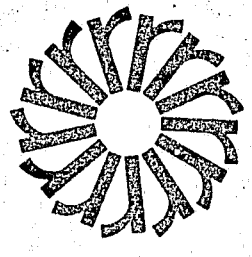
Emergency Telephone Communications Workshop

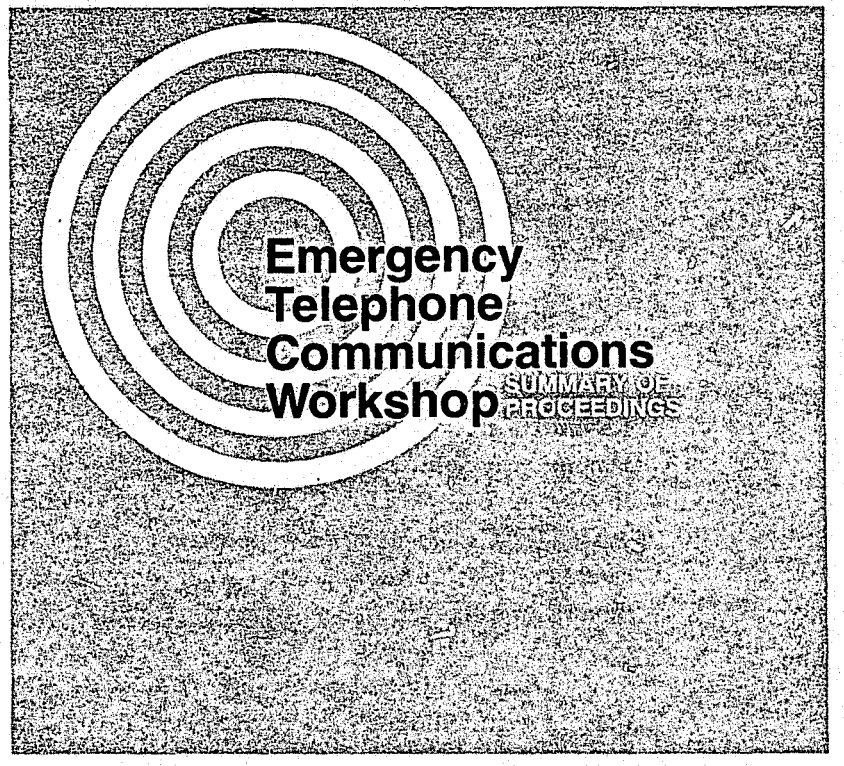
SUMMARY OF PROCEEDINGS

OMAHA, NEBRASKA

December 16-17, 1970



National ~~Service to~~ Regional Councils
1700 K Street, N.W., Washington, D. C. 20006



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PREFACE

The meeting and subsequent proceedings contained in this report result from the National Service to Regional Councils staff activities, partially funded through a grant from the National Institute of Law Enforcement and Criminal Justice, U. S. Department of Justice. Reporting, editing, analysis and conclusions are the exclusive responsibility of the National Service. While extensive editing of remarks was necessary, every effort was made to assure accuracy and to maintain a consistent theme and line of thought.

A special word of appreciation to the hosts for this meeting, the City of Omaha and the Metropolitan Area Planning Commission. We owe particular thanks to Mayor Eugene A. Leahy and his staff, including Al Pattavina, Richard Andersen, Martin Dineen and the many others with the City of Omaha who contributed immeasurably to the success of this session. Our thanks, also to MAPA Chairman, Robert Walton and the staff of MAPA, especially Gerald Tartoni, who served as the "silent force," assisting with arrangements, speakers, and other details, throughout the planning and operation of this meeting.

We want to also take this opportunity to formally express our thanks to the many individuals who participated in this program and effort. Particular thanks to the officials who traveled to Omaha to share their experiences and insights with us. Also expressions of appreciation to the members of the special National Advisory Committee which worked with us and to Lou Mayo, NILCS, who ably assisted throughout.

C. James Dowden
Assistant Director

INTRODUCTION

The National Service became interested in the concept of a single universal emergency telephone number because of the obvious regional implications of such an endeavor. As one looks at the prospects of implementing such a system on a nationwide basis or, more fundamentally, on a single jurisdictional basis, it is readily apparent that a high degree of inter-agency and inter-jurisdictional cooperation and coordination is essential. Because of the incompatibility of telephone exchange boundaries and political jurisdictional boundaries, a city or county is rarely able to implement a system such as 911 without consulting and cooperating with neighboring jurisdictions.

The National Service was intrigued with the prospect of implementing 911 on a regional or metropolitan basis rather than exclusively through a single jurisdictional approach. In all but a handful of the nation's urban areas, there is a regional council which provides the mechanism for inter-jurisdictional, cooperative program planning and implementation. The National Service has proposed that these councils be considered as the device for planning and programming 911 in their regions, in order to avoid a piecemeal, city-by-city approach.

Very few people who have considered implementing 911 have had opportunities to discuss or work with others who have tried it or who have made decisions with respect to it. Our intention at this session was to bring people together, to give people an opportunity to sit and chat with those from other areas that have comparable situations, that are encountering the same kinds of problems, and that may give some insight into ways that each can work out problems in their own communities.

We are concerned about the great lack of information or misinformation about 911. There seem to be two general views about 911. There is the view that 911 is very simple, once a community decides that they want it. That's not true! 911 is not simple from the telephone company's point of view, nor is it simple from the local government's point of view.

On the other hand, there is the view that 911 is so difficult that the problems are insurmountable. And we would have to say that's not true either. We hope that with the collection of data from the six pilot areas and the other communities with which we've now opened conversations, we will be able to put together the kind of information package for local elected officials necessary to overcome this misinformation.

The National Service designed this two-day session to be as complete a briefing as possible. We brought together as many people from as many areas as possible that are involved in some fashion with the implementation of a 911 type system, or who are involved in the evaluation of the need and desirability of a 911 system in their area. A great diversity of communities, at various stages in the consideration of 911 for their areas, were represented.

We designed the program so that we have not only the pilot areas reporting about their experiences, but also representation from other regional groups that are trying 911.

In addition we have added, wherever we could, other elements which are very much related to 911. 911 cannot be looked at in isolation from the total communications systems of a community. We can't put 911 into a police communications center if all of the trunk lines to that center are overloaded and there isn't sufficient personnel to handle the calls now received. At the same time, we can't put 911 into a community unless we're concerned with fire and their relationships and coordinating the fire departments and other kinds of emergency services. We're talking about an examination from the outset of the total emergency communications service package in the community even before we talk about 911.

Much more so today, than two years ago, there is a feeling that 911 is coming. There were questions and doubts then, and people were talking about a multiplicity of other numbers or approaches. We are concerned that although 911 continues to move forward, it is uncoordinated. There seems to be no information cross-flow, or checking, no exchange of experiences or ideas. We hope the exchange of experiences in these proceedings will help get the word out before we have mistakes, before we have systems developed that may not be suitable to meet the demands in five years.

We have noted, too, a very significant difference between the Chicago meeting a year ago, and this meeting in Omaha. Last January, while there were some who predicted that 911 was coming on a nationwide basis, we found ourselves still in the process of trying to convince local officials to take a look at 911. To at least examine 911 in terms of possible benefits to their community.

Now, we find that the people who have come to the Omaha meeting have come to learn about how they might best implement the system in their area. Of course, there is still convincing to be done; some doubt still remains as it always will. But now, it seems that more and more people are learning of the successes with 911 and our task now is to work with them, to benefit from other experiences, to put together a successful system in their areas.

We are looking forward to meeting this challenge.

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OPENING AND WELCOME

Hon. Robert S. Walton, Chairman
Metropolitan Area Planning Agency, Omaha

Most of you are probably aware that there is a large gap in the understanding of public officials, both elected and staff, concerning 911, the single emergency telephone number. For this reason, we at the Metropolitan Area Planning Agency are pleased to cooperate in conducting this meeting with the City of Omaha, a member of MAPA, and the National Service to Regional Councils. I'm sure you will find the program will help you better understand 911 as it exists across the country.

It is my pleasure to introduce the Mayor of Omaha, our host city, which has effectively implemented a most successful 911 system.

Hon. Eugene A. Leahy, Mayor
City of Omaha

We are truly proud of the 911 system in the City of Omaha, and we owe thanks to so many people—the members of MAPA, the police and fire departments, the circle of jurisdictions surrounding the community of Omaha, the city council, the county board, and the people in the community who assisted, advised, and supported us in the development of this 911 system.

What makes a successful program such as 911 work? It takes dedication from the people committed to making the system work, and I'm talking principally about the politicians who have to make the decisions to appropriate and allocate the funds to support such a system. Based upon my experience, the big reason why we have problems in our urban communities today is because the people are living in fear of someone invading or moving in and destroying their little selfishly owned empires.

I think we have a successful 911 system in the Omaha area because people set aside their little petty jealousies, their personality differences, their political beliefs, and they said this was for the benefit of the citizenry that's going to be served by this system. We are committed to serving the people and not our own selfish interests.

This is what each and every community is going to have to do to bring about an effective, responsible, moving 911 system, or any other change in our political and social system that is for the benefit of the public.

So we have had great success in getting people to sit around a table, subject themselves to some criticism, and open their minds to suggestions. I think that therein lies the success of not only this program, but any program we wish to develop in an urban community—a spirit of cooperation, of getting the job done. The job being, of course, to serve the needs of the community.

I welcome you to the City of Omaha and to this workshop. It is commendable that so many representatives from so many cities would be willing to spend the time and the effort to learn more about a 911 system, such as we have in Omaha.

PURPOSES AND GOALS

Louis Mayo, National Institute of Law
Enforcement and Criminal Justice,
U. S. Department of Justice,
Washington, D. C.

It has been my pleasure to be associated with the development of 911 in many of its phases, since the President's Crime Commission recommended this concept in their report, which was filed early in 1967. Shortly thereafter, conferences between the Department of Justice and telephone company representatives resulted in the announcement of a single emergency telephone number, 911.

Subsequently, the Office of Law Enforcement Assistance sponsored the first national conference on 911, at the Franklin Institute in Philadelphia, to discuss what it is, what it isn't, and what it should be.

At that conference, we assembled for the first time representatives of all of the organizations that we could identify who could be involved in 911 implementation or directly affected by it. The primary result of this conference, in my opinion, was to surface some of the more critical problems. This was an important and essential first step down a long road, which has brought us here today.

This is especially true if you subscribe to the principle that the identification of a problem is the major obstacle to solving it. The staffing of the Franklin conference was my first major involvement in 911, and since then my interest and enthusiasm for this has increased. Although the extremely limited resources of the Institute, especially at its inception, did not permit extensive activity in this area, I've watched with interest the work of such people as Ken Bordner at the Franklin Institute, under the sponsorship of the National Science Foundation; Jim Dowden, NSRC, and John Shepherd of AT&T when I came to be on the NSRC-AT&T project's steering committee.

During this time various resolutions and bills have been introduced in Congress in support of 911. The concept of a common, single emergency telephone number for the United States now seems to be on its way.

When NSRC proposed to the Institute a series of conferences to bring together the organizations interested in 911 for discussion, identification and resolution of the issues, the importance and potential of such conferences were immediately apparent. The Institute was pleased to have the opportunity to participate in this sponsorship.

Our expectations were certainly fulfilled in the first conference in Chicago, early this year, which was most successful. At that meeting, we hoped to refine the basic problems which were identified at the Franklin conference, to identify other problems, and to discuss these problems in the real world context of specific locations and conditions, rather than just a theoretical context.

This was to be followed by a second conference, which would have the inputs of many persons working on these problems for several months. That is why we are here today. I think this historical perspective is an appropriate and beneficial way to focus on the purposes and goals of this conference. To assess where we are, where we should go in the future, and how we should get there.

Throughout the conference, I hope we will keep one goal uppermost in our minds—improved emergency service to the public, with intraorganizational problems discussed only in the context of how they can be overcome.

The Institute is looking forward to more opportunities for research, to facilitate the implementation of 911.

911: AN OVERVIEW

C. James Dowden, Assistant Director
National Service to Regional Councils
Washington, D. C.

The most frequent inquiry we get in our office about 911 is, "who has it and what kinds of systems do they have?" I want to bring you up to date a little bit and elaborate on what Lou has said about what the National Service has been doing.

The National Service is a non-profit organization concerned with assisting in the development of regional councils of governments in order to foster greater, more effective interlocal cooperation. The National Service felt that 911 was a natural project for local government cooperation—to implement something on an areawide basis of mutual benefit to the citizens in the region. As such, we approached AT&T almost two years ago, and indicated that we felt some study should be undertaken to examine the feasibility of implementing 911, not on a single jurisdictional basis, one city at a time, but rather on an areawide basis. We felt that the physical-mechanical constraints of the telephone exchange boundaries and the political jurisdictional boundary problems would make the implementation of 911 more practical on an areawide basis.

Accordingly, AT&T did fund an effort of ours for one year, in which we worked with six selected areas to assist their officials in the consideration of 911 in their areas. This project has involved the regions of Atlanta, Georgia; Washington, D. C.; Buffalo, New York; Dayton, Ohio; Los Angeles County, California; and Seattle, Washington.

Remember that this was not an effort to encourage these people to implement 911, but to encourage them to take a look at the feasibility of 911 on a regional basis in their areas. We've been working with those officials, as well as trying to stay abreast ourselves, of what other cities and counties have been doing as far as 911 is concerned.

Our concern has not been directed at mechanical-technical problems. Frankly, that's just not our bag. We're interested in interagency and interjurisdictional relationships; whether or not, given 911, communities, governments, police and fire and ambulance personnel would cooperate together to produce a workable system for emergency communications.

We directed our attention to identifying the issues, the problems that communities have been running into in looking at 911. And I'm talking specifically of the problems of getting a city and a county to talk to each other; of the police chief and the fire chief talking to each other; of trying to develop processes for handling emergency calls that would assure the police and the fire chief that they had adequate command and control; trying to find processes or techniques to get combinations of counties or combinations of cities and towns to sit down around the table and design a workable 911 system.

We're not in the business of selling 911. We are attempting to develop a body of literature about 911. The one thing that struck us as we took a look at 911 two years ago was the lack of any printed information that would be of assistance to a mayor or a county commissioner, police chief or a fire chief, to identify the kinds of problems he was going to have to look at before he undertook 911.

Most 911 systems that are now in operation have been implemented almost on a trial and error basis. One felt one's way very slowly, to try to identify and overcome any of the problems or issues that arose. We're fortunate in coming to Omaha not only because Omaha has implemented 911 effectively, but because it's been implemented on an areawide basis. It's been implemented on a multicounty multijurisdictional basis, and it's the first such installation in the United States. Everyone at this meeting will have an opportunity now to see one of these systems in operation.

In attempting to build a body of literature and to become a clearinghouse of information about 911, we've produced a few basic reports, which are available to all of you. This is the first time that anyone has published and made available to local governments, case studies of communities that actually have in operation or have tried to develop a 911 system. It's an opportunity for you to take a look at what happened in New York City, Springfield, Massachusetts, and the several other communities that have now got 911 in operation.

This is the beginning of what we hope will be a body of literature that will help the next mayor or county commissioner that decides to take a look at 911.

In designing this workshop we have tried to include on the panel both single jurisdictional implementations, on a centralized basis, multijurisdictional implementations, some of them centralized, some of them decentralized. You will have an opportunity to evaluate and look at a range of possibilities. Perhaps not all of the nice, clean-cut alternatives, but certainly enough of them. You'll have a chance to get an assessment from individuals who are working with 911 on a day-to-day basis, of how it is working, and what the problems are.

What are ways that we can better design our system so that we can improve our emergency service capability? I think you have to recognize that we're starting to build some data, but there's a real task ahead for areas that are considering 911.

You would be amazed at the number of officials who don't know how many telephone calls their emergency service agencies receive a day, let alone what kind of telephone calls they are, and where they get them from. And how many are coming from the operator; how many are coming through the direct switchboard, or how many are coming in on a hotline. How many of them are fire calls and how many of them are accident calls, and how many of them are armed robberies, murders and so forth.

One of the pressing needs we've identified at this stage of our effort is that before anybody can make a decision about 911, any decision, they must first know what the current situation is in their community. How many calls are you getting? Where are they coming from? What do they require you to do? The telephone companies can do some traffic surveys for you, but it's really incumbent upon you to have this information at your fingertips, to know this for sound planning.

More important, to help all of us nationwide, we need a comparison of what there was before 911 and what there is under 911. If we're not collecting the data in advance, it makes a useful comparison rather difficult later.

John Shepherd, Marketing Staff Supervisor
American Telephone and Telegraph Company
New York City

It is now nearly three years since it was announced that the three digits 911 had been designated as the new universal emergency number for the United States.

During that time, considerable progress has been made in implementing the 911 concept. We have also learned a good deal about 911 systems both through experience and through various studies. I would like to provide a brief status report on 911 along with some observations on what has been learned in the past three years.

The announcement of the 911 concept by AT&T was generally well received by the public. Certainly, the press in most parts of the country gave it a strong endorsement.

There were, nevertheless, some misgivings among public safety officials. This was probably due, at least in part, to the fact that the announcement came as an unexpected position change by the Bell system. Up until shortly before the decision was made to offer a three-digit universal emergency number, the Bell system had made a strong case for retaining the system of distinct numbers for the various safety agencies with dial "O" for operator as a back-up "universal emergency number."

It had become obvious, however, that there was growing *political* and *public pressure* for a change and that there were valid reasons, such as increasing *urbanization* and rising crime rates, for moving in the direction of a universal emergency number.

As far back as 1967, the Commission on Law Enforcement and Criminal Justice recommended that: "Wherever practical, a single (emergency) telephone number be established, at least within a metropolitan area and eventually over the entire United States."

