

FINAL REPORT

on

ARSON INFORMATION RESOURCES:
A BASELINE COLLECTION AND SURVEY

Prepared under
Grant Number NFPCA-76044

to

NATIONAL FIRE REFERENCE ^{Service}~~SYSTEM~~
NATIONAL FIRE DATA CENTER
NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

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PREFACE

This document summarizes the research and development activities carried out under National Fire Prevention and Control Administration Grant Number 76044, "To Assist in the Design, Development, and Implementation of the Arson Information Center". The period of performance for these activities was June 15, 1976 through February 28, 1977.

This activity was carried out with the assistance and support of a large number of arson investigators and other personnel in both government and private industry who are dedicated to correcting the destructive effects of arson in this country. It is their report because it expresses their needs. We are indebted also to the NFPCA and the American Insurance Association for the time and energies of a number of their staff members in assisting us in developing this report.

We would also like to acknowledge the efforts of Battelle's Clarence Chaffee and Richard Weirich for the development of the interim manual processing/retrieval system, and in addition, Cathy Goettge, Gloria Janis, Janice Jarvis, Bob LaBounty and Don Patrick for their efforts in assembling and categorizing this baseline collection.

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EXECUTIVE SUMMARY

Responding to the urgent national need to develop information resources to combat arson, Battelle in 1976 proposed to the National Fire Prevention and Control Administration "To Assist in the Design, Development, and Implementation of the Arson Information Center". With the partial financial support of the American Insurance Association a grant was awarded to Battelle to survey and obtain the arson documentation available in several major cities over a six-month period. While this activity was not designed to produce a complete national information resource on arson, it was designed to provide the beginnings for such a resource in rough form. Before the best utilization can be made of the documents which were gathered, they must be subjected to detailed analysis.

Early in the activity it was decided to approximately double the number of sites to be visited by the Battelle research team, thus providing a more representative national collection and including information on significant arson problems in nonmetropolitan areas. Specifically, we sought information which could be used in any of three ways:

- To enhance the professional knowledge of those who need and use information about combatting arson, both in industry and government
- To provide useful bases for the development of training materials to combat arson
- To provide useful bases for the development of public understanding of the arson problem.

Twelve needs-area categories which had been identified by leading arson investigators were chosen as reference points to reflect the character of available information and represent subject areas where more information, and particularly better development of information resources,

is necessary. Uses of the information materials were categorized and an interim manual processing/retrieval system was developed. Approximately 800 documents were processed through this system and referenced on 7000 file cards. In addition to printed documents (books, reports, texts of speeches, seminar outlines and presentations, course outlines and instructional texts, articles, etc.), this collection includes audio-visual materials (slides, photographs, films, and videotapes), and representative case files which were selected by arson investigators and those individuals responsible for controlling the spread of arson. (The materials are listed in Appendix A.)

Battelle's concern in this activity went considerably beyond assembling a collection of documents which are representative of the total arson information picture. *As we had expected, such a collection can be useful only in showing the type of information that is available, not what should be available to meet the needs of potential users.*

Recognizing the National Fire Prevention and Control Administration's need to have a useful, developed collection of arson-related materials as soon as possible, we first examined the materials we acquired to find those which are so well developed that they can be used immediately. A total of thirty items were identified in bibliographic format for just such a collection. Then, a more painstaking effort was undertaken to characterize all of the documents, to begin to identify their strengths and weaknesses, and to recommend areas of improvement. For this in-depth analysis several of the needs-area categories were chosen.

We found that many of the available documents are "reinventions of the wheel": revised versions of the same information on why arson is a problem and what basic steps are followed in identifying fire causes, gathering evidence, interrogating suspects, and preparing cases for court. We summarized, "In particular we have noted shortages of information on the more sophisticated aspects of arson detection (particularly

in difficult circumstances, handling and laboratory analysis of evidence, particularly the precise laboratory identification of substances used as accelerants), and case preparation and documentation. There also was a lack of valid statistics on the occurrence and costs of arson. In addition, there was little definitive information on the mechanics of cooperation between fire and police departments and between public agencies and private agencies such as insurance companies. Also lacking was the type of information which could explain the duties, functions, and requirements of arson investigators to city managers."

Despite these shortcomings it was possible to identify, often in raw form, significant information resources which could be used in developing specialized information modules or products. Such development is an *analytical* function, requiring both the expertise of the information communicator and that of the subject matter expert, together with the concern of those who can respect the confidential nature of many of the basic materials. For this reason, we recommended the future development of the Arson Information Center as an information analysis center type of activity. Such a center, which can be initiated on a small or large scale depending on available resources, can have three particular types of benefits:

- By developing the cost effectiveness of a national effort which presently is marked by diffusion, inconsistencies, and the lack of clear objectives, as well as by poor information exchange,
- By serving as a spearhead for a meaningful attack on arson, and
- By providing a continuous flow of timely and accurate information based on problem recognition, definition, and solution.

ARSON INFORMATION RESOURCES:
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INTRODUCTION

The 1970s marked the beginning of a new spirit of attack on America's fire problem as a *national* problem. Set up under an Act of Congress, the National Commission on Fire Prevention and Control developed its pace-setting report, America Burning, which was published in 1973. Significant attention was brought to arson as one of the principal causes of our fire problem in a report prepared in 1974 for the Department of Justice (Law Enforcement Assistance Administration) by Stanford Research Institute. In 1975 the National Academy of Sciences held a conference on arson and incendiarism, and during that year Battelle conducted its Resource Assessment for Arson Education and Public Awareness for the Ohio FAIR Plan Underwriting Association. In 1976 the new National Fire Academy of the National Fire Prevention and Control Administration supported two leadership seminars on arson among its first activities. Publication of the seminar report on Arson, America's Malignant Crime was soon followed by the release of a comprehensive Survey and Assessment of Arson and Arson Investigation for the Law Enforcement Assistance Administration of the U.S. Department of Justice. In mid-1976 Battelle began the information acquisition activities which are covered in this report under an NFPCA grant supported in part by the American Insurance Association. All of these projects and programs, plus a number of innovative state and local activities such as those of the newly formed state advisory committees on arson, are resulting in an awareness of the problem which is perhaps greater than ever before. At the same time, however, the burning of America continues. On the basis of incomplete statistics, the property losses due to

incendiary and suspicious fires at least tripled during the first five years of the decade.¹

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1. Fire Protection Handbook, Fourteenth Edition, NFPA, p. 1-27 and Survey and Assessment of Arson and Arson Investigation, Aerospace Corporation, p. 14. (Statistics based on a national sampling rather than a complete compilation.)

BATTELLE'S PROJECT OBJECTIVES

In its Resource Assessment for Arson Education and Public Awareness, conducted for the Ohio FAIR Plan Underwriting Association in 1975, Battelle identified twelve "needs areas" of arson-related training and information program content. These areas reflect the character of information which is available and also represent subject areas where additional information is necessary. More than 30 leaders in the arson detection field reviewed these categories and were in general agreement with the Battelle listing. Further verification was obtained by comparing the Battelle listing with needs lists from other sources.² This identification provided a starting place for the identification of materials which are potentially useful. Following is a listing of the needs-area categories:

1. Orientation, general job descriptions of those concerned with arson
2. Size of the problem, how it affects the public
3. Fire sources and methods of arson
4. Classification of (incendiary) fires by reason or motive
5. Inspection of the fire scene
6. Interviewing and interrogation
7. Collection and preservation of evidence
8. Professional laboratory assistance
9. Legal aspects, corpus delicti
10. Case preparation and courtroom matters
11. Roles and responsibilities, including those of insurance industry
12. Workshops, case histories, set fires for training purposes.

Noting that available resources to address the arson problem are scattered widely and applied only in a limited way, we proposed an activity to provide a better understanding of these resources and how to acquire and utilize them. During this activity, two major objectives were pursued:

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2. The International Association of Arson Investigators in Selected Articles for Fire and Arson Investigators and The Aerospace Corporation in Survey and Assessment of Arson and Arson Investigation.

- To acquire and catalog a baseline collection of printed materials relating to arson so that the National Fire Technical Information Center of the National Fire Prevention and Control Administration could have these materials in a useful reference collection, and
- To locate, procure, interpret, and describe in a format suitable for input to a retrieval system other useful information from a limited but representative selection of primary sources -- both government and private sources -- in selected major cities so that this information could be screened and evaluated for use in filling needs related to arson that have been identified by Battelle and other groups.

During the process of resource development, we conferred briefly with representatives of Informatics, Inc., to determine the activities being included in their program to provide design criteria and recommendations for the National Fire Technical Information Center. During the final stages of our project activity we were given the opportunity to review the Informatics report³, noting the following references which pertain to arson information resources:

"In the early stages of the NFTIC it will be necessary to undertake special identification and collection tasks. One of them is already underway. This is a grant to Battelle for a collection of sample material related to arson and definition of collection methodology. The activity will identify data and information in a variety of forms and formats for potential collection." (p 5-18)

"In contrast to the reactive research and response activity that responds for requests for information, and the active information support, *we perceive a need for positive information activity that addresses a specific information problem for a target group. In these cases, there will be significant barriers to information use such as a non-existence of published information on a topic, or no channels of communication by which appropriate information can be disseminated. An additional barrier might be a lack of focal point for collection of information from diverse groups with a subsequent analysis of gaps and plans for future direction.* The subjects

3. Design and Recommendations for the National Fire Technical Information Center, Final Report, September 30, 1976.

of these activities will be parallel major issues of interest to the NFPCA. Examples of these positive action activities would include:

- The anticipated large-scale, nationwide canvassing for arson-related information and data . . ."

(p 6-22; italics are ours)

Informatics has put the arson information problem into a nutshell!

Rather than try to define arson in a legalistic way, we chose a standard dictionary definition: "The crime of maliciously burning the building or the property of another, or of burning one's own for some improper purpose, as to collect insurance."⁴ This avoids the semantic hangup that one can get into by attempting to shape one's definition by the way arson is interpreted in certain areas. (In some states, burning an automobile is not defined as arson; in Georgia, to cite another example, one could until recently burn one's own house without committing arson.) It also avoids the difficulties experienced by those who attempt to distinguish between "arson" and "incendiary", which our dictionary⁵ defines as "of or pertaining to arson".

