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# DIAL-911

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MICHIGAN INDEPENDENT TELEPHONE  
ASSOCIATION

## "911" EMERGENCY CALLING

### GENERAL

### ACQUISITIONS

The nationwide "911" emergency telephone numbering plan has recently been the subject of much interest nationally. Although the emergency service numbering plan is provided on a relatively limited basis across the country, we are confident that significant local interest will materialize. Therefore, anticipating this interest, we have developed this booklet to provide information which will acquaint you with the service and some of the major questions which may be raised regarding this service.

The implementation of "911" emergency number calling in the communities served by any telephone company should be governed by the municipal government's desire for "911" and their agreement as to the arrangement which will satisfy their various public safety agencies.

### "911" CONCEPT

The idea of a single and simple telephone number - uniform throughout the United States - by which one can summon help in any emergency is not new. It was proposed in concept several years ago by officials in the law enforcement and fire protection services, by their national professional associations, and by the telephone industry. Recently new impetus was given to the single

nationwide number. The program has received congressional endorsement and encouragement. The Office of Telecommunications Policy, Executive Office of the President, is now establishing a Federal Information Center for "911" and will provide advice and assistance to local governments wishing to initiate "911" service in their communities.

The advantage of the single number is obvious: the telephone is "the next best thing to being there." With it, an individual can summon help, obtain more specific aid from the responding service and receive instructions on what to do until help arrives.

#### WHAT IS THE "911" EMERGENCY NUMBER PLAN?

"911" is a universal or nationwide reporting telephone numbering plan that is designed to assist the public in contacting community safety agencies in time of an emergency.

#### HOW DOES IT WORK?

One number, "911", is available in a community for the reporting of emergencies. All calls dialed to "911" are directed to a main answering location which, in turn, dispatches the appropriate public safety agency, such as the police and fire departments.

#### CAN OTHER TYPES OF EMERGENCY CALLS BE HANDLED?

At the discretion of the community, other emergency service

agencies may be "tied into" the main answering location. For example, the Coast Guard, FBI, Poison Control Centers and local hospitals. It is also contemplated that the main "911" answering location will receive some misdirected calls. It should be administratively equipped to handle these calls either on a referral or direct transfer basis.

WHO OPERATES THE MAIN ANSWERING LOCATION?

The main answering location in each community is a function and responsibility of the local community. The telephone company should be available to assist training the personnel who staff the center with the equipment operations, and, of course, will maintain the equipment provided by the telephone company.

WHY WAS "911" SELECTED AS THE EMERGENCY NUMBER?

"911" is easy to remember and dial. More importantly, it can be more readily adapted for use with the nationwide telephone equipment and numbering arrangement.

HOW MANY EMERGENCY CALLS ARE HANDLED THROUGH TELEPHONE COMPANY OPERATORS?

An example of the annual volume of emergency type calls to operators in one Telco serving area was over 70,000 calls. Since there were over 45 million operator-handled calls in that year, the volume of emergency type calls was less than 1%.

WILL "911" SERVICE REDUCE THE VOLUME OF EMERGENCY CALLS TO OPERATORS?

Probably so. The best way to answer this question is to cite an example of an actual situation. In one Illinois community where it provides "911" service, the serving Telco experienced a 50% reduction in emergency calls to the operator. It is expected that other Telcos will experience similar results whenever and wherever this emergency service becomes available.

WILL "0" STILL BE AVAILABLE FOR RECEIVING EMERGENCY CALLS AFTER A COMMUNITY INSTALLS THE "911" SYSTEM?

Yes. Although "911" would become the primary number for emergency calls, operators will still be available to offer any assistance necessary in an emergency situation.

WHAT IS THE STATUS OF "911" ACROSS THE COUNTRY?

In the United States, as of early 1971, there were 120 cities with about 23,500,000 people being provided "911" service. With the exception of New York City, most of the cities that have this service are small and have only one or two switching centers. There were then 90 systems planned for implementation by the end of 1973.

WHAT HAS BEEN THE PUBLIC'S REACTION TO "911" IN THOSE AREAS WHERE IT IS PROVIDED?

It appears that the service has been accepted very well.

As with anything new, there were a few curiosity-type calls at first, but this appears to subside shortly after implementation.

CAN EMERGENCY CALLS BE DIALED FROM PUBLIC COIN TELEPHONES WITHOUT A DIME?

It is certainly expected that this service will be available. However, there are considerable modifications needed in the switching equipment and on all coin telephones to allow this service to be provided. Coin-free dialing is a separate program and may either precede "911" or be a later conversion.