The suggestion for a universal emergency number was quickly adopted by a number of senators and congressmen who introduced resolutions calling for the establishment of a nationwide emergency telephone number. Meanwhile, two other commissions began to pursue the question of a single emergency telephone number. The President's Commission on Civil Disorders, established after the riots of 1967, expressed concern over emergency reporting systems and asked the Federal Communications Commission to look into the matter. Lee Loevinger, then Defense Commissioner of the FCC, began discussions with telephone industry officials in which he strongly urged that every effort be made to find a means of developing an emergency number system that could be put into effect as quickly as possible—and then to take steps to see that this was done.

Mr. Loevinger saw the need in these terms:

"It is literally impossible to inform the public in a large metropolitan area of all the emergency agencies and facilities available or to teach it several ordinary but seldom-used telephone numbers. However, one three-digit number is remembered and known, and the small cadre of professional attendants of an emergency switchboard can be kept fully informed and in a position to make a calm and skilled judgment as to the appropriate emergency agency for virtually any kind of an emergency."

The FCC was not unaware of the many problems inherent in the universal number concept when it urged a single emergency number. However, as Lee Loevinger put it:

"The real issue . . . is whether the burden of coping with emergencies and the threats to life and safety posed by emergencies and with the confusing and conflicting complexity of governmental agencies shall be imposed upon the public. Or whether the various agencies established to serve the public will assume the burden of cooperation among themselves to resolve such problems and to provide assistance to the public in emergencies as quickly and efficiently as possible."

As a result of these various recommendations plus an extensive re-evaluation of the situation, the Bell system agreed to do what it could to establish a universal emergency number in this country. And so, on January 12, 1968, it was announced that 911 had been made available as the new universal number.

Under the 911 concept, everyone, regardless of the nature of the emergency, would dial the code 911. The call would be routed from its originating central office, via dedicated trunks, directly to a government-operated reporting center. The success of the plan, of course, was predicated on the assumption that inter-agency cooperation could be achieved and all emergency calls for a community or group of communities could be handled at a single location.

The plan was seen as having many advantages:

- The public has no decision as to what number to dial; the same number would always be dialed regardless of the emergency.
- The number is brief, uncomplicated, and requires at the most, just a second or two more than the number which the majority of people were using to report emergencies—namely, "O" for operator.
- No telephone company employee intervention is necessary to query the customer as to where he lives, or as to what is the nature of the emergency.
- Finally, and perhaps most important, the 911 plan offers the potential for cutting precious seconds from the response time since it gives the public direct access to an emergency dispatching center.

Today, 911 is now in use in more than 100 communities in every part of the country. More than 50 other cities are scheduled to introduce 911 systems, and it is being considered by many others.

Granted, many of the locations which first adopted 911 are small. This is because it is usually easier to implement a 911 system in smaller communities. Nevertheless, a number of large cities have adopted the new universal number.

In New York City, for example, people are placing 911 calls more than 18,000 times a day. These calls include not only police, but also fire and ambulance calls. A number of other major cities now have 911 including Springfield, Massachusetts; Buffalo, New York; Suffolk County, New York, who incidentally handles over 4,200 calls a day; Jackson, Mississippi; Lincoln and Omaha, Nebraska; Baton Rouge, Louisiana; Galveston, Texas; and Atlantic City, New Jersey.

We estimate that approximately 14 million people now have the capability to place emergency calls via 911. For a program less than three years old, this I think, represents pretty fair progress.

While I am on the subject of progress, let me mention some of those other major cities which now have 911 scheduled: They include Denver,

Seattle, Toledo, Nashville, Jacksonville, Florida; Birmingham, Huntsville, Alabama and others.

This does not mean that it's all down hill from here on out. The problems associated with any universal number still exist. Common answering centers have to be established, interagency cooperation must be obtained, and jurisdictional problems resolved. Then and only then can the expensive equipment modifications be made in our central offices.

The resolution of these problems will vary from community to community and will depend on local needs and circumstances. However, based on the experience in communities which now have 911 service, some general guidelines are emerging.

For one thing, it is not necessary to establish a new super communications agency to accommodate 911 service. Present personnel and facilities now dedicated to receiving emergency calls from seven-digit public safety numbers and via telephone operators may well be adequate. However, this should be reviewed critically.

The dispatching function in 911 systems does not have to be physically associated with the answering point. In smaller communities, the same individual may handle both the answering and dispatching functions. In larger cities, they may be separated to accommodate more sophisticated command and control systems.

The answering responsibilities for 911 service could fall with either the police, fire or some interdepartmental organization. However, since approximately 80 per cent of all emergency calls are for police assistance, the most practical arrangement may be for the police to answer 911 calls and have the capability of rapidly transferring fire and emergency medical calls to the appropriate fire and ambulance dispatchers or separate jurisdiction if involved.

Adding to our knowledge of 911 is a recent study which I believe deserves special attention. The Franklin Institute Research Laboratories study which was undertaken to determine, from an objective point of view, if in fact the need really did exist for a single emergency number, and secondly, if the implementation of such a number were feasible. They concluded that a single emergency number was *needed* and *feasible* and that it be implemented nationally. Two quotes deserve special note:

"Most of the objections to a single number arise because many individuals do not have a clear understanding of a single emergency concept. FIRL found that those who had experience with a single number are generally in favor of the system, while those who have not had experience with the concept are generally opposed. To eliminate these misconceptions, FIRL recommends that a *national program of public education* be initiated to inform the people of what a single emergency telephone number is, what it can do, and what it cannot do. Such a program could provide an additional benefit by educating the public not to misuse an emergency telephone number."

"Many public safety organizations seem to find fault with a single number system when the fault actually lies within the organization. Organizations must be prepared to adjust to innovations in technology when these innovations are in the best interests of the public. FIRL recommends that public safety organizations consider evaluating their organizational structures to determine if, in fact, the inability to work with a single number concept is an organizational problem rather than a technological problem."

As part of this study, the Franklin Institute devoted a lot of attention to the problem of response time. This, as you know, is one of the major concerns or problems raised by public safety agencies in evaluating 911.

The FIRL study made the very important observation that emergency agency response-time should be measured from the time the emergency is detected and not from the time the emergency agency was notified, as is usually the case now. FIRL called this new measure "true" or "actual" response-time. If "true" response-time is considered, we can see the positive time savings possible through 911. (See diagram, page 6). The citizen no longer has to fumble for the correct number, or wait for the operator to connect him to look up the correct number to call.

The FIRL study concluded that 911 can contribute significantly to the saving of time for the citizen in trouble. In fact, using this same time line, even if the 911 agency receives a call that must be transferred to another agency or jurisdiction, there would likely be a time saving, although not as great as if the answering agency also dispatched assistance.

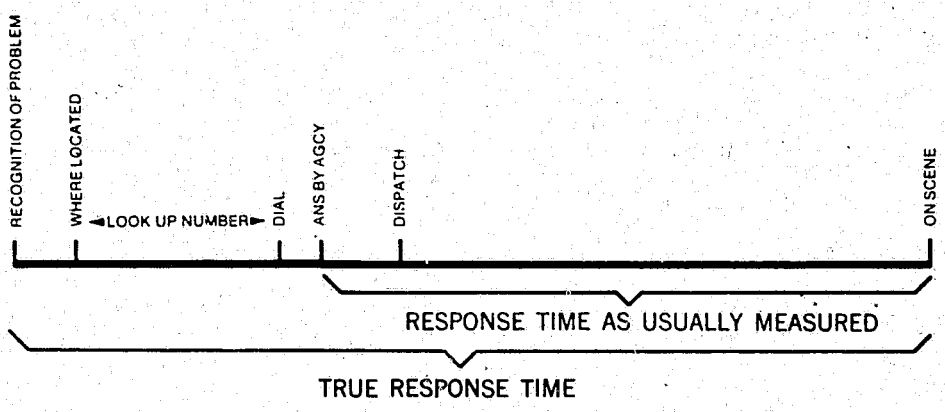
It is obvious from this study and the efforts of the National Service that there are still a number of problems that must be resolved as we proceed in the introduction of the universal emergency number concept. On the other hand, we have been able to resolve many of the problems that loomed large when 911 systems were first proposed.

We hope that today's meeting will help contribute to the understanding of what 911 is all about. In the simplest of terms, 911 is merely a response to an expressed public need.

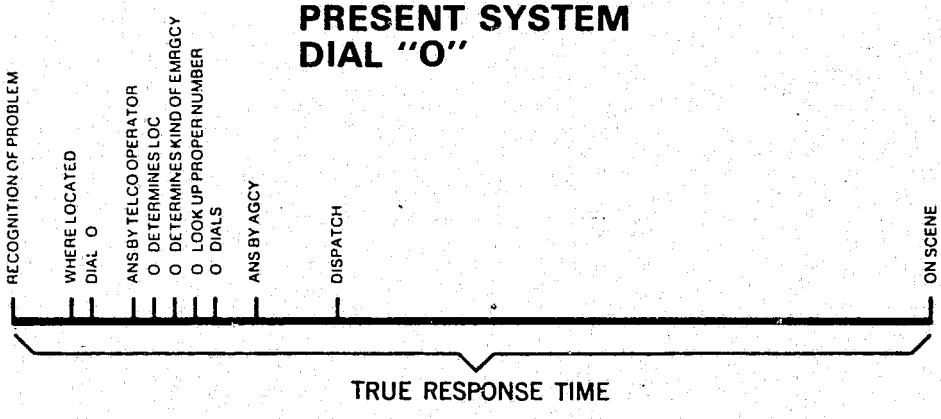
We are pledged to work with public safety agencies and government officials in developing orderly workable arrangements for 911 service. We are doing this in many cities across the nation. It is a big job and one that requires considerable effort and cooperation. However, the advantages of having single, easy-to-remember emergency numbers to summon aid far outweighs the problems in achieving it. After all, public officials, as well as we in the telephone industry, are ultimately responsible to the same citizenry for which the system is intended.

RESPONSE TIME IS IMPROVED BY 911

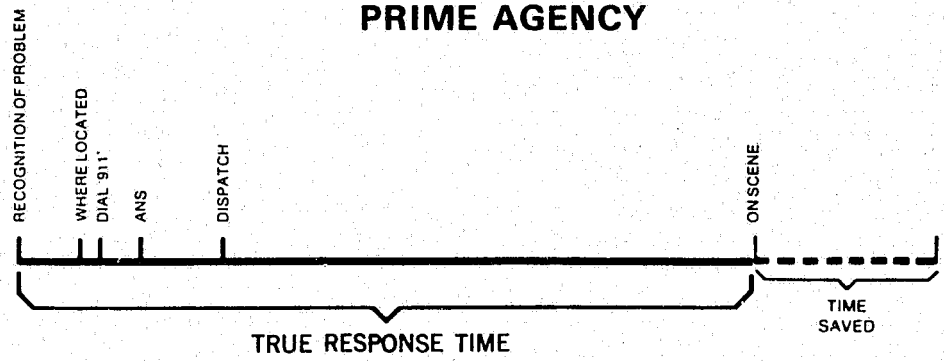
PRESENT SYSTEM
DIAL 7-DIGIT NUMBER



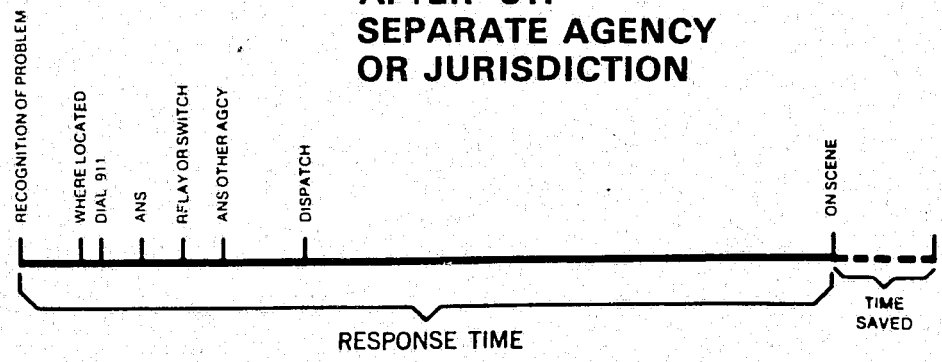
PRESENT SYSTEM
DIAL "O"



AFTER '911'
PRIME AGENCY



AFTER '911'
SEPARATE AGENCY
OR JURISDICTION



REGIONAL COUNCIL REPORTS

C. James Dowden, Assistant Director
National Service to Regional Councils
Washington, D. C.

We have with us five representatives of areas that have been looking at 911 on a regional basis. We selected these metropolitan areas, so that we could attempt to highlight and examine areas with a real mix of some of the conditions that will be encountered in trying to implement 911. We have one of the most complex and one of the most high populated areas represented here, Los Angeles County, and a rural area from just north of Buffalo. We have the multicounty situation, the single county situation, and in Washington, D. C., we have the interstate situation.

We have tried to put together here a group of people who can highlight for you what they are finding in their areas as they look at 911. These communities do not now have 911. They're in a very preliminary stage—a stage I think most of you find yourselves in—of beginning to have discussions between the jurisdictions, agencies, governments and personalities involved, to find out just what some of the problems are going to be, and what must be done to design a system to overcome these problems, if indeed they decide to go 911.

We hope during the course of this panel that we'll begin to identify certain key problems that continue to occur from area to area. I know that every person in every situation thinks his problem is unique. What we hope to show is that there really are patterns, and some common situations with 911. This group is working to overcome those problems, and hopefully when we have presentations from the people that have 911, they'll demonstrate how they've overcome some of these issues and concerns.

Hon. James Bristow, Mayor Pro Tem
City of Commerce
Southern California Association of Governments
Los Angeles

The State of California, as of the last census, has 10 per cent of the population of the United States. Sometime between now and the year 2000 the five southern counties of California will contain 10 per cent of the population of the United States.

There are 78 cities in Los Angeles County. The largest, naturally, being Los Angeles City itself. But we have other large cities—Pasadena, Long Beach, Glendale, etc. The problems that are created by more than 125 telephone exchanges in the county area, which do not even follow county boundaries, 78 cities with 50 different police departments, and more than 50 fire agencies, makes the challenge of instituting 911 a very difficult one.

At the present time there is only one city in California that has 911. That's the city of Alameda, which is in San Francisco Bay, an island, with its own police and fire department. I know that others are planning on instituting it in the very near future.

In Los Angeles County, we started to look at 911 in 1967. I represent my city in the League of California Cities, the Los Angeles Division, and in 1967, the President of the Los Angeles Division appointed me as Chairman of an Emergency Communications Committee. We later called it the 911 Committee but still it is labeled Emergency Communications.

We met and we asked the county for a committee. We found they already had one. I worked as a representative from the League to that committee. We went through a series of many discussions. It seemed that every time we held a committee meeting, we had new people, and new people had to be told the whole story from the first. Actually, we were not working out problems, we were trying to educate some people about what 911 really is.

Let me say that to date I can only report dismal failure in Los Angeles County, and I say it with malice aforethought.

A fire chief in one of our neighboring cities met me one day and said: "I hear you're on this 911 Committee. If the police department starts taking my fire calls, I'll resign!" I knew that he meant what he said. This has been the problem to me from the start—a lack of willingness of the individual cities, the individual departments, to cooperate, not only with other cities but to cooperate with the people in their own cities.

At its last meeting, the committee decided that nothing could be done on 911 until we had Automatic Number Identification. When people talk to me about it, I get perturbed. We could equip every telephone in the United States so that you could pick up the receiver and shout "Fire!" and it'd be automatically connected to your fire department—if we could afford the cost, and if we are willing to wait 20 years until it is fully developed.

And then we talk about the state of the art. The state of the art needs only one thing, that I can see. And that is cooperation between agencies. We need 911 now! Not 20 years in the future when we develop some huge technology which we haven't got at present. And we *can* do it now. Every agency here can do it.

Perhaps if I haven't done anything else, I have alerted a lot of individuals as to what can be done, or what we should do. I hope that eventually they will develop enough clout to prevail upon these dissident opinions to do away with the misinformation that's put out, and help.

Before John Tunney was elected to the U. S. Senate, I worked with a member of his staff on the 911 concept. This last session, Mr. Tunney made a presentation on 911 to the House of Representatives, which shows he now knows about it and is sold on it. I hope that we can sell a few more people like him on 911.

Hon. Gordon N. Johnston, Mayor, City of Tacoma
Puget Sound Governmental Conference
Seattle, Washington

The City of Tacoma along with other jurisdictions in the four-county Puget Sound Governmental Conference, is anxious to see this service made a reality, and is working through the Puget Sound Governmental Conference in this regard.

As mayor of the city, I see some additional benefits—the benefits of governmental agencies working together. We are a common community and we must cooperate to solve our mutual problems. The Puget Sound Governmental Conference had hoped to finance its current efforts on 911 through a work element of a proposed highway safety demonstration grant. For reasons other than the 911 portion, this application has not been completed. And the small amount of staff effort on 911 has more or less been bootlegged from a law and justice planning grant.

We are presently looking forward to new Federal Safe Streets Act funds for 911. In the meantime, individual cities and towns are proceeding with implementation on an individual basis. Later examples of this effort will be discussed by a representative from the City of Seattle, which is implementing a form of 911 next spring.

Facing up to the technical problem without becoming too discouraged has been costly. There are close to 80 telephone exchanges in the four-county area. About a third operate with step-by-step equipment, and use "9" as an access code.

For a number of these, implementation will probably mean the use of a standardized seven-digit emergency code, until plans and capital funds for new switching equipment materialize.

The political obstacles to be met in the central Puget Sound region are serious—as serious as anywhere else in the country. Local government in Washington state is highly fragmented. Local and single purpose taxing districts are used in a number of instances for emergency service outside the large cities. These districts often have little resemblance to either telephone company or telephone exchange boundaries, further complicating the technical as well as the political problems.

The Governmental Conference has now commenced work to resolve 911 conflicts between these special-purpose districts, and between units of general purpose government in the four-county area. However, these problems are not fully identified, and will not be until we are able to staff these efforts without interruption.

In the meantime, telephone company personnel and individual jurisdictions are moving ahead within a less than regional context.

To provide you with more specific information on the efforts of several jurisdictions who are implementing 911 next spring, I'd like to introduce Mr. Howard Fordice, Supervisor for Municipal Communications Systems for the City of Seattle.

