South Wales, especially in matters relating to fire inquiries.

A seminar sub-committee has been formed to organize and co-ordinate the 1996 seminar. At this time the dates selected for the seminar are 25-26 July, 1996, with discussions under way on format and content.

We in NSW were disappointed to hear that the Queensland Chapter were unsuccessful in their endeavours to host the 1998 International AGM of the IAAI, and as I said at our own AGM, what is the relevance of the word "International" in the title "International Association of Arson Investigators"?

At our first committee meeting for 1996, we received 6 applications for membership, a promising start to the year for the association to keep moving forward.

Photographic Competition.

In conjunction with the seminar to be held in July, 1996, the NSW AFI proposes to have a photographic competition.

Entries are invited from one and all. There are two categories:

- * Deliberate fires
- * Accidental fires

Please submit entries to: Robert Cameron, Secretary, NSW Association of Fire Investigators, c/- Abbott Tout Solicitors, Level 42, MLC Centre, 19-29 Martin Place Sydney, NSW, 2000.

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FIU REPORT

(Compiled by Alan Easy, Head of the NSW Fire Brigade Fire Investigation Unit).

RESTAURANT FIRES.

In the twelve month period, July 1994 to June 1995, the NSW Fire Brigades attended eighty fires in restaurants and commercial kitchens, which resulted in approximately one million dollars damage (direct dollar loss and not taking into account any loss of profit or other factors). In the preceding year ninety fires occurred in restaurant/kitchen occupancies.

Since 30 December 1995, firefighters attended four major restaurant fires in Sydney, including one which required evacuation of two hundred patrons and treatment of twenty persons for smoke inhalation.

Most restaurant fires occur in the kitchen, often initially in the ducting system, or with the progression of fire from the cooking area into the ducting where deposits of grease can provide further fuel to worsen the situation.

The problem is generally poor maintenance of the extraction and ducting system. Frequency of cleaning will depend on usage, but the system should be checked at least weekly to determine the presence of grease or other residues which may create a fire hazard.

Despite the obvious risk, kitchen staff have been known to use flammable liquids as cleaning agents. In one incident attended by the FIU, methylated spirits were used. The subsequent fire removed all the grease and there was no further problem with ants.

CURRENT FIRE SITUATION 1994-1995 (NSW FIRE BRIGADES)

- 30,106 fires overall (+5.9% on 1993 to 1994)
- 6,783 building fires (+7.3% on 1993 to 1994)
- 42% of all fires recorded as suspicious/incendiary (+10% on 1993 to 1994)
- Suspicious/incendiary fires increased (statistically) by over 300% from 1987 to 1994/1995
- In 1994 to 1995 there were 55 civilian deaths and 522 injuries due to fires.

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POLICE REPORT

(Compiled by Detective Sergeant Wayne Parkes, a member of the Training and Research Branch (Physical Evidence), Forensic Services Group, NSW Police Service).

BUSHFIRE TRAINING

How much did the 1994 NSW January bushfires cost? The dollar loss has been estimated by Alan Easy, NSWFB FIU to be \$47,018,000 (Firepoint Magazine, September, 1995).

As a response to these bushfires, the NSW Police Forensic Services Group placed greater emphasis on bushfire investigations.

In 1995 the Training and Research Section (Physical Evidence Section), Forensic Services Group, NSW Police Service, in conjunction with the NSW Bushfire Service conducted a structured training course in bushfire investigation.

The objectives of this course was to provide the participants with the knowledge and skill to:

- * Investigate and determine origin, cause and circumstances of a fire
- * Collect, identify and record evidence relevant to the origin and cause and any offence which may have been committed
- * Present and discuss the relevance of any evidence found

during the course of an investigation

- * Participate in a multi-agency fire investigation

The course was conducted over a 5 day period and included both practical both and theoretical application of the following topics.

THEORY

Introduction:

The introduction covered objectives, assessment criteria and methods of assessment, principles of fire investigations, categories of bushfire causes and fire prevention.

Practices and Procedures:

This topic covered the Fires Attack Crews-Investigators and interviewing techniques and the collection, collation and analysis of information.

Determining Fire Origin:

In this topic the students studied the initial stages of a bushfire, the effects of wind, slopes and fuels. Burn indicators with respect to grass, scrub and trees. Burn indicators on fences, posts etc. and non-combustibles.

Determining Fire Cause:

This topic dealt with the elimination of possible causes; Natural, machinery or equipment causes and evidence of any other possible causes.

