PARTNERS IN MOTION AND CUSTOMER SATISFACTION IN THE WASHINGTON, D.C METROPOLITAN AREA

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Partners In Motion Evaluation Subcommittee

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TABLE OF CONTENTS

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EXECUTIVE SUMMARY

Partners In Motion is a program aimed at improving the quality, quantity, and availability of travel information to transportation agencies, the media, and, ultimately, to the traveler in the Washington, D.C. metropolitan area. The program was initiated with a "Quick-Start" in July 1997 and has been running in "Full-Service-Dissemination" mode since 1998. The program is envisioned to continue developing as a regional traveler information system that provides information via mediums such as television, telephone, and Internet web sites.

This report evaluates Partners In Motion in terms of guaranteeing customer satisfaction, which was one of the goals identified by the group as being important to consider. The evaluation objectives related to this goal that were tested as part of the study are:

- To improve customer satisfaction with use of Partners In Motion for trip planning, en-route trip, and choice of travel alternatives;
- To improve customer satisfaction with the reliability, quality, and level of traveler information; and
- To improve customer satisfaction with the use of specific dissemination devices.

To provide needed input for this evaluation, a series of surveys of travelers in this region was completed. To establish a baseline of traveler information service use, a survey of the general public was administered in the fall of 1997. This survey was implemented again in the fall of 1998 to establish another baseline and measure differences between the two baseline surveys. During this same time, an Intercept survey of *SmarTraveler* Audiotext users and an Internet survey of *SmarTraveler* Webpage users were also administered. The results of these surveys suggest that Partners In Motion is improving customer satisfaction in the region, and is meeting the specific objectives associated with this goal.

First, the *SmarTraveler* phone service appears to be being used for trip planning and en-route trip planning, which in turn is having some influence of travel behavior and customer satisfaction. The service is used for both work-related and non-work-related travel. Most of its use however, is by commuters, who access the service either while en-route or before leaving work. Although the service is affecting a variety of travel choices, including those relating to mode of transportation, destination, departure time, and decision to travel, the largest impact appears to be on route choices of travelers. Almost 90% of all *SmarTraveler* phone service users admitted to "often" or "sometimes" changing routes after using the service.

Second, travelers appear to be benefiting from the choices they make in response to the traveler information service. These benefits include saving time, saving money, avoiding traffic problems, and reducing anxiety. With the exception of saving money, a greater percentage of *SmarTraveler* users perceive that they receive each of these benefits than do users of other traveler information services. In fact, over 80% of SmarTraveler phone users responded "yes" to receiving these benefits.

Third, *SmarTraveler* users appear to be fairly satisfied with the information provided by the service. Satisfaction was defined in terms of the currency, accuracy, accessibility, detail, and relevancy of the information available. In comparison to users of other traveler information services, a greater percentage of *SmarTraveler* users perceive to be satisfied in terms of these criteria. These findings suggest that Partners in Motion is improving customer satisfaction with the reliability, quality, and level of traveler information and with the use of specific dissemination devices

Another round of surveys—specifically, a survey of *SmarTraveler* phone service users, a survey of *SmarTraveler* Webpage users, and a survey of the general public--is planned to be completed in the Fall of 1999. This is part of a three-year vision by the evaluation group to assess Partners In Motion as it expands and changes over this time period.

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1. INTRODUCTION

Partners In Motion is a program aimed at improving the quality, quantity, and availability of travel information to transportation agencies, the media, and the public in the Washington, D.C. metropolitan area. This program commenced with the "Quick-Start" program on July 1, 1997 and continued with the "Full Service Dissemination" program in 1998. Partners In Motion is envisioned to continue to grow and expand as a regional traveler information system.

Several public and private agencies from the Washington, D.C. region have been assembled to evaluate this program. The primary evaluation goals of Partners In Motion listed in approximate order of priority[1] are developing intermodalism, increasing mobility, reducing congestion, guaranteeing customer satisfaction, increasing transportation services' efficiency, increasing transit ridership, guaranteeing cost-effectiveness, improving regional attractiveness and performance, maintaining or improving the environment, and increasing institutional cooperation.

This report evaluates Partners In Motion in terms of the goal of guaranteeing customer satisfaction. The evaluation objectives related to this goal that were tested as part of the study surveys are:

- To improve customer satisfaction with use of Partners In Motion for trip planning, en-route trip, and choice of travel alternatives;
- To improve customer satisfaction with the reliability, quality, and level of traveler information; and
- To improve customer satisfaction with the use of specific dissemination devices.