Mr. Fordice: Mayor Johnston has pointed out something that I think is highly important. He has named the three major areas of consideration when looking at 911.

First of all is the political area. And when you solve the political area, you can solve some of the other problems, which are administrative and technical. I'm putting technical last, because, as he has implied, the technical problems can be solved.

In the Puget Sound area there are four cities, which have started to implement 911 or are about to implement. One city implemented last November. It's a relatively small, almost totally rural city. It has rural area about it. It still has a telephone district or boundary problem. Part of its telephone service comes from the City of Tacoma, which is a few miles away. But nevertheless, they have implemented, and they are operating.

There are three other cities in the area which are about to implement. The City of Seattle, as has been mentioned, is implementing on April 15, 1971. Seattle represents approximately 600,000 people. On two sides, it's bounded by water. So it does tend to limit some of the jurisdictional cross-boundary problems which exist elsewhere. However, to the south and to the north, we really have them.

The City of Mercer Island, inspired by the fact that Seattle was going to 911, has announced that they intend to implement on the same date. Mercer Island is a perfect situation. It is totally surrounded by water; it's an island. They have one telephone exchange serving the total island. No boundary problems or jurisdictional problems. It's a perfect model in that respect.

Then we have the City of Renton. This is an example of even greater boundary/jurisdictional problems than those of Seattle, because it is served by more than one telephone exchange, is surrounded by rural area, is highly industrialized in its own internal boundaries, and is bounded by a commercial type city on one side and other smaller cities on the other side.

So really, we have the whole bag. It appears to me that in this area, the way things are going, there will be spot implementation, and that the overall area of implementation will probably have to follow piecemeal. I don't see any particular hope at the present time, for overall planning.

Richard Liddell, Fire Coordinator, Niagara County
Erie-Niagara Counties Regional Planning Board
Buffalo, New York

We do not have 911 nor have we attempted to implement it as yet. In Niagara County we have approximately 250,000 people, made up of three cities and twelve towns. The three cities make up approximately 150,000 of these people. In the summer we have quite a tourist trade—in and around the city of Niagara Falls, along the international boundary between Niagara Falls and Canada.

We've been looking into 911 to identify the jurisdictional problems, and the problems between the fire and police departments.

In Niagara County a few years back, we realized that because of the small towns—we had 28 volunteer fire companies—we needed a central communications center. So we have put in a central radio communications network. We have radio contact with all 28 volunteer companies, and we also have radio contact with the three city departments. The person can dial any of the seven-digit numbers for fire. We do have control of each of the volunteer company's sirens and their own monitors. We accept the initial call for 22 out of 28 of the companies. The sheriff's department also has radio contact with the three city police departments, and four town police departments.

In Niagara County, 911 was requested by a few civic organizations, and it was brought before the county legislature as a resolution that it be adopted. This resolution was put to our group—the sheriff's committee. We in turn asked the telephone company to instigate a feasibility study for us. Gene Fredericks, from the New York Telephone Company is here. I'm going to ask Gene if he'll bring you up to date on what he has planned for Niagara County.

Mr. Fredericks: The remarks that I'm going to make pertaining to Niagara County are strictly remarks based on the very limited official discussion in the County Legislature, and a few off-the-cuff conversations with various agencies.

About two months ago we received a letter from the County Legislature, authorizing us to do a feasibility study on this.

During the first week of January we will begin to sit down with the various elected officials and agencies, to pick their brains, to see what they need, what they don't need, what they would like and what they don't like.

We have developed, based on the initial conversations with some of the county officials, a tentative plan.

I feel quite confident that we have no problem in Niagara County. We have many areas of concern, however. The elected officials and agency officials I've talked to indicate that they would like to provide the benefits of 911 to their communities. They're cognizant of the fact that they also host hundreds of thousands of people from all over the United States to view the mighty Niagara. And they're cognizant that we have a heck of a good neighbor to the north of us—Canada—and the social interchange between the people in Canada and our citizens is on an hourly and a daily basis. They are earnest in their desire to see if they can work out a system for 911, which will better serve the public.

Hon. Ken Nishimoto, Councilman
City of Takoma Park, Maryland
Metropolitan Washington Council of Governments
Washington, D. C.

As a member of the Takoma Park Council, and the Metropolitan Washington Council of Governments Public Safety Committee, I'd like to say a few words about the Washington regional council, its jurisdictional complex, and the interest of the council in 911.

The Metropolitan Washington Council of Governments is composed of 15 member jurisdictions. We have six counties, eight independent cities and the District of Columbia. If we consider the District of Columbia as a state, we would have three states to deal with. Of the six counties, four are in Virginia; two are in Maryland. Three of the independent cities are in Virginia. This is further complicated because my city, Takoma Park, is located just on the borderline separating Montgomery County and Prince Georges County. This presents some problems, but not too great.

In addition to the members from the various jurisdictions, we have the members of the United States Congresss, and the General Assembles of Maryland and Virginia, as members of COG.

The council is responsible for nearly three million citizens in a 25,000 square mile area. And it's projected population is 7.7 million by the year 2000.

Within COG's Department of Public Safety, the staff people—the police chiefs, fire chiefs, and civil defense personnel—among others, have been active in attempting to meet the increasing demands of the citizens for public safety.

For example, COG has developed a fire mutual-aid agreement that enabled the suburban jurisdictions to answer about 250 fire alarms in the District of Columbia, during the disorders of April 1968.

COG also has developed a police mutual-aid agreement, which makes this type of cooperation and coordination available to the police departments. COG has also formulated a hot-pursuit policy that sets up needed guidelines for policemen pursuing suspects across state jurisdictional lines.

The council of governments has been interested in implementation of 911 system in Washington for some time. I'm sure that we need to technically line ourselves up first before we get on in this area, but I think that we have a strong public feeling for the benefits that can accrue from an effective 911 system.

The District of Columbia has already shown definite interest in the 911 system, by coordinating its police emergency communications system with Prince Georges County, Maryland. Both jurisdictions now have the same seven-digit emergency telephone number, 444-1111. However, lack of funds has proved to be the main stumbling block for areawide implementation of 911. Without federal funds to be used specifically for 911 projects, COG does not have the staff to work regularly on making 911 a reality in the Washington Metropolitan Area.

Paul Ziehler, 911 Coordinator
Miami Valley Council of Governments
Dayton, Ohio

To give you a little background on the Miami Valley area, the population is about 700,000.

We're talking about 450 square miles, with about 15 municipalities and 13 townships.

Ohio Bell operates 13 central offices in the county, and they are serving primarily Dayton and the highly urbanized areas. The General Telephone Company (an independent company) operates seven central offices within this area and they operate in the less urbanized area in the western half. There is one central office being operated in the southwestern portion of the county, which is a small independent company—the Germantown Independent Telephone Company. So we're talking about 21 central offices, and three telephone companies.

In the area we're also talking about more than 50 emergency service agencies—fire, police, suicide control, poison control, ambulance services, etc. That's more than 50 separate phone numbers.

Miami Valley COG is the agency in the Montgomery County area that is coordinating this activity of studying 911, and working toward its implementation.

In July, 1969 an initial questionnaire survey was sent out to all the police and fire departments in the county asking what they knew about 911, if they were interested in it, and where should we go from here?

The results of the survey showed that there was a general lack of knowledge about benefits, and how the 911 system would actually work. They did show enough interest, however, to warrant going on to a feasibility study, and that was the next stage.

The council of governments asked Ohio Bell to prepare a feasibility study, just looking into the general concept of 911, how it might be laid out in Montgomery County, and to identify the overall engineering requirements that we might have to consider when we get close to actually implementing.

We also contacted the other two phone companies, General Telephone and Germantown Independent Company to see if they would be favorable to participating at a later date.

This information was given to the council of governments to review and Ohio Bell asked for future direction.

In the spring of 1970 the council of governments reviewed what Ohio Bell had prepared. The officials generally liked what they saw and what 911 could do for Montgomery County and all the police and fire and other emergency agencies, and they said: "Okay, go ahead now and give us some specific requirements; what we will need." Each local agency was asked to determine how many emergency calls they were receiving, and they were also asked to project trends in the agency development and potential use of 911.

Interesting figures that came out of this portion of the survey were that in 1968 there were approximately 75 emergency calls per day. These are the best estimates that they were able to come up with. By 1970, those calls had reached 100 emergency calls per day. And we've projected that by 1971 there would be approximately 125 emergency calls a day. So the amount of emergency calls, as the population grows, and as the urbanized area grows within Montgomery County, the amount of emergency calls also increases.

Initially, a fact that came out of the volume of calls was that 70 per cent of all emergency calls were coming into the City of Dayton—of this 70 per cent; 45 per cent was the Dayton Police Department, 55 per cent was the Dayton Fire Department. You see that the total number of emergency calls within the county was concentrated in the City of Dayton.

With this information, we went another step and in the summer of this year, Ohio Bell was asked to work with General Telephone and Germantown Independent Telephone to actually see how the Dayton Police Department and the Dayton Fire Department set up might be used as a central reception point for 911 calls—since these agencies received most of the calls.

They were also asked to look at what additional personnel, space, and operating requirements might be needed if, in fact, the Dayton Police and Fire Departments operation would be used. Prior to this point it had been thought that the Montgomery County Sheriff's office and his operation might be the proper location for the operation of the 911 communications center.

It would be a great savings in capital cost to use the City of Dayton's existing facility. The primary cost would be in the addition of one or two personnel.

The three companies are working together, and are developing alternate systems that will be proposed to the council of governments. They are drawing up the details on how the system can be implemented. The two alternate systems presently being worked on will be proposed to the COG—one is a manual system which will have connection capability only to receive calls from the citizen in the appropriate central business office. The other system—a multi-system or the crossbar switching system, which it is called—would have the ringback capability and also the capability of interconnecting service stations.

We don't have any exact cost figures to give you now other than that the phone companies are working on these figures now and they should give them to the council of governments shortly. Ohio Bell does estimate that it will be in line with the other installations throughout the country. This whole proposal will then be presented to the council of governments in the first quarter of 1971 to make their decision on which way to go, on either the manual system or the multi-system.

Certain problems that the COG has noted along the way are not unique to the Montgomery County area. One is the existence of various types of switching equipment. In the 21 central offices, they have different types of switching equipment. Although we've been assured that this is no technical problem, there is substantial cost and

time involved to replace, convert or match up these to handle 911.

The problem of boundaries—with 21 central offices, some overlap outside Montgomery County, some don't quite extend up to the end of the county. We've been told that something could be done to straighten out the boundaries. We realize what the cost factor is here, too, but we at least want to take a look at what that is.

Finally, there's the problem of the lack of complete agreement and acceptance of the concept of 911. We feel that through a continual public information program, we'll be able to sell this program not only to the police and fire services, but also to the general public.

As I said, we have been getting great cooperation from all the service agencies and from the telephone companies. We feel that we are going down the right road, and that we will be able to get this implemented, no later than this summer, or late 1972.

As it stands now, Montgomery County has set aside $50,000 for the 1971 budget for implementation and operation of the 911 system. There are a lot of things to be worked out yet, as to who's going to be paid for what, but this $50,000 has been set aside by Montgomery County's Board of Commissioners.

We're also looking into financing of 911 through the Safe Streets program. We understand if you include this in your law enforcement program, your actual law enforcement plan, there is federal funding, through the LEAA, available for the 911 system. Once it's included in your plan, the only thing that's required in Ohio is that you get the state law enforcement planning agency to list it as one of their priorities within the state.

PANEL: THE OMAHA 911 SYSTEM

Moderator: Al Pattavina, Director of Public Safety, City of Omaha

Richard Andersen, Chief
Omaha Police Division

I'd like to start with a general description of what we have operational in the Omaha 911 center. We have 37 jurisdictions linked through this 911 center. This includes police, fire, and rescue squad or municipal ambulance service. The City of Omaha has a population of about 400,000; our jurisdiction under 911 is about 600,000. The city is about 75 square miles; our total area covered for 911 is about 600 square miles.

We feel that to be successful in a 911 operation, three things are needed. One is *cooperation*—cooperation not only of the jurisdictions involved, but of the manufacturers and operational people, and installation people. Second, you need *total planning.* And in doing this you must never lose sight of the basic concept of 911. Third, you need the *hardware and equipment* to put the concept into operation. I'd like to talk a little bit about each of these three factors.

Although you need total cooperation to be successful, you need a leader first of all. Somebody has to start the thinking and carry it through. In an average metropolitan area we feel this leadership must come from the central city. I do not think it would be practical to assume that one of the fringe jurisdictions, a smaller city, could carry the ball for the entire region.

When we began considering a 911 system, we met with officials from all of the adjacent jurisdictions. We met with them early in the game to offset any concerns they might have. We did not meet with them regarding minor items or costs. There is no cost in our 911 center to the surrounding jurisdictions. The costs, to include service for these areas, are so minor that we simply did not consider it worth the time to go into extended discussions on it. So the total cost of the system is carried by the Omaha Police Division, at this time. We have no intention, until costs get out of line, if they ever do, to go into cost-sharing.

One of our main principles was that we could not usurp the emergency number of any small jurisdiction, or their identity as a community. 911 was not meant to totally replace every emergency number in the region. However, 911 does replace all emergency numbers for the City of Omaha. It is the single emergency number in the City of Omaha.

We felt that after the system was operational, the jurisdictions would do their own thinking in regard to cancelling their emergency numbers and using 911 as the only number. But we left all these choices up to the various jurisdictions. We did not try to force any thinking or any numbers onto any jurisdiction.

The one thing we did request was that the outlying areas make the choice on what we were to do with the call. We gave them reasonable alternatives on this. We offered three methods. One, we would transfer the call to them, which is a very simple thing. Second, we could transfer the information to them, but not the call. Or third, it could go into a hard copy method of transferring the information to the jurisdiction. We left the choice up to them.

With one exception, they each decided to have the calls transferred to them. Since then, however, some of the jurisdictions are starting to suggest

that we should do all of their dispatching, as well as receiving the calls. This could be done with total integration of the radio networks in our central dispatch center. And I can foresee, within a few years that this 911 center could be the total dispatch center for the entire metropolitan area.

After you've obtained the cooperation of all jurisdictions you need the cooperation and assistance of the people to be involved in the actual installation and planning of the center. In our case, this meant Motorola Radio people, because you have a definite connection between your radio room and your 911 center; and the Northwest Bell Telephone Company, the chief technical people in implementing the system.

We found both these companies to be extremely cooperative in listening to our problems and our needs. We wanted to wind up with a system that was satisfactory to all concerned.

The second large thing that is necessary is total planning. The basic concept, never to be forgotten, is that you are trying to provide a number for all people to call for any type of emergency service, that can be handled without a second call being necessary. It must be the center for the reception of calls for emergency assistance. You can have no administrative calls of any type going to the center, or being transferred by this center. 911 is there for only one purpose, and that's emergency service. They're not meant to be administrative personnel or phone answerers in any manner.

We installed a complete, separate telephone system in this police division building, with no connection to the 911 center. This is solely for the administrative use of the police division. We feel that this is an absolute necessity to be a successful center.

The third large item that comes into play is the hardware and the equipment. Most of the equipment is telephone company leased equipment, certainly. You must remember one thing in this area: Bell Telephone personnel are telephone people. They're not policemen and they're not firemen. They're telephone specialists and telephone installers. They have unlimited equipment, they have unlimited talent to assist you. But you must tell them what you want and how you're going to do it. The one thing I want to hit on is the end result. Anytime you're dealing with people, the most important element is making the public aware of what you're doing and what you're asking for. For this reason we have conducted an extensive information program to tell people what 911 is for and how to use it.

We've had about a 90 to 95 per cent acceptance by the people, and this is the percentage of emergency calls that now come over 911. We've had extensive publicity through the newspapers, magazines, a regular public information campaign, and a crime check program. We've done everything we can to sell this concept to metropolitan Omaha.

I think that's a key, because if you do not sell your service and you do not convince the people of what you are doing, why you're doing it, and what it's for, I think you're doomed to failure.

Ted Janning, Sheriff
Douglas County, Nebraska

Most people cannot understand why the sheriff's department and police department would work together because of the variation in their work. Sheriffs are very conspicuous by their absence. And that is one reason why the sheriff's department and the police department are not cooperating on this kind of work. So your primary task is selling this idea to your county sheriffs; most of the sheriffs will not go along with this program unless you cooperate and work with them. One big advantage that we have in Douglas County is our Douglas County Sheriff Radio Communications controls the entire county. We operate on a 39.9 megacycle with all radio stations, all communities in Omaha and Douglas County. This is a regular sheriff's band, and it was very easy for us to sell this program to our individual little communities, because we broadcast their emergency calls anyway. Then Sarpy County, they're also on a 39.9 band, so it's very easy to sell them this program.

And we have had many, many opportunities to use this 39.9 radio, and have been very successful, and think it's a very good deal for the Omaha Police Department and the Sheriff's Department to work together. We are very happy with this cooperation.

Martin Dineen, Chief
Omaha Fire Division

When 911 became operational last April 10th, the immediate effect on the fire division was the discontinuance of the old seven-digit number. Surveys had indicated that less than ten per cent of our population actually knew the number. So, in effect, the citizen had to dial operator and the call would have to be handled at two or three points before our emergency dispatchers would get it.

As has been mentioned before, the volunteer fire departments have maintained their old number, and they can be dialed direct, or if the citizen doesn't know their local number they can come through 911 and be transferred to their local community's emergency agency.

Many calls that we formerly received from outside the city are now quickly identified through the 911 color coding system. And the question of what side of the border they are on, or what community they are in is quickly learned through the color code. When the phone rings, the call is given to the proper agency with a minimum loss of time.

We now have a hold feature, which we use until our equipment is on the scene. This feature permits us to hold the calling number and re-ring it if the other party hangs up. When the first firemen on the scene indicate that a fire actually exists, the hold is released. If there's nothing showing on

approach, we hold the line until they have investigated. We have eliminated a number of nuisance and false calls and malicious calls through this process.