PRACTICAL

In addition to the theoretical component of the course, it was necessary for each student to demonstrate their competencies in the following areas when investigating a bushfire:

- * Identify and explain burn patterns on a range of vegetation types and non-combustible objects
- * Demonstrate correct practices and procedures in the conduct of an investigation
- * Identify the evidence required to prove a range of offences under relevant fire Legislation
- * Demonstrate the recognition, collection and recording of relevant evidence

Prior to assessment, the students were given the opportunity to witness a number of fires which were demonstrated in bushland using various means of ignition in varying densities of scrub, grassland and wooded areas

A piece of bushland, approximately 50 hectares, burnt in the absence of the students by various methods, was used to conduct the field assessments on each of the students.

The following case met with success as a direct result of the training received at this course.

During the training a 'verified' bushfire was reported to the Bushfire Command Centre responsible for fires in that particular area.

The fire was large and being fanned by westerly winds gusting 50-52 km/hr to which a total of eight Fire Units responded.

The fire had spread quickly from bushland to the east and was threatening eight residential properties.

Fortunately, the fires were brought under control and extinguished before any properties were damaged. Two police and two bush fire personnel were selected from students at the course and were dispatched to investigate the scene.

The investigation team were successful in determining there were two fires, each of which had been deliberately lit. Their area of origin was established to be in bushland approximately one km from the main road and had traveled in an easterly direction for a further 2 km (due to the westerly winds) where it threatened residential properties.

Although no ignition device or accelerant was detected by the investigation team, shoe prints and tyre tracks (mountain bike) were located leading to, and from, each area of the fires' origins.

Subsequent inquiries made, and evidence located at the scene, proved an important link, assisting the team in identifying a suspect responsible for lighting the fires.

DEADLY DIESEL

(A report in the Melbourne Herald Sun of December 15, 1995, notes that a highly volatile diesel mixture responsible for explosions that have injured several people is being sold around Australia).

The flammable cocktail called "funny diesel" is a mixture of sump oil, crude oil and out-of-date jet fuel, and is believed to be manufactured at Numurkah, a small town north of Shepparton. Unmarked tankers are said to be transporting the "funny diesel" and selling it at deflated prices.

Three people have already been treated in Adelaide Hospital for burns and broken limbs after a tanker exploded while being repaired. The scam has sparked a high-level investigation by several of the nation's most important government agencies. Victoria Police's State Highway Taskforce has been called into the investigation.

A memo distributed to Country Fire Authority regional offices has warned of the highly flammable nature of the potentially lethal mixture. "Funny diesel" has a low flash point (5°C) compared with normal diesel (60°C).

The memo warns members of the CFA to be cautious when attending incidents involving trucks and storage places of diesel fuel. It notes efforts should be made to identify the type of fuel when first arriving at incident scenes.

Investigations conducted by the South Australian Department of Occupational Health and Safety uncovered the scam after analysing samples taken from the damaged tanker. OH & S regional manager Bill Cain indicated the practice had been going on for some time. He said there was nothing in the legislation to stop people using it, but there are laws to prevent its storage. He indicated it gives off vapors that will ignite, and that there was a dangerous situation if a truck is in an accident and this fuel leaks out. He stated people needed to be made aware of its nature. It could even be being used in home heating.

Sen. Sgt. Jeff Millar of the State Highway Taskforce said emergency services had been warned of the danger. He said the quantities available were unknown, but seemed substantial, warning that it was an underground operation bypassing federal taxes to make the fuel cheaper.

("Funny diesel" appears to be cheap, but it is potentially highly dangerous. It needs to be eliminated from our roads. Please report to us any further fires due to its use).

Financial Records Investigation Assists in Conviction of Arsonist: One Case Study

by Kent Shriver

On October 2, 1991 at 11.29 a.m. neighbors called 911 reporting a house fire in the central part of the City of Arvada. Upon arrival, firefighters of the 180 member Arvada Volunteer Fire Department confirmed smoke coming from a 5,000 square foot single family, two-storey brick and frame residence. Within minutes, the structure was fully involved.

Immediately after extinguishment, sympathy donations poured in; compassionate neighbors held a fund raiser for the stricken family days after the fire. One year later, on October 22, 1992, after the most rigorous investigation in our history, the homeowner pleaded guilty to third degree arson and felony theft.

This case is of singular interest because investigators could not find absolute arson evidence or even a "smoking" gun. The four member I-Team instead used circumstantial evidence and an unprecedented financial records search to formulate a convincing case of arson. This article reviews the unique circumstances of this case, which illuminates the value of financial records as an investigative tool.

Preliminary fire cause determination intrigued fire investigators because the fire started in the northwest corner of the house in a garden level bedroom. The super-hot fire quickly jumped fifteen feet to the vent extending into the open attic and traveled to other parts of the house.