To provide needed input for this evaluation, a series of surveys of travelers in this region was completed. The purpose of the first survey was to establish a baseline condition for traveler information services in the Washington, D.C. metropolitan area.[2] This survey is referred hereinafter as the 1997 general phone survey. In the fall of 1998, this survey was administered again, but to a different random sample of travelers in the region. The results of this survey (i.e., 1998 general phone survey) were compared against the 1997 general phone survey findings to assess changes in the use and awareness of traveler information services in the Washington, D.C. metropolitan area.[3]

During the fall of 1998, an Intercept survey of *SmarTraveler* phone service users and an Internet survey of *SmarTraveler* web site users were also conducted. The main purpose

[1] This list was developed and refined through a series of meetings. It was eventually pared down to customer satisfaction issues due to funding and other concerns.

[2] The first of these, a phone survey, was administered from October 27 through November 11 of 1997. The results of this survey are summarized in an earlier report: "Use and Awareness of Traveler Information Services in the Metropolitan Washington, D.C. Area," The Institute of Public Policy, George Mason University, January 1998.

[3] During the months of October, November, and December in 1998.

of these surveys was to determine how satisfied *SmarTraveler* customers are with these services. Secondary to this, the surveys were intended to determine when and why individuals use *SmarTraveler* and how the information they receive from *SmarTraveler* influences their travel behavior.

Another round of surveys—specifically, including a survey of *SmarTraveler* phone service users, a survey of *SmarTraveler* Webpage users, and a survey of the general public--is planned to be completed in the Fall of 1999. This is part of a three-year vision by the evaluation group to assess Partners In Motion as it expands over this time period.

This report discusses the findings of the first two sets of surveys and evaluates *SmarTraveler* with respect to its counterparts. Section 2 discusses the design and implementation of these surveys, as well as the sampling issues relating to each survey. Section 3 discusses use and awareness of traveler information services in the Washington, D.C. area. These services include SmarTraveler but also others that are provided via the radio and television. Section 4 discusses the extent to which *SmarTraveler* is meeting the goal of guaranteeing customer satisfaction, and specific objectives associated with this goal. Section 5 provides some concluding remarks.

2. SURVEY DESIGN AND IMPLEMENTATION

2.1. Survey Design

The *SmarTraveler* user surveys were fashioned after the 1997 and 1998 general phone surveys. This allowed for valid comparisons to be made between *SmarTraveler* and the other sources of travel information, which are provided on radio and television. Each survey is displayed in Appendix 2.

Each survey consisted of three major sections. The first collected information on travelers' general travel characteristics, such as their mode of travel and length of commute. The second captured information on travelers' use and awareness of traffic information sources, and their satisfaction with these services. The surveys of *SmarTraveler* users focused exclusively on *SmarTraveler*, while the survey of general traveler also addressed other traffic information sources. The last section in each survey collected information on travelers' demographic characteristics.

2.2. Sampling Design and Survey Implementation

2.2.1. General Phone Surveys

For the general phone surveys, the target population included all individuals of driving age living in the Washington, D.C. metropolitan statistical area. This geographical region consists of 16 counties (Calvert, Charles, Frederick, Montgomery, Prince George's, Arlington, Clarke, Culpeper, Fairfax, Fauquier, King George, Loudoun, Prince William, Spotsylvania, Stafford, and Warren), 6 independent municipalities (Fairfax , Falls

Church, Fredericksburg, Manassas, and Manassas Park), and the District of Columbia. In 1990, there were approximately 3 million people residing in this area, with 78% of driving age. Given this, it was determined that a sample size of approximately 1000 would be needed in order to ensure a reasonable degree of confidence in the survey results. This number derives from the following rule of thumb: sample 10% of the population, provided that number falls between 30 and 1000 (Alreck and Settle, 1985). Stratified random sampling by county was also employed to ensure that the geographic distribution of the respondents matched that of the Washington, D.C. metropolitan area.

Telephone numbers were extracted randomly from an electronic file of all residential phone numbers in the Washington, D.C. metropolitan area. All telephone numbers were removed from the completed survey database in order to assure respondent confidentiality. The George Mason University, Institute of Public Policy survey center, located on the Fairfax campus completed all phone interviews. Each interviewer was extensively trained before conducting surveys, and at least one supervisor was present at all times to monitor work and field problems. Approximately five to seven interviewers were on staff at any given time.