4. The American Heritage Dictionary of the English Language, p. 74.

5. *Op. cit.*, p. 664.

THE INTERIM PROCESSING/RETRIEVAL SYSTEM

To provide a flexible resource which, later, could be developed into useful materials after screening and analysis steps, Battelle developed an interim manual processing/retrieval system for arson information. This system was designed to serve as a guide to the general contents of the materials. However, it was not built to serve potential users of the materials directly by providing fully developed information modules which are, by design, responsive to user needs. (This step will require an analysis of the materials together with a program to acquire and process documents which supplement those already available.)

The interim processing/retrieval system is "key-word based", but it does not benefit from a fully developed thesaurus of arson-related terms. (The NASA Vocabulary of Aerospace Safety Terms Pertaining to Cryogenic Safety, Fires, Explosions, and Structural Failure⁶ was reviewed and was found unsuitable for this specific use.) We have had discussions concerning the development of such a thesaurus by the Johns Hopkins University Applied Physics Laboratory. This thesaurus is expected to be available later in 1977. Within the interim system, each unit of material (speech text, journal article, slide set, videotape, seminar program, etc.) is considered to be a "document". Each document has been assigned an accession number (see Appendix A). Hard copy is to be filed in accession number order. A 5 x 8-inch card has been prepared for each document. (A typical card is shown in Figure 1.) This card contains the following *index terms* under which the document can be accessed:

1. Document title
2. Source of document
3. Author(s) of document if different from source
4. Accession number
5. Needs-area categories to which the document particularly relates
6. Major key words or phrases which describe document contents.

Each card has been duplicated in sufficient quantity to provide a separate file card for each index term. The cards have been filed under major

6. NASA Technical Memorandum TM X-73521.

TITLE: Engine Company's Responsibilities in Arson
Detection

00373
ACCESSION NUMBER

SOURCE: Fire and Arson Investigation Short Course, June 14, 1959, UCLA, 10 pp

AUTHOR(S): Spencer, G.L.

RELATED NEEDS AREA(S): 1, 3, 5, 7, 9, 11

KEY WORDS OR PHRASES:

Arson detection
Fire loss
Dollar costs

Fire scene
Evidence

Fire cause
Witnesses

Figure 1. Typical document card for interim manual processing/retrieval system.

index terms so that they may serve as retrieval mechanisms for documents in the collection. For example, one may use the file to locate all of the information from a particular author or source. One also may review the file to determine which documents relate to a needs area category such as "fire sources and methods of arson" (area 3). Or one may review the file to find which documents pertain particularly to such key words as "fire safety", "fire investigation", or "explosions".

Approximately 800 documents have been processed in this manner, resulting in a total of approximately 6700 individual file cards. While reasonable care has been taken to avoid duplication of documents, some duplication is inevitable in this preliminary compilation, particularly where documents consist of reorganizations of the same basic materials.

Quality Problems

In attempting to prepare a useful information resource, we were forced to recognize that there are many quality problems in what we have been able to assemble. Most of the documents and other materials assembled for the Arson Information Center display some or all of the following problems in interpretation:

1. Complicated by inconsistencies in reporting the incidence and seriousness of arson, there is a lack of identification and articulation in the documents of specific needs of arson investigators and fire marshals, of insurance personnel, and of law enforcement personnel and the courts. (Community leadership recognition of the seriousness of arson must precede the organization of an effective arson squad. But leaders cannot recognize arson if it is not reported to them by persons who have the necessary expertise to be considered reliable information sources.)
2. Complicated by inconsistencies in handling and reporting arson case particulars, there is a lack of documentation of specific community resources and organizations to combat arson. (We have seen no valid bases for either quantitative or qualitative comparison of arson squad effectiveness, level of staffing, training, etc.)
3. Even within instructional offerings for seminars, meetings, and local courses there are not enough clearly defined training or educational objectives. (Anecdotal materials which help set the scene and produce good feeling within a group are necessary, but often

crowd out the instructional content of a seminar where time is limited.)

4. The quality of the information that is gathered for later interpretation is influenced by the credibility and stated purposes of the gathering organization. Particularly in the case of arson, there is a reluctance to hand over information without a specific understanding of how that information will be used. (As the development of a national arson information resource continues, we expect also the development of such an understanding.)
5. It was not the purpose of the activity to develop procedures for handling sensitive information about arson on a national scale. Therefore, we have obtained and indexed only a minimum representation of materials of potentially sensitive nature. (In particular, arson case files contain potentially useful information about investigation, reporting, case preparation, modes of operation of arsonists, etc. This "raw" information requires extensive analysis before it can be released as useful products.)
6. The arson information picture is complicated by poor understandings of how the crime actually is committed, as well as detected. "Experts" at arson seminars may present elaborate fire setting schemes which are not grounded in verifiable reality. There is also little information on validation of detection techniques, even for accelerants. (A retired state fire marshal lamented in a talk, "There is no one to investigate the fire investigator.")

These six problems reflect the newness of arson as a subject for systematic investigation. There is no standard body of knowledge or terminology in the field, and until such a body is accumulated there will be a lack of standards for judging the validity and accuracy of each piece of information that is collected. As a start in developing such standards, we have conducted a limited exercise in qualitative evaluation within specified needs area categories. This exercise was confined to documents which had not been placed in reference works such as Selected Articles for Arson Investigators or the (California) Arson Investigation Handbook, which presumably already have been evaluated by professional editors. This examination shows that the available materials have characteristics which can be developed into a useful reference file. But meanwhile, those who would design instructional and information programs based on available resources should observe the principle of caveat emptor!

USERS OF INFORMATION MATERIALS

The users of the National Fire Technical Information Center were defined by Informatics³ (above) to include the National Fire Prevention and Control Administration (NFPCA), other federal government organizations, local and state governments, the fire services, building code and enforcement officials, the building design industry, the building materials and furnishings industry, the insurance industry, the fire equipment apparatus industry, research organizations, and the general public and other groups. Most of these categories of users have needs and requirements related to arson. In this section, we will specify many of these needs and will broaden the listing of potential users to include those individuals and agencies which share a growing concern over arson as a social phenomenon.

National Fire Prevention and Control Administration

An important NFPCA use, particularly of the baseline collection of printed materials, will be in developing and interpreting an understanding of the arson problem. The information file also will be useful to the NFPCA in delineating current efforts relating to arson control now going on in major cities. The Public Education Office should be able to make particular use of materials which describe the nature of the arson problem and show its consequences in cities such as New York and Chicago. The National Academy for Fire Prevention and Control should have specific interests in all materials (including videotapes) which refer to seminars and training programs. We suggest also that the Academy become particularly concerned with defects in these materials which we have identified later in this report.

Other Federal Government Organizations

Because arson accompanies urban blight, there should be particular interests in this problem by the Departments of Health, Education, and Welfare and by Housing and Urban Development. However, the literature

is lacking in references which relate arson to its ultimate community and social causes. (This is a serious defect.) Federal agencies concerned with rural problems should share an interest in arson in rural areas, another subject which lacks definitive treatment. Even in its present raw, unanalyzed form, the information on the impact of arson in individual communities -- as well as its impact on the insurance industry -- should be of significant interest to Congress and to agencies of the Executive Branch.

Local and State Governments

At the local and state government levels there are needs to develop an understanding of the consequences of arson and to develop control mechanisms. The former need is quite well served by the literature; however, the latter is not. The legal aspects of control mechanisms such as arson squads and task forces are covered to some extent; however, there is a lack of information specifically designed for the *prosecutor*, who may be the key to stopping arson.

Cost effectiveness information is required both on local and state levels so that administrators will be able to know if increased support of arson detection and prevention will reduce the costs of fire suppression. This is important because combatting arson must be able to compete with other demands for uses of local and state tax revenues.

The literature is beginning to provide some information of interest to legislators who are considering statutory improvements which may assist in the identification and prosecution of arsonists and which may facilitate cooperation between public authorities and insurance companies.

The Legal Profession

Lawyers who serve within government agencies or who are employed by insurance companies or practice privately have specific information needs. These needs are related to specific types of cases and case strategies as well as to the interpretation of arson laws. Here, again, the *prosecutor* must be firmly grounded in the subject,

prepared to spend extra time on technicalities which might not seem important in other cases. Fortunately, it is already possible to identify a small but growing group of attorneys whose contributions in this area can be employed as national prototypes. (This is particularly true in civil areas such as insurance fraud.) Also, it should be possible to identify a number of judges whose decisions on arson cases could be made widely available. Where insurance companies and organizations (such as the Massachusetts FAIR Plan) have taken special pains to defend arson claims in the courts, their efforts should be documented and made available.

The Fire Services

Within the fire services there are many significant job-related needs which can be addressed by an Arson Information Center and which are filled in part by the available collection. There is a wealth of information on *basic techniques* of arson investigation, supplemented by a number of case files which are intended for professional use only. A baseline collection of materials has been identified which, for the most part, should be directly useful. Other materials in the available collection need development and analysis for effective utilization. Some of those who should receive particular benefits from an Arson Information Center are fire service planners, fire chiefs, training officers, fire marshals, arson investigators, and fire prevention specialists. There also are continuing needs for better information on fire cause identification for firefighters.

To quote the Informatics report³, "The information needs of the fire services will not be served by merely making existing information accessible but will require packaging of some of the information in a form that can be easily applied to their concerns." *The same is true for all other user groups!*

Individuals concerned with building codes, building design, building construction, and building furnishings

These individuals come from many professions but share interests in preventing arson and suppressing arson fires. There is

little information in the literature on how to "arson proof" a building, but such information might be developed by competent professionals. For these individuals there is a particular need for analyses which show the types of structures (such as nursing homes, night clubs, urban apartment buildings, etc.) which are most likely to become the targets of arsonists.

The Law Enforcement Services

Arson represents the most direct area of congruent interest between the police and fire services. For this reason, there should be a sharing of arson information between the National Fire Technical Information Center and counterpart organizations within the Department of Justice. In particular there should be free exchange of information on those aspects of arson investigation and prosecution which closely resemble the investigation-prosecution continuum for other crimes. Within the documents assembled for the initial collection there is some useful information on scientific crime investigation techniques which can be supplemented by information from the Department of Justice. (However, the arson information has its own particular defects which must be corrected by more precise information and data on fire cause identification.)