Our daily average of dispatches has increased 25 per cent in the short period of time that 911 has been in operation. The only reason we can find to account for this is apparently that 911 is so easy to remember that the public will call us on the slightest sign of an emergency. I'm referring both to rescue squad, or our municipal ambulance calls, and sometimes minor fire calls or smoke scares. It seems that we get a quicker call through 911, a handy number, than we did if they had to go through the trouble of looking up the seven-digit number.

The number of false calls has steadily decreased. In October we had ten false calls. It's a very small fraction of one per cent of our total number of calls.

Now, our present fire communications system is remote from this building. It's about four or five miles away from here. Eventually it will be in the same room. And again, calls will be answered just as quickly, and fire calls transferred to our operators.

The advantage, of course, of the consolidated safety communications system and 911 are many. We have looked at this, and we are thoroughly convinced that it has many more pluses than minuses.

One of the minuses that we were concerned with originally was the loss of identity of our own fire dispatchers. We are quite sure, now, that we will retain our own identity as fire dispatchers. We have strongly maintained the position, as many of you do, that fire calls are to be given directly to us and we are to make all decisions on them. It's not to be made by a police dispatcher or a civilian dispatcher. If it pertains to a fire emergency condition, the call is transferred immediately to our people and we make dispatch.

Another area of concern in fire departments, where the 911 or receiving center, is controlled by police officers, are the reported instances where the fire calls have been held while the police investigated them. That, again, is one of the reasons we specified and emphasized here that they do not hold them. Give them to us, first.

We don't have any cost figures on 911, but there's certainly no savings as far as the fire division's concerned. We will maintain our same staff of dispatchers, whether at this location or at a remote location.

Another minus point that has been mentioned in other cities was that if the police board is quite busy at any given time, there may be a number of rings before the call is answered. We have only one reported incident of that here. That would be a serious problem. However, in our seven months experience, that is an isolated case.

We did have some questions about consolidating our communications into the 911 center. However, a representative of the American Insurance Association has assured us that we will be as well off under this arrangement as we are now.

Another point that we had discussed here, which I don't have the answers for, is one that is certainly worth considering. When you accept the responsibility for receiving emergency calls for the surrounding communities, what about their facilities that are wired for burglar alarms or fire alarms or sprinkler systems, and so on? Do you accept that? And then when you do, are you married to that system in the way of maintenance and checking, and so on? That is an area that we are now exploring.

That's just a brief outline of our limited experience, but all and all, again I'd emphasize that from the plus and minus side, we are now better off today than we were six months ago.

Wally Agee, Customer Relations Regional Manager
Northwestern Bell Telephone Company, Omaha

As I'm sure you have gathered, we are all very proud of our 911 center, and we do welcome the opportunity of showing it to you. You've heard a word this morning many times, and let me just echo it. That word is cooperation. Before we did anything it became very apparent that we really couldn't have 911 in Omaha without cooperation from the Omaha fire chief.

So our first meeting was with the police and fire chief and the safety director. As a result of these early sessions, our fire chief did agree to let the Omaha police chief answer his calls. We had two sheriffs involved, the Douglas County sheriff and the Sarpy County sheriff. We visited with these gentlemen, and they agreed to let the Omaha police answer calls from citizens within their jurisdictions.

We had volunteer fire departments. We talked to them. We visited with officials from each of the 17 communities. We talked to town marshals, volunteer fire groups, small town fire chiefs, generally about anyone who would listen to us. And cooperation is what we received, one hundred per cent.

Now, from the very outset of our planning we established three major objectives. The first, and most important, was that we wanted our citizens to be able to dial 911 for any kind of emergency—police, fire, ambulance, sheriff, poison control, mad dogs, you name it.

Second, we believed that all of the citizens in Douglas and Sarpy Counties should have this facility available to them. It didn't make sense to us to have a stranger come into our community, or one who has lived here, and start in his car in Omaha, and drive to the community to the south of us, Bellevue, have an accident and not be able to dial 911 and get assistance.

And third, on calls that went through the telephone operator, before 911, we had the capability to hold and re-ring the customer. We wanted the 911 operator to have the same capability.

Our 911 center serves approximately 500,000 people. We cut over the service in May 1970, which

coincided with delivery of our Omaha telephone directory. The front cover of our phone book has a picture of the Omaha police station on it. We gave prominent identification to 911 on the inside front cover.

No matter how good your 911 system is going to be, there are several things that need to be done to assure its success. First of all, people must learn about 911 and remember it. The number has an advantage in being easy to remember, but reminders help. Initial publicity is extremely important. Our Omaha news media were very cooperative in letting people know about 911. At the start in Omaha, Northwestern Bell carried on an advertising program. We used TV, radio, newspaper, outdoor billboards, bill inserts, pay stations, and so on.

In addition to that, our media used a lot of good will, if you please, type of spots both on air time TV and in the press. Our Omaha World Herald even today carries in the metropolitan edition that goes into the homes each day, and generally on the front page, the 911 logo, reminding people of the number.

But let me conclude by pointing out to you that none of us on this panel are trying to tell you that our way is the right way to do it. Our Omaha fire chief cannot speak for the Indianapolis fire chief, any more than I can speak for the Indianapolis telephone manager. We established the objectives that we thought would best apply to our area. We're using the 310 switching unit as the serving vehicle. In our judgment that is the piece of hardware that would best do the job for us. That's not necessarily the one that would be best suited for your community.

If you're planning 911, visit with your telephone people, ask their help. I'm sure you'll get a responsive ear.

DISCUSSION

Mr. Pattavina: Chief Dineen brought up one point I'd like to clarify here. We felt we were going to have a real problem with telephonic alarm systems directed to the 911 system. We immediately went to our legal staff in the city and had them draw up an ordinance that would preclude any telephonic alarm systems coming into the 911 system. If these automatic dialer systems come into 911, they can destroy the system's capability. For instance some of the alarm systems will continue to ring until somebody on the other end, the originating end, turns it off. This ties up your emergency lines.

We're operating on the basic concept that nothing will come in on the 911 system on a telephonic alarm unless it's specified by law. These alarm systems are coming in through other means and other techniques.

Question: Did you have any ART systems prior to 911 or this ordinance?

Mr. Agee: The Automatic Recording Telephone was developed by the Bell System. We recommend that all users of ART go to some agency or alarm center *other than* a public safety agency. Many cities do go to public safety agencies, and if this decision is made, a separate number should be set up. Under no circumstances should these messages be processed through 911. This is a precaution against overloads.

Question: What are you doing to handle calls for the poison control or suicide prevention centers? Do you have direct line tie-ins, or do you transfer the calls?

Mr. Andersen: We transfer the call. If it is necessary to put a leased line in to process these transfers, this is at the expense of the agency to which calls are transferred. But our total system is push-button dialing, which is far superior to the old hand dialing method. You can quickly transfer calls through this push-button dialing.

Question: Chief Andersen, you mentioned that you did not quibble about cost-sharing with the suburban jurisdictions. Are we to assume then that the jurisdictions included did not hassle too much with any money relative to this system?

Mr. Andersen: If you look at a metropolitan area, you will find that generally the central city police division receives 80-90 per cent of the emergency calls. No matter what you add on to this percentage, it is such a minor increase in total load, there is no additional cost if you're honest with yourself.

Question: Are the calls transferred to these other jurisdictions recorded?

Mr. Andersen: Yes. We decided that every call that is received by 911, even if it is transferred, should be recorded.

Question: Don't you need extra lines coming in from the municipalities which add more costs for the system?

Mr. Andersen: No. If the other jurisdictions want to lease lines back for transfer purposes, they will have to pay for that lease line. But with push-button dialing, there is really no gain to lease lines, because the push-button dialing is just as fast as lease line transfer.

Question: What is the largest suburb that is included?

Mr. Pattavina: Bellevue is about 30,000 in population. That's our largest incorporated city.

Question: Did you have any other exchange that began with "9" outside of 911?

Mr. Agee: We had some pay telephones in one of our communities that started with "9." We had to change those numbers, but this was not an extensive problem in our area.

Question: What is the cost of this system?

Mr. Andersen: With 2000 911 calls coming in per month, our cost is running about 17 cents a call.

Question: Have you considered anything less than uniformed personnel in the 911 communications operation?

Mr. Andersen: Those are all civilians up there. There is not a policeman in that room. It's a matter of training and supervision of our communications supervisors.

Question: Mr. Dineen, can you tell me what percentage of fire calls are received through 911, as compared to those still coming through the old seven-digit number?

Mr. Dineen: All fire calls come through 911. We make about 30-40 emergency dispatches a day.

Mr. Andersen: The police division makes about 650 dispatches a day. We phased out all but one of our other numbers. We watched our call load go down close to zero. People still remember that number to some extent. Quite a few people still have that sticker on their phone with the old seven-digit number. We still get about ten calls a month on that number.

911: A LOCAL GOVERNMENT RESPONSIBILITY

Hon. Francis B. Francois, Councilman
Prince Georges County, Maryland
Metropolitan Washington Council of Governments
Washington, D. C.

As a member of the NSRC Board of Directors and as a local elected official, I have been invited to make a few comments regarding what I feel is and should be a priority program for public safety agencies around this nation. More importantly, I wish to encourage, exhort, and cajole, if possible, the local governments represented here to accept their responsibility, and to begin active consideration of 911 in their communities.

I think we should establish at the outset, if we haven't made it clear already, that 911 is a service for the public—for the individual citizen for whom we in public office work. It will benefit him greatly, in most instances.

But for we who are in office, make no mistake, 911 will give us problems. We will have to come to know and negotiate with our neighbors. Our police will actually have to talk to our fire personnel, perhaps for the first time. There are some who would say that if consideration of 911 did no more than those two things, it would be worth it.

We will all have to do more than this, though. We will have to think in new terms, maybe act in new ways, and of course, there is the inevitable problem of finding the money. But the guy who is paying the bill—Mr. and Mrs. American Taxpayer—should get better service as a result. And I think that is what local government is all about.

The concept of 911 was unveiled just three years ago by AT&T; as yet another way to add usefulness to Alexander Graham Bell's wonderful contraption. Ever since Mr. Bell placed that first phone call, the telephone has been relied upon by more and more people as their individual link with society. With 911, we can now achieve the ultimate communication link between the citizen, and the emergency services he seeks.

The Omaha Indians, for whom this dynamic city is named, of course had no telephone. A person to person call within the tribe could be made only by one Indian going to see another. In a primitive way, by the use of smoke signals, a station to station call could be placed. But the time needed to build a proper fire, find a blanket, and wait for proper wind conditions made this system most unreliable, especially in an emergency. All too often the cavalry charge was over before the first puff of smoke rose to pollute the air.

When my pioneer grandparents came to the beautiful Nebraska City area, just a few miles south of here, and to the virgin plains of Iowa west of Fort Dodge, their methods of communication were no better than those of the Omaha Indians. To summon the sheriff or a doctor you walked or rode to the county seat, if you had time. Otherwise, you solved the emergency by yourself or with your neighbors—or you merely succumbed to it.

With Bell's contraption, all of this changed. Around the turn of the century the party line telephone came into being, and the plains, where my parents were born and reared, entered our modern instant communication age.

I grew up on a party line, and I know its joys like only one who lived with it can. We had nine families on our line, each with its own distinctive ring code. Our ring was two shorts and a long. Frankly, I believe the party line was the most effective public speaking training device ever invented. You always knew you had an audience when you used the telephone, gathered by the ring heard in all 9 homes. Your emergencies, your business, your joys, and your sorrows were known to all of your neighbors.

We had no 911 number to dial, and, indeed, no dial at all. But five long cranks was a general ring that served to summon one and all for help in any emergency.

We no longer have a party line in my home farming area in Iowa. My parents now enjoy the same dial service in Iowa as I do in Maryland. The service is infinitely better, but deep down I know my Irish mother misses dearly those code rings, and the chance to keep up with her neighbor's business.

But enough of yesterday. We have gone from the five long rings to 911 service. Today "one stop" emergency service by telephone can be a reality for each of our communities, if you and I will but lead the way.

Why don't we all have 911? It troubles me when I realize that now, nearly three years after 911 was made available by AT&T, barely 100 communities have the service. If "one stop" 911 really is a

useful service to the citizen—if it really does make it easier for him to get in touch with the police, fire department, ambulance, and others in an emergency—then why aren't there more cities and towns with 911 service?

The program in which the NSRC has been involved has sought to answer this question. We need only look back to the Chicago meeting last winter, or to this meeting today, to learn some of the obstacles to 911. Many of the problems are simply a lack of knowledge or understanding of the concept. 911 has been an emotional issue for many, who have seen it as a threat to their way of life, or to their way of operating. But when you look back to the presentations from the Omaha personnel, we see that 911 is not really a threat, but can be a real help to the operations of all participating emergency agencies.

911 serves a very vital purpose in those communities which have it. We have heard of example after example where, in times of need, citizens have used 911 to bring help and assistance.

And in some cases the citizens have merely ignored and overruled the bureaucratic objections, delays and hang-ups, and have made 911 work as it was intended. In New York City, 911 initially applied to the police and ambulance only because the fire service was not convinced that 911 would provide improved service. But the fire service wishes have been ignored and outvoted by the people of Fun City, who call 911 anyway for fire services. Indeed, more than 30 per cent of all fire calls now come in on 911.

It is time for all of us in public office to accept our responsibilities as representatives of the people, and to place in motion those forces which will bring about an implementation of 911. In my own Washington area, we have taken the first steps by undertaking a study to determine the feasibility of and the best arrangements for implementation of 911, through the Metropolitan Washington Council of Governments. Beyond this, we have made significant progress by using one common seven-digit police number, albeit not 911, for our two major jurisdictions, my own Prince George's County and Washington, D. C. But we have yet to join the distinguished ranks of those with true 911 systems.

We in public office who have the authority to implement 911 can no longer hide behind the issue that we lack evidence that 911 can work. We have seen here today, that not only can it work, but it is possible for it to work without encroaching upon the prerogatives of any agency or government.

It might be, of course, that after a thorough study of the need for 911 in your area, you will decide it isn't a high priority item. Atlanta found that out. But don't you at least owe it to your citizens to do the study so that you can make a judgement as to need? We know that for most areas you will find an overwhelming need. Once you know that, you will find means to overcome all the obstacles between you and a working 911 system.

It is the responsibility of local elected officials to get our staff people—the police and fire personnel—to work together to achieve this goal, once we know we need to achieve it. At the same time the elected official must get out in front. He is the leader. He must work with the other communities which surround his town, to develop the system to maximum benefit.

We know through the efforts of the NSRC project that in *every* community where 911 has thus far been adopted, there has been a strong local political leader and spokesman for 911 who has worked to overcome opposition to the system. This should be the role of the elected official, and he must assume that role.

We can no longer talk about 911 costing too much. 911 is only as expensive as you make it. We know, too, that response time can be improved, not hurt, by 911. We have seen that it is possible for several cities and counties to cooperate on a joint enterprise to put 911 into operation successfully. So let us get on with it, and forget our hang-ups.

As responsible local officials I think we would be derelict in our duties if we failed to acknowledge the possible role of regional councils in assisting our efforts to study and implement 911. In almost every area of this nation there is an areawide agency concerned wholly with developing programs on a regional, cooperative basis. I am talking about councils of governments, in the broad sense. They exist in every metropolitan area, and most non-metropolitan areas as well.

These regional councils, frequently charged with law enforcement planning responsibilities under the Safe Streets Act, are in the best position to serve as the focus for our 911 effort. As a mechanism for areawide cooperation these councils can staff and undertake much of the preliminary effort with regard to 911. In addition, as an existing mechanism for cooperation, they can go a long way towards resolving many of the local conflicts which, with near certainty, will arise.

Of course, they will need funding for the costs involved. Hopefully, the next Congress will assure this funding through amendments to the Safe Streets Act. The NSRC will be working in this direction.

If we want 911, and if we are willing to work for it, our communities can join Omaha and the 100 other pioneers in this effort. And that's when we can recall that intrepid opossum, Pogo, from Walt Kelly's comic strip, who perhaps sums up our present inability to offer 911 everywhere by his famous comment: "We have met the enemy, and he is us."

CRIME, THE CHALLENGE OF RESEARCH AND DEVELOPMENT

Dr. Edwin I. Golding, Chief
Center for Criminal Justice
Operations and Management
National Institute of Law Enforcement

We have been discussing problems of technology and implementation with respect to 911, the single emergency telephone number system. I would like to stretch your concern beyond the immediate problems relating to 911. I wish to propose additional research problems to improve the operational capabilities of law enforcement agencies and, in turn, the level of public safety.

I suppose I am asking some of you to be Johnny Appleseeds. For in truth, I am suggesting that you take back to your base of operations, challenges, "Seeds of Concern," that your parent organization, industrial acquaintances, research affiliates or universities can think about and literally "grow" solutions for.

My remarks, then, focus on problems for channeling research and development. I can present these challenges, and you may come back with ideas and possible solutions. My question is though, how does one get such ideas supported or implemented? That's where LEAA comes in.

The Omnibus Crime Control and Safe Streets Act of 1968 established the Law Enforcement Assistance Administration, known as LEAA. Basically, LEAA is the federal government's major entity to help the cities and states fight crime.

LEAA is designed to provide leadership, funding, and technical assistance at the local level. Funding has steadily increased to $480 million in FY 1971. The federal government's commitment will probably continue to grow significantly, provided we show we are effectively combatting crime.

The National Institute of Law Enforcement and Criminal Justice of LEAA carries out extensive research and development programs that are designed to improve the operational capabilities of law enforcement agencies. One of the Institute's concerns is technology—new technological developments to improve our law enforcement capability.

Now this brings me to my real purpose. What can we do through good research and development programs? What needs to be done?

In 1969, there were more than 8-1/2 million criminal acts reported and more than 7-1/2 million arrests. Illegal activities cost society $30 billion a year, through stolen goods, lost sales, destruction of property and etc. The taxpayers burden to support law enforcement agencies to combat such crime is about $6 billion a year.