WHAT ARE THE PRINCIPLE PROBLEMS IN ESTABLISHING AN EMERGENCY TELEPHONE NUMBER?

There are several. The required equipment changes in telephone company switching centers can be quite expensive and involved.

Secondly, there is the question of where the "911" calls will be routed after they have been dialed. Telephone exchange boundaries, more often than not, do not coincide with municipal boundaries. A given telephone exchange may include geographical areas served by several police or fire departments because of the many cities within the exchange. When a single number is used for all emergencies, it must be routed to a customer-operated central answering location equipped to dispatch help regardless of the type equipment or the municipal boundaries involved. Obviously, there must be an understanding and agreement on who responds to what emergency.

Further, there is the question of who will pay for the communications services and staffing of a "911" answering center, both of which must be resolved by the community or communities served. A single control group must be identified and authorized to work with the Telco in ordering services and facilities to serve the answering bureau and contract for same.

WHAT MAJOR PROBLEMS DOES "911" INTRODUCE FOR THE MICHIGAN TELEPHONE COMPANIES?

The problems are many and will vary with each company. Some of the most significant include:

- ..... What will Company policy be relative to the provision of "911" service? Will there be a one-time charge for central office rearrangements/additions to provide for "911" dialing or will the cost be spread over all telephone users?
- ..... Where EAS routes are involved, will the additional circuits required for handling "911" calls be provided at no cost to the contracting agency?
- ..... If EAS routes are involved and Michigan Bell is one of the Telcos, will the increased Bell charges for EAS trunks be a one-time charge to the "911" contracting agency? A continuing monthly charge? Or, no charge with costs spread across all rate payers?



..... Will the contracting agency be required to subscribe for additional trunks when "BY" conditions reach a given level? Do existing tariffs allow for same?

..... Will Hold and Trace service be provided? If so, at what cost in attended offices? Unattended offices?

HAVE ANY MICHIGAN TELEPHONE COMPANIES DEVELOPED A POLICY RELATIVE TO PROVISION OF "911" EMERGENCY REPORTING SERVICE?

Some of the larger telephone operating companies will make "911" available as the emergency calling number when requested by the communities they serve.

To provide "911" in many localities, extensive equipment changes are required in central switching offices. As a result, schedules for putting the number into effect will have to be determined by the telephone company; however, the minimum implementation period is 18-24 months from receipt of the order. Some make no charge for these central office rearrangements or additions.

To assure the fullest possible utilization of the "911" number, it is recommended that the emergency answering centers handle calls for all public safety agencies in the participating areas and urged that, as a minimum, these centers handle calls for the law enforcement and fire agencies.

Some Telcos will proceed to implement "911" emergency number calling after the local governments reach agreements that satisfy their various participating public safety agencies. The agreements include arrangements for coordinating the emergency-reporting procedures in contiguous and over-lapping geographical jurisdictions. The "911" contracting agency in some cases is required to provide the Telco a letter guaranteeing the prompt dispatching of a call to the appropriate emergency body regardless of whether the community from which the call is received or the emergency group involved is a participating "911" member.

The larger Michigan Telcos are providing additional circuits to handle "911" calls over EAS routes without charge to the "911" agency. If dedicated trunks are specified by the "911" center, FX mileage charges are applied regardless of whether or not the route is normally EAS.

WHERE CAN MICHIGAN TELCOS OBTAIN ASSISTANCE IN SOLVING THEIR "911" PROBLEMS?

Contact the Michigan Independent Telephone Association headquarters. Assistance will be provided as needed.

WHAT TYPE OF PLANNING SHOULD A COMMUNITY CONSIDER BEFORE REQUESTING "911" SERVICE?

A centralized answering facility could serve more than one community. With this possibility, it is recommended that

interested communities should consider:

- ..... What municipality and what agency within the community should be responsible for the facility?
- ..... How the center will be staffed and financed?
- ..... How the activity between the various emergency-type agencies can best be coordinated?
- ..... What emergency-type agencies would be included?
- ..... What inter-community communications are needed?
- ..... How to handle administrative calls
- ..... How will calls be dispatched to non-participating emergency bodies?

WHERE CAN THE COMMUNITIES OBTAIN ASSISTANCE IN SOLVING THEIR "911" PROBLEMS?

The Office of Telecommunications, Executive Office of the President, has established a "911" Federal Information Center. Mr. Charles Joyce, Deputy Director, may be written or telephoned at:

Washington, D. C. 20504

Telephone: 202-395-4876

Advice and assistance is available through this office for local governments wishing to establish "911" service. The center will also act as a clearing house for information concerning

federal assistance programs that may be made available for establishment of "911" service.