Police services can benefit from the arson investigation techniques of the fire services and should have access to information modules specially developed to fill their own needs. The sharing of information through an Arson Information Center may lead to better understandings by the fire and police services of each other's problems.

The Insurance Industry

Major assistance to the insurance industry would be afforded by the development of better arson statistics, both generalized statistics and specific, local statistics. The information that we have been able to assemble only provides an understanding of the difficulty in obtaining such statistics. While the direct development of arson statistics is not a function of the National Fire Technical Information Center, the Center could supply useful analyses of statistics obtained from federal and private information sources.

Practically every aspect of the arson problem has insurance concerns, and there are many types of individuals within the insurance industry who need specific information products: private investigators, legal representatives, adjustors, underwriters, claims supervisors, public information specialists, and executives. Many of the insurance needs are similar to those of the fire and law enforcement communities. In addition, there is a particular need for information which can be used by insurance companies in defending arson claims in civil court. Within the initial collection assembled for the Arson Information Center there is useful insurance-related information which needs further development. Because insurance requirements, laws, and restrictions are subject to continuing change, any basic information collection should be subjected to constant review and updating.

Within the insurance industry, professional groups such as the National Association of Independent Insurers, the American Insurance Association, the American Mutual Insurance Alliance, the Federal Insurance Association, the Factory Mutual System, the Insurance Information Institute, the Property Insurance Plans Service Office, and the National Association of Insurance Commissioners form vital communication links and should be viewed both as users and as producers of arson information.

Cooperative Groups

Within many states and some large cities, cooperative groups between government and industry are being formed with the specific purpose of stopping arson. (Examples of these groups are the Illinois Advisory Committee on Arson Prevention, Atlanta's METRO association of public and private investigators, and the recently formed "A Texas Advisory Council on Arson".) These groups have needs in all areas of arson prevention and control and could benefit both from basic materials on arson investigation and the arson problem and from developed information modules which pertain to particular local problems (such as arson in changing neighborhoods). In addition, there is a particular need among these groups for a medium of information exchange such as a continuing newsletter which addresses similar problems they are having in their organizations and development.

The Banking Industry

As the relationships between arson and the financial aspects of building construction and building management become clearer, we see an increased information need developing within the banking industry. While this industry probably will not become a major user of an Arson Information Center, a need is emerging for developed information on both the opportunities and responsibilities for financial institutions and their officers to address the arson problem. The available collection would provide bankers with a useful understanding of the size of the arson problem, but specifically developed information resources are badly needed.

Research Organizations

A number of public research organizations (such as the Bureau of Standards and the Defense Civil Preparedness Agency) and private organizations (such as Battelle Memorial Institute, the Aerospace Corporation, and the Institute for Puget Sound Needs) are accumulating information and experience on arson. The expertise of these groups is already available and should be utilized for further development of information resources. In addition, these organizations should be encouraged to share in information that is available and to further develop the types of information and data which have been identified during the project covered by this report.

The International Association of Arson Investigators and other similar organizations

We have singled out the IAAI because it is the largest and most comprehensive national group that is specifically devoted to curbing the arson problem. But there are also other organizations which have needs in this area, ranging from the International Association of Chiefs of Police and the International Association of Fire Chiefs and the Joint Council of Fire Service Organizations, to the International Association of Fire Fighters and the International Association of Professional Black Fire Fighters, to the International Association of Fire Photographers and the California Conference of Arson Investigators. Members of these groups

should, of course, benefit from information that is specifically related to their own duties. While there is much job-related information in the initial file, this information needs further development and organization, and there are numerous deficiencies. (For example, the subject of arson photography particularly needs further development.) In addition the organizations can benefit from generalized treatments of the over-all arson problem, some of which are found in the literature. By having information available on what others are doing, the organizations can support their own efforts to curb arson.

Individuals, government agencies, and organizations in other countries

The information-gathering activity summarized in this report was restricted to the United States, although a small amount of information on the arson problem in Canada also was made available. From correspondence, we know that other countries share significant interests in arson and arson information exchange. Because other countries constitute potentially useful information resources, and because of the possibilities for information exchange, this subject should be developed further by the NFPCA.

The General Public

It is presumed that most interactions between an Arson Information Center and the general public would be handled through the NFPCA Public Education Office. In particular, we could obtain certain significant documents for the initial collection *only with the understanding that they would not be disseminated directly to the public.* (The reasons for this are discussed later in this report.) However, to become aware of the arson problem and to assist those in government and industry who are fighting arson, improved public understanding of the problem is a *prime necessity.* Many of the materials assembled for the initial collection can and should be used in developing such an understanding, and there is a particular need for producing materials (such as a public awareness film) which are designed for public release. One way the existing materials can be particularly helpful is in showing local and

state groups what can be done to stop arson. Some of the best public education materials we have seen (and obtained) are locally produced, and the story of how they came about needs to be told to a national audience. On the other hand, in some areas we have seen concerned professionals trying to do something about the arson problem but constantly frustrated by a lack of ability to motivate the public or to involve public communication media.

SCOPE OF COVERAGE

Through its previous project experience the research team had developed an understanding of the scope and the extent of the arson problem in the United States. We were able to capitalize on this understanding in selecting a group of cities which are broadly representative of the nation as a whole for our collection activity. In addition, we were assisted by officers of the International Association of Arson Investigators in selecting both cities and individuals to be contacted. Eight cities were chosen for the initial sampling: Atlanta, Chicago, Cleveland, Denver, Houston, Los Angeles, New York City, and Seattle. Because of the importance of arson in other areas, particularly non-metropolitan areas, and because of the availability of specific materials which were identified in other visits, we also were directed to several other stops: Austin, Texas; Boardman and Shaker Heights, Ohio; Bloomington, Illinois; Coronado and San Bernardino, California; Prince George's County, Maryland; and Miami and Ocala, Florida. In addition, materials were added from Battelle's files.

The research program sought to identify available information and then to categorize it. Therefore, rather than present each agency we visited with a "shopping list", we used an open-ended interview technique. To provide each person we contacted with a definition of our objectives, we distributed a one-page "fact sheet" describing the scope and purposes of the activity. This was supplemented as necessary by letters of introduction from the Administrator of the NFPCA and the former chairman of the Arson Committee of the International Association of Chiefs of Police (see Appendix C).

Discussions in the major cities were concentrated in those agencies which have direct responsibilities for arson investigation, most frequently in fire departments but also in fire-police task forces, sheriffs' offices, and offices of state fire marshals. In order to complete a representative collection, we also contacted others who have been involved in developing arson training and public understanding materials, primarily for insurance companies.

PROPRIETARY AND CONFIDENTIALITY PROBLEMS

Information relating to arson is *not* freely exchanged between groups or individuals which are involved in combatting the crime, nor is it freely exchanged even in the same community between groups and individuals with different professional interests, such as arson squads and insurance companies. The reasons for this reluctance must be understood by those who operate an arson information center, and measures must be taken to remove such obstacles if a center is to operate effectively. It will be useful to document successes and problems of current efforts to exchange information through arson task forces and state advisory committees.

Legal interpretations of privacy and freedom of information stand in the way of the exchange of information regarding arson cases, suspected and known arsonists, and those who establish for-profit businesses of setting fires. Because of these interpretations, no effort was made to obtain information on specific arsonist's activities. It should be pointed out, however, that without exception the arson investigators who we interviewed stressed the need for developing some medium of case-specific information exchange.

At the insurance community level, the American Insurance Association has taken the lead in proposing to develop a nationwide property loss data bank which would serve the entire insurance industry. A broad program has been developed and its objectives have received initial approval from legal evaluators for matters of privacy, antitrust restrictions, etc. The Association's Executive Committee in February, 1977, approved marketing the program to a wide spectrum of the insurance industry which has already expressed its support. When sufficient funding has been obtained, a final system development and legal review will be conducted, leading to the expected authorization by the Executive Committee to implement the program as soon as possible. (The present target is early 1978.)

We recall three specific recommendations made to the NFPCA during the 1976 Leadership Seminars for Developing a Coordinated Attack

on Arson⁷: (1) that user committees be formed to work out compatibility between federal and (proposed) insurance industry fire data and information systems; (2) that the NFPCA, with the cooperation of the insurance industry, should organize a legal advisory committee to determine how information about fire insurance claims and fire causes can be shared between public and private agencies (a subject which is being partly addressed by state legislation such as Ohio Senate Bill 462); (3) that there be an immediate study of the Fire Marshal Reporting Service to see if it can be improved as an information exchange mechanism (The national bomb information center activity of the Law Enforcement Assistance Administration might be studied as a useful activity of this type.).

There are other confidentiality and proprietary problems, however. In some cases individuals who have developed personal expertise in arson detection are reluctant or have not been motivated to share their techniques. (This problem also pertains to organizations which have developed training programs limited to their membership or for which they charge a fee in order to recover expenses.) More broadly speaking, there is the problem of handling information that is restricted in nature because it may be of value to arsonists or potential arsonists. We sought and obtained only a minimum quantity of information of this type to serve as a representation of resources which can be made available, consisting largely of specialized training materials (i.e., the film Firebugs, the San Bernardino County, California, Basic Course on Fire Investigation) and of arson files. *Procedures for handling such confidential materials must be developed for any arson information center both to insure proper access to the materials and to encourage the sharing of useful information.* As an interim measure, we have stamped such materials in the collection and on the appropriate file cards with the designation "STRICTLY PRIVATE".

The typical arson case files obtained from the actual files of the Cleveland, Seattle, New York City, Denver, and Houston fire departments are representative of resources which could be obtained in quantity providing problems of confidentiality are worked out. There

7. Arson: America's Malignant Crime, p. 20.

is an obvious need to sanitize such cases, removing references which might interfere with personal privacy. (This has been done only in part in the cases furnished us.) We recommend that such cases be treated as raw material for *information analysis*. Through the analysis of successful, and unsuccessful, arson cases it should be possible to characterize the crime of arson as it occurs in reality, rather than in theory. Analysis of a large number of case files can produce information on the use of accelerants, on fire cause identification procedures, on the preservation and handling of evidence, on reporting techniques, on interviewing and interrogation procedures, on the use of laboratory identification procedures, and on case preparation for court. As another result of such analyses, it should be possible to develop a "model" case reporting system with standardized procedures which are found to be most successful. Such a model system could facilitate the exchange of information between arson squads and possibly could be made to interface with an on-line data and information retrieval system.

