



U.S. Department  
of Transportation

**Federal Highway  
Administration**

# **511**

for

## **TRAVELER INFORMATION**

### **Implementation Issues**

**August 14, 2000**

**Prepared By**

**ITS Joint Program Office  
US Department of Transportation**

# 511

## Implementation Issues

### **I. Introduction**

At least three hundred telephone numbers currently exist for traveler information systems in the United States. To overcome the confusion caused by this array of numbers, the United States Department of Transportation (USDOT) petitioned the Federal Communications Commission (FCC) for a national assignment of a single, easy-to-remember three-digit dialing code, N11. On July 21, 2000 the Federal Communications Commission assigned 511 as the nationwide telephone number for ITS traveler information.

The use of 511 for traveler information services will provide crucial benefits to the community. 511, it will allow the public an easy-to-remember number to access traveler information services. The result of this ease of access will be a major increase in the number of peoples using the service. The Northern Kentucky and Cincinnati area experience produced a 72% increase in calls when they implemented their "211" service in 1997. The increase in call volume will produce a public better informed about local travel conditions and, experience has shown that informed citizens make choices about when and how to travel; thus reducing congestion and resulting safety and other problems that are a result of congestion.

### **II Purpose**

The purpose of this document is to provide State and Local transportation agencies with an explanation of the FCC action, some of its implications, and some key issues related to how a transportation agency would proceed to implement 511 for the region. Also discussed are potential involvement with telephone Local Exchange Carriers (LECs), wireless communications carriers, and state regulatory agencies such as the State Public Utilities Commissions (PUCs), State Commerce Commissions (SCCs), or State Public Service Commissions (PSCs).

### **III. The FCC Report and Order**

There have been several petitions to the FCC requesting N11 number assignments for a variety of uses. In 1992, the FCC issued a Notice of Proposed Rulemaking concerning the assignment of N11 codes (CC Docket 92-105). In 1997, the FCC issued a First Report and Order and Further Notice of Proposed Rulemaking on N11 codes. In that Report and Order, the FCC assigned the number 711 for telecommunications relay services (TRS) and the number 311 for non-emergency police and state and local government services. The FCC also clarified the jurisdiction and numbering authority in this proceeding.

In the 1997 Report and Order, the FCC stated that although the FCC has exclusive jurisdiction over the North American Numbering Plan (NANP) in the United States, the Communications Act of 1996 also allows the Commission to delegate to State commissions or other entities all or any portion of such jurisdiction.

This FCC order implied that if a state regulatory agency performed any N11 assignment functions in the past, they may continue to do so in the future. Conversely, if the agencies did not address these assignments, they are not required to. That decision rests with the state agency and the authority given to them by the State Legislature. The importance of this statement is that the laws vary from state to state, and each transportation agency will have to determine if their respective State regulatory agency exercises any jurisdiction over the implementation of N11 numbers, and what specific requirements would have to be met.

**The new Report and Order assigns the number 511 for Traveler Information. The FCC order will allow the number to be assigned only to government entities.**

Transportation agencies are not obligated to use the number, and the Report and Order does not dictate which agency should request its use, or how it will be implemented or funded. These decisions are left to local governments.

Some local telephone companies may have been permitted to use unassigned N11 numbers for commercial purposes. Therefore, there is a possibility that 511 is currently in use in your area. The incumbent user does not have to vacate the number until it is requested for traveler information. The FCC order allows current users a reasonable time to vacate the number after an application is filed by a transportation agency.

## **IV. Key Issues in Obtaining the 511 Number**

### **1. Introduction**

The FCC delegated the authority to resolve implementation issues to state and local governments. Each state has different legislation concerning whether there is a state regulatory agency that has jurisdiction over assignment of the number, filing of tariffs, vacating services currently using the number, and resolving conflicts if competing requests are received for the number. The best method for implementing a system depends, in part, on the authority exercised by the state regulatory agencies.

There are various steps an agency can take to begin the process of implementing a 511 service. Based on information gathered from several state regulatory agencies and communications service providers, the following is a description of actions that can be taken and issues that should be addressed by transportation agencies desiring to implement this service.

The information provided in this section applies primarily to organizations that have an existing telephone-based traveler information system. These organizations have an

existing infrastructure to collect traveler information, a means of paying for the service, and telephone access to the system.