Arriving fire fighting crews initially reported only heavy smoke showing from the structure. However, after initiating suppression operations and setting up a command post, the fireground commander reported a "fully involved" structure fire suggesting a fire traveling unusually fast and uncharacteristically hot.

As firefighters moved in the garage to extinguish the fire and protect exposures, they were aghast to find a 55 gallon drum of "Racing Fuel" swelling from radiated heat.

"Red Flags"

During post-fire interviews with investigators, curiosity piqued when several firefighters independently mentioned that the owner seemed more concerned about his classic 1957 Chevrolet car in the garage than the extensive damage to the house and contents. They also mentioned pictures missing from the walls in the room of fire origin and most closets empty.

A second clue surfaced when during overhaul firefighters found a shotgun under the owner's bed. Arvada police detectives traced the shotgun's serial number. They soon discovered the weapon was reported stolen by the homeowner on November 5, 1989 during an alleged burglary. Detectives then conducted a computer search of area pawn shops. This search revealed that another shotgun reported as stolen during the same alleged burglary was later pawned by the homeowner. While not directly related to demonstrating arson, these incidents, in the aggregate, fueled suspicion among investigators.

The I-Team found an innocuous looking television set plugged into the wall in the room of fire origin. The homeowner, in antagonistic fashion, insisted this device caused the fire. Instruments however, detected accelerant under walls in several rooms. An electrical engineer eliminated the television as the cause of the fire.

Investigators noted an inconsistency in the time the owner claimed he left the premises on the morning of the fire. Eyewitness accounts from several neighbors engaged in yard

work independently corroborated the homeowner left the premises only minutes before the fire, not the full thirty minutes claimed.

A fast and unusually hot fire, missing pictures, empty closets, conflicting stories, the owner's frantic concern about an exposed automobile, a previously reported stolen shotgun, and detected accelerant all prompted a more comprehensive arson investigation.

Investigators agreed a financial records review could be revealing. This technique is part of the ATF's "Arson for Profit" curriculum at their Glenco Georgia campus.

Thus, during the first prescribed interview with the suspect, conducted one day after the fire, investigators presented the suspect with the "Release of Financial Records" (see Document #I). Without hesitation, and with a high degree of discernible arrogance, the homeowner signed this momentous document. The "Release of Financial Records" granted investigators carte blanc access to this suspect's private financial documents.

The I-Team immediately began pouring over hundreds of bank and credit union account transactions from the past four years. The prolific activity of the suspect's bank account showed considerable high dollar drafts with few deposits.

Credit Union documents included loan qualifying reports for a second mortgage. During interviews, Credit Union staff casually mentioned that the suspect told them he discussed a second mortgage and the desire for a smaller home with his real estate agent. Mortgage records confirmed the residence recently appraised for \$239,000 in preparation for a second mortgage of \$30,000; the original mortgage note was \$126,000.

Equally as revealing, the suspect's insurance agent mentioned that sixty days prior to the fire, the suspect inquired about the likelihood of racing fuel causing a fire. The suspect queried the agent about the probable severity of a fire fed by a low flash point, volatile flammable liquid and if existing insurance would cover the damage.

Confounding Lab Tests

Results of the initial head space lab tests undertaken to determine the presence of hydrocarbons proved disappointing. The first test by the local police lab confirmed the presence of an accelerant but the technician could not confirm the exact accelerant nor match it to the "Racing Fuel" found in the suspect's garage.

A second test and opinion by a larger crime lab was, surprisingly, negative. Technicians felt the sample indicated the presence of a "false flammable liquid trail" creating high styrene levels from either burning carpet and/or the carpet's pad. Subsequently, an independent lab re-tested and these tests provided clear, positive court admissible evidence.

The I-Team and insurance investigators properly exchanged information. All of the investigations had concurrent opinions.

As the I-team prepared a full report for the District Attorney, the suspect launched a vicious letter writing campaign impugning the integrity and professionalism of both the fire department and its investigators. The City Manager, District Board of Directors, newspaper editors, and neighbors all received a copy of a letter with these numerous bogus concerns.

While a momentary distraction, the letter actually became a source of inspiration. The I-Team knew they had been fair and objective.

The assembled, circumstantial findings suggested this reasonable fire theory:

- a) The existence of two separate within wall hot fires, both having point-of-origin properties, is very suspicious.
- b) A fire of electrical origin, as reported by the homeowner, was not supported by the evidence.
- c) The most logical fire cause, based on observations that an accelerant was poured and intentionally ignited.