THE BASELINE COLLECTION

All of the documents assembled during the information resource project are categorized by cards in the interim manual processing/retrieval system. However, for consideration by readers of this report as a basic arson investigation library, we have singled out a limited number of books and other materials for listing in bibliographic format. This listing does not cover all reference works on arson, but consists of *references which have been identified as particularly helpful by arson investigators* in cities we have visited. Also not included are references to U.S. Army explosives manuals which, though formerly restricted, are now available through private distributors.

Accidental or Incendiary, by Richard D. Fitch and Edward A. Porter. 1968. Charles C. Thomas, Springfield, IL. (brief text on most aspects of fire investigation)

Arson, by John Barracatto with Peter Michelmore. 1976. W. W. Norton & Co., Inc., NY. (Some may be offended by the language of this lurid account, but the cases are true and, we have been told, typical of what confronts the New York City fire marshals.)

Arson: America's Malignant Crime. 1976. NFPCA, U.S. Department of Commerce, Washington, DC. (Final report on leadership seminars for developing a coordinated attack on arson held at Battelle Columbus Laboratories. Research team -- Phillip E. Fisher, Louis J. Hillenbrand, John T. Suchy. Presents specific recommendations.)

Arson, A Handbook of Detection and Investigation, by Brendan P. Battle and Paul B. Weston. 1954. Arco Publishing Co., NY. (reference text, needs updating)

Arson Investigation Handbook. 1973. California Conference of Arson Investigators, Los Angeles. Printed by Southern California Edison Company, Southern California Gas Company, and Pacific Gas and Electric Company. USE ORIGINALLY RESTRICTED TO MEMBERS OF CCAI. (Large collection of seminar papers and training materials; lacks illustrations)

Arson . . . Not Recognized as a Class-1 Crime: Why?, by Phillip E. Fisher, Louis J. Hillenbrand, and John T. Suchy, Battelle Columbus Laboratories. 1975. Ohio FAIR Plan Blue Ribbon Arson Committee, Columbus, Ohio. (Report on Resource Assessment for Arson Education and Public Awareness)

Arson, Some Problems and Solutions. 1976. National Fire Protection Association, Boston. NFPA Publication No. SPP-38 (compilation of articles from Fire Journal, Fire Command and Fire Technology)

Arson, Vandalism and Violence: Law Enforcement Problems Affecting Fire Departments, by Kenneth D. Moll. National Institute of Law Enforcement and Criminal Justice, LEAA, Washington, DC. 1974. (report on Stanford Research Institute arson study)

Automobile Arson (Slide-Tape Presentation). 1976. Prepared by the National Automobile Theft Bureau with cooperation of the Seattle Fire Department. (This presentation is being copied in Seattle and will be forwarded by Battelle to the NFPCA as soon as it is available. It is not part of the initial resource collection.)

Basic Requirements for a Good Adjustment. 1975. Metropolitan Chicago Loss Bureau, Chicago, IL. (useful brief insurance guide)

Circumstantial Evidence in Criminal Cases, by Alcus Greer. Not dated. Texas Commission on Law Enforcement Officer Standards and Education. (presents several cases, many of them arson cases, to illustrate uses of circumstantial evidence)

Criminal Interrogations and Confessions, by Fred E. Inbau and John E. Reid. Second Edition, 1967. The Williams and Wilkins Company, Baltimore (basic law enforcement text)

Equipment Systems Improvement Program Survey and Assessment of Arson and Arson Investigation, by John F. Boudreau, Quon Y. Kwan, William E. Faragher, and Genevieve C. Denalt. 1976. National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, U.S. Department of Justice, Washington, DC. (Report on comprehensive study and survey by the Aerospace Corporation. Validates need for arson investigation based on best available, though incomplete, statistics)

Fire and Arson Investigation, by John Kennedy. 1962. Investigations Institute, Chicago. (Covers most aspects of arson and still an excellent reference, though needs updating; 1962 edition is reprinting of earlier edition.)

Fire and Arson Photography, Kodak Publication M-67. 1969. Eastman Kodak Company, Rochester, NY. (useful basic leaflet on a subject which needs a more exhaustive treatment)

"Firebugs -- A Treatise on Arson" (Film). 1975. Film Communicators, Los Angeles, California. Produced in cooperation with the Los Angeles City Fire Department. FILM RESTRICTED BY PRODUCER TO PROFESSIONAL AUDIENCES. ("Eight people, each one with a different hangup, but all with one thing in common -- they set fires." Excellent for basic understanding of motives for arson, but somewhat superficial)

The Firefighter's Responsibility in Arson Detection. 1971. National Fire Protection Association, Boston. (useful booklet)

"Fire for Profit" (Videotape). 1976. Channel 13, Tampa, Florida. Produced with the cooperation of the Florida Advisory Committee on Arson Prevention. (Represents the best popular television treatment of the problems of arson investigation that we have seen)

Fire Investigation, by Paul I. Kirk. 1969. John Wiley & Sons, Inc., NY. (basic text)

Fire Protection Handbook. Fourteenth Edition, 1976. National Fire Protection Association, Boston (One-volume encyclopedia of all phases of fire protection. Frequently used source of national arson statistics which are based on a limited sampling and do not report full impact of the crime.)

For Sale: Buildings. What Agents and Underwriters Should Know About Arson, The Iceberg Crime. What Police Officers Should Know About Arson, The Torch's Reward. What Insurance Claims People Should Know About Arson. Not dated. Illinois Advisory Committee on Arson Prevention, Bloomington. (useful booklet series intended for wide distribution)

Georgia Manual for Arson Investigators. 1976. Georgia Prosecuting Attorney's Council, Decatur, Georgia. (valuable interpretation of state laws and case handling procedures; could be a model for similar presentations for other states)

A Proposal to Design, Develop, and Implement the Arson Information Center for Professional Exchange, Education, Training, and Public Awareness. 1976. Battelle Center for Improved Education, Columbus, Ohio. (Recommends the establishment of a full information analysis center on arson)

"Putting the Heat on the Arsonist" (Slide/tape presentation--65 slides and audio cassette). 1976. The Allstate Insurance Company, Chicago. Subtitled, "Why You Should See Red Over Arson". (Produced originally for internal use, this presentation is being used in national education activities by the U.S. Junior Chamber of Commerce.)

Recognition, Collection, and Preservation of Evidence. Not dated. Michigan State Police, Fire Marshal Division, East Lansing, MI. (useful basic presentation, particularly for smaller fire departments)

Report From Engine Company 82, by Dennis Smith. 1972. Saturday Review Press, New York, NY. (the life of a New York City fireman; sensational but does not exaggerate; covers several arson fires)

Seattle Arson Task Force Implementation Program. 1976. Seattle Fire Department and Washington Insurance Council, Seattle, WA. (Report traces implementation of highly successful arson task force concept)

Selected Articles for Fire and Arson Investigators. 1975 Edition. International Association of Arson Investigators, Inc., Marlboro, MA. SALE RESTRICTED TO MEMBERS OF THE IAAI; REPRODUCTION NOT PERMITTED. (Massive collection of reprints from Fire and Arson Investigator, the IAAI journal. For sale either as whole volume or in sections. Excellent resource for anyone having the patience to go through it; lacks illustrations)

Selected Bibliography for Arson Investigators. 1974 Edition. International Association of Arson Investigators, Inc., Marlboro, MA.

Was it Arson?. Not dated. Fraud and Arson Division, General Adjustment Bureau, New York, NY. (useful booklet)

QUALITATIVE ANALYSIS

A limited qualitative study was performed on the materials gathered by Battelle. While many of the materials, such as those described in the preceding section of this report, would be useful without further analysis, most of the documents would be treated most usefully as *raw materials* for information analysis. That is, the materials should be used in developing *specially prepared information packages* which are designed to meet identified needs of users of the National Fire Technical Information Center. We will present our recommendations for such an activity in the concluding sections of this report.

A number of deficiencies were noted in the limited qualitative study, which concentrated first on the materials in general and then on the coverage of specified needs-area categories. It is possible that a number of these shortcomings would be overcome by a collection of arson-related documents which is truly national in scope. However, we approach them assuming that the initial Battelle collection is representative of the real world. Inherent in the interim manual processing/retrieval system there also may be inconsistencies in document classification and interpretation which must be worked out as the documents are used.

Analysis of General Coverage

Arson seminars and presentations, as shown in the documents, are characterized by "reinventing the wheel". In our earlier Resource Assessment for Arson Education and Public Awareness⁸ we noted that there is a preoccupation with motivating those in attendance to do "something" about arson. Following a motivational appeal there usually are basic presentations which are quite similar from seminar to seminar of material on fire and arson investigation principles, the motives of arsonists, evidence problems, interviewing and interrogation, and the problems of

8. Arson . . . Not Recognized as a Class-1 Crime: Why?, pp 21-37.

criminal and civil proceedings. Little time is spent on actual case preparation, and there is a lack of definitive job-related information. Anecdotes are used frequently to illustrate unusual circumstances rather than typical arson cases. Seminars tend to be carbon copies of the same basic information (with speakers and speaking styles changed), and this problem is reflected in the documents. Surprisingly, most statements about the seriousness of the arson problem are not even supported by local statistics.

Thus, available arson documents are characterized by the duplication of basic themes; the presence of extraneous, anecdotal materials; the lack of definitive, job-related information; and by the presence of potentially valuable information which needs further development and analysis. In particular we have noted shortages of information on the more sophisticated aspects of arson detection (particularly in difficult circumstances), handling and laboratory analysis of evidence (particularly handling and precise laboratory identification of substances used as accelerants), and case preparation and documentation. There also was a lack of valid statistics on the occurrence and costs of arson. In addition, there was little definitive information on the mechanics of cooperation between fire and police departments and between public agencies and private agencies such as insurance companies. Also lacking was the type of information which could explain the duties, functions, and requirements of arson investigators to city managers. Nor were there adequate materials on how the media can help prevent and stop arson.

The file thus has limited capabilities, but significant ones because it fills a void. The file should be useful in characterizing the arson problem and the types of activities which presently are going on to solve that problem. It also should be useful in providing a beginning for further analysis and development (as with arson case files), and it should be useful in providing an indication of probable information voids.