We made a quick victimization type study in a few large cities and found out that about 40 per cent of the population believes that it is unsafe to walk out on streets at night. If we could deter a significant number of individuals, that is, prevent the individuals who have decided to commit a criminal act from committing that act, then in turn we could make significant gains in removing such parasitic costs and unnecessary fears from society.

The one area that can be addressed is alarm systems—for both the home and small businesses. For the home we would like to see developed a device and system that is portable, with zero false alarm rate, and that utilizes existing communication links, i.e., telephones to transmit the alarm covertly. Such a device should be marketable at service rates at least comparable to charges for home repair service for a TV or washing machine. Businesses, however, would prefer a system integrated permanently into their establishment. For business applications, the Institute is currently funding programs in Cedar Rapids, Iowa, and Louisville, Kentucky, to gain better data on the costs of operations and false alarm rates by using systems that can be designed from on the shelf technology. We have preliminary indications that conventional installations cost about $300 a year, but there are considerable false alarms.

The problem in this area for businesses or home usage can be summarized as: false alarm rate from the police point of view; initial and recurring costs from the user point of view; lack of standards regarding technical specifications and installation procedures from the point of view of large system operators; and lack of a recognized test and evaluation organization from viewpoint of new equipment manufacturers.

The next area of concern is to develop means of improving tactical communications and information primarily during civil disorders or disruptive group meetings. The problem is that ambient noise level becomes so high that law enforcement agents have difficulty in communicating with each other at the scene of the disturbance.

Special helmets with integral transceiver capability would be useful, provided the costs were low enough and they could be used during the situations where tear gas is required to disperse crowds. A portable bull horn—type amplifier, putting out more than 70 watts of power, would be an improvement, if helmets were impractical from a cost/effectiveness point of view.

In this same area of concern is the need for gaining information either about what an adversary may be attempting to do or where limited resources may be located.

In the situation about an adversary's actions, we are concerned with the possibility of developing reasonable night reconnaissance equipment. For instance, most night viewing systems have been developed for more stringent uses. The question is whether or not they can be degraded without too much compromise in performance for use by police at an operational and maintenance cost they can afford. The possibilities might include remote low-light-level TV or passive direct night viewing devices known as scotoscopes. These latter devices

just amplify, without complicated circuitry, the night scene so that an observer can discern what is occurring without the aid of additional sources of visible light. But real time viewing of the scene is not enough. Permanent record of the situation for subsequent study and analysis would also be needed.

Finally, in this same area of concern is the need for an economic car locating system. Unfortunately the problem is not unilateral, that is, what is required to satisfy requirements of urban police departments is not the same as what is required to satisfy requirements of metropolitan police. In one instance, there are a few resources but a large area to cover and in the other, larger resources with less area to cover. The former has a communication power range problem, the other the possibility of multipath interactions and errors.

Because of the high projected costs, most planners are thinking in terms of automatic vehicle locator systems (AVL) as a municipal facility. No single department in a local government can be expected to be able to assume all the costs of an AVL system. The question I pose is has the R&D community really researched all alternatives?

A third area of concern covers spectrum conservation. Among our high priorities is the need to further automate digital responses so that a computer at P.D. (under supervision of a sworn police dispatcher) and a mobile digital transmit-receive device in a police cruiser can be made to handle more effectively routine operational requirements (i.e., license plate checks, driver identification, etc.)

In this spectrum conservation area there is also the need, in certain communities, to overcome dead spot communications (i.e., subways to street). At present permanently-installed F1-F2 repeaters are used. But because such devices receive on one frequency and retransmit the signal at another, they worsen the congested spectrum problem. What is required is an economic F1-F2 repeater which receives and transmits an amplified signal at the same frequency. From both a cost and operational capability it would have to be competitive with what exists today.

Finally, while the existence of this next item doesn't necessarily relieve the use of the spectrum, it does help make what we use more effective. It is a voice radio scrambler. Although there are several commercial radio scramblers available for police to buy, they do not appear to have received large acceptance. The reason may center on cost/effectiveness (with the emphasis on cost.) Price ranges from $125.00 to $1,000+.

The major problem is to achieve a reasonable level of scrambling complexity in a manner acceptable to the FCC and compatible with standard communications equipment at a "low price." What is a "low price" is best defined by the law of supply and demand or in other words—what the law enforcement community is permitted to pay in view of other necessary budget expenditures.

Finally, the last area of interest is one in which the economists in the audience should appreciate, for it is making use of economies of scale. It is the consolidation of police services and consequently the consolidation of police communications. Coordination and consolidation of police services is looked upon by many experts (for example, the President's Crime Commission and the International City Management Association) as one means of achieving a logical solution to crime problems afflicting the urban environment with limited resources. Police jurisdictions in the areas of Philadelphia, Chicago, Miami, Phoenix, Cleveland, as well as several cities in Colorado and California, have adopted integrated communications systems. Other systems are in the planning stage, and assuming the FCC gives the states greater controls over air-waves, more are likely to be developed.

The equipment needs can be impressive, especially if the police jurisdictions seek to improve command and control procedures *without congestion of messages* but *with useful priority interrupt capability!* Computerized dispatch systems, monitoring boards capable of tuning in on several channels simultaneously, and other communications equipment represent the need for the application of new technology to such a law enforcement problem. Assuming many of the rapidly growing areas of the country would benefit from consolidated communications services, a market of tens of millions of dollars in equipment would be possible!

In closing, I hope I have planted some seeds of concern and interest in the need for good research and technology problems in a variety of areas, as with 911, to improve our ability to fight crime.

PANEL: COMMUNITIES WITH 911 PLANS

Moderator: James Gigoux, Executive Director
Southern Colorado Economic Development Commission, Pueblo, Colorado

Robert N. Quinnell, Director of Law Enforcement Planning
Toledo Metropolitan Area Council of Governments
Toledo, Ohio

In Toledo, we see 911 as the first subsystem in an areawide emergency response delivery system. Our goal is to reduce response time in terms of the whole emergency system design—to reduce the time between the moment the citizen lifts the telephone receiver and the dispatch of appropriate assistance. Our goal is to cut this time by 45 seconds. To do this we believe that the establishment of a central 911 reception point is essential. Further, we think that the establishment of centralized dispatch is also essential.

We looked at four methods of implementing 911: (1) *Telephone operator intercept*—the citizen dials 911 and gets the telephone company operator; (2) *Centralized reception by telephone exhange*—a 911 operator to receive calls for each exchange or each central office district; (3) *Centralized reception, decentralized dispatch*—all 911 calls come to a central point and then the calls are switched out to the appropriate dispatch agency; (4) *Centralized reception, centralized dispatch*—dispatching takes place at the reception center.

Centralized reception and centralized dispatch is probably ideal in terms of system design, but this is where you run into most of the problems. Technically it is very feasible, but you are asking local governments, that are politically fragmented, to cooperate on a very basic and well-established service. Based on our examination, we came up with the centralized reception point as the most feasible. Based on political realities, decentralized dispatch would be the most feasible.

All of this was fairly well defined in February. What's happened since then? First of all, the detailed planning was delegated to the City of Toledo. The city council passed a resolution backing the implementation of 911, and since the COG staff had no funding for 911, the city took over the actual planning.

The determination to go to 911 led to the decision to take administrative calls off the police and fire switchboards, and place them on the administrative switchboard. This led to an examination of the city's whole telecommunications system. We are now attempting to design a regional, police radio communications system.

This led to a look at the interface between the 911 reception point and the dispatch and command-control points. The economics of the situation in Toledo demand centralized dispatch, and this we have noted in our long-range plans.

We have a rather large central city, surrounded by a half-dozen or so smaller communities. We determined that it costs roughly $35,000 a year minimum, in terms of manpower, for a small city or village to maintain 24-hour dispatch capability. This is certainly a luxury to most of these smaller cities and villages, who cannot afford it in the face of increasing citizen demands for police and fire service. $35,000 could help to put more police officers on the street. It is a question of priorities. We think this is ultimately the leverage that will induce these small cities and villages into a centralized dispatch function.

Beyond this, the regional approach to law enforcement does require a central command post somewhere, and by somebody. This also requires substantial interjurisdictional cooperation.

While all this was going on, the City of Sylvania, one of our suburban cities with a population of about 12,000, implemented a 911 system. It covers one central office, including the City of Sylvania and Sylvania Township, a total population of about 20,000. This was possible because of a reasonably good match-up between the central office boundaries and the jurisdictional boundaries, even though some people on the Sylvania exchange live in Toledo and in southern Michigan. While they don't have a perfect match-up, Sylvania has had a sample of 911 and they buy it. 911 does work in their community.

We're not unique in the problems we face—understanding what 911 is, what it will cost, what personnel are needed, how we operate it, and the interjurisdictional, interagency conflicts.

I think we have a different perception of what 911 is and can be as a result of this meeting. We are working now to be sure the Toledo metropolitan area will have a regional 911 system, and ultimately we will have a complete regional communications system capability. Whether we are successful or not is going to depend solely on the level of interjurisdictional cooperation that we can generate over the next year or two.

H. B. Putnam, 911 Coordinator
Birmingham-Jefferson County
Civil Defense Corps, Birmingham, Alabama

First let me ask this: When do we need 911? Do we need it tomorrow? Do we need it today? Did we need it yesterday?

I am of the opinion that we have needed it for a long time. Why? Because the reports that we have had here indicate that they have had quite a few more calls since 911. Where were those calls before? The need for a single, easily remembered number is demonstrated by this increase. People remember it—it's easy to dial—people are put to less trouble to report an emergency. For some reason you have had an increase in the number of calls since the initiation of 911. So I don't think we need 911 tomorrow or today; we needed it yesterday.

911 service in Birmingham covers two entire counties and the fringe areas of three other counties. Early in 1968, the president of the Jefferson County Commission and the mayor of Birmingham met with representatives of the South Central Bell Telephone Company to discuss the feasibility of a 911 system. The result of this meeting was to pursue the establishment of 911.

It was decided to locate the 911 center in the Civil Defense Emergency Operating Center, in order to utilize the existing radio network covering the area. In October 1968, the mayors of all the cities involved met to discuss the problem of establishing a 911 agency. The group voted to adopt 911 and to assess each of the 45 municipalities $.07 per capita. This is based on the 1960 census figures. The funds collected were to be used against the operating costs of 911.

A number of meetings were held after this to iron out some of the pros and cons of the operation. Obviously there were some who were not in full agreement, but on the whole it was accepted in a fine spirit.

Because of the innovative nature of 911, we encountered a variety of problems. One of these related to the need to sell the idea to most of the smaller municipalities. They seemed to be skeptical, not only of its value, but also of the potential that this might lead to metro government. We gradually overcame this opposition by going out and talking at each city council meeting. This effort, supported extensively by South Central Bell, contributed substantially to the success of our efforts in Birmingham.

Another problem we encountered concerned the establishment of job classifications for 911 operators. These operators must possess certain skills not common to the ordinary switchboard operator. They must be adequately paid and trained in order to attract the caliber person we felt we needed. This is very critical to the success of your 911 system.

Our operators had to be trained and for this job we obtained the services of an individual who had been chief complaint clerk for the Birmingham Police Department for 25 years. The training program consisted of 65 days of intensive training.

An application for federal assistance from the Highway Safety Program was submitted on April 1, 1970. A grant for $50,000 was received, and we matched it with $8,000 in in-kind services. On April 8, 1970, the City of Birmingham applied for discretionary funds under the Safe Streets Act, and received $150,000, to be matched with $100,000 from the City of Birmingham. This was to finance their share of the communications complex.

The existing civil defense radio net was utilized in implementing the 911 system. The Jefferson County Civil Defense Council adopted a resolution placing the operating and administrative functions under civil defense control. Since civil defense is a local government function, consisting of trained personnel for emergency situations, it seemed logical to place the responsibility for 911 with the civil defense agency. It would allow centralized control, with decentralized operation.

The Birmingham Regional Hospital Council has recently installed a hospital ambulance radio net. This system connects each of the 16 medical facilities and each ambulance company dispatcher. There will be a hospital-ambulance radio operator in the 911 center to tie this system to 911. We strongly feel that the public will respond to this system in a positive manner, after effective publicity is released. However, we will hold down publicity until we are assured that we can give the level of service needed to do the job.

Howard Fordice, Director of Communications City of Seattle, Washington

The City of Seattle is in the final stages of developing a new emergency call receiving/dispatching system to incorporate the universal call number concept known as 911. A key element of the development is the new Police Department Call Receiving Center.

We feel that the development of this center into a 911 emergency center will be of great benefit to the citizens of Seattle. However, proper implementation requires close cooperation between the City of Seattle and those jurisdictions which surround the city, be they county, city or fire district, whose citizens might reasonably be expected to use the service at one time or another. If we can significantly speed the call of a distressed person to its proper destination where he will receive appropriate action, we have served that citizen well.

For some metropolitan areas, and many less populated areas of the country, the problems of centralizing the emergency call receiving points at one center and securing the cooperation of the various agencies have outweighed the benefits of 911 *at this time.* However, for the City of Seattle, we hope to show that 911 will be a definite overall benefit to our citizens and to those citizens of the metropolitan area who use the facilities of the city. The most important thing we hope to demonstrate today is the explicit manner in which the City of Seattle expects to manage the implementation of 911. At the same time, we will reiterate clearly the fundamentals with which we are working and then explain some of the important details of application.

Emergency service may be—

- A resuscitator for a drowning victim.
- A policeman to stop a gang fight.
- A fireman to put out a fire.
- An ambulance for an accident victim.
- An electrical crew to restore a power outage.
- An emergency crew to stop flooding from a broken water main.

There are many types of emergencies and many agencies to provide assistance. Let's take a look at the agencies that provide most of the emergency services in a community, police, fire, ambulance, physicians, poison control. The Community must decide which agencies will participate.

The inside front cover of the Seattle telephone directory lists a number of emergency agencies and many different telephone numbers. Whenever an emergency situation occurs, it often becomes necessary for a frantic excited person to search hurriedly through this long list of numbers to find the proper number to dial. To avoid this, he needs to have the proper telephone number posted near his telephone, or he will probably dial "O" for operator.

When we are faced with an emergency, the key element in securing help is the telephone. Although the telephone is effective and fast, there may be problems associated with phoning for help.

When emergency help is needed, a child is likely to have trouble remembering what agency to call, finding the telephone number to call, and correctly dialing many digits. The same situation may exist when an adult is under the stress of an emergency. Meanwhile, valuable time is lost trying to get the proper agency on the telephone (whether dialing direct or going through the operator).

In the case of fire, I'm sure you all agree that the first few moments are the most important when it comes to preventing extensive fire damage. In fact, the fire department's objective is to have fire apparatus on the way within 20 seconds of receiving the alarm.

In law enforcement, time is just as important. As the seconds go by, the chances of making an arrest on the scene or finding a witness are greatly diminished. In emergency service, saving time is paramount to saving life and property, and reducing crime.

Many people save time in an emergency by dialing "O" for operator—this most often occurs, of course, when the seven-digit number is either unknown or forgotten in fright. Dialing "O" does eliminate the time required to look up the proper emergency telephone number. But, there are time loss problems here, too.

Fewer than one per cent of dial "O" calls are emergency calls. No matter what the experience of an operator, she cannot know it is an emergency until she answers the call. Then she must determine and dial the correct seven-digit number to reach the desired center. Moreover, if you dial "O" for help during peak telephone hours, you may have to wait because all operators are busy with their many other duties. The telephone office is simply not geared for immediate emergency response. So, "O" for operator is *not* the best answer. Now let's examine some advantages of a universal emergency reporting number.

- With 911 you don't have to select one number from several to get emergency service.
- 911 is easy for even children to remember.
- When you dial 911 you don't have to wait for a telephone company operator to answer.
- The three-digit number saves several seconds of actual dialing time.
- You don't need a directory to find out what emergency agency to call.
- Ultimately, 911 calls from pay phones will be cost-free. Coins will be returned as they are for dial "O" calls.

Let's look at some of the events which follow an emergency and see how 911 may save time. A person will—

- No longer have to decide which agency to call.
- Probably not have to look up the number to dial.
- Take less time to dial.
- Have to wait less time for an answer.
- Furthermore, 911 will provide a stimulus to improve technical and procedural features such as prompt analysis and dispatch and split-second transfer of calls both within and without the emergency center.

The use of 911 may save seconds, when seconds count! In an emergency, time saved means lives and property saved.

We are fortunate in Seattle to have been able to develop a modern police communications center incorporating modern design and advanced technical features. Some of these features were provided with 911 expressly in mind.

About two and one-half years ago staff members of the Seattle Police Department began making serious plans for the implementation of a much needed new dispatch center. During the planning phases it became necessary to spend many hours defining and redefining the elements of a center. Early in the definition process it became evident that certain elements should be clarified not only in our minds but in the minds of everyone who, for one reason or another, would be involved.

So, to begin this portion of our presentation, I wish to talk about the elements which go into the call center operation. The elements of events—people—and equipment.

The responsibility of establishing, staffing, and maintaining the reporting center will be that of the City of Seattle. This will allow the city to fully utilize the experience and knowledge of its own public safety experts. The telephone answering equipment used to answer 911 calls will vary greatly depending on individual needs and plans of the community. It could be simply a telephone with 911 lines terminated directly on it, a hold button to hold the call, and an intercom button to dispatch the emergency vehicle. We have a special console with sophisticated transfer and conferencing features.

Probably the most complicated problems faced in converting to 911 are related to jurisdictional boundaries. Every community must solve these problems before 911 can be provided without confusing the public. Municipal and telephone boundaries do not coincide in Seattle. In the north, and again in the south, there are telephone central office areas which encompass both city and county areas and the incorporated areas of Tukwila, Normandy Park, Lake Forest Park and Renton. When we add the fire districts surrounding the city—the problem becomes further complicated.

Careful assignment of jurisdictional responsibility will be necessary in the implementation of 911. The reporting center will have to provide appropriate assistance for emergency calls from all telephone subscribers in a 911 serving area, whether or not they live within the municipal limits.