Interviews were conducted Monday through Thursday, from 6:00 P.M. to 9:00 P.M., Saturday from 9:00 A.M. to 5:00 P.M., and Sunday 1:00 P.M. to 9:00 P.M. The survey period in 1997 extended from October 27 through November 11, while in 1998 it extended from October 15 to October 31. Each survey took from about one to ten minutes to administer, depending on the extent to which a respondent indicated they use Traveler Information Services. A total of 991 completed surveys were collected in the Fall of 1997 and 973 in the Fall of 1998.

2.2.2. Demographic and Travel Profile of General Phone Survey Respondents

It was important to establish that the samples collected from the general phone surveys were representative of travelers in the Washington, D.C. metropolitan area. Looking at the geographical distribution, demographic profile, and general travel characteristics of the respondents accomplished this. For these variables, it was found that both samples do in fact closely resemble the population of travelers in this region.

Each of the major counties, independent municipalities, and the District of Columbia are represented in both samples, as shown in Table 1. The shares reported in this table correspond to the actual geographic distribution of driving age population in this region.

Table 1: Approximate Distribution of 1997 and 1998 Samples by County, Municipality,and District of Columbia

Location	Share of Total (1997 &1998)
Fairfax County	34%
Montgomery County	20%
Prince Georges County	19%
District of Columbia	10%
Arlington	5%
Alexandria	3%
Prince William County	2%
Other	7%
TOTAL	100%

In terms of demographics, there were no statistically significant differences between the 1997 and 1998 samples. In other words, the results were consistent between the two years. Just over one half of all respondents were men. In addition, all age categories were represented, although the largest group fell into the 35 to 54 years of age category. In terms of schooling, respondents were generally well educated. More than half of the respondents had at least a college degree. Most respondents were white (approximately 70%), however there were respondents from each of the other racial categories (i.e., Black, American Indian, Asian, Hispanic, etc.). Of the two-thirds who responded to the question about household income, distribution across income categories was relatively even however generally skewed to higher income levels.

The travel characteristics of the survey respondents closely matched those of Washington, D.C. area travelers. For both 1997 and 1998, almost two-thirds of the respondents were commuters. Non-commuters likely consisted of retired, unemployed, and "work-at-home" individuals, although the exact breakdown between these categories is not discernible from the survey data. Of those who commuted to work in 1997, approximately 85% drove alone. In 1998, this share decreased to 78.6%. At the same time, METRO, VRE, and MARC use increased from 7.2% to 10.4%, bus use increased from 2.3% to 4.0%, and carpooling increased from 2.2% to 4.0%.

For non-work-related trips, private vehicle remains the most popular mode of travel. In 1997 and 1998, almost 95% used this mode for non-work-related travel. Although transit (rail and bus) is the second most popular mode of travel for commute trips, other modes such as walking and bicycling are the second most common mode of travel for work-related trips. The types of changes that occurred with commuter's mode choice were also seen for non-work-related travelers. Between 1997 and 1998, private vehicle usage decreased from 93.3% to 86.5%. While during this same time period, METRO, VRE, and MARC use increased from 1.5% to 4.2%, bus use increased from 1.7% to 3.0%, and carpooling increased from 0.5% to 1.7%.

No significant differences were observed between 1997 and 1998 in terms of commute lengths in miles and minutes. In both years, commute lengths in terms of miles tend to be distributed in the lower distance categories, while commutes in terms of minutes tend to be distributed in the longer travel time categories. This could show that commuters are making relatively short commutes in terms of miles, but relatively long trips in terms of minutes.

2.3. *SmarTraveler* User Surveys

SmarTraveler phone service users in the Washington, D.C. area were surveyed by using a phone-intercept method. Employees of the Institute of Public Policy at George Mason University intercepted calls to this service at the Washington, D.C. SmartRoutes center. Intercepts took place mid-October on several weekdays during the A.M. and P.M. peak hours, and on a couple of days during midday.