Coverage of Specified Needs Area Categories

Using specified needs area categories as search terms for retrieving documents through the interim processing/retrieval system (see previous section on Battelle's Project Objectives), a sampling was made of the document file. Through this sampling, which was concentrated mainly on the printed materials from individual cities (rather than on books and standard reference collections), impressions were formulated on the contents of the file as it applies to a number of arson-related needs.

Area 1, Orientation, General Job Descriptions of Those Concerned with Arson

This nonspecific information category is quite well covered in the literature we have sampled and in the various arson seminars and instructional programs. The category represents the fact that generalized descriptions of the nature of arson and of the activities required to stop its spread are found in the introductions to speeches, articles, and courses. Of particular interest here are a number of brochures and other materials put out by insurance companies and groups such as FAIR Plans and arson advisory committees. Among the best are booklets published by the Illinois Advisory Committee on Arson Prevention which discuss the responsibilities of insurance agents and underwriters, insurance claims people, and police officers. A useful booklet published by the National Fire Protection Association discusses the responsibilities of firefighters. A handy pocket guide for firefighters, published by the Georgia State Fire Marshal, also is available.

At a more advanced level, the fire and arson seminar handout materials published by the American Insurance Association provide useful job-related information for the field adjuster. One author, Captain William C. Alletto of the Chicago Fire Department, has contributed several thought-provoking papers on the teamwork approach to fire investigation. A particular problem in this area -- how to divide responsibilities between fire and police investigators -- is constructively addressed by

Seattle Police Chief Robert A. Hanson. The Seattle arson task force concept, described in the literature, stands as a useful example of the degree of fire/police cooperation which can be achieved.

Area 2, Size of the Problem,
How it Affects the Public

In recent years there has been new interest in showing the public that there is, indeed, such a crime as arson and that it is a very expensive crime. Presentations in newspapers and popular magazines have stressed this. Yet, there has been little published in the popular media on the causes of arson and how to eliminate those causes. This is compounded by a lack of valid arson statistics, particularly *local* statistics. Nor is there an evident appreciation of arson as a truly national problem.

If the literature we have acquired is typical of what is available throughout the nation, there is little material that will directly involve the local homeowner or taxpayer. (A notable exception is the slide/tape presentation, "Putting the Heat on the Arsonist", which was developed for insurance company use but is being adopted as a national program by the U.S. Junior Chamber of Commerce.) Our own report, Arson, America's Malignant Crime, discusses the need for public understanding and presents several recommendations, including the production of a documentary film for nationwide distribution.

Where public understanding has been achieved in a particular city, it is often due to the direct cooperation between local news media and an arson squad or task force. In the collection is a series of television newsfeatures, broadcast over a Seattle station, which were instrumental in alerting the public in that city. A Florida documentary, produced by a Tampa station (Channel 13) with the cooperation of the state's Advisory Committee, provides an example of what can be done at relatively low cost in any city where arson is a problem.

Two popular-level books, Report from Engine Company 82, and Arson, are now receiving wide circulation and have stimulated some popular

interest. However, they are limited in coverage to New York City, and, hence, only marginally useful in showing nationwide arson impacts.

Significant possibilities exist within the literature for developing materials which inform the public, however. Armed with the Aerospace Corporation's Survey and Assessment of Arson and Arson Investigation and with other reference documents from the collection, the interpretive journalist should have an excellent background of impressions of arson (if not well-validated statistics) to supplement what he finds out in his own community.

Area 3, Fire Sources and Methods of Arson

Available data indicate that about 90 percent of incendiary fires are set using gasoline, kerosene, paint thinner, or similar easily available combustible liquids. Evidence of the use of these usually appears through patterns of burning on floors or other surfaces where the liquid accumulates in pools or soaks into surface coverings, or through laboratory detection and identification of residues of such liquids. (Portable "sniffers" are used by some investigators to locate substances for further laboratory analysis.) While this seems to simplify the observations needed for arson detection, the general accumulation of litter, water, fire debris, and pyrolysis materials frequently complicates what otherwise would be a simple observation.

For such reasons, and because special devices sometimes are used to cause ignition or delay ignition, further education into the characteristics of fire sources is needed to answer the question, "Accidental or incendiary?" In addition to fire source characteristics, one also must be able to understand the special effects of ignition sources and particular accelerants. Armed with such an understanding, the investigator is better equipped to know what to look for.

Among the materials assembled is a Basic Course on Arson Investigation used by the San Bernardino (California) County Sheriff's Office (DISTRIBUTION RESTRICTED) which summarizes the effects of:

- humidity on ignition and fire spread
- heat conduction, convection, and radiation on the attainment of ignition or dissipation of ignition conditions
- flammability and explosion limits for combustible vapors
- flash point data for liquids
- spontaneous ignition.

Two useful contributions to this subject area relate to the work of C. W. Stickney, former State of Oregon Fire Marshal and Chief Investigator for the Portland, Oregon Fire Department. The first of these appeared in the NFPA Fireman Magazine issues for September, November, and December, 1960. The second is a talk "Fire Tracks" presented at the IAAI Seminar in Lincoln, Nebraska, April 24, 1975. Stickney summarizes observations on the temperatures achievable from a variety of heat or ignition sources and the conditions under which these lead to fire spread. Particularly covered are the temperature and fuel loading combinations necessary to ignition for:

- slow heat sources such as electric bulbs, hot service pipes, appliances
- electric motors, wiring defects, electric irons, electric blankets
- cigars and cigarettes
- spontaneous heat sources
- flammable liquids
- types of cellulosic materials such as wood and paper.

Stickney points out, "A successful and destructive fire is not nearly so easy to accomplish as many people assume -- especially in populous areas where fires that might in time become damaging are discovered and reported while in the early stages." This importance of early discovery is readily apparent in video tape demonstrations of set fires which were obtained for the document collection from Colorado, San Bernardino, and Florida. (It has been pointed out that experienced arsonists might set their fires in interior rooms so that substantial damage can be done before the fires are discovered.)

Stickney also provides an illustrative example of care that must be learned in choosing adequate ignition sources. Two years ago a psychopath on a firesetting spree in Portland, Oregon, set 24 fires in a six-week period. Twenty-two fires were started with crumpled newspapers; 20 of these went out or burned so slowly that they were discovered and put out with only minor damage. Two were set with flammable liquid and both were successful, causing heavy damage. In New York, arson investigators pointed out that many of the systematically set arson fraud fires are first set in paper and debris without the use of accelerants because arson is so much more difficult to establish in such cases. These usually are unsuccessful, with the result that subsequent fires in the same structure utilize an accelerant such as gasoline. (This is *not* documented in the literature, illustrating that interviews of arson investigators which were not included in the collection activity should be considered a useful source of raw material for information analysis.)

On the other hand, Battelle-Columbus demonstrated, in a full-scale fire program conducted for NASA, that bedrooms could be set on fire using little more than the equivalent of a Sunday newspaper in each case. In one of these fires a bedroom of typical furnishings was totally involved in about 2 minutes and reduced to char in 8 minutes. In these fires the newspapers were arranged between the floor, a bed, and an upholstered chair forming two simultaneous paths for fire development, each involving substantial portions of the bedroom fuel loading.

Arsonists, frustrated by the lack of success in setting fires, are apt to use excessive amounts of an accelerant, occasionally with disastrous results to the fire setter. For this reason, or because the fire setter wants to be away from the site at the time of ignition, ignition delay devices are sometimes used. A number of such devices are shown in 35-mm slides obtained from Fire Chief Donald C. Cover of Boardman (Youngstown), Ohio. Other slide sets in the collection show the uses of accelerants and ignition devices in specialized circumstances, such as automobile arson.

In the first annual Roland Behrend Arson Seminar in 1970 at Bloomington, Illinois, Captain William Troch of the Chicago Fire Department

presented a talk summarizing more than 50 devices which have been used to set fires. (Of these, eight or nine had been used within Chicago itself.) All of these devices are simple to construct and do not require sophisticated electronic or mechanical expertise. This presentation does not categorize frequently used devices, but it helps in establishing the nature of devices to be looked for during the early stages of an investigation. (Some special residue usually remains from a device after the fire.)

In the file of videotapes is a talk on "Investigation of Explosions and Explosive Device Materials" by Jim Jordan, Agent for the Colorado Bureau of Investigation. This talk includes useful summaries on gas explosions, pressure vessel explosions, and the characteristics of explosions involving explosives or blasting agents. Similarly, a videotape from a Florida Arson Seminar presents demonstrations of a variety of such explosive devices.

Area 4, Classification of (Incendiary)
Fires by Reason or Motive

Several sources enumerate the categories into which fall individual motives for arson/incendiarism. Though the categories are often elaborated differently, most sources agree on:

- Fraud, for economic gain,
- Vengeance, including spite and revenge,
- Cover-up for other crimes,
- Vandalism, including juvenile activities,
- Pathological causes, including all sorts of mental/emotional problems
- Sabotage.

A larger, and perhaps more important, aspect encompasses the community motives, in contrast to those of individuals, that lead to locally severe problems of arson. For each community the individual categories listed above can be expected to become important in large measure as the result of prevalent community attitudes. Local factors of decaying property

values, loss of control by local authorities of the quality of living, sharp changes in ethnic composition of the population, changes in economic structure and unemployment, changes in transportation patterns, etc., are the substances which make up community motives. These factors achieve a balance in the community which seems to determine the attractiveness of arson to its inhabitants. Such problems are complex, and the literature we have been able to gather is far from conclusive. Yet, here again, it is possible that *systematic study of actual arson case files* can provide useful information.

The need for establishing the motive for arson is clouded by the differences in importance that motive occupies in the arson aspect under consideration. Several references indicate that on many occasions the courts have ruled that it is *not* necessary to prove motive for a conviction, whereas it is necessary to prove felonious, malicious, or wilful *intent*. Others point out that motive should be established because of its effect on investigation, interrogation, and prosecution activities. In some instances it is alleged that cases were lost in court because the motive could not be shown the jury.

An interesting series of papers appeared in The (American Bar Association) Forum, Winter, 1976, treating some of the legal and trial preparation aspects of a hypothetical arson case. In these articles the legal needs to develop the incendiary nature of the fire, the motive, and the opportunity are discussed in four papers on the preparation and defense of fraudulent arson claim cases.