The homeowner who stood teary-eyed in front of his burning Arvada home about one year earlier, pleaded guilty to arson for profit and to defrauding his insurance company. He received a four-year sentence in the State penitentiary at Canon City, directed to pay \$105,000 restitution to his insurance company, \$4,200 to his Credit Union, and \$3,000 to the Arvada Volunteer Fire Department. Surprisingly, just before publication of this article, a \$110 restitution check from the arsonist arrived through the Jefferson County Courts.

This challenging fire investigation underscored several valuable lessons. Keep the investigation on track and smartly organized by using a proven, systematic approach firmly grounded in the scientific method. Don't be discouraged by roadblocks, dead-ends, or political pressure. Also, ruthlessly guard against attempts to inflate the importance of evidence and suspicious circumstances. Some of the simplest arson flags and signposts proved the most valuable. Furthermore, ask for insurance company information. Finally, carefully piece the arson puzzle together then step back for the "big picture" view. The financial data within the larger arson framework filled several voids in the interpretation of evidence and establishing motive.

Document 1

AUTHORIZATION FOR RELEASE OF FINANCIAL INFORMATION TO:

The undersigned hereby consents to and authorizes the release of all my personal business records, insurance, policies, charge accounts, credit card accounts, debit card accounts, bank statements and records concerning all bank, saving, and checking accounts, funds on deposit, canceled checks, and all other applicable data and information relative to my credit standing and business reputation including consumer reports and investigative consumer reports within the meaning of Title 15, Section 1681 and following the United States to agents and employees of

THE ARVADA FIRE
PROTECTION DISTRICT

This written permission is provided by me voluntarily and without threats or promises of any kind. A copy of this authorization shall be considered effective and valid as the original.

Signature
Printed Name
Date of Birth
Social Security Number

ABOUT THE AUTHOR

Kent "Sparky" Shriver has been a Deputy Fire Marshal with the Arvada Fire Protection District for over sixteen years. He holds degrees in Business Management and Fire Science, and is a certified Fire and Explosion Investigator. The Arvada Fire Protection District is home of the Arvada Volunteer Fire Department, the largest all volunteer fire department in the U.S.

This article is reprinted from the June 1995 issue of Fire and Arson Investigator.

INTERVIEWING TECHNIQUES.

An article presented by Trevor J. Sinclair, a Chartered Loss Adjuster from Whyalla, South Australia, a long-standing member and supporter.

Individual interviewers and investigators have their own interrogation technique, often refined, indeed finely honed after many years experience. This has arisen from necessity, in that, in the civil arena one does not have the authority of a "uniform" to rely upon.

As investigators we are often confronted with the situation that a particular incident has a known cause but it then becomes necessary to directly link it to a particular person. Therein lies the major obstacle to a successful prosecution or civil court defence.

It is rare indeed that an admission will be made during the course of interview; one normally relies on the accumulation of as many facts as possible, preferably sworn by way of a statutory declaration, to open avenues of enquiry which may reveal obvious deception. Strong circumstantial evidence, particularly in civil matters, is often the only basis upon which actions can be successfully defended.

But the problem still arises - how does one conduct an interview in such a way to maximise the detection of

deception? Can this be done in a nonconfrontational manner and is it possible, through interview skills, to obtain a confession?

Professor D Glen Foster, the author of "The Kinesic Interview Technique" and joint author (with Australian lawyer now living in America, Mary Marshall) of "How Can I Get Through To You" (soon to be released in Australia) provides the affirmative answer.

Kinesics: A systematic study of the relationship between non-linguistic body motions and communication. (Webster).

I recently had the opportunity of attending Professor Foster's course at the Police Academy in Alabama USA. He has lectured to many diverse groups of professionals, mainly in North America but more recently, in Russia and the United Arab Emirates.

Whilst Professor Foster's main interest is in relation to "cold" homicide cases, his technique is the same (no matter the nature of the crime or type of interview involved) whereby the interviewer seeks to determine whether the interviewee is being deceptive.

His technique utilises subtle subconscious verbal and non-verbal behaviour patterns exhibited by interviewees who are unable to disguise emotional states. This provides critical information to the interviewer to obtain the truth during the course of an ostensibly friendly interview. Any aggression on the part of

the interviewer has a negative effect, but a mild display on the part of the interviewee (who seemingly has no reason to be reactive), is a telltale response.

Professor Foster's keen observations during the course of thousands of interviews, initially as a polygraph operator in Georgia has now been documented and is the basis of the Kinesic Interview Technique.