The appropriate handling of an emergency call, of course, depends entirely on the type of emergency which has occurred or is occurring. Any system or device, which shortens the elapsed time taken to pass a call between the caller and the call receiver or dispatcher will effectively shorten the total time which it takes for the action unit to arrive on the scene or administer help. 911 shortens the time element between the caller and the call receiver. It is up to us to design and plan methods to keep subsequent time elements short and free of error so that there is a rapid transfer of information from the *caller* to *call receiver* to *dispatcher* to *action unit.*

A call receiving/dispatch center receives calls from a potentially large group of callers and processes these calls through a relatively small facility to a group of action units. It is therefore, critical that the call receiving center be properly equipped and manned so as not to impede the flow of calls.

If the call receiver is physically in the same room with the police dispatcher, then he may give the dispatcher direct information to be transmitted to the action unit. In a small operation, the call receiver and dispatcher may be the same person, or the call receiver may get information from the caller and then disconnect and *relay* to a dispatcher the necessary information for him to dispatch an action unit. This is known as "relaying a call." Third, the call receiver, by use of adequately planned and designed telephone facilities, may transfer the caller directly to a fire call receiving center where the correct information is gained and appropriate dispatch action is taken. This is known as "transferring a call." In transferring a call the primary call receiver may stay on the line or get off the line—whichever is expedient.

Fourth, the call receiver merely talks to the caller and instructs him to call another agency, i.e., the caller is "referred" to another agency. All of these methods are used now. The added ability to transfer a call in a fraction of a second can be a distinct aid in handling emergency calls. At this point I will outline for you what has been done in the development of a new Seattle Police Department call receiving/dispatch center to aid in processing emergency calls.

To allow implementation of a new call answering concept, the call receiving area—is divided into two sections. (1) a primary call answering group, directly adjacent to the radio dispatch consoles; (2) a secondary call answering group; and (3) both the primary and secondary group is under direct visual supervision by a supervisor.

The primary call receivers will process only calls which they determine are emergency calls that require action. Fire calls will be "transferred" directly to the fire call receiving/dispatch office, which is located in another building some distance away. Police calls will be card processed directly to an appropriate dispatcher via a bi-directional conveyor belt. Non-urgent calls will be direct dial transferred to the secondary call receiver group where they may be handled as written reports—or further transferred, relayed or referred. This process, in each case, very quickly clears the primary call receiver for subsequent call answering and probable emergency calls. The aim of the primary call receiving section is to answer every incoming call within two rings, or ten seconds.

Now, while the primary call receiving area is designated as such, it must be pointed out that the terms "primary" and "secondary" are arbitrary. The secondary positions immediately become primary in the event of severe overload situations.

All of the facilities provide immediate call transfer and "on line" monitoring. Rapid touch/tone dialing is built into each of the 14 call answering positions. The system promotes more efficient use of manpower because it allows a primary group of people to handle emergency calls while "shunting off" the non-urgent calls to secondary call receivers who are better prepared to process them. The most important feature is the more rapid processing of urgent or emergency messages.

From telephones in the six central office areas, portions of which are outside Seattle, callers *may reach* the 911 emergency center. The incidence of these calls, however, should be no greater than the incidence of presently misdirected calls from those areas. Of course, the seven-digit emergency numbers now in use will continue to operate unimpaired by the possibility of dialing 911. Moreover, by public information procedures, 911 calls from areas not served by the City of Seattle will be discouraged.

The direct benefits of 911, as you have seen, accrue to the caller only. These benefits are simplicity and universality. However, the stimulus 911 gives to provide the best possible service to the citizen should result in better overall technical, organizational and operational performances.

The 911 emergency system concept has received support and impetus from the President's Crime Commission, members of Congress and the Federal Communications Commission. Pacific Northwest Bell is altering their switching machines in the Seattle exchange area at their own cost. The city has accepted the responsibility to provide and staff the emergency center and pay the tariffs on the telephone equipment.

PANEL: OPERATIONAL 911 SYSTEMS

Moderator: James Walters, Office of the County Executive, Erie County, Buffalo, New York

Buffalo, which is the large municipality in our county, has already implemented 911. At the time of our Chicago meeting last year, I reported that it looked like our county would follow suit rather soon. I'm sorry to say, that did not come about; and I am further sorry to say that I don't know how we are going to overcome some of the problems in our county that have been mentioned time and time again here this morning.

The cooperation basic to any sort of program, such as this, does seem to be lagging. Perhaps cooperation is not quite the word in our area. I have not been able to convince the fire and police organizations—principally the fire organizations—in our county, that 911 actually offers any opportunity for improved service. So the question comes back—Why should they cooperate? We haven't been able to open that door. The reports to follow here should help all of us better answer that question.

Hon. Russell C. Davis, Mayor
City of Jackson, Mississippi

Jackson is a city of just over 150,000 people. We are the largest city in Mississippi. Our 911 system was activated in April of 1969, to serve major portions of the greater Jackson area. This area is composed of a population in excess of a quarter of a million people. 911 service was provided to assist local public safety agencies in protecting the life, safety and property of the public at all local levels. 911 service makes it easier for those requiring emergency assistance, because only one three-digit number is necessary.

Jackson's 911 service is terminated in the City of Jackson's communications center, a modern communications facility serving all public safety agencies within the city as well as interconnecting the county and adjoining municipal governments, and appropriate state agencies. This is a $300,000 installation with a 250 foot radio tower.

Agencies included are the city police, fire department, county sheriff, civil defense, city engineering and maintenance departments, and privately operated ambulance services.

911 calls are received by well trained and competent city communications personnel. This is something that should be stressed to anyone who is contemplating the installation of the 911 system. It's most important that you have people on that end of the call who cannot only receive the information in an intelligent way, but also reassure the person who is phoning that this emergency is going to be taken care of. This may be the only time in a person's life that he's going to report an emergency, but he wants to be assured that everything's going to be handled right.

The volume of calls on 911 is averaging about 3,200 calls per month at this time. The majority of these calls are for police, fire and ambulance services. This represents more than 40 per cent of our emergency calls at the present time.

Our calls have been increasing steadily each month since it has been in effect, and I think that we will be approaching 90-95 per cent in a relatively short time. The increase, of course, has been brought about by the publicity and the promotion that we and the phone company have given it. We used decals and signs on all our city equipment. We've also used the news media, school programs, personal contacts with citizens and civic club activities in this promotion.

With any innovation, some problems will arise. Some of these problems, in connection with 911 service, have been incorrect dialing and curiosity seekers. The number of curiosity seekers has dropped steadily since the program began.

I can say that 911 is a great plus from the standpoint of a politician, however. We get no complaints from the public. The system is working, and the people who are using it are well satisfied.

The success of a 911 system, as I've heard said this morning several times, depends on interagency coordination and cooperation. If you don't have that—if you can't get the police and fire departments to agree that their participation is necessary for the overall good of the city—then your use of 911 is not going to be successful. It's necessary to overlook departmental integrity and ambition for the overall good of the city. We have done that in Jackson, and I think it should be possible to do that in any city.

The costs have been minor, because we already had our communications center, and most of the telephone lines were installed. All we had to do was add the 911 lines. This was done at cost to the city of approximately $80.00 per month over our previous charges. This required no increase in the number of our dispatchers. When the system was installed, we had to put a few dispatchers on overtime for several weeks.

One of the great advantages of 911 in our city would be the same in any city. That is that most emergencies require assistance from more than one agency. Accidents could require the police department, the ambulance service, wrecker service, state police, and the fire department. Fire emergencies could require the fire department, the police department, ambulance service, water department, and perhaps the city engineering department.

When the emergency calls are received at one location, a well trained emergency dispatcher should be capable of getting all the information, make a fast decision as to which agency or agencies should be notified, and which agency's assistance will be required. In a serious emergency all of the agencies or departments could be alerted in a matter of seconds.

Key city officials can also be notified of certain types of incidents, so they can make whatever

decisions have to be made at that level. This is done with our operation. For example, if we have a bomb scare call, the mayor's office is notified immediately.

When a call is received, someone is telling us that he needs help and he needs it fast. He is saying, "My life or property is in danger, it's in your hands. Don't let me down, and don't let inter-agency problems or political boundaries become more important than the survival of my loved ones or the protection of my property." At that moment of emergency, government has the opportunity to fulfill its purpose for existing. In Jackson we are convinced that the use of the 911 system is the best means available to this end. We are firmly convinced that it will remain an important part of the services of government in our city. And that our city is a better city because we have this system operational.

Hon. Ronnie Thompson, Mayor
City of Macon, Georgia

Macon is directly in the center of the State of Georgia. We have two interstate highways which cross right at Macon, and they are supplying quite a bit of traffic and people in the vicinity.

Macon has a population of 135,000 people in the corporate city limits. In the metropolitan area of Macon in middle Georgia, we have approximately a quarter of a million.

I had not heard of 911 in the summer of 1967, when I was seeking the office of mayor of Macon, Georgia. But I did make a promise that I would like to have a single emergency telephone number program, not limited to just 911. A program that would produce immediately the emergency capabilities people needed. I thought it was a good idea, and the people responded to it. They liked it and had quite a few comments to make about it.

Instead of having three or four emergency numbers, I was simply going to limit it to one number. From there we would dispatch all of our emergency agencies.

We started discussions with Southern Bell Telephone Company in Macon, and in April 1969, the idea of 911 hit us right square in the face. So we started to work with the idea of developing 911 as the single emergency number in our particular area.

The planning started in June 1969. A survey to determine volume of emergency calls made in October and November showed an average of 9,000 calls monthly involving police, fire, ambulance, and reports of demonstrations. A second survey, made in January and February of 1970, showed almost exactly the same total calls; the same breakdowns, with police calls predominating, followed by fire calls and ambulance calls.

Based on these surveys Southern Bell Telephone Company recommended ten trunk lines for emergency service. The telephone company agreed to modify the city hall switchboard and install all necessary equipment. The city paid only for ten trunk lines at $12.60 monthly each, or a $126.00 monthly total for all of them.

The only other cost to the city was the employment of an additional telephone operator to guarantee two operators on duty 24 hours daily, seven days a week. At my request the Bibb County Commissioners agreed to pay half of the total cost, including the cost of an extra operator, providing the City of Macon would include direct service from the city switchboard to the sheriff's office.

The telephone company equipment cost roughly $12,000. It was supplied by the telephone company at no cost to the City of Macon. The telephone switchboard, and headquarters for police, fire and civil defense are all located in the city hall, and they were already inter-connected before 911 service was installed. It became a simple task to add the sheriff's office, ambulance service, and the Georgia State Forest Department for forest fires.

The big advantage came since the police, fire, civil defense, ambulance service calls can be relayed not only by direct line, but also by common radio frequency. All emergency agencies can be contacted within 30 seconds after the receipt of emergency calls.

At the suggestion of the telephone company, individual emergency numbers of all departments involved as well as 911, are still listed on the inside cover of the current telephone directory. On May 1, 1971, the new directory will list 911 in large print and red colors, with other emergency numbers reduced in size and played down in location.

In 1972, only 911 will be listed on the inside front cover of the directory. All other numbers will have normal listings inside the directory, and will not be played up as emergency numbers. Obviously, to do away with all other emergency listings immediately in May, 1970, with a tremendous publicity campaign would have been unnecessary.

During the first six months of 911 operation, we estimated that we would have had an average of 6,000 nuisance calls per month from children and other curiosity seekers. Under this system less than one-half of one per cent of our calls are nuisance calls per month.

According to all of our professional people in all the departments that are involved with the 911 system, they say it's effective, it's working well, and it's serving our citizens well.

Hon. Dave Shepherd, Councilman
City of Oak Park, Michigan

The City of Oak Park is a city of five and a quarter square miles, located immediately north of Detroit. Our southern boundary matches Detroit's northern boundary. We have a population of 40,000. We have an unusual situation. I'm going to talk about a failure and then a success.

Oak Park is one part of a single telephone exchange. There are ten communities serviced by this single exchange. I'll call it the Lincoln Exchange, for purpose of this speech. We attempted to get the ten communities to work together on 911. And we were doing an awful lot of listening

to what Michigan Bell was telling us. At this point, there's no one here from Michigan Bell and they're not able to defend themselves from some of the very nasty things I have to say about them. But they were invited to this meeting.

We were provided with a lot of excellent information by Michigan Bell, considering the fact that what we were trying to do was impossible, according to them.

Of the ten communities that were involved, six communities were in favor of a central reception center for emergency phone calls and four were not. On three of those four city councils, there were employees of Michigan Bell. With this decision, we really gave up until we found out a little bit later that Michigan Bell actually had someone working against us. We got quite upset about this. We talked to the National Service, and consequently we attended the meeting in Chicago. At that meeting we found that many of the things we were being told were not true. We were told that if we were to establish 911 in the Lincoln Exchange, if we were going to be the only ones that had it, we'd be so flooded with calls from other communities, that our entire communications set-up would break down.

I found at the Chicago meeting that this was not necessarily true. I came back, and at the very first meeting in February, the City of Oak Park ordered in 911 service. And we ordered it in with a couple of features--hold and ring back, forcible disconnect and so forth. To Michigan Bell's credit, I have to say that we ordered it in early February and on October 23 we were plugged in. Once we took a strong position, they really came through. Except that they will not give us hold and ring back or forcible disconnect until much later.

The biggest headache we had to resolve was eliminating calls from outside our corporate boundary. Obviously, we could not service those areas with our personnel. We decided to embark on a very positive educational campaign, and we got Michigan Bell to spend some money. Letters were sent to every Oak Park residence and business indicating the change to 911. The problem was to confine information about 911 to Oak Park, and not let it get into the other communities.

Michigan Bell ran some nice ads. They said basically: "911. In Oak Park, memorize this number. It might save your life."

They also put stickers into pay phones calling attention to 911 as the emergency number. But they did not number the outside pay booths, as we requested, so the caller can tell us where he is located. You can drive six miles on the Main Street that goes through our town and be in three different communities, so people really don't know where they are.

In addition to this, Michigan Bell furnished us with handouts which we are using, and they have gone into the schools with a film strip and an educational program on the use of 911. This has been extremely valuable. Michigan Bell came through on the educational aspects.

In addition, we put signs on city vehicles and in all of our city offices. We made up some posters and these were distributed to stores for window and counter-top displays.

Prior to 911 we made a survey of 622 people. They were asked a single question, "What is Oak Park's emergency telephone number?" Of the 622 people interviewed, only two knew the number.

Last week, after 911 was in service for about six or seven weeks, approximately 1,200 students were interviewed, and 96.7 per cent knew that 911 was Oak Park's emergency telephone number. To me, that's our goal. This is what 911 is all about! In July of 1970 before 911, Michigan Bell did a count for us, and found that in a single week we answered 375 calls. In the last three weeks the calls on 911 have gone from 537 to 519, and most recently to 437. In all, during the seven weeks that we've had it, we've answered 1,247 calls for service within our community.

Our educational campaign has been successful in educating our people to use 911, and to educate people from outside Oak Park that we don't want them to use 911. Despite the television coverage we received, and the newspaper and radio coverage that carried to the whole metropolitan area, we have received only 76 calls from outside our jurisdiction. Ten of these calls needed emergency service. All ten of these calls were received during the first 12 days that we had it. In fact, all 76 calls were. We haven't had any calls from outside our area since the end of the first 12 days. Our old emergency number is virtually not used, and we will be able to cut down on the number of lines we have there.

We learned something else at the January meeting. At the same time that we cut in 911, we adopted an ordinance which prohibits the use of our emergency line by recorded telephone alarms. We're anticipating lines that these people can use, but it will not be a 911 line.

Since we cut in 911 we have found two companies that have tried to use 911. With the power of the ordinance we were able to get them off here.

The manner of getting information between jurisdictions was something that we had to very seriously consider. And the way we are doing this is by tie line and common radio frequency.

The battle of Michigan Bell has been bloody. But we must have hold and ring back and forcible disconnect. When we ordered 911, we had to sign an agreement that we would accept 911 without these features. They told us that they would not be available from Michigan Bell. But we accepted 911 because we thought there were enough advantages without these features. But about a week or so ago, I did talk to Michigan Bell and I said, "I just want a very firm reply as to why we are not going to have these two features, because I'm going to be in Omaha and I'm going to speak, and I'm going to tell everybody why we're not going to have it." This Monday they gave me information that we will have these services, after all.

Except for part of the system, we will have these services in the second quarter of 1972. And for the balance of service, we will have it in the third quarter of 1973. At least we have them committed that they're going to give it to us!

I intend to go ahead and do some more talking about it, and talking to people higher than the level we've been talking to. We have to get to Michigan Bell because of what we are trying to do. Let's face it, in the City of Oak Park, this little town, five a half square miles, 40,000 out of four and a half million people, it's nice for us to have 911 for our people while they are home.

But we're a bedroom community, and our people work outside of Oak Park. And they don't spend too much time at home during the ordinary parts of the day. So we must have 911 throughout the entire metropolitan area. But unfortunately, because of Michigan Bell's attitude, and because of the lies that they've been telling us—that's a powerful word but I can back it up—the City of Detroit has not been interested in being the core city to force this or to lead the fight in the area.

So we've had to take an approach opposite to what they have done here in Omaha. The core city here was the leader. We in the suburbs have become the leader for 911 service in our metropolitan area. We are now having discussions with Detroit—telling them the truth as opposed to what Michigan Bell has been telling them, particularly on costs.

By the way, our costs are running between $220.00 and $250.00 a month. In conclusion, let me say that we are going to have 911 in the Detroit metropolitan area. And we are going to have it with the cooperation of Michigan Bell.

Mr. Dowden: I'd just like to read something here. As the audience might guess, Dave Shepherd has developed a reputation, at least in this area, of bringing things about against which there sometimes appear to be overwhelming odds.