Our impressions of this needs area suggest that whereas the legalistic importance of inquiring about the motive for arson can be established, and the role it plays in investigation demonstrated, the sociological and economic pressures that contribute to motive require substantially more inquiry.

Areas 5 and 7, Inspection of the Fire Scene and Collection and Preservation of Evidence

A substantial number of the documents collected include references to these subjects, but many are superficial, contain substantially the same

information, and are of questionable value except to the complete novice. The better examples try to show both the procedures and the reasoning of the expert so that some understanding can be gleaned of what is observed and why it is significant. On review of the films, slides, and videotapes, some of which record fire sets carried out for arson training, and a few of which (the slides) show details of actual arson fires, one suspects that these subjects are best taught through actual field observation or through professionally developed illustrative materials.

A number of the videotapes which have been developed locally are rich in content, but poor technical quality often interferes with their ability to communicate. These tapes and the knowledge of their producers could serve as valuable raw materials for the eventual preparation of training tapes and films of useful technical competence that is on a level with audio/visual materials employed for fire service training.

Some inconvenience is met in the keyworded material because the needs areas as presently identified do not indicate how the subject of *investigation* should be referenced. Investigation of a suspicious fire embraces a fairly large number of subjects, including *inspection* of the scene and *collection* of evidence, which are identified in the needs-area categories. Material appearing under the subject of "investigation" (which is a popular title) must be examined carefully in future work so this material can be referenced under each of the component parts as they occur.

Among those documents assembled, useful listings of the components of fire scene inspection are found in the Fire Investigation Course materials of the Illinois Advisory Committee and in the Georgia Manual for Arson Investigators. Good treatments of some of the topics in these listings are found in other references. Additional work needs to be done in identifying the outstanding investigators in each state for consultation on these subjects.

The collection and handling of evidence requires input from both the laboratory analysis and the legal communities. Expert sources from these communities appear to be responsible for several items:

- Suggestions for Handling of Physical Evidence, originated by the FBI,
- Submission of Criminal Evidence to the Laboratory, originated by the State of Ohio Arson Bureau Laboratory,
- Recommendations to the Washington State Crime Laboratory, obtained from the Seattle Arson Task Force,
- Basic Photography for Fire and Arson, by L. M. Dey of Eastman Kodak Co.

Conspicuously lacking is a treatment of *what* evidence to collect and *why*!

For the most part, the references in these two needs areas serve best to stimulate thoughts on what must be done to prepare good educational materials for those trying to develop basic skills. There is a special challenge to develop treatments of the entire subject of investigation which are suitable for the attention of the expert. While none of the seminars we have reviewed accomplish this, there seems to be room for a true expert seminar, devoted to professional exchange between peers, where the professional investigator could be made aware of new techniques, problems, and legal developments as they occur on a national basis.

Area 6, Interviewing and Interrogation

Interviewing and interrogation procedures are quite well established in the literature on criminal science. In general the procedures for arson are the same as the procedures for other crimes and are reflected in the available materials. There are lectures in this subject in practically every seminar and training program. What are missing, however, are quality assessments of interviewing and interrogation techniques which are particularly useful in locating and identifying both those who set fire to property and those who "sponsor" the work of torches either by paying them directly or by creating conditions (such as neglected, overcrowded tenements) which will ultimately lead to arson. Such an assessment, which needs to be made, could be supported by references to actual arson case files. Good techniques, then, could be practiced in actual training

programs through the use of role playing exercises. There is a particular need for information beyond what is available on interviewing and interrogation techniques for dealing with members of minority groups. Particularly lacking are discussions on how to obtain information from minority group members who are not themselves arson suspects.

Notable in the literature made available to us are a few discussions of interviewing and interrogation techniques by insurance claims personnel and by lawyers and private investigators who represent insurance companies in civil cases.

Area 8, Professional Laboratory Assistance

This subject area as presently organized includes references to laboratory examination of physical evidence, fatal fire investigation procedures (autopsy, burned body handling, etc.) and special procedures such as psychological stress evaluation (voice printing). Ultimately, it will be necessary to organize the materials to reflect this subdivision.

The hydrocarbon fuels which predominate among the accelerants used for arson can be identified by various gas chromatography (GC) and gas chromatography-mass spectroscopy (GC-MS) techniques. Descriptions of the use of GC-MS for the detection of gasoline residues are contained in reports in the collection from the Aerospace Corporation. These reports include descriptions of analyses made using the procedure for actual Los Angeles arson cases. (However, we found that only in very exceptional cases do arson squads, even including those from larger cities, make use of such sophisticated procedures. We have noted wide variations in methods used for accelerant analysis, and it is axiomatic that detection sensitivities are strongly influenced by the methods employed.)

A typical problem is caused by the fact that the sensitivities for the detection of components believed characteristic of fuel residues are such that these residues may be insignificant in amount compared to most other pyrolysis (burning) products. There is no information in the collection which could help inform an arson investigator or laboratory scientist how he could be certain that the characteristic components identified in a sample are not simply adjuncts of the pyrolysis of wood,

plastics, and other construction or furnishing materials also involved in real fires. Credibility of such procedures will require proper demonstration of such matters, and perhaps more systematic investigation.

This subject area should be expected to serve two major purposes:

- Description of methodologies for carrying out laboratory tests,
- Description of the assistance that an investigator can expect from the laboratory, with laboratory requirements carefully stated, though without technical details.

Presently neither of these is well served by the information assembled. Judging from contacts made during our field research, there has been very little attempt at standardization of procedures. (We have seen efforts to accomplish such standardization only in the Ohio State Arson Laboratory.) We also have seen that the degree of liaison between laboratory scientists and field investigators does not seem to assure effective use of laboratory assistance. Further in-depth analysis of these needs is imperative.

Area 9, Legal Aspects, Corpus Delicti

The body of evidence that an offense has been committed against the law relates strongly to matters of investigation, interrogation, evidence collection and preservation, etc., included in other arson needs areas. Here it is intended to treat the bases for proving the corpus delicti and the legal constraints on how that basis is established and presented.

From the standpoint of the law enforcement officer, the discussion of handling of circumstantial evidence in criminal cases, and especially in arson, is treated in some detail by reference to actual cases in the Instructional Material from the Texas Commission on Law Enforcement Officer Standards and Education. Guidelines for the officer in pursuit of his duty are presented in the materials from the Golden, Colorado, District Attorney's Office which treat matters such as

warrantless search and seizure, stop and frisk, the arrest warrant, probable cause, entry into and upon premises, and a number of related concepts. These are of interest because they establish the circumstances under which the evidence for the proof of the corpus delicti can be obtained.

From the insurance community, we have obtained several treatments of this subject area. The value of these should be in the instructions they provide the insurance representative for cooperating with fire and police authorities in establishing the corpus delicti. Some of these materials originated with the American Insurance Association, the Illinois Advisory Committee on Arson Prevention, and the State Farm Fire and Casualty Company. Of particular interest are two papers: "Elements of Proof of Arson" by John E. Lecompte (given at a Massachusetts seminar) and "A Legal Analysis of Fraud and Arson Fires" by Max J. Gwertzman (obtained from the New York Board of Fire Underwriters). Here also, the detailed treatment of a trial of a hypothetical arson case presented in The (American Bar Association) Forum provides useful information.

Thus, the collection obtained for this needs area covers many aspects of the subject. Perhaps more importantly, the collection also identifies a group of practicing experts who should be consulted for further development of this type of information.

Area 10, Case Preparation and Courtroom Matters

This is a continuation of the legal process through the actual case, with particular distinction being made between criminal proceedings, where the arsonist is accused, and civil proceedings, where the arsonist may be attempting to collect from an insurance company. In addition there also needs to be consideration of types of cases where the defendant is charged not with arson but with other offenses, such as mail fraud or violation of alcohol, tobacco, and firearms laws, which may be less difficult to prove. Some of the questions which might be asked are, "What is required of the witness, investigator, or observer in court?" "How should evidence be presented?" "What are the pitfalls of being qualified as an

'expert'?" "When should expert testimony be called for and used?"

While there are some good presentations of material in this area, the coverage is spotty when it comes to specific legal strategies. One problem apparently is that there still are many inconsistencies in the ways courts handle and interpret circumstantial evidence in criminal arson cases. It would be worthwhile to conduct comparative analyses of arson cases brought to trial in various cities to determine those with the highest conviction ratios, and then to attempt to characterize case preparation in those cities where there is the most success in obtaining convictions. Lacking success statistics, we are forced to rely on those persons who have a reputation for being successful. A number of these sources, particularly insurance attorneys, are represented in the literature.

In our field investigations we discovered, even in areas where fire-police cooperation is greatest, an inclination on the part of prosecutors to prefer cases prepared by police investigators, rather than fire investigators. In further developing the documentation in this needs area, the reasons for this should be explored, and consideration should be given to assembling more information from police sources.

Based on case history files, demonstrations and role-playing exercises should be developed for arson investigators. (In the available collection, there is a videotape of one such exercise conducted in Colorado.) A set of case history readings could be developed with particular reference to courtroom procedures.

Area 11, Roles and Responsibilities, Including Those of the Insurance Industry

This needs-area category has several aspects and will benefit from more precise definition as the arson information resources are developed. One aspect of the category relates to overall responsibilities in a service context, the responsibilities of fire service personnel, police personnel, fire marshals, state arson investigators, etc. Another aspect relates to the roles and responsibilities of those who work for private organizations such as insurance companies as compared with the

roles and responsibilities of those who work for public organizations. A third aspect relates to the roles and responsibilities of those in both public and private capacities in working with the public. In each of these areas the discussion must be more broad than job descriptions (category 2); however, many of the references identified under the former category also contain material on roles and responsibilities.

The documents provide useful understandings and background on *perceptions* of roles and responsibilities by those who are dedicated to combatting arson. However, the data are insufficient to permit detailed comparisons of how these responsibilities actually are carried out. There is some information which can lead to such comparisons (memos of operating procedures, reports, compilations of forms used in reporting arson cases, etc.) but more is required. The three compilations (not otherwise discussed in this qualitative analysis), Selected Articles for Fire and Arson Investigators, Arson Investigation Handbook, and Arson -- Some Problems and Solutions, contain useful information. Materials from the Roland Behrend Arson Seminars (Illinois) and the Lakewood, Colorado Arson Seminar also are helpful. William C. Alletto of the Chicago Fire Department has provided several discussions of arson squad organization.

