
511 Implementation in Washington DC Metro Area

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Abstract

On July 21, 2000, the Federal Communications Commission assigned the abbreviated dialing code 511 to be used for traveler information services. The basis for reserving 511 is that it meets the “public interest” standard for such a determination, and that use of traveler information systems increase substantially when a three-digit number is available. A study conducted by the National Center for ITS Implementation Research at George Mason University explored various issues related to adopting 511.

Before configuration of the system can be addressed, the issue of how to enable the use of 511 must be reconciled. Past N11 implementations provide a good outline for how this is done. A delay in the other jurisdictions’ adoption of 511 would not have an effect on its implementation in Virginia because of each state’s sovereignty over its own telephone lines. However, the usage of a traveler information system when an N11 is available versus the usage of the same system when accessed only by using a 7-digit number has been shown to be substantially higher (72 percent). The increased usage also resulted in more travelers equipped with the system’s information and, thus, able to optimize their travel decisions.

The FCC Order

On July 21, 2000, the FCC issued order FCC 00-256 reserving 511 for traveler information services. In its justification for assigning 511, the Commission noted the significant impact of highway-related incidents each year in the United States (6 million accidents, 42,000 deaths, and 5.2 million injuries) at an approximate cost of \$200 billion annually. Building more roads is becoming more and more difficult each year both economically and politically. The FCC agreed with the conclusion that an N11 would result in increased use of a traveler information service. They also noted that in the Cincinnati/Northern Kentucky area, during a 3-month period, when a 211 was enabled for wireline users in Kentucky but not in Ohio, 72 percent more calls were made to the N11 than to the seven-digit number (333-3333).

The FCC also described a United States Department of Transportation (USDOT) grant program to assist in paying for the switching function to transfer 511 calls to the 10-digit number, totaling \$50,000 to each entity granted funding.

Regional Approach for Washington, DC

Because of the large amount of inter-jurisdictional local and through travel in the Washington area, a traveler information system allowing access to information from the

District, Maryland, and Virginia using a single call to the system is desirable. In order to implement this system, the model for the current *Partners-in-Motion* contract could be followed. The steps to implementing the N11-enabled system are as follows:

- ◆ FCC allocation of the N11 is necessary (completed--July 21, 2000).
- ◆ In the Request for Participation, the USDOT stated applications will be evaluated on (1) the level of coordination of the applicant with other agencies in the affected areas to reach agreement on a conversion approach for all traveler information numbers in the affected region; (2) the readiness of the applicant to convert traveler information telephone numbers in a timely fashion; and (3) the quality of the traveler information to be provided.
- ◆ An agreement among the various entities (the District, Maryland and Virginia) must be reached to resolve such issues as (1) the lead agency for the project and (2) financial and administrative duties. The Metropolitan Washington Council of Governments has stated the type of agreement needed is quite simple in nature.
- ◆ After the lead agency is determined for the DC-Metro system, that agency will then have the responsibility of implementing the procurement process and serving as the point of contact with Verizon. Verizon is the Incumbent Local Exchange Carrier (ILEC) in the Washington Metropolitan Area and would be the telephone service provider to switch the N11 call into the 10-digit number. For the wireless industry, negotiations with individual providers, perhaps facilitated through an industry association, would establish the 511 system.

Collection and Dissemination of Traveler Information

Public financing is a necessary part of the equation, as the resources required to collect the data is currently beyond the means of private entities. Currently, contractors actually install and maintain the collection and dissemination of traffic information.

The gathering of relevant information for inclusion in the system would necessarily be decentralized, as there is no one entity charged with collecting all information relevant to a traveler information system. Within the state of Virginia, system updates would come from various regional VDOT offices, based on information provided by field personnel. State and local police, emergency service personnel, news organizations, and private citizens would also provide input for the statewide system that would need to be integrated at a centralized location. Of note is the Virginia Operational Information System (VOIS), an internal network for the State which compiles and disseminates information to Virginia state employees with access to the system. The system is currently being upgraded, including web-enablement, to be completed in the near future, and could be integrated as input into the 511 system. The actual configuration of the system with regard to transferability between different

regional sources of information shows that a statewide service leveraging the rates afforded by the Commonwealth's telephone contract with MCI to be the more realistic option.

For a Washington Metropolitan system, input could be collected directly from relevant sources as for the statewide system, as it is with the Washington *SmartTraveler* system. Alternatively, the information could be forwarded to the regional system from the centralized Virginia collection point. With the current infrastructure configured to collect information directly from the decentralized units, the recommendation is to continue this method.

Challenges to Success

With the knowledge of how a traveler information system would be organized from the functional and institutional viewpoints, it is also necessary to discuss possible sources of disruption in the successful implementation of a traveler information system. Two types of challenges, technical and institutional, are addressed in this section.

In the foreseeable future, budget limitations will prevent perfect traveler information from being available, and care should be taken to not imply it is perfect. The quality of information currently available, though, is sufficiently accurate and timely to aid travelers in making informed route and mode decisions. The most important issue, therefore, is the time it takes from a relevant event occurring (for example, an accident) until the system is updated. Currently, the information is manually processed and entered into the system at the *SmartRoutes* office. This manual entry results in a delay of a few minutes and, thereby, reduces the effectiveness of the 511 system. If, for example, during a delay, a large number of travelers decide to take the affected route, as could occur during rush hour and other peak usage periods, traffic gridlock would be significantly increased. Assuming a level of system usage that would be sufficient to alleviate delays, it will be necessary to ensure all updates are input as soon as possible. Consequently, research into automatic updates and other means of quicker system updating should be conducted as soon as time and budgets allow. Additionally, the need to comply with forthcoming federal guidelines could serve to place limits on individual traveler information systems.

Ultimately, success of the 511 regime depends as well on the political and administrative actors with the states and the District of Columbia implementing the systems in an effective manner. At the institutional level in Virginia, there is some doubt as to the ultimate cognizant agency that would control 511. Virginia's Department of Information Technology (DIT) is responsible for administering information technology-related contracts, of which 511 is an example. This contract is distinct from the *Partners-in-Motion* arrangement, in that the functions of information collection are not included in the set of DIT's responsibilities, but rather an overlap is created. Meetings with VDOT have established that DIT manages their telecommunications contracts, but it is possible that because DIT is responsible for

managing N11 contracts in Virginia it would ultimately be able to determine to whom the 511 calls are transferred. Therefore, the recommendation is that VDOT meet with DIT at the earliest opportunity to negotiate the decision that 511 calls will come to a VDOT-determined information source.

In summary, the states of Virginia and Maryland and the District of Columbia have recognized the need for a timely, reliable traveler information system in their jurisdictions. A cooperative traveler information initiative using an N11 has the potential to help meet the goals of increasing safety, reducing congestion, and decreasing fuel consumption. The steps involved in implementing 511 in each jurisdiction are different, with the process in Virginia being the best understood. For the Washington metro area, it is important that some kind of regional system be implemented, as there is a high-level of inter-jurisdictional travel each day. A continuation of state and local information sources making their updated information available to the traveler information system is critical. Cooperation among wireless and wireline telephone service providers is not anticipated to be problematic, as #211 is currently enabled for wireless customers in the DC metro area.