I have here a copy of the resolution that was adopted as a policy statement by the National League of Cities at their convention. Dave Shepherd is the author of this resolution. "We endorse the principle of a nationwide emergency telephone number, and encourage every local community and telephone company to study and implement where possible the 911 emergency telephone system on an areawide basis to secure faster notice and relief for citizens in need of assistance in time of emergencies affecting life, limb and property."

I think this is a significant move. At least on the policy side, we're starting to see more and more interest across the country. More and more strong people like Dave Shepherd, the mayor of Jackson, and mayor of Macon, are moving ahead in their towns and are spreading the word to others.

E. O. Bauer Jr., Chief of Police
City of Baton Rouge, Louisiana

The City of Baton Rouge has a population of 186,000. We have an area of 57 square miles. Our 911 system covers five parishes, or counties, including the City of Baton Rouge.

We have three Motorola consoles, and nine frequencies working out of our communications center. At the present time we're operating 911 through a call director, which was established and recommended by the telephone company.

When 911 was inaugurated in Baton Rouge in 1968, there was a transition going on at the telephone company, and the telephone personnel were a little bit surprised that there was such a number as 911 in existence. So we had a meeting at the police department and we oriented them on 911. The next day they came back and told us all about 911. You talk about hot lines, they've got them. I must say this about the telephone company. They're the most wonderful people in the world to work with as far as we're concerned in Baton Rouge. We have the finest relationship, bar none.

You've heard a lot about costs today. The total cost to the City of Baton Rouge to put in 911 was $355.00. The monthly charge for all our lines, for the sheriff, the towns and the direct hot lines that come into our switchboard, is $364.97 a month. The big cost is our console—it's $75.00.

The sheriff's office pays a sum total of $17.50 for their contact. The fire department pays $17.50, and that's the standard, going rate. We eliminated 18 emergency numbers. I didn't know we had so many of those in the phone book.

We also have ambulance service on 911. The only agency that's not hooked directly into our equipment is the State Police. The reason is that it would have cost them $105.00 a month to run an extension from our office to their headquarters.

Since September 12, we have absorbed more towns and area into our 911 system. We have even tied in part of one town in an independent exchange.

We currently have complete coverage of approximately 400 square miles, and we're expanding as the telephone company exchanges are expanding. In February, we'll be picking up 911 for another city. We have had no difficulty convincing other jurisdictions to go with 911. 911 was not to eliminate any of the present emergency numbers. But it was a central number.

We started out with an extensive promotional campaign. On the back of all phone bills is an ad that we have 911. We put out 10,000 bumper stickers, and 10,000 little stick-on-your-telephone things. We went into 57 public schools and 10 private schools and distributed the stickers and

told them to go home and put them on their telephones. They said, "To call the police, 911." So we feel we've got a good public relations program.

The telephone company made a survey and they said we were going to receive 300 telephone calls a day from curiosity seekers. We worked hard to prevent this. As it turned out, we only received a total of 10 calls for false alarms the first week.

We sold 911 on the radio, press and television. We believe in 911 and all that it has made possible in our community.

911 AND RESPONSE TIME

Kenneth R. Bordner, Manager
Behavioral and Social Sciences Laboratory
Philadelphia, Pennsylvania

Under the auspices of the National Science Foundation and The Franklin Institute of the State of Pennsylvania, The Franklin Institute Research Laboratories (FIRL) undertook a study to determine if a need existed for a single emergency telephone number and if the implementation of such a system were feasible. This was accomplished by investigating the operational requirements of both responding agencies and users of a single emergency number, and by examining the technical feasibility through the requirements to be imposed upon the communications industry.

A study of responses to questionnaires and discussions with persons in all phases of emergency work have led FIRL to conclude that a single emergency telephone number is feasible and should be implemented nationally.

In the course of our study, we determined that the only true measure of effectiveness for an emergency response system is the time it takes to respond. You can't value a human life in dollars and say, "If we improve the system we can save *x* dollars." There is no cost benefit analysis that works. We have to think in terms of response time.

So in that respect we utilized some systems analysis to try to develop what an emergency care system was. We broke it down into four components: transportation, communications, documentation, and treatment. It is the communications subsystem which is of interest to us.

The chart on page 6 represents all the events that occur in the communications subsystem in one cycle of the emergency system. And the analogy is direct between this and any other public service. The time between detection and notification is the critical time element involved in the communications system: the detection that something has happened, and the notification to the proper authorities. Emergency care response time starts when something happens—not when somebody knows about it, but when something happens.

The other elements to the system, beyond the reception of the call, are basically outside the 911 problem. These are the internal communications considerations of the public safety organizations, but they too can be affected by 911.

The place where we have to concentrate to improve this response time is in shortening the time it takes to notify the proper emergency agency. You've got to make it simpler for the public to make sure he gets the right help, or notifies somebody of the right thing. Paradoxically again in our society we have placed all the decisions with the public. Think about that! *They* have to decide who to call. They have to decide what to dispatch, because it's their emergency!

You're a public, I'm a public. But not all citizens have the advantages we have, knowing what's available and where. There are a lot of people out there who don't know an awful lot about government. And we're leaving them with the decision of what to do. Shall I call the fire department, shall I call the ambulance, shall I call the police, what should I call?

Let's take that away from them! Put it in the public safety sector where it belongs. Put in 911 or its equivalent. That's my theory on response time. This, you must realize, is all purely hypothetical, but I submit that we can save time by the interjection of 911.

We're not going to save a great deal of detection time with this kind of program. I've seen no valid arguments to the contrary. We will save time in notification beyond the dial saving time.

It is possible that the dispatch time for an individual public safety organization may go up, especially if it goes through central dispatch. But again, I submit, that's not as significant to the total cycle as shortening the time it takes to notify the proper emergency agency. That's what response time means to me.

I think we all have to face this problem that the public safety segment of all levels of government is to be just that, a public safety sector. There's a lot of public out there. That's the way we look at it, that's the way we will continue to look at it. And I hope we'll win more disciples.

Question: Why, with centralized dispatch, might the response time increase?

Mr. Bordner: That's just a pure, mathematical decision on my part which may have no merit. I'm

just saying that, hypothetically, if, in fact, you add one relay point in a process, with an intermediate decision, you will probably increase the time. Now, that is not making any decision what number to originally call. Assuming the correct number was originally called, a straight-in call to an object dispatcher would be better than a relay to a central dispatcher who has to make a decision.

The point is that the time we save keeping the citizen from making the decision on who or what number to call is probably more important to the whole problem.

ROUNDTABLE DISCUSSION—BASIC ISSUES

Moderator: Hon. Gordon N. Johnston, Mayor, City of Tacoma, Washington

RESOURCE PANELISTS

Hon. James Bristow, Mayor Pro Tem, City of Commerce, California
Roger Reinke, Assistant Director, Professional Standards Division, International Association of Chiefs of Police, Washington, D. C.
Burl Johnson, Assistant State Civil Defense Director, Nebraska Civil Defense Agency, Lincoln, Nebraska
Robert A. Mason, Director of Communications, Santa Clara County, California
Jack O'Neill, Urban Systems Engineer, National Academy of Engineering, Committee on Telecommunications, Washington, D. C.
Kenneth R. Bordner, Manager, Behavioral and Social Sciences Laboratory, Franklin Institute Research Laboratories, Philadelphia, Pennsylvania
Hon. David Shepherd, Councilman, City of Oak Park, Michigan
***Thomas McNerney,** Deputy Fire Chief, City of Seattle, Washington

Question: We've heard references to surveys in which the public has been demonstrably ignorant of what number to call in an emergency. And yet I don't remember anybody making a point of using this as ammunition in trying to promote 911. Why not?

Mr. Bordner: This argument is being used, but perhaps to the wrong people. We should probably use this argument in dealing with the public and their elected officials, rather than with the staffs of emergency agencies.

Question: I want to talk hardware for a moment. I made a lot of long distance calls to find out how 911 worked for various cities. I kept finding police departments or sheriffs offices as the reception point. Now, I'm getting a little indication about general government or a neutral agency serving as the reception point. Does anyone have any figures or recommendations as to how the operation should be set up and what equipment is best suited to 911?

Mr. Mason: I've looked at all types of equipment, and in my technical judgment the 310 system that you saw here in Omaha is probably the one best suited. The 308 equipment which is being used quite extensively in Los Angeles has some technical characteristics which are different than the 310. But the 310, I think, can't be beat. There's one other part of your question I'd like to respond to, and I have very strong feelings on this.

When you are dealing with agencies, like the police and fire departments, that like to control their own activities, one way to eliminate some of their fears is to use a neutral agency as the reception and dispatching center. This agency would be subordinate to the city's administrative structure. After all, the chief of police and the chief of the fire department work essentially for the city manager or the mayor. I have a very strong feeling that if 911 is going to work, each chief has to feel he will get his fair share whenever the chips are down.

Mr. Johnston: One thing you have to be aware of is the parochial conflict between agencies serving the people and the people they serve. In one specific case I know of, where the reception of calls was assigned to the police, people hesitated to use the number to summon emergency medical assistance. They were afraid the police were going to come and arrest them! You have to be very careful.

Mr. Reinke: I think the question may be directed to the idea of consolidation. There are a number of communities where consolidation may be desirable. But, overall, consolidation is a long way off—consolidation, in the sense of providing police, fire, and other emergency communications in one facility. In smaller places where consolidation has taken place, more often than not, on 85 - 90 per cent of the fire calls placed the police have an obligation to respond, even though it is a fire call. They will relay the call, if that is required, but they also have an obligation to respond. That is why the police department usually ends up as the reception agency.

*Mr. McNerney was invited by Mayor Johnston to join the panel to present the fire service point of view.

John Shepherd, AT&T: May I respond to the question regarding equipment. I want to be sure that no ones leaves this room with the thought that the 310 switcher is the only way to go for 911. That's not true. The 310 switcher is a very unique vehicle that has served the City of Omaha very effectively. That still does not indicate that the 310 is the only way to go. The equipment must be selected based on the conditions in your environment. Even the six button telephone can serve well for 911 in certain areas. It could be an automatic call distributor, a switchboard, or a 310, and so forth. We are working, now, to develop a system similar to the 310 without all the features it has which the 911 centers don't need. This will bring the cost down. Hopefully this will result in the kind of system we need.

Thomas McNerney, Seattle Fire Department: In looking at the panel I see most of the agencies or people that should be involved except the fire service. And yet many of the problems which are identified here are with the fire service. You have no trouble convincing the police chief to take on 911; he's getting most of the calls as it is. We have heard for two days that the fire service personnel are the negative people in this whole thing. I agree. Probably because they are the last people you consult. And then you wonder why they're negative. You never ask or hear their side of it.

The fire service has a system which is designed and operated on a response time of seconds. We have fewer calls, overall, but the longer we take to respond, the more serious the fire becomes. With the police, there is a much greater volume, but the time element is not nearly as critical. Generally, the incident has already taken place and no further damage is likely to occur. So there is little to be gained by the fire service in terms of internal communications, although there may be something to be gained from the public awareness. From this point on, there is added a transfer step which means the fire service could lose a little or it could lose a lot in terms of its response time. The police meanwhile stand to gain a lot from 911. So the police are for it, the public and elected officials are for it, but the fire service is negative, because it is protecting its service capacity.

We need to bring the fire service into the discussions on 911, before discussions go too far toward implementation. If we are involved, we can work out the problems so the system is designed to forestall any of the potential concerns of the fire service.

Mr. Bordner: I can't help but make note of one major contributing factor to the heavy involvement of the police in 911. That is the existence of the Law Enforcement Assistance Administration. There is no counterpart agency for the fire service, and what little federal funds there are for 911 come from LEAA and go straight to the police department.

Eulan Tucker, Fire Chief, Toledo, Ohio: About 50 years ago, an estimated one-half of one per cent of the gross national product of this nation burned up each year. In 1969 and 1970, only one-tenth of one per cent of our GNP went up in flames. This is even with the increase in the use of the automobile, which involves gasoline and other volatile materials.

I think Mr. McNerney did us a great service by bringing our attention to the concerns of the fire chiefs, when you talk about 911. In the first place, these organizations are doing their job. As I just indicated, the fire service is apparently doing theirs. They are not negative about 911, but they are concerned. They want to keep the same record that they have now.

911 is for the benefit of the people that we are serving, and that's what it should be. We can use this 911 system and we can keep the fire chief happy also, as long as he can put out those fires like he did before. If the fire chief wants a button so he can talk to the caller, give him a button. Is that difficult? I don't think it is. Omaha has done it. The 911 system that you are hearing about, and the systems available today, have been improved. They have been improved because the fire chief asked questions and assured himself that adjustments were made, so that he could continue to do his job as well as he did before.

I think we should all resolve to go back to our communities with this goal in mind. To approach our fire chief, to seek his advice and guidance, so that we can design our 911 systems to meet his needs and concerns, as well as those of the police chief.

Question: In light of the things we've heard for these two days, is it feasible or practical to implement 911 on a nationwide basis?

Mr. Mason: I have been carrying this torch for a long, long time. We have to remember that 911 is for the benefit of the customer who needs the service. It is an interface system to some system of resource management. I predict that this thing will snowball. We are no longer able to support tradition for the sake of tradition. Our tax dollars are too few. You will find attempts being made to consolidate functions, eliminate duplication of dispatching, etc. I predict, therefore, that it is only a matter of time before 911 goes nationwide.

Mr. Johnson: I think it is feasible, but there are problems to be overcome before we get there. One of the factors we have not really brought out is that 911 must be a universal number. One of the major problems in not having 911 nationwide is the likelihood of dialing it where it doesn't exist. Our mobility works against us. Therefore, having 911 nationwide is a real prerequisite for an effective 911 system. We have to work to accelerate the process, however. If we don't there may well be legislation to bring it about.

In looking to nationwide implementation, there has to be some discussion of statewide or regional reception and dispatching for 911. I believe that this function should remain at the local level under local control.

Mr. Reinke: It seems to me that we should address ourselves to how we can implement 911 in places where it seems to be extremely difficult. I cannot understand, and I think most police chiefs feel the same way, how we can somehow regress—adopting the attitude that we don't need a single emergency number or that the number should be something other than 911. Maybe we could have come up with a better number or system but, the point is that the way things are going, in places where we have 911, we are not going to regress or change the number. We need to concentrate now on the tough areas to assure implementation on a sound basis.

Mr. Bristow: I'll say Amen to that. It is very frustrating when the committee you've been working with for three years comes out with a report that 911 in Los Angeles County is impossible without Automatic Number Identification, when you yourself know in your heart that all you need is cooperation between the agencies to put it in. I am positive it can be done successfully without ANI. ANI is not available but that does not mean we are in a position to wait for 911. If 911 is needed at all, it is needed now. Later, if more improvements are developed and made available, such as ANI, which can enhance our capability to serve the public, we can adopt those improvements. I am going to keep fighting for 911 in what I believe is the most difficult area I know of in the United States.

Dave Shepherd: Someone at the Chicago meeting said, "If you think 911 is simple you are a politician. If you think it is complex you are a communicator." I happen to be a politician, so my position is clear. I believe we absolutely must have 911 as the emergency number throughout the whole country. I am really concerned with what's going to happen with 911 from today on. As I understand it, the NSRC contract will expire shortly. Where is the national leadership going to come from? 911 is a program which must be sold. It will not just happen. Who is going to take the initiative and the leadership to promote this on a national level?

Mr. McNerney: According to the technical people we have heard from, it will not be possible to provide 911 service nationwide for several years. There have been several statements that we should move into the difficult areas and work on solving the tough problems. I think we should do just the opposite. Let's take the easiest places and get it in. As more people become aware of it, it will sell itself. It will make the people who do not have it demand it. And when people demand it, the politicians want to give it to them. When politicians agree to give it, the technicians will find a way to do it.

I came to this meeting with a somewhat negative attitude. My interest was to find out why we are having this thing pushed on us. We felt we would gain little from 911. When it goes in we want to be sure we don't lose too much. Now I've discovered that there were some problems in Omaha, and that a way was found to solve these problems from the fire service standpoint. Hopefully, we will now be able to solve the problems we foresee before 911 goes into service.

Question: Those of us in the fire service are naturally very concerned about insurance underwriting. I wonder if the American Insurance Association has ever expressed itself with respect to 911?

John Shepherd: I met with AIA representatives recently. They were originally somewhat negative toward 911, but they have now issued a Special Interest Bulletin #322, which talks about 911 and incorporating fire service agencies. You may obtain this bulletin from AIA.

Mr. Reinke: The AIA is rating cities, which do not have police and fire call boxes on the street, at 300 points. In some suburban communities this is nothing less than absurd, considering the number of pay phones available. Before too long AIA will have to recognize that public telephones are the most frequently used means of alerting police and fire agencies of an emergency. I also feel that the substantial number of homeowners' policies these days make the rating scale less significant than we are all thinking.

Mr. Johnson: One of the significant things I see happening, as 911 is considered by various communities around the country, is that elected officials are beginning, perhaps for the first time, to take an active interest in emergency service communications. Improvements are being made to our communications systems, improvements that were needed before, but brought about as a result of looking at 911.

Question: For two days we have been focusing on what is an emergency service. We have looked too narrowly, in terms of physical danger and in terms of immediate response to prevent harm. Aren't there other emergency situations, as defined by the public, which are just as important and need immediate response. For instance, there are now many 24-hour telephone hotlines for psychologically distressed citizens. Shouldn't 911 be designated then from the outset to handle and process these calls? Then we would in fact have a total emergency communications system?

Mr. Johnson: In Sweden, they already do this with their three-digit number. They have two classes of emergencies: (1) the fire, police, ambulance type of call, and (2) all other household psychological, and sociological emergencies. All of these calls come to one point, where they are then referred to the appropriate agency. I personally believe we ought to be prepared to process these kinds of calls on 911. However, I don't believe everyone is willing to accept the kinds of sociolog-

ical problems you are talking about, at this time. If we can move in and successfully implement 911 for the basic services of police, fire and ambulance, then as more experience develops, the system can be adjusted to include these kinds of calls.