A videocassette lecture by Richard Aaberg on "The National Fire Fraud Picture" provides useful insurance-related information, as do contributions from the Metropolitan Chicago Loss Bureau and other insurance industry sources. Responsibilities for addressing the arson problem in remote areas are covered in reports from the National Wildfire Prevention Analysis Task Force and the U.S. Forest Service.

Area 12, Workshops, Case Studies, Set Fires for Training Purposes

While there are a number of useful contributions in this area, those that we have seen could benefit from clearer statements of objectives (which might be developed within programs of the National Fire Academy) and from more professional presentation. There are a number of demonstration videotapes in the collection which are excellent in terms of content and could be utilized as guides, for example, in preparing a videotape

series on fire sources and basic investigation techniques. Another excellent raw material resource exists in the form of several sets of slides which were obtained through the cooperation of Chief Donald C. Cover of the Boardman, Ohio, Township Fire Department.

In characterizing materials in this content area in our first Resource Assessment for Arson Education and Public Awareness⁹ we suggested two important types of applications:

- To replace experience that is difficult to come by with the reproduction of actual cases, with set fires for training, and with visual records of such activities.
- To provide matrices for the sharing of experiences by practicing experts, through seminars and workshops that follow up training programs and provide opportunities for peer-group contacts.

We noted that workshops and demonstrations generally are held for investigators within a particular state or locality, and that there is little opportunity for the planners in one state to benefit from experiences gained in another state. This continues to be the case. There is a need for instructional materials on how to conduct a successful workshop or training fire.

Actual arson case files, such as those assembled for the collection, should be useful resource materials for anyone planning such an instructional activity.

9. Arson . . . Not Recognized as a Class-1 Crime: Why?, p 37.

RECOMMENDATIONS FOR ARSON INFORMATION CENTER DEVELOPMENT

It should be recognized that the arson information collection which we have gathered by following out the procedures described in this report is scarcely an ideal collection. Beyond certain standard materials which might be part of any investigator's library (identified as the Baseline Collection), there is a lack of fully developed, reference information. The value of these materials lies in their potential for further analysis, development, and assemblage into a useful collection with the addition of materials which can be obtained through an aggressive, continuing acquisition program.

A major adjunct to the collection process has been the opportunity provided us to establish the identity of many of the expert contributors available on a national basis, and to establish links for further communication and development of arson-related information. Though the identification of Battelle as an "interested party" was not a purpose of the activity covered in this report, we soon found that our own status as an independent research organization with a serious interest in arson opened many doors that otherwise might have been closed. There was complete cooperation (often with the investment of considerable time spent by overworked individuals) by every fire service organization and by most other organizations we visited. The contacts established within these organizations, we believe, should form the bases for achieving a collection with the detail and authority required for professional information and training needed for an effective attack on the arson problem.

To accomplish this, each needs area collection must be examined in depth, using the standard bibliographic materials as well as available films, videotapes, and printed materials to establish the scope of present information resources and, perhaps more importantly, to identify gaps and inconsistencies. Using the expertise of the contributors and other identified sources:

1. The gaps and inconsistencies would be examined and corrected, or specific recommendations would be made for their correction.

particularly for arson because the crime of arson has no built-in awareness mechanism. Murder, rape, burglary . . . any of the so-called "Part I" crimes are capable of arousing immediate community interest and concern. Arson is not, except in the rare cases where an effective local arson task force is organized. An information analysis center can address this need by *pulling* data and information which can be of value in meeting identified needs and by *pushing* continued local involvement and awareness, supporting the task-force concept.

Such a center can be large or small, depending on available support. (A diagram of such an activity is shown in Figure 2.) It can address the entire arson problem, or segments of the problem which are identified by those it must serve. It should have three characteristics: (1) continuity of operation, (2) expert input, and (3) dissemination of specialized products. In a classic article on the subject¹⁰, G. S. Simpson, Jr., of Battelle defines the activities of an information analysis center:

One or more scientists, engineers, and information specialists, committed, at least part time, to providing a specialized audience the technically intellectual service of evaluating, integrating, condensing, and analyzing available information or data in a specific . . . area or pertaining to a specified mission. The center provides answers to technical questions and provides to its specialized audience *authoritative* and *timely* data arrays, analyses, monographs, or state of the art reports.

This center should address the arson problem in three particular ways:

- As a mechanism for developing cost effectiveness of a national program which presently is marked by diffusion, inconsistencies, and the lack of clear objectives, as well as poor information exchange,
- As a spearhead for a meaningful attack on arson through the marshalling and development of information resources,
- As a continuing activity which operates throughout the entire problem-solving process -- recognition and definition as well as solution.

10. "Administration of Information Analysis Centers" in Toward a National Information System; Second Annual National Colloquium on Information Retrieval, April 23-24, 1965, Philadelphia, Pennsylvania.

2. The needs area categorization would be further developed to improve its specificity and to interface with an arson thesaurus.
3. User end products such as reports and highly specialized training packages would be recommended and designed to match the identified requirements of each professional group.
4. Actions to fill information gaps by study, analysis, or further collection of materials would be identified, recommended, and initiated.

The teamwork thus established among legal, insurance, law enforcement, and fire protection communities -- and the cooperative activities undertaken -- should lead to better information sharing on a national basis. This cross fertilization should provide a positive benefit to broadening the understanding between those whose *basic* interest is in stopping arson, while at the same time providing materials which are specifically job related.

Any such exchange of information to be worthwhile must be cost effective. The cost effectiveness problem is obvious in the documents we have gathered because there are so many wastes. Why are the same basic materials presented over and over again by different authors? What safeguards are there against perpetuating information that is incorrect or based on hearsay rather than expert analysis? What evidence can be presented to city management that proves an arson squad itself is cost effective? What evidence can be presented to insurance company management of the cost effectiveness of denying insurance claims by arsonists? What can be learned from the experiences of others who have tried to interpret the costs of arson to the general public?

To answer questions like these, the Arson Information Center should be developed and conducted as a continuing *information analysis* activity. To develop such an activity was beyond the scope of our study. However, we feel that the implementation of this concept would be essential to a realistic attack on arson. Such a catalytic activity is needed

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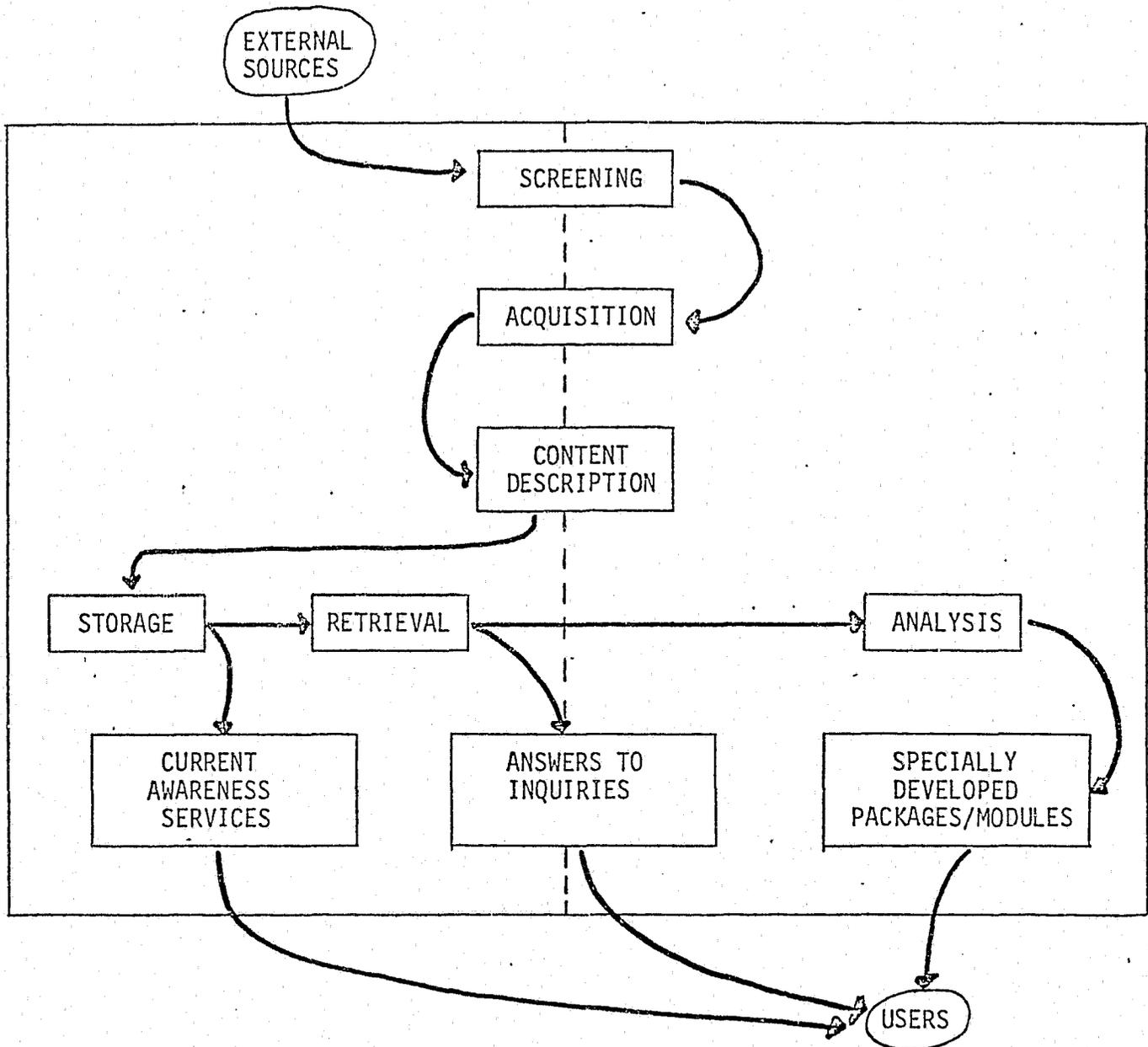


Figure 2. Functions of an Information Analysis Center

Based on our own analysis of the arson problem and on the concerns which have been expressed to us by individuals within a wide professional spectrum we recommend nine priority activities for special groups which should be developed as soon as possible within an information analysis center format:

1. For city and county management, there is badly needed an authoritative characterization and compilation of the needs, functions, and duties of an arson investigation unit. This compilation must contain specific recommended levels and dollar costs of equipment and staffing. (Recommended standards of arson squad staffing are not available on a national basis. There are no mechanisms for relating the costs of arson investigators to their value to a community, nor for specifying local needs in terms of manpower, skill, or equipment. City and county managers need *credible* information.)
2. For state government, both legislators and administrators, there is badly needed an authoritative characterization and compilation of the needs, functions, and duties of arson investigators within the state fire marshal's office. (What can and should be done at the state level has never been thoroughly researched and documented. As a result, state government organizations seem to be developed along the lines of political expediency rather than identified needs. What can and should be encouraged within state government structures? An analytical activity should be supported to answer this question.
3. For insurance companies and insurance company officers, there is badly needed an authoritative characterization of insurance company needs and responsibilities in combatting arson. (The process of developing this has been initiated within a number of insurance organizations and individual companies. Here the need is for the continuing development of mutual understanding, facilitated by the free exchange of information on a regular basis.)
4. For continuing professional education of arson investigators and fire investigators there is a need for the development of high-

quality audio/visual materials. We have entered into the document collection a number of videotape presentations from seminars and training sessions which have good information content but which are so poorly prepared in organization and technical quality that use of them would require much more time and patience than we suspect are generally available.