He has identified four key personality groups - Feeler, Driver, Analyst and Elitist. The majority of personalities are of the Feeler type, with two sub-types. Next largest group is the Driver, followed by Analyst and the very occasional Elitist.

At the commencement of any interview, there is a conditioning process, whereby the interviewer is able to assess the interviewee's personality and determine a grouping. Armed with that information, the interview proceeds - in the case of a Feeler, in general, non-specific and rather casual terms.

A Driver is interviewed in more direct, almost pointed fashion - this personality has no time for obsequious chit chat!

The Analyst requires facts - he abhors non-specific uneducated questioning, whilst the Elitist demands, by its very persona, recognition. Less than one per cent of personalities are Elitist.

Of course, the interviewer must know his own personality - if it is Driver, as the opposite to Feeler, it must be adapted to the latter's persona.

Having established the interviewee's category, questioning based on its type will result in a non aggressive interview - aggression occasionally being shown by the interviewee, but never the interviewer.

Personality traits then become very apparent - observations of bodily movement, facial expressions, diction, breathing, nature of words used, bridging and stalling techniques reveal which are the interviewer's most pertinent questions and, provided cluster signs of deception continue to be exhibited, particular areas of questioning can be pursued.

The interviewee's attitude can be gauged by other spontaneous displays - movement of hands, shaping of hands/fingers, bodily movement - the stage can be reached where there are obvious signs of submission and if properly read, an admission can be obtained.

For four days I keenly attended the lectures, as did an assortment of captains, lieutenants and sergeants in homicide, major crime, arson, vice and narcotics squads. These attendees, like so many others to whom Professor Foster and his team lecture, are convinced of the effectiveness of the technique.

His presentation includes videos of interviews he has conducted, resulting in confessions. Interviewed by Professor Foster have been serial killers, murderers of police and firemen but

particularly, those involved in crimes against children, which Foster finds to be the most detestable. He has a standing arrangement with police and fire agencies throughout Canada and the USA - if a "badge" is taken down, he will assist in the investigation free of charge.

I accompanied him for three days whilst he investigated two "cold" murders. Each occurred over two years previously and, despite detailed police investigation and having featured in Robert Stack's "America's Most Wanted" program, there had been no arrests.

The arrest of the murderer of an eight year old child took place soon after Foster's involvement - thereafter, two accomplices were also arrested. Unfortunately, Cyclone Opal struck during the midst of the investigation, preventing the recovery of the child's body from a river.

Another incident involved the bludgeoning to death of a young woman - all scene and post mortem evidence was reviewed - Professor Foster then viewed videos of suspects, analysing their choice of words, speech, stalling, bridging techniques and spontaneous body reactions, many being almost negligible movements. He was able to immediately identify a prime suspect, advised investigating homicide officers how best to proceed with further investigation and then arranged to be present when the suspect was brought in for interview. Currently, that case proceeds.

The Professor has lectured to lawyers, judges, police and fire investigators, FBI, internal security organisations etc. in several countries around the world and is retained by one of the largest loss adjusting companies in North America, Adjusters Canada. The head of its SIU unit, Glen Gibson, who I spent some time with, maintains the technique adopted by his team has proved by far the most successful, especially as it is nonconfrontational. An innocent person should not be affronted by such an interview. Indeed, egression on the part of any interviewer is counter productive.

Particularly, the question of hand writing and typed evidence from claimants can be scrutinised for deception. Hand writing technique is important but more so, sentence construction, choice of words and general description/composition can be vital clues to the educated investigator. Consider the importance of this knowledge to a Claim's Examiner, who can then more accurately detect deception and pass the matter on for professional investigation.

Professor Foster will be touring Australia in March/April and will be lecturing in Brisbane, Sydney, Melbourne, Adelaide, Perth and in Auckland, New Zealand.

Specific details of his talks are included in a flyer within this issue of "Firepoint".

(A paper presented by Station Officer Ian Krimmer, NSW Fire Brigades Regional Fire Prevention Officer, to the NSW AFI Seminar held in Sydney on 3rd August, 1995)

"To take a fire crew with it's gleaming red fire engine with red lights and sirens to the school and teach 'Don't Play with Matches', is like sitting a child in a candy shop and expecting the child to learn about the dangers of tooth decay!" (anon)

Question: In our good natured attempts to educate our youth have we unwittingly compounded the very problem we have been trying to stop?

It is documented (Kafry, 1980; Cole et al., 1986) that children, especially boys, from the age of two onwards will progress through a period of fascination with fire.