Mr. McNerney: To some extent we are doing this now with our crisis center in Seattle. Our biggest problem has been to find a place to which we can refer the call. Frequently the agencies that handle this type of emergency operate on a voluntary basis, and they are not always in operation 24-hours a day. But if we have a place to refer the call, we will handle it. We have to recognize that the public does consider some things an emergency which do not require a response, in normal terms, such as dispatching a police or fire vehicle. But we do have an obligation to respond in some fashion. We will work to tie in any agency for referral that can be of service to our citizens.

Mr. Bordner: Intellectually, I agree with the basic premise you have offered. However, we may be rushing things too much and compounding our problems in the process. We are still trying to formulate 911 for the basic hard core emergency services.

In New York City for example, 911 has become, to many people, a personal counsel. The chief of their communications operation, fortunately, is totally sympathetic to that principle. They assume that anyone who calls has a problem, and they have to take care of it. That's why they're there. That's why they have encouraged him to call 911. So you're correct, but this is something that must come after we have 911.

SUMMARY AND CONCLUSION

Louis Mayo, National Institute of Law Enforcement and Criminal Justice, U. S. Department of Justice, Washington, D. C.

I think we should review some of the issues we have raised and have looked at during this meeting. The first thing we should look at is the goal of 911. 911 is not an end in itself. It is a method of achieving a goal. The goal is to reduce the total emergency response time, by reducing the time elapsed from the time the emergency first occurs to the time notification is received by the appropriate emergency agency. Through the implementation of 911, we are only attacking a small portion of the total response time, but this is an area which needs great improvement.

We have talked about two types of emergencies, those in process and those which have already occurred. Fire emergencies are always of the first type. Most police emergencies are of the latter, although occasionally the police will respond to a robbery in process or officer in trouble. The emergency service agencies, accordingly, have two different priorities for emergencies. Those "in process" must have a more immediate response.

We discussed the importance of response time in terms of the fire service. I would also like to emphasize that response time is very important for police service. The President's Crime Commission estimates that for crimes in process, if the police do not arrive in a total elapsed-time of 120 seconds, they might just as well take 120 days. The faster they respond, the more likely an arrest. So if they are going to respond within 120 seconds from the time that the crime is initiated, then we can see the importance of saving every single second that we can in this message receipt and processing time.

Our goal then is the improvement of public service and 911 is a method to achieve that goal. The advantage of 911 is in having an optimized system, with people, procedures and equipment to do one thing—efficiently handle and process emergency calls.

In these two meetings, we have addressed the question: Is 911 feasible? Since 911 is now operational in 108 locations around the country, the question is academic. Yes, 911 is feasible.

We have also discussed some of the problems involved with the implementation of 911. As far as these problems are concerned, I think we have narrowed them down to one basic issue—interagency or interjurisdictional cooperation. If you've got that, you've got it made.

The question of costs is important, but has become almost insignificant in comparison with the problems of interagency cooperation. We know that in many cases, the cost of implementing 911 is modest. Furthermore, in most instances where 911 has been implemented, the jurisdictions have greatly increased their communications capability. Most of the costs involved are generally for increasing this capability. This is something that in all probability should have been done before 911. We even know of one example (Suffolk County, New York) where 911 resulted in a net savings of $1,900 a month.

We have mentioned that 911 forces an examination of broader emergency communications issues. In examining the feasibility of 911, emergency service agencies are frequently forced to address certain fundamental issues that they have never been forced to address before. This has usually resulted in great improvements in emergency services.

In wrapping up the findings of this meeting, I think we can say that 911 is feasible, the cost is feasible and the operation is beneficial. But we still

face obstacles, primarily in interagency cooperation. Any major change such as 911 must come from top elected officials who are primarily responsible to the general public needs, and who are above intraorganizational divisions of function and autonomy.

Floyd Kalber well illustrated the old adage that you cannot please all of the people all of the time. Similarly this should not deter decisions to implement 911, even though we should try to please all related interest groups to the degree that we don't sacrifice our goal of improved public emergency service.

Finally, I would like to say that it has been a pleasure for the National Institute of Law Enforcement and Criminal Justice to work with you on these two meetings. We look forward to furthering the cause of 911 in the months ahead.

NATIONAL SERVICE TO REGIONAL COUNCILS

The National Service to Regional Councils was established in 1967 to assist the rapidly growing number of regional councils in setting up and improving their programs and activities. Initiated by the National League of Cities and the National Association of Counties, the National Service was incorporated in 1968 and became a membership association of regional councils throughout the country. Three years of rapid growth has transformed the National Service into a vital clearinghouse for information on regional affairs.

Since its initiation, the National Service has been developing and expanding its service program directed to and for regional councils. The goals of this program are:

- To promote the development and understanding of regional councils
- To provide up-to-date information and technical assistance
- To prepare information on national policy proposals and develop a national image for regional councils and regional affairs
- To assist in the expansion of regional council program opportunities
- To strengthen regional council staff capabilities

The National Service serves as a clearinghouse for information on regional affairs. The numerous informational and other services include:

- Monthly newsletter covering regional activities
- Annual directory of regional councils
- "Regional Review Quarterly," a digest of what's happening in regional affairs nationally and internationally
- Monthly case studies each detailing specific regional council programs
- Regional employment opportunity listings
- Regional workshops
- Annual conference
- Special summary memos on such items as the federal budget, federal agency guidelines, reports of national commissions
- Special "how-to-do-it" reports
- Copies of reports, guidelines and other specialized items
- Consultation
- Field staff for customized consultation
- Federal-aid information
- Preparation of policy proposals on regional affairs

Several types of National Service memberships are available. Regional councils may become active members and receive all of the services previously noted as a part of their membership privileges. Active members participate in the development of the National Service program and budget, aid the formulation of national policy positions, vote at general membership meetings and receive discounts on meeting registration fees.

Interested individuals, organizations and libraries are eligible for associate membership in the National Service. Membership information is available from the National Service upon request.

APPENDIX A

Areas Which Have 911
September 1970

Alabama

Athens
Birmingham
Clanton
Cordova
Evergreen
Haleyville
Jasper
Livingston
Thomasville
Troy
Tuskeegee
York

Arizona

Sierra Vista

Arkansas

Jonesboro

California

Alameda
Gustine
San Clemente

Connecticut

Ansonia
Cheshire
New Britian
Middlebury
Newington
Seymour
Shelton
Simsbury
Waterbury
Watertown

Georgia

Albany
Macon

Illinois

Bloomington
Evanston
Mount Vernon
Nashville
Salem

Indiana

Huntington

Kansas

Lawrence

Kentucky

Frankfort
Mayfield
Paris

Louisiana

Alexandria
Boyce
Deville
Lecompte
Tioga

Maine

Camden

Massachusetts

Springfield
Westfield
Worcester

Minnesota

Windom

Mississippi

Belzoni
Cleveland
Indianola
Jackson
McComb
Vicksburg
Yazoo City

Missouri

Cape Girardeau

Montana

Glendive

Nebraska

Grand Island
Haleyville
Lincoln
Omaha
Sidney

New Jersey

Atlantic City

New Mexico

Los Alamos
Roswell

New York

Batavia
Buffalo
New York City
Suffolk County

North Carolina

Newland

North Dakota

Grand Fork

Ohio

Sandusky

Oklahoma

Alva

Pennsylvania

Butler
Du Bois
Milton
New Bethlehem
Norwood
Tarentum

Tennessee

Brownsville
Cleveland
Columbia
Dayton
Gallatin
Harriman
Humbolt
Lebanon
Maryville
Murfreesboro
Newport
Paris
Rockwood

Utah

Bountiful City

Virginia

Nelson County

Washington

Puyallup

West Virginia

Summerville

Wyoming

Evanston
Gillette
Green River
Jackson
Riverton
Rock Springs
Thermopolis
Wheatland

APPENDIX B

The National Service has compiled a brief summary of information on each of several "911" systems in selected cities around the U. S. The summaries were compiled via phone conversations with appropriate city and telephone company personnel in the "911" areas. Contact was made within the past month and therefore the material presented is reasonably current. Cost figures are necessarily dependent upon the size of the area being served and the type of facilities installed. Figures indicating volume for "911" are vague since few departments have kept accurate emergency call records prior to "911" installation and many presently do not maintain accurate logs.

This information is provided in order to present some idea of the experiences which these communities have had with the implementation of "911." In this way, you may make general comparisons to your community. However, we do urge you to remember that the design of the "911" system, its complexity and area served is unique in each community and must be carefully planned in advance.

Macon, Georgia
(130,000 pop. served)

Presently, "911" is a secondary emergency number for police, fire, ambulance, and civil defense but in May, 1971 it will become the only emergency number. Calls are received at the city hall exchange and routed directly to the appropriate agency. The system serves only Macon city population but it has direct lines to the county sheriff's office, the state police and state forestry department. Public and city departmental reaction has been favorable, though the number is not widely used yet. The volume of emergency calls has increased 15-20% since installation, with "911" being used with increasing frequency. There was no installation charge to the city and the monthly rental of $130.00 is payed jointly by the city and the county. Within the next five years it is expected that the system will include the six county area contiguous to Macon.

Alameda, California
(80,000 pop. served)

The island city of Alameda utilizes a low-keyed "911" system. Emergency calls are received by the police department, which maintains tie-lines to the fire department and emergency ambulance service. Presently Alameda is in the process of integrating all city systems at the city hall switchboard, allowing closer ties between the police and fire departments. The volume of calls has been averaging 600-700 per month on "911," 40% of which have been emergency in nature.

Cutover charges were $60.00 and there was a monthly increase of $10.20. The police have been pleasantly surprised with the system. Fire department reaction was initially lukewarm due to some interdepartmental problems. The public response has been excellent according to city officials.

Lawrence, Kansas
(45,000 pop. served)

The "911" system in Lawrence is confined to the city population with police, fire and ambulance emergencies being handled. Advertised as the emergency number, calls are received by the police department which maintains direct lines to both the fire and ambulance service. The city had established central emergency dispatching some time ago and "911" was a logical follow-up, though there was some initial hesitancy by the fire department.

There was no installation cost to the city and a monthly increase of $20.00. Public reaction has been very favorable.

San Clemente, California
(17,900 pop. served)

The "911" system in San Clemente serves only the city population with the exception of some 300 families within the city but outside the telephone exchange common to the rest of the city. The police department receives and dispatches all calls for police, fire, ambulance and lifeguard service. They also maintain microwave contact with other law enforcement agencies within the county. Though not the only emergency number advertised, the volume of emergency calls has increased since "911," averaging 165 calls a month.

Installation costs were $45.00, while recurring charges are $27.00 per month. The public reaction has been favorable, if somewhat limited.

Bloomington, Illinois
(65,000 pop. served)

The emergency dialing system serving the dual cities of Bloomington and Normal originally was handled by the police department, but technical problems forced the telephone company to assume control of the system, but until the system is perfected "911" will remain a secondary number to be used only in "dire emergency." Police, fire, ambulance, and tornado emergencies are handled by the system but city departments prefer the use of the 7 digit number. Though the public is aware of the system, its use has been nominal.

Installation fees for 4 trunk lines were $17.00 per trunk, while the monthly fee has been waived until the technicalities are ironed out by the telephone company.

Suffolk County, New York
(990,000 pop. served approx.)

The "911" system in Suffolk County is somewhat unique in that the installation of the system saved the county $1900.00 per month. Installation costs were only $200.00. The reason: The 600 square mile area contained 40 different numbers prior to "911," but this was consolidated into one answering point after "911." It is only a police emergency system, but they will handle other emergencies if received. The Suffolk County police serve 90% of the population in the county and receive about 11,000 - 12,000 calls per week. Reaction by both police officials and the public has been very favorable.

Springfield, Massachusetts
(170,000 pop. served)

The "911" system in Springfield consolidates 4 exchanges within the city limits, principally serving police and fire emergencies. The police department receives all incoming calls with a direct line hook-up to the fire department. Each agency dispatches its own equipment. Advertised as the emergency number in the area, "911" averages "a couple hundred" calls per day and is well received by both the public and the city agencies.

The installation fee was $250.00 while monthly charges have been about $300.00. This figure, however, is being reduced as old lines are taken out of service because of the new set-up.

Worcester, Massachusetts
(180,000 pop. served)

The emergency dialing system in Worcester is coordinated by the police department which receives all emergency calls for police, fire and ambulance. The fire department is on a direct line hook-up and dispatches its own equipment, while the police department provides the emergency ambulance service. Public and department reaction has been favorable in regard to "911."

Serving only the population within the city limits, "911" cost Worcester $400.00 to install with monthly charges of $400.00

Jackson, Mississippi
(250,000 pop. served)

The "911" system serves the whole metropolitan area of Jackson, including parts of four surrounding counties. It is not presently the only emergency number (due to the telephone company's request that the community wait until "911" is installed in neighboring jurisdictions), but it is recognized as the primary number. Calls are received in police headquarters which maintains direct lines to the city fire department, county sheriff's office, and state highway patrol. In fire emergencies outside the city, volunteer companies are contacted via regular telephone lines. Dispatching is done by each department individually. The public averages about 1,000 emergency calls per month on the line. After initial interdepartmental problems both the police and fire departments have accepted the system heartily.

Costs were $100.00 for installation and $80.00 per month service fee.

Huntington, Indiana
(30,000 pop. served)

The emergency system covers both Huntington and the surrounding county with the city police department receiving all calls. Though "911" is the primary emergency number other emergency numbers are given and the resulting volume is approximately 1 call per day. The police maintain direct lines to the fire department and the county sheriff. Ambulances and county fire departments are called via the 7 digit number from the central receiving headquarters. The police have welcomed the system, while the fire department expressed some initial hesitancy.

There was a $100.00 cutover charge and $100.00 per month extra on the phone bill.

Frankfort, Kentucky
(35,000 - 40,000 pop. served)

The Frankfort system covers the city and the surrounding county providing police, fire, and ambulance emergency service. The police dispatcher receives all calls and maintains a direct line to the fire department, ambulances, and state police. The exchange averages about 30 calls per day on "911," 25% of which are emergencies. The reaction of the police and fire departments has been mixed due to some initial problems in the dialing. For this reason it is not the only emergency number, though it is the primary number.

Set up as a phone company demonstration project there was no cost to the city for installation and no monthly charges were levied.

Sandusky, Ohio
(35,000 pop. served)

The "911" system covers both Sandusky and adjacent Perkins Twp. since they are both in the same telephone exchange. Perkins Twp. will not join the system formally, and, thus, there are no direct links between the central dispatcher and Perkins Twp. Advertised as the emergency number to call for police, fire and ambulance, a central dispatcher receives all calls and dispatches all emergency equipment. On the average emergency calls run between 250 and 300 per month. City departments have reacted well, and the fire department is pleased because it no longer receives nuisance calls. Presently the public is not too well educated in the use of the system.

Installation costs for the system were below $20.00 and the monthly increase has only been $22.85.

Birmingham, Alabama
(800,000 pop. served)

Presently in the initial stages, the Birmingham "911" system will be fully operational within the next two months. The system serves the Birmingham metropolitan area of two counties, parts of 3 other counties and 48 separate municipalities. A central communications center for police, fire, ambulance, and civil defense emergencies has been established with tie lines to all of the above mentioned city services. County contacts are maintained through a county wide radio net. The system is working well in limited operation as jurisdictional disputes are being ironed out. Thus far there has been fine mutual cooperation.

This comprehensive system cost $2,000.00 to install and will average between $200.00 - $250.00 extra per month for phone charges.

Simsbury, Connecticut
(18,000 pop. served)

The "911" system was introduced in Simsbury with the construction of a new emergency center at the police department. Advertised as the emergency number to call, it handles police, fire, ambulance and civil defense emergencies. Central dispatching is accomplished through a radio system (Plectron system) to both fire and ambulance. Thus far everyone has been well pleased by its operation.

As "911" costs are inseparable from the dispatch center construction cost, these figures appear relatively high. The installation costs were $17,000.00, which included 50 direct line call boxes to the center placed around town. The additional cost per month for the whole operation has been $1040.00.

New Britain, Connecticut
(85,000 pop. served)

The Emergency Reporting Center in the New Britain police department receives all emergency calls for police, fire, and ambulance and also serves as a central dispatcher. There is a slight jurisdictional problem as the New Britain exchange overlaps some 400 families in Berlin, Connecticut, but the emergency center has established a direct line link to the Berlin police department. Well educated in its use, both the city departments and the public have been well satisfied.

There was a one-time cutover cost of $50.00 and there is a monthly charge of $40.00.

Evanston, Illinois
(80,500 pop. served)

The "911" system is confined to the city boundaries and serves police, fire and ambulance emergencies. Calls are received in the police department which maintains direct line to the fire department. The city had central dispatching prior to "911" and is presently building a new communication center. This has alleviated many departmental hesitancies concerning "911." The public response has been favorable and 55-60% of "911" calls received are considered true emergencies. It cost the city $15.00 per trunk to install at a total cost of $225.00 while monthly charges have been $18.50 for the whole system.

Vicksburg, Mississippi
(75,000 pop. served)

The "911" system serves an area roughly 25 miles in radius about Vicksburg, thus including parts of Louisiana. Phones ring simultaneously in police, fire, and ambulance headquarters, but the police dispatcher answers all calls and rings the appropriate service. Each department then dispatches its own equipment. Advertised as the only emergency number, Vicksburg city departments handle all calls, as the surrounding county has no appropriate emergency facilities. The system averages about 150 emergency calls per month. Public and municipal reaction has been highly favorable. Installation costs were below $100.00, and as the city has a franchise agreement with the telephone company there are no service charges.

Atlantic City, New Jersey
(45-50,000 pop. served)

The "911" system is operative only within the city limits, providing police, fire, and ambulance emergency service. The police department receives all calls, averaging about 200 emergencies per day in which 80-90% are dispatchable calls. Direct lines are maintained to both the fire and ambulance, in addition to a tie-line with the fire department. Each department dispatches its own equipment. Advertised as the emergency number, the system has been well accepted, and the police response has been very enthusiastic. The six "911" trunks cost $140.00 to install and service charges have been $100.00 per month.

END