WHAT CAN TELCOS DO TO ASSIST CITIES IN THEIR "911" CONSIDERATIONS?

Provide each community served with a letter informing them of your desire to work closely with them in establishing "911" service after they have solved their political problems.

Due to changes of public officials because of elections, retirements, etc., a letter should be sent each political entity once each year reiterating Telco interest in participating in their "911" planning.

HOW WOULD A TYPICAL "911" BUREAU OPERATE?

The following figure 1. illustrates the general concept of the system which is comprised of the following elements:

1. Telephone central office areas - shown as irregular geographical areas.
2. Various jurisdictional boundaries:
  - a. A city - shown as a circle for ease of illustration.
  - b. Miscellaneous surrounding townships, boroughs, villages, etc.
3. A communications center for the entire region.

4. Various public safety organizational locations (not shown in the figure). It is assumed that the city has police, fire and emergency care services and that similar services exist in each of the surrounding political jurisdictions. In some areas (the township, for example) the county sheriff may also be responsible for law enforcement services.

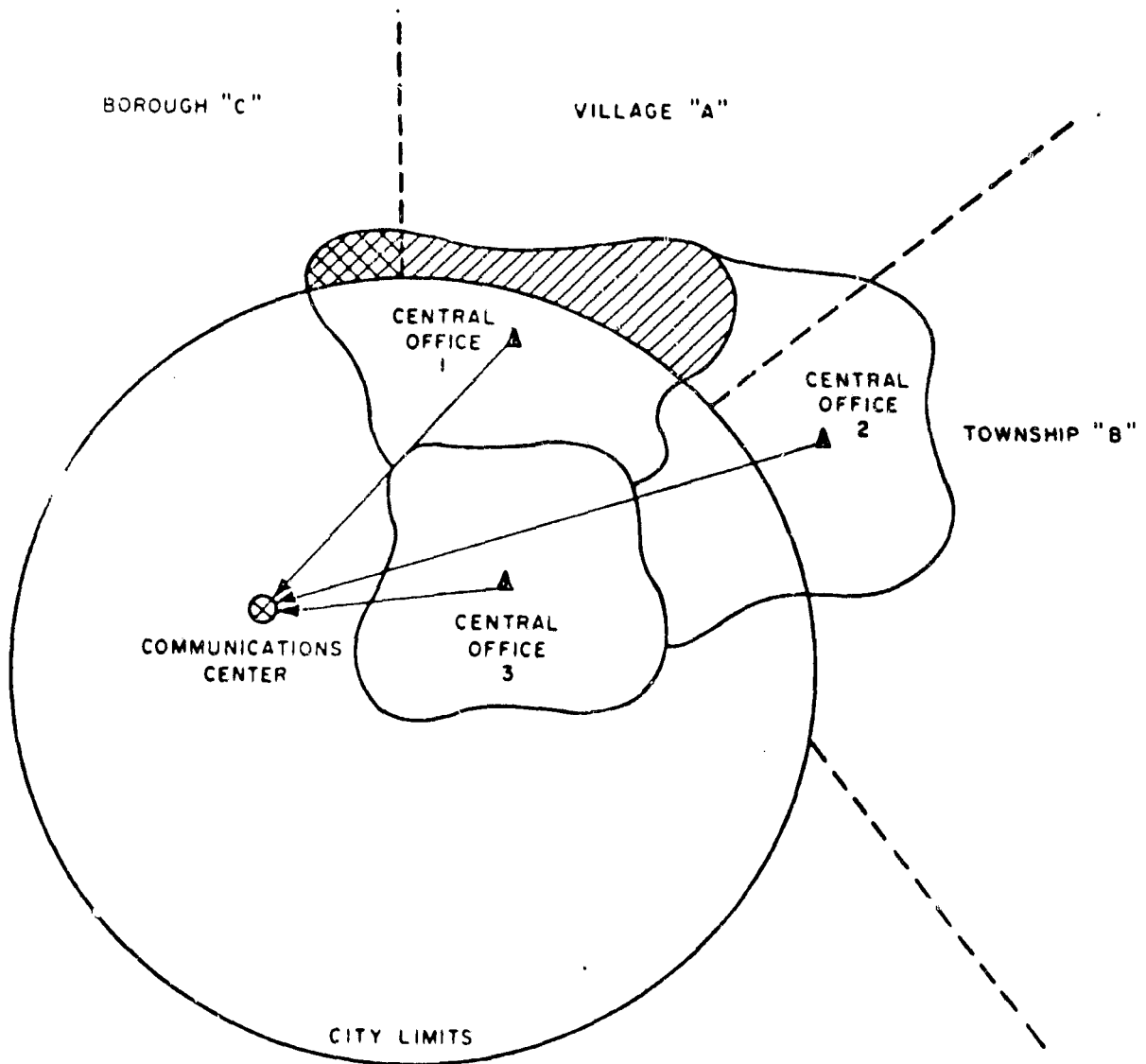


Figure 1. 911 Regional Concept

In brief, such a system works as follows: A "911" call within a central office area is automatically relayed at the central office to an emergency dispatch operator at the "911" communications center. (The "911" center is not necessarily a separate agency. By mutual agreement, an existing service (such as police) can operate the "911" center as a service to all agencies.) The operator elicits the exact details of the problem and notifies the proper emergency agency.

The following steps provide a more detailed description of a "911" system.

1. A citizen, reporting an emergency, dials "911".
2. The call is automatically routed through the central office to the "911" center.
3. The call is received at the "911" center switchboard by a dispatch operator who is assigned to incoming calls from that central office. This receiving operation can be handled in one of three ways, depending on the preference of the "911" center director:
  - a. An operator handles all calls routed to her/him regardless of the degree of emergency.
  - b. A primary operator ascertains the true emergencies and relays them to a secondary operator

who handles the call. The primary operator retains and disposes of non-emergency calls.

c. A primary operator handles the true emergency calls and routes the non-emergencies to a secondary operator for disposition.

4. The emergency operator determines the extent and nature of the problem and obtains information concerning identity and location of the caller. Location becomes a problem in central office areas such as that designated "central office 1" in Figure 1. In this case, the central office area encompasses three separate political areas (shown in the figure by cross-hatching).