## **2. Suggested Actions for Transportation Agencies**

### **a) Regional Cooperation is Essential**

The 511 number will be available to state and local transportation agencies. The FCC order assumes that the telephone-based traveler information systems are multi-modal. They could include several categories of information such as real time traffic information, transit information, information on commuter rail, weather and construction. Prior to the assignment of the 511 number, each agency probably has a different telephone number for these services. With the 511 assignment, it is now possible that all transportation agencies in a given region will share the 511 number to make it easier for the traveling public to obtain information. To make a single number, 511, work, it will be essential that all agencies wishing to use the number cooperatively determine the exact implementation of the service.

You will have to deal with potentially both the state regulatory agency and the telecommunication carriers in your area. It is important that conflicts on who answers the call be resolved by the transportation agencies rather than a state regulatory agency. State regulatory agencies may get involved in conflicting requests for the assignment if the state law gives them jurisdiction. (See section “c” below) However, the telecommunications companies will not deal with conflicts among agencies. They will tell you to come back when you have all that straightened out .

Therefore, in order for any one agency to use 511, all agencies will have to cooperate to resolve a variety of issues, many of which are described below. Implementation of 511 may be frozen until the agencies can agree among themselves how the assignment should be made.

### **b) Designate a Single Point of Contact**

A lead agency/person/ consortium should be designated (e.g. the State DOT or a Metropolitan Planning Commission, or a contractor as an agent for the public agencies, etc.) to deal with both the state regulatory agency and the telecommunications carriers in the region. (The local telephone companies are referred to as Local Exchange Carriers - LECs - as opposed to long distance carriers.) Communications carriers have a particular way of doing business and a somewhat unique terminology that they use. The carriers have stated that it greatly simplifies getting questions answered and issues resolved between the public sector agencies and the various service providers if there is a single point of contact with whom they can work. Since this is a multi-modal service, there are many agencies involved and a great potential for confusion without a lead agency and a specific project manager designated to work with the LEC and all the wireless carriers.

The agency or consortium that applies for the number will be the responsible party for filing materials with the state regulatory agency. In states where the regulatory agency will not exercise jurisdiction, the responsible party will be the one that places the request for service with the communications service providers. The communications service providers will be more cooperative if they are presented with a request from an agency that is addressing the ownership issue for all agencies.

Traveler information systems can be enhanced in terms of the types of information offered. This may involve having a new transportation agency join the system and provide information for distribution. For example, a system that provided traffic information may be approached by a transit agency desiring to make real-time transit information available to customers. A framework for adding new participants to the system should be developed to avoid conflicts between agencies desiring to use the 511 number.

Cooperation on the local, regional, and state level is essential to the success of the project. Form a framework for an organization that can equitably represent all potential participants and a procedure for adding new participants and expanding the service area in the future.

### **c) Contact the State Regulatory Agency**

The FCC has the authority to make decisions pertaining to the use of telephone numbers in the North American Numbering Plan. The FCC can, and does delegate some responsibilities to state and local governments. Each state in turn has legislation that determines whether a state regulatory agency will perform any administrative functions concerning telephone numbers.

The designated lead agency/program manager should contact the state regulatory agency, Public Utilities Commission (PUC), or Public Service Commission (PSC), or other nomenclature, to determine if the state regulatory agency has jurisdiction over any facet of N11 number administration. In general, state regulatory agencies that have jurisdiction usually regulate only wireline telecommunications networks. Wireless telephone services such as cellular (e.g. Cellular One), enhanced specialized mobile radio services (ESMR) (e.g. Nextel), and Personal Communications Systems (PCS) (e.g. Sprint PCS) are normally not regulated by a state agency. (Dealing with wireless carriers is discussed later in paragraph f.)

Find out if the state regulatory agency should be petitioned, if a tariff has to be filed, and if there are any specific requirements the state agency will expect the petitioner to meet. Some state regulatory agencies may decide to issue a notice of inquiry, or may decide to develop a set of procedures for assignment of the number.

The states that have regulatory agencies that take administrative responsibility for implementing the use of N11 codes may decide to hold public hearings on the issues described in this paper as well as any others raised by the participants. They may also

delay assignment of these numbers until they develop administrative procedures for applying and granting the use of an N11 number.

Some regulatory agencies will require that “tariffs” are filed, and in all likelihood, this will only be required of the LEC, not the wireless carriers. Tariffs are the schedule of rates that are charged for specific services. The carriers may decide to define 511 for traveler information as a new service and create a new rate structure.