Peak hour travelers were targeted because they comprise the majority of *SmarTraveler* phone service users. When intercepted, respondents were asked if they would be willing to participate in a phone survey at a later date (approximately one to two weeks from the intercepted call). If the respondent consented to this, they were asked for an evening phone number, and then promptly returned to the system. If they did not consent to this, or they had a call to the phone service intercepted at an earlier time, they were promptly returned to the system. The process of intercepting calls was terminated immediately when repeat intercepts were observed. Around 500 travelers consented to participate in the survey, and of these 182 were successfully contacted and surveyed.[4]

The target population for the Internet survey included users of the Washington, D.C. portion of the *SmarTraveler* Webpage. The survey was placed directly on the home page for the Institute of Public Policy at George Mason University. A link on the Washington, D.C. page of the *SmarTraveler* homepage allowed individuals to access the survey on the George Mason University Webpage. A link back to the *SmarTraveler* Webpage was placed under the survey. The survey was posted from November 1, 1998 to December 15, 1998. During this period, approximately 65 surveys were collected.

Although the Internet is a relatively inexpensive medium for collecting data and an appropriate tool for targeting individuals with specific interests or concerns, like travelers in the Washington, D.C. area, any information collected from a survey on the Internet should be used with caution. There are a variety of technical problems associated with its use for data collection. One is the problem of multiple Internet browsers. Not everyone's browser is configured in a way that would allow him/her to complete and submit a web survey. There is no way of guaranteeing that individuals will only fill out the survey once, although it is possible to minimize this problem by removing surveys with duplicate e-mail addresses. It should be noted that these problems are universal, and not

[4] A target sample size could not be conveniently estimated. This was due to the fact that the true population of phone service users is unknown. On average, there are approximately 125,741 calls made to the service each month. From this figure, it is nearly impossible to estimate the number of individuals who actually use the service.

unique to the *SmarTraveler* web survey effort. Due to these problems and to the relatively low number of surveys collected, any Web survey results presented in this report should be read with caution. They should be used to observe general tendencies in *SmarTraveler* Webpage usage, and not statistically significant findings.

2.3.1. *SmarTraveler* Phone Service Users

SmarTraveler patrons are different demographically than individuals who use the more conventional sources of travel information provided on the radio, television, and Internet. According to the Intercept survey and Internet survey, *SmarTraveler* phone service and Webpage users tend to be middle-aged (35-55 years), well-educated, and relatively wealthy. This is in contrast to radio users who tend to be older (in the 45 to 54 age category) and television users who tend to be younger (in the 18 to 34 age category) and less wealthy.[5] On the other hand, radio users are similar to *SmarTraveler* phone service and Webpage patrons in that they tend to be more educated in terms of schooling and they tend to have longer commutes in terms of minutes and miles.

3. USE AND AWARENESS OF *SMARTRAVELER*

This section describes when, why, and how individuals use the information provided by the *SmarTraveler* phone service and Webpage. This information, although not directly relevant to the evaluation objectives, is important for understanding when and to what extent *SmarTraveler* may be having an impact on travelers.

3.1. General Use of *SmarTraveler*

SmarTraveler is a relatively new service in the region. According to the 1998 general phone survey, approximately 1% of the traveling population in the Washington, D.C. area has used the *SmarTraveler* phone service, while 2% had used the *SmarTraveler* Webpage.[6] Radio and television are still the primary means for getting travel information, as indicated in Table 2.[7] In both 1997 and 1998, almost 70% of the population used radio and/or television to obtain travel information. Although there has been very little change between 1997 and 1998 in the overall use of traveler information services, there has been a shift in the relative popularity of travel information sources. Exclusive use of the radio

[5] No significant relationship between radio use and income at the 5% level was found, as reported in the following: "Use and Awareness of Traveler Information Services in the Metropolitan Washington, D.C. Area," prepared by the Institute of Public Policy, George Mason University, January 1998.

[6] It is possible that the percentages of individuals aware of *SmarTraveler*, and who use the service are higher than those reported by the surveys. In the call-back part of the Intercept survey, several respondents noted that they had not heard of *SmarTraveler*. They had used the phone service but did not know it by name.

[7] It should be noted that table describes *use* only of traveler information services, not *frequency of use*. This latter issue is discussed later, and summarized in Figures 2a and 2b.

for obtaining travel information declined by approximately 10%, while for television it increased by almost 25%.