For many, it will simply be the birthday candle, the "...please light it again..." syndrome that most parents have experienced. For many others it will progress onto more intense fire experimentation and **fire play**. For some, sadly, a pattern of **firesetting** will be established in the early impressionable years when it is quickly realised that a cigarette lighter is an effective weapon that can be carried, legally, in the pocket and quickly utilised to attract attention, fight back, destroy or even kill.

The Facts: NSW Fire Brigades attends about 35,000 fire incidents annually. Every year about 9,000 of these fire incidents are attributed to children under the age of 16 years.

It has been estimated (Fineman, 1980) that only 10% of fires lit by children are brought to the attention of fire departments, the other 90% being discovered by parents etc and extinguished without further assistance being required.

It is therefore suggested that in NSW some 90,000 fires are lit annually by young children. These figures are frightening when it is considered what the potential of a young child in the possession of a cigarette lighter, unaware of the potential risks, can inflict on themselves and their immediate environment.

At the July 1994 conference I stated that in Region North, it was determined to undertake a study of the child firesetting problems. The following represents some of the findings since July 1994.

Area

- * Northern Sydney Suburbs
- * Central Coast
- * Newcastle
- * Coast strip to Queensland

Fire Stations: 115

Servicing a customer base in excess of 1.8 million people (1991 census).

IDENTIFIED CHILD FIRESETTERS

Enquiries received at North office 423 clients

Male Firesetters 417
Female Firesetters 6

The following information was received from parents, and in many cases represents an estimation only.
eg "Do you have any idea of how many other fires your child may have lit?"

How many fires (estimated by parents) 5,076

Most common place for fire lighting (estimated)
3,786 inside - bed/living rooms

Most common igniter used
Ratio of Lighters:Matches 7:1

Most common source of igniter
Found in kitchen/lounge

Most common time of day
5.30 - 11.00 a.m.

Most common day of week
Sunday (then Saturday)

Estimated of damage caused
\$800,000

Most common types of property damage
Burnt carpet, small furniture, linen, paint damage

Injuries
63 minor, 4 admissions
Most common injury
Burns to fingers

Times brigade called
82 (1.62% of fires set)

SOME SCENARIOS

COMMON

The following list does not provide a typical profile of a child firesetter. It simply shows an entire range of various issues that have been regularly identified in NSW case studies. Often, but not always, one or more of the following will be identified:

Male

2 - 8 years old

Extremely curious

Extremely intelligent

Enjoys experimentation and exploration

Single parent home - living with mother

Either no "father figure" present or there will be a constant change of adult male

Recent trauma, such as moved home, school

Lower socioeconomic profile

Attention Deficit Disorder (ADD, Hyperactivity)

Recent new baby

Feels neglected

Low self esteem

Poor communicator

Parents are poor communicators

Slow learner, poor reader

Behaviour problems at school

Difficulty in relating with peers

Often prefers adult company

Abused physically, sexually, mentally

Easily influenced by peers

SOME NEW APPROACHES

The NSW Fire Brigades North Region is aggressively instigating some new approaches to these problems. With the backing of the Region North Senior Management Team, and in conjunction with

the States three other regions, the following areas are being investigated and implemented.

1. PRIMARY INTERVENTION

The first time we meet the children, usually in the pre-school environment, are we achieving our objective of teaching the child appropriate fire competent behaviours.

2. SECONDARY INTERVENTION

How do we best deal with a child who is identified as having inappropriate fire competencies or behaviour?

This child is often:

- a) met on the fireground
- b) brought to the fire station by a concerned parent
- c) brought to the attention of the Brigade by a teacher, welfare worker, police officer, criminal justice system etc.

PRIMARY INTERVENTION

All children from the age of two years onwards, will become curious about fire. This is a normal phase of growing as they experience the environment around them. The major problem is that most younger children have no concept of the potential life threatening properties of fire. Most youngsters have no understanding that clothing and skin can burn.

Traditionally the NSW Fire Brigades has responded to requests from pre-schools for fire engine visits etc. There is some concern that maybe there

is a better approach to child fire education and safety.

Recent studies, particularly in Melbourne during 1993 and 1994, have revealed that there are concerns that when children see a fire engine, meet the firefighters, hear the siren etc, there is a high probability that fire curiosity will increase, particularly in boys from the age of two onwards. This is probably due to the high level of excitement that a fire engine, its crew and equipment create.

All firefighters enjoy going to fires; we wouldn't be in the Fire Brigade if that wasn't true. Unfortunately, children are very perceptive! No matter how hard we try we can't avoid imparting this impression to children that fires are exciting and sometimes fun!

To address this concern we are trialing what we believe is a better approach.

Before we show children our fire engines and fire stations we must ensure that all children have an understanding that fire is a **"Negative Experience"** - Fire kills and destroys.