It is important that the operator determine from what political entity the call is originating. This is readily solved on calls from homes or businesses since it is assumed that most people know where they live or work. Pay phones present a different problem, however, because the caller honestly may not know where he is. This can be simply solved by providing the dispatch operator with a list of telephone numbers by political district or, alternatively (since the number of pay phones is relatively small), arbitrarily assigning a simple numeric designation to the phone on a permanent plaque which tells the caller where he is. Such a plaque might say: YOU ARE CALLING FROM PHONE 21 IN THE VILLAGE OF \_\_\_\_\_ . From this information,

and an appropriate list, the dispatch operator can readily identify the location.

5. The dispatch operator notifies the appropriate emergency organization in the proper jurisdiction of the nature and location of the problem.

This entire process, properly handled, would take less than 30 seconds and would ensure that the caller gets the help he truly needs. It is important to remember, however, that costs for trunk lines from the central offices to the "911" center and circuits from the center to the various jurisdictional entities must be financed by the region being served.

In this concept, the public safety organizations would retain their own telephone numbers if they desire, and would also retain control over the specific dispatch of their forces. No intermediate authority is interjected, but a more effective technique for the public to get emergency help is provided.

The above concept does not preclude the installation of a single-jurisdictional "911" system. In fact, virtually all of the "911" implementations to date have been single-jurisdictional. Obviously, it is far easier to institute "911" where there are no political boundaries to cross. A single-jurisdictional installation is probably the only way that many areas will be able to "cut-over" to "911" in the near future and is totally satisfactory for large,



urban areas. In suburban and rural areas, however, the multi-jurisdictional problems must be overcome if people in these areas are to be served.

WHAT IS THE ROLE OF THE PUBLIC IN IMPLEMENTING "911" SERVICE?

The public has a major role to play in the successful operation of a "911" system. If citizens are provided with a more effective means of communicating with public safety agencies, they must not abuse this service - "911" is designated an "emergency system" and, as such, is not to be construed as an ombudsman service, nor a means of airing personal grievances.

No attempt has been made to define "emergency" for the public, since the decision to term something an "emergency" is highly subjective, often based on circumstance. The public, however, should be properly educated in the nature of emergencies and the use of "911". A certain number of nuisance calls will, of course, occur under any circumstances.

WHAT ACTION SHOULD TELCOS TAKE NOW?

Begin planning for central office rearrangements and additions required to implement "911" dialing.

Increased Federal, State and local emphasis is expected to be given "911".

OUR INDUSTRY MUST PLAN NOW TO DO ITS PART IN INITIATING THIS IMPORTANT EMERGENCY SERVICE!

**END**