Table 2: Sources of Travel Information (1997 and 1998)

	1997*		1998**		1997-1998
Traveler Information Service	Total	Percentage	Total	Percentage	Change
Radio (only)	365	36.80%	257	26.31%	-10.49%
Television (only)	142	14.34%	379	38.79%	24.45%
Internet (only)***	4	0.40%	6	0.61%	0.21%
Radio and Television	163	16.46%	15	1.54%	-14.92%
Internet and Other***	19	1.90%	21	2.15%	0.25%
None	298	30.10%	295	30.60%	0.50%
Total	991	100.00%	973	100.0%	0.00%

*The numbers reported in this column are based on the 1997 General Phone Survey.
**The numbers reported in this column are based on the 1998 General Phone Survey.
***This category includes all Webpages, including *SmarTraveler.*

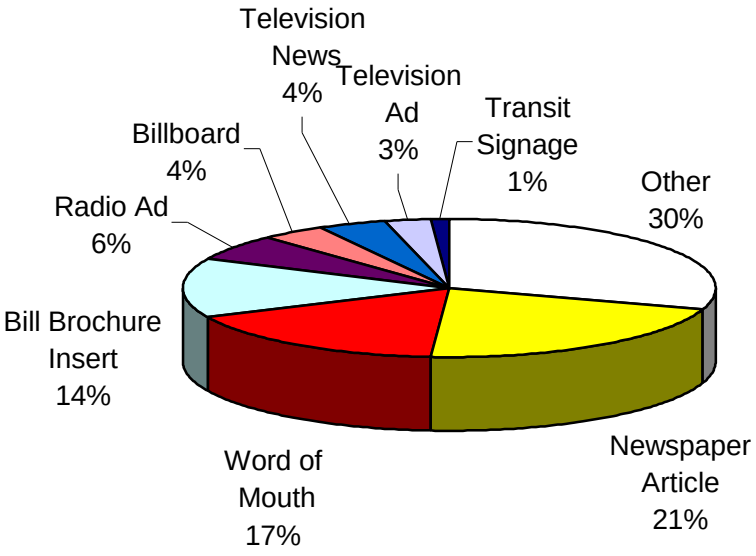
Use of the Internet for obtaining travel information was relatively low in both 1997 and 1998. This was expected, given that access to the Internet, relative to radio or television, has been somewhat limited. In addition, there are other factors that likely hinder travelers from using the Internet to obtain travel information such as: a lack of awareness of travel information sites, inconvenience of use in the A.M., and the limitations associated with en-route usage.[8]

The relatively low market share of *SmarTraveler* is likely due to the newness of the service. In addition, there appears to be a lack of awareness about the service. According to the 1997 general phone survey, only 11% of the driving age population had heard of *SmarTraveler* in 1997. This is in comparison to 16% in 1998, as indicated by the 1998 general phone survey.

In the Intercept survey and Internet survey, individuals were asked how they became aware of *SmarTraveler*. For phone service users, newspaper articles, word of mouth, and bill brochure inserts were some of the most commonly cited sources of information, as illustrated in Figure 1. This is in contrast to Webpage users, many of whom said they found out about the service while searching for traffic information on other Webpages (e.g., Washington Post).

[8] Some respondents of the *SmarTraveler* Web survey commented on these factors.

Figure 1: Where Individuals Heard of SmarTraveler



3.2. When and How Often Travel Information is Sought

Figures 2a and 2b illustrate when and how often travelers use the radio and television to get travel information. There are several points worth noting. First, the *SmarTraveler* phone service tends to be used more frequently for work-related trips than non-work-related trips. Over 20% of the Intercept survey respondents indicated they use the service "often" for work-related trips--either before leaving for work, before leaving work, or while en-route. For non-work-related trips, less than 10% of the respondents said they use the service "often" before or during such trips. Similar patterns of use exist for radio and television. Individuals who use the radio and/or television to obtain travel information tend to do so more for work-related travel rather than non-work-related travel.

Second, for work-related travel, *SmarTraveler* phone service is used more frequently while en-route or before leaving work, rather than before going to work. As Figure 2a illustrates, the percentage of respondents who said they use the service while in transit or before leaving work was in each case approximately 37%, while for use before work, this share was only about 25%. For non-work-related travel, there appears to be little difference between pre-trip and en-route usage of the phone service in terms of frequent use (i.e., percentage of respondents who said they access the service "often" at either of these two times). Radio users are similar to *SmarTraveler* phone service patrons in that they more frequently access information while en-route rather than pre-trip.