5. For arson investigators and fire investigators, there should be a field guide to the use of laboratory techniques for fire cause identification, including how to obtain and handle evidence which will be submitted for analysis.
6. For crime and arson laboratory scientists, technicians, and administrators, there should be standard reference guides to fire cause identification which eliminate the ambiguity and sensitivity problems created by the uses of nonspecific techniques.
7. For arson investigators and members of the legal profession, there should be the utilization and development of a large amount of case-related information obtained from actual case files, for training and professional awareness. (We have already emphasized the value of case files which could constitute a significant, though unexploited, resource. Mechanisms should be set up for routine analysis of large volumes of case files to show arson trends; trends in the uses of accelerants, etc.; trends in court settlements; trends in investigative techniques; and strengths and weaknesses in case preparation.)
8. For arson investigators, members of the legal profession, and insurance companies, standardized criteria for case reporting should be developed. (To permit case by case comparison, it would be useful to have uniform reporting formats and criteria. This would facilitate case comparisons and could be used as the basis for developing a standardized arson case information system which could be sanitized to permit information exchange without violating privacy laws.)
9. For prosecuting attorneys, specialized arson reference materials should be developed. (The prosecutor is the key to criminal arson

conviction. Yet, particularly in nonmetropolitan areas, he often lacks the time and experience to become familiar with the unique requirements of an arson case. Special professional materials for prosecutors should be prepared, based on case analyses by prosecutors and fire marshals who have well-developed professional expertise in the arson area.)

For the National Fire Prevention and Control Administration to implement the recommendations in this report will constitute a range of activities which fall well beyond the functions traditionally assigned to a reference library. The reason for this is, as we have found out in our field activities, that the subject of arson is approached, interpreted, and considered in so many ways that it still lacks the kind of a well-defined, standardized approach and methodology which is necessary for a good reference file. (There is a particular lack of the kind of hard data which can be applied to fire suppression problems.) Through the activities we have recommended, we are confident that a useful beginning can be developed for a standardized approach. *However, as we have found, the real world of arson information is now so poorly developed that it is only because of the dedication of individual investigators, fire marshals, insurance executives, lawyers, task force members, and prosecutors that any progress is being made at all!*

APPENDIX B

LIST OF ORGANIZATIONS
VISITED BY
BATTELLE RESEARCH TEAM

APPENDIX B

LIST OF ORGANIZATIONS VISITED BY BATTELLE RESEARCH TEAM

Aerospace Corporation, Los Angeles, California
Allstate Insurance Company
American Insurance Association, New York, New York
Atlanta, Georgia, City Fire Department
Boardman Township, Ohio, Fire Department
California Arson Investigators Association
Chicago, Illinois, Fire Department
Cleveland, Ohio, Fire Department
Cleveland, Ohio, Police Department
Colorado Advisory Committee on Arson
Coronado, California, Fire Department
Denver, Colorado, City Fire Department
District Attorney Office, Colden, Colorado
District Attorney Office, Denver, Colorado
Florida State Advisory Committee on Arson Prevention, Ocala
Florida State Fire Marshal's Office
Georgia State Crime Laboratory, Atlanta
Georgia State Fire Marshal's Office, Atlanta
Houston, Texas, City Fire Department
Illinois State University, Bloomington, Illinois
Institute for Puget Sounds Needs, Seattle, Washington
Insurance Information Institute, Austin, Texas
Insurance Information Institute, New York, New York
Los Angeles, California, City Fire Department
Metropolitan Chicago Loss Bureau, Chicago, Illinois
Miami, Florida, City Fire Department
National Fire Prevention and Control Administration
Nationwide Insurance Company

LIST OF ORGANIZATIONS VISITED BY BATTELLE RESEARCH TEAM
(Continued)

New York, New York, Board of Fire Underwriters
New York, New York, Fire Department
Office of California State Fire Marshall
Ohio FAIR Plan
Pan-Technic Laboratory, Chicago, Illinois
Prince George's County, Maryland, Fire Department
San Bernardino County (California), City Fire Department
Seattle, Washington, Fire Department
Seattle, Washington, Police Department
Shaker Heights, Ohio, Fire Department
Southern California Gas Company, Los Angeles
State Farm Insurance Company, Bloomington, Illinois
State Farm Insurance Company, Winterhaven, Florida
State of Ohio Fire Marshal Office, Columbus, Ohio
Texas Advisory Council on Arson, Austin, Texas
Texas State Fire Marshal's Office, Austin, Texas
Ulmer, Berne, Laronge, Glickman and Curtis Attorneys, Cleveland, Ohio
U.S. Forest Service, Seattle, Washington
Western State Crime Laboratory, Washington State Patrol, Seattle
Winter, D., Los Angeles Private Investigator
Wolfe, T., Ft. Lauderdale, Florida, Private Investigator

APPENDIX C

"FACT SHEET" AND LETTERS OF INTRODUCTION
USED DURING FIELD VISITATIONS

RESOURCE DEVELOPMENT FOR THE ARSON INFORMATION CENTER

For the National Fire Data Center of the National Fire Prevention and Control Administration, Battelle Memorial Institute (Columbus, Ohio) has begun a baseline program to identify and build the resources for an Arson Information Center. This center will serve to analyze, organize, and disseminate information about arson for use by concerned professionals. It will not include a "register" of suspected arsonists but will provide case-history and other information for those who develop training activities and who develop and implement local detection, identification, and enforcement programs. In addition, the Center can serve those who are concerned about the public understanding of arson.

Currently, we are doing two things: (1) Obtaining a baseline collection of printed materials to serve as a useful reference collection and (2) Developing materials from primary sources, such as fire and police departments, arson task forces, prosecutors, insurance companies, etc., so that the materials can be accessed by those who have information needs.

In carrying out these activities we are using criteria established in more than a year of research experience with the NFPCA and the Ohio FAIR Plan Underwriting Association. For the FAIR Plan group we have completed a Resource Assessment for Arson Education and Public Awareness. This Assessment represented one of the largest insurance industry efforts to determine what needs to be known about arson. For the NFPCA's National Fire Academy we recently held two national leadership seminars for developing a coordinated attack on arson. We have summarized these seminars in Arson, America's Malignant Crime, a major report which will be released shortly by the NFPCA.

Our research group currently is visiting representative major cities as part of its information search. These visits began in Cleveland, and they are continuing through Chicago, Denver, Seattle, and Los Angeles as well as the Southeastern and Eastern United States.

We are seeking information (photographs, case histories, training program contents or outlines, reference lists, etc.) pertaining to several needs categories. Materials we obtain will be credited as to source and will be made available only for professional use.

Following is a listing of the needs categories:

1. Orientation, general job descriptions of those concerned with arson
2. Size of the problem, how it affects the public
3. Fire sources and methods of arson
4. Classification of fires by reason or motive
5. Inspection of the scene
6. Interviewing and interrogation
7. Collection of evidence
8. Professional laboratory assistance
9. Legal aspects, corpus delicti
10. Case preparation and courtroom matters
11. Roles and responsibilities, including those of insurance industry
12. Workshops, case studies, set fires for training purposes

Participants in the research activity: Phil Fisher, Dr. Lou Hillenbrand, John T. Suchy -- Battelle's Columbus Laboratories, 505 King Avenue, Columbus, Ohio 43210, (614) 424-7184.



UNITED STATES DEPARTMENT OF COMMERCE
National Fire Prevention and Control Administration
Washington, D.C. 20230

The National Fire Prevention and Control Administration has provided a grant to Battelle Memorial Institute for the first step aimed at developing a national arson information resource. For users of the National Fire Data Center, this resource will provide badly needed materials on the prevention and detection of this serious crime. We are pleased that Battelle is helping us in this important activity because of the urgency of the arson problem.

This effort has been recognized in two national seminars which we recently sponsored at the Battelle Laboratories. Another most useful stimulus has been Battelle's Resource Assessment for Arson Education and Public Awareness sponsored by the Blue Ribbon Arson Committee of the Ohio FAIR Plan (a comprehensive group of fire insurance underwriting companies).

In their new activity, the Battelle team will be visiting selected cities to locate, interpret and procure useful information about arson--case histories, photographs, information on programs and task forces--anything that will be useful in a national data base for authorized individuals interested in combatting arson. The staff members undertaking this activity are trained scientists and investigators, and you may be assured that they will respect the confidential nature of your information resources.

We at the NFPCA hope that you will lend your support and cooperation to this effort. In particular, we would appreciate it if now--in advance of the Battelle visit--you would begin to pull together any information that you may have about the arson problem in your community as it exists today. This effort is not an attempt to "rate" your arson program. It is an attempt to procure needed factual information for training, for resource development and for alerting the public.

We are supporting this important program in spirit as well as in funding, and we would be personally grateful for your assistance to the Battelle group.

Sincerely,

Howard D. Tipton
Administrator





END