Several states have no legislation giving the regulatory agency jurisdiction or administrative responsibilities concerning N11 numbers. These regulatory agencies are likely to tell the transportation agency applying for the use of the 511 number that the state does not exercise regulatory authority in this matter, and that all arrangements are between the communications carriers and the transportation agencies.

### **c) Who Will Answer the Call ? Decide How and Where to Route the Telephone Call**

There are several issues related to the routing of a 511 call for traveler information. There are going to be situations where the call could be potentially routed to more than one logical location. For example, Columbia, Maryland is a city half way between Washington, DC and Baltimore, Maryland. Some residents work in one city and some work in the other. When they dial 511, which city will they get information from? Will it be the State? The solution to this issue will depend on regional cooperation. The agencies providing the services in both cities may have to jointly implement an automated call director that will forward the call to the proper city at the caller’s prompt. This is only one potential solution.

LEC calling boundaries do not necessarily match up to political jurisdictions. Agencies that are charged on a per-call basis may have to accept calls that are routed from a switching center that serves residents from both within and outside of the desired service area. Also, the call may be considered by the carrier to be a toll call, and the carrier will need to know who to bill; the caller or the service provider. The implementing agency will have to work with the carrier to solve these routing issues.

The routing issue is simplified with wireless service providers. According to some of the service providers contacted as part of this study, they are able in most circumstances to be able to route calls from specific base stations (cell sites) to designated locations. They also often have what are known as sectored base stations. These base stations have more than one directional antenna. When a base station is located near the edge of a desired service area, the antennas pointed toward the service area can route the call to the proper location, and the antennas pointed away from the service area can refuse the call.

The 511 number will be assigned to public transportation agencies only. No private company can apply or own the number. However, the transportation agency may allow a private company, or several companies, to operate the system for them. A number of metropolitan areas currently have public-private partnerships providing traveler

information. This arrangement does not have to change if the transportation agency decides to convert the number to 511. Further, these private service providers may be a major asset in organizing the region and dealing with the LECs.

#### **d) Who Pays**

A basic decision must be made regarding who pays for the 511 call. The FCC report does not require this to be a public service. Transportation agencies may choose to make this a free call to the public. However, agencies may also choose to have the caller pay a charge per call. This may be especially appropriate if there are means available to customize the information for a particular caller. Currently, there are some traveler information systems that are supported by revenues from advertising. Before you contact your telecommunications carriers, this issue should be decided. Don't forget, the public now pays for information from 411; they pay for 911. Who pays for 511 is your choice.

#### **e) Use Competition and Leverage off Other Government Purchasing Power**

Remember, 511 traveler information is *not* a public service required of the carriers. This will be revenue generating service for them - they will make money on 511. Further, if you now have a 7 or 10 digit traveler information number, when you implement 511 the call volume will increase. The Kentucky-Cincinnati experience showed the call volume doubled. This will impact what you pay and how much money the carrier could make.

State and Local Governments are often the largest single customers of the LEC's. There are existing contracts for service already in place and the Government, as a customer, may have considerable clout in dealing with the carriers, as well as having experienced people who are accustomed to negotiating with the carriers and setting up telecommunications systems. There may be existing contracts that transportation agencies can "piggyback" on. Transportation agencies can investigate what resources and clout the State and Local governments have to deal with the local carriers, and use these resources to try to obtain a lower cost for providing the service.

Competition among carriers, particularly the wireless carriers, can help reduce costs. Wireless carriers may decide to charge subscribers for airtime, as was the case in using 311 for non-emergency police service in Chicago. When 211 was implemented for traveler information in Cincinnati, one cellular carrier charged airtime and the other did not. After several months, the carrier charging for airtime decided that for competitive reasons, they should also make the call free. Charges by the carriers for 511 service should be considered negotiable, and transportation agencies should encourage competition, particularly between the wireless providers. Remember, there is now competition in the local exchange market. The Baby Bells are not the only game in town any longer.

#### **f) Contacting the Carriers**

Plan on approaching the LEC first. They will be the implementers of the service on fixed telephones. Some groups implementing 311 have had success in working with the LEC first, and having the LEC coordinate with the wireless carriers. There will be 2 analog cellular carriers in each service area, up to six PCS carriers, and one or more ESMR carriers that will have to implement the service for ubiquitous coverage. If the LEC is willing to approach the wireless carriers on behalf of the 511 applicant, implementation will be greatly simplified.