Figure 2a: Use of Travel Information for Work Trips by Medium and Time of Day: Comparison of General Phone Survey and Intercept Survey Results

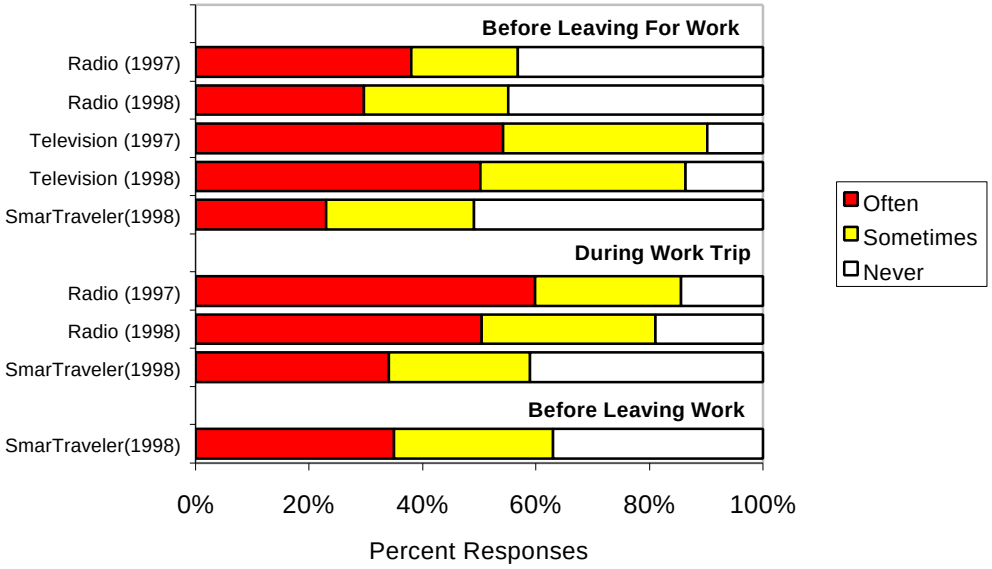
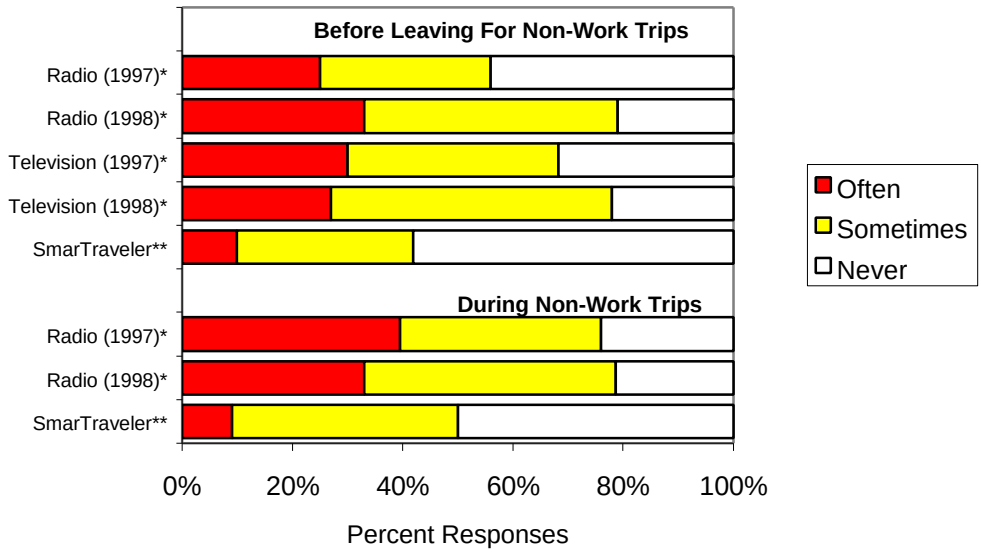


Figure 2b: Use of Travel Information for Non-Work Trips by Medium and Time of Day: Comparison of General Phone Survey and Intercept Survey Results



*Radio/T.V. (1997) includes all 1997 general phone survey respondents who said they use the radio and/or television to get travel information. Radio/T.V. (1998) includes all 1998 general phone survey respondents that said they use the radio and/or television to get travel information.
***SmarTraveler* (1998) includes Intercept survey respondents. *SmarTraveler* Webpage users are not represented