As members of the NSW Fire Brigades, we are amongst the most proficient and professional fire combat agencies in the world; however, our skills do not always extend to the recognised and specialised expertise required in child education.

We now ask **THE TEACHER** to conduct some lessons on our behalf.

The pre-school is now requested to conduct two simple fire safety lessons on our behalf, using the guidelines we provide. The objective is to teach children some simple "Negative Aspects" about fire prior to our visit.

The two KEY FIRESAFETY BEHAVIOURS taught by the teachers are:

Unit 1: Stay Away From Hot Things That Can Hurt.

Unit 2: Tell a Grown-up When You Find Matches or Lighters.

The Fire Crew now visit and conduct a follow up unit:

Unit 3: Toys are OK... but Matches... NO WAY!

Despite our best efforts, we still recognise that children will always light fires! We therefore need a back-up system!

SECONDARY INTERVENTION

... when all else has failed!

In 1990 the NSW Fire Brigades commenced a programme in an attempt to address the alarming statistics of child related fires. The programme is designed to intervene where a child fire lighter had been identified to determine if further assistance could be required.

HOW THE PROGRAMME WORKS

The Intervention Programme is a free service. Information and discussion pertaining to every case is private and confidential. Participation is voluntary and without coercion.

1. *Attempt to determine WHY the child is lighting fires.*

2. *Determine the MOST APPROPRIATE course of action.*

ELIGIBILITY CRITERIA

The eligibility criteria for children entering the programme is:

Child aged up to 16 years

Child has played with fire on three separate occasions or has started at least one fire which resulted in injury or significant property damage in the past 12 months.

When a parent or authorised care-giver makes contact or is referred to the Fire Prevention Officer, a questionnaire that has been approved by child psychologists is utilised to assess the suitability of the child to enter the programme.

On some occasions, a child who does not meet the criteria is accepted to the programme.

Once the questionnaire is completed it will generally indicate the action to be taken. There are 4 usual courses of action, one of which is selected.

1. *The child enters the programme, or,*

2. *The child and family is referred to social, medical or psychological professionals, or,*

3. *Child enters the programme and the Intervention Officer works in conjunction with social, medical or psychological professionals, or,*

4. *Where a child has played with fire on less than three occasions, the parent is provided advice and support over the telephone, but is advised to ring immediately if the problem becomes more serious.*

WHEN A CHILD ENTERS THE PROGRAMME

The first thing that happens is that a brief 'fire competency assessment' is conducted. After finding out what the child already knows about fire and its dangers, a specific programme is devised for that particular child.

A discussion is then held with the parents or care-givers, explaining the programme and emphasising the importance of their support.

WHAT HAPPENS IN "THE PROGRAMME".?

When a child enters the programme the following will generally occur:

1. *Intervention Officer conducts an education programme to the child in the home.*

2. *The child makes a promise/agreement not to play with or light fires.*

3. *The child care-giver and Intervention Officer agree on a penalty should the child break this promise/agreement*

4. *Intervention Officer and care-giver decide on a suitable reward when the child reaches the nominated time without breaking the promise/agreement.*

5. *The child signs a promise/agreement (depending on age) not to light any fire for a nominated time.*

6. *The child is appointed as a Home Fire Safety Officer.*

7. *Intervention Officer keeps in contact with the family to monitor the child's progress over the nominated time period and sends small rewards for good behaviour.*

8. *Intervention Officer arranges a visit to the Fire Station, certificate is presented on the condition that if the child ever breaks their promise/agreement the special certificate must be returned.*

9. *Intervention Officer continues contact for 12 months to monitor progress.*

10. *Intervention Officer closes the file if no recurrence of firelighting after 12 months. If at any time there is a recurrence of firelighting, the child is immediately re-assessed.*

HOW TO SPOT A LIAR

(Material from the Victorian Chapter 1995 seminar).

There is an old joke about how to tell when a politician is lying, which runs as follows. When he smiles, he is telling the truth. When he points an accusing finger, he is telling the truth. But when he opens his mouth, he is lying. Clearly, in real life no such easy and simple criteria apply. But there are certain behaviours which occur more often when people are lying than when they are telling the truth.

Leakage (nonverbal behaviour which an individual fails to control and which can give clues as to the real truth) most frequently occurs in the lower half of the body. Shuffling the feet, twitching the toes, crossing and uncrossing the legs, increase in number when we are trying to deceive others.

Attempts at deception do also involve the upper half of the body to some extent. Facial expressions may be capable of control, and an accomplished liar may be able to maintain eye contact with his listener, but the movements of the hands are less easily controllable. One gesture has been found to be common amongst those seeking to deceive. This is the hand shrug in which the hands are rotated so as to expose the palms. It is used to signal helplessness. It is as if deceivers were trying to enlist our sympathy because they could not help themselves.

Touching the side of the nose, touching the eye, licking the lips, drumming fingers and gripping arm rests whilst not in themselves being indicative of falsehood, occur more often when people are attempting to deceive others. It comes down to context. We have to remind ourselves that there are very few pieces of body language which have meaning on their own regardless of context.

Albert Mehrabian, when he investigated how people behaved when they were conveying truthful messages and how they behaved when the messages were untruthful, discovered that those who were lying talked less, talked more slowly, and made more speech errors. Their rate of body movement also seemed to be slower.

Blushing, perspiration, voice tremors, gulping, shaking and playing with pencils or spectacles are some other fairly obvious activities to watch for in people who are not telling the truth. Liars are less likely to engage in bodily contact or even to approach closely. Their body language very often contradicts their spoken words. For instance, they may say they would be very willing to submit themselves to a full enquiry and yet their facial expression may show distaste and their gestures and posture may be closed. Body language is nearly always a better guide to the truth than even the most eloquent words.

*From: Body Language,
Gordon R. Wainwright,
Hodder & Stoughton, 1993.*

ARSON FRAUD FROM THE PERSPECTIVE OF THE FORENSIC ACCOUNTANT.

by Fiona Bateman

Part of a paper presented to a meeting of AFI (NSW) by Fiona Bateman, partner in Dolman Bateman, Chartered Accountants.

Summarised below are some of the common areas addressed in order to give the true picture of a business.

1) *Sales Trends.*
Decreasing sales often indicate difficulties in trading.

2) *Cost of Sales.* Profit figures can be manipulated through over and understatement of stock. Reported stock often includes obsolete or worthless stock. Check for quality control. Check the records for returns of stock.

3) Normal expectations for investment in a business are reasonable wages and return on capital.

a) Wages

Analyse wages records. Check whether the employer is complying with all financial obligations for their employees (superannuation, workers compensation, tax payments, payroll tax, etc.).

Check for family members working in the business for little or no wages. One investigation revealed a shop with the following hours of opening:

Four days 10 - 10 (60 hrs)

Two days 10 - 11 (26 hrs)

Additional person (23 hours)

TOTAL 109 hours

A minimum expected wage to the owners for a total of 109 man hours per week at award rates would be \$1,293.69 p.w.
\$1,294 x 52 weeks = \$67,272.

In this case, the owner and his parents had worked for 18 months for no wages. The business was making losses.

b) Return on Capital

A minimum expected return on investment dollar would be equal to bank interest rates as this is a risk free environment. Usually the higher the risk, the greater return required.

4) *Analyse Directors and Owners Loan Accounts.*

Often the owners are drawing far in excess of the profitability of the company. For example:

Case A: The partnership showed a profit to the partners of approximately \$9,000 per annum. The drawings of the partners were between \$40,000-\$90,000 per annum in the 3 years previous to the fire. The result was increasing debt.

Case B: The insured drew \$41,000 for the 18 months of trading and the company was making losses.

5) *Analyse Bank Accounts.* One investigation showed a credit bank account which seemed unusual as the business was suffering financial stress. Investigation showed large deposits which were unusual in the type of business. It was revealed the whole family was using the one account for their banking. Check for dishonored cheques and increasing loan facilities.

6) *Test whether the business can pay its debts when they fall due.* Investigate suppliers' invoices, check for time outstanding and if they are being paid in full or part paid. Often creditors are understated. One company

investigated reported a profit of \$37,000. Our investigation proved a loss of \$150,000 when all outstanding creditors were accounted for.

Check whether they are complying with all financial obligations such as superannuation, workers compensation, tax payments, sales tax and payroll tax, and any other relevant industry obligations.

7) *Check the existence of all assets and have valuations prepared.* Some assets have proven not to exist or have no value or are merely accounting entries e.g. goodwill, intellectual property.

8) *Check Debtors.* These are often overstated and often include slow payers and possible bad debts.

9) *Check the insured's personal debts, credit cards, etc.* Have a search done to ensure they have advised of all directorships, etc.

10) *Check legal fees.* These are often paid to chase bad debts or indicate possible litigation.

11) *Check advertising costs as this could indicate the insureds were trying to sell the business.*

12) *Look at how quickly the insureds have attempted to re-establish themselves.*

13) *Check repairs and maintenance costs.* These can indicate problem areas within the business. For example, we found a bus company had numerous defect notices placed buses.