Some of these carriers may want to provide traveler information to their subscribers themselves. In fact there already may be competing services in your area. This is more likely to occur with the cellular/PCS carriers. For instance, if Sprint wants to provide this for their customers, all 511 calls from Sprint customers could be routed to their service. Indeed, the US DOT has been encouraging the provision of these services by the private sector. However, this is the decision of the local transportation agencies. Further, if an agency allows a carrier to provide the 511 service for their customers, the agency can insist on a certain quality of that service.

### **g) Sources of Funding and Cost Issues**

Funding is an important issue for the telephone service providers. There are fixed and recurring costs associated with implementing a N11 number. The telephone companies will want to know how the system will be funded. They are very sensitive to the political issues surrounding the funding of 911 for emergency communications and the customer response to charges on their monthly bills for this service. They will be reluctant to participate in any funding mechanism that will either require any significant involvement on their part or will add separate line items to the subscriber's monthly bill.

For existing traveler information systems, the ITS program intends to provide some grant money to help pay for the non-recurring conversion costs to change from a seven or ten-digit number to the 511 number. This program was announced in the Federal Register on August 9, 2000.

There are also recurring costs that have to be paid for items such as leasing lines and charges for every call made to the system. Traveler information systems are eligible for many Federal aid transportation funding programs, including the National Highway System, the Surface Transportation Program, and the Congestion Mitigation and Air Quality (CMAQ) program. For example, some agencies have used CMAQ funds as well as state funds. In California, money from the Service Authority for Freeways and Expressways, the California Transportation Development Act, CMAQ funds, and the State Transit Assistance funds are all used to finance the traveler information system used in the San Francisco Bay Area.

The information does not have to be collected and distributed by a transportation agency. Several of the existing traveler information systems are based on real-time travel information collected and distributed by a private sector company. The transportation



agency can contract with a private sector provider to supply part or all of the service. Several of the existing traveler information services offered by a DOT use Federal and State funds to help pay private sector companies to collect and distribute information provided over the telephone-based system.

The cost of 511 service may be different than what agencies are currently paying for a 7 or 10 digit number. LECs may be required to file a tariff by the state regulatory agency, while the wireless carriers may not have to. Carriers may decide that this is a new service and may present prices that bear no resemblance to charges for other N11 services. If the charges are deemed unreasonable by the transportation agency, they can petition the state regulatory agency for assistance. If the regulatory agency claims they have no jurisdiction, the transportation agency may have to make a case to the state legislature.

In many instances, 511 numbers could be implemented simply by redirecting calls made to 511 to the old 7 or 10-digit number, and both numbers remain active. If the existing number was not a toll free number, there may be the additional issue of paying for toll charges if the 511 call is initiated within the region but is not considered a local call. This is an unfortunate result of switching centers and call routing being independent of political boundaries.

#### **h) Participate in national discussions on traveler information services.**

The FCC order has charged the US DOT to encourage a degree of uniformity across the country in what the traveling public can expect from N11. Uniformity of service for a nationwide system may be desired or expected by consumers even though it is implemented at the local level. Customers calling 511 from different locations in different states may, for example, expect to hear a similar greeting or list of menu options when dialing the service. They may also expect consistent terminology when information such as travel conditions, weather forecasts or transit schedules are provided.

The US DOT, in conjunction with ITS America and organizations of state and local governments, is initiating a dialog on the subject of uniformity. Plan on participating in forums and other efforts that will determine how to achieve this objective.

### **V. Conclusion**

The FCC report and order leaves resolution of implementation issues to agencies at the state and local level. Each state has different laws concerning their level of involvement in assigning telephone numbers and filing tariffs. Therefore, the experiences that transportation agencies will have in setting up an 511-based traveler information service will differ from state to state, and there will be many lessons learned. It is hoped that this guide will assist in getting agencies started with the conversion from a 7 or 10 digit number to 511.

The ITS JPO will be generating additional information based on the experience of the early adopters of 511 to assist other state and local governments in implementing this service.

US DOT contacts are: Bill Jones at the ITS JPO; 202-366-2128, [william.s.jones@fhwa.dot.gov](mailto:william.s.jones@fhwa.dot.gov) , and Bob Rupert in the Office of Travel Management in the Operations Business Unit, FHWA, 202-366-2194, [robert.rupert@fhwa.dot.gov](mailto:robert.rupert@fhwa.dot.gov).

The FCC order, this document, and other information on the implementation of 511 as it is developed, are posted on the ITS web site at [www.its.gov](http://www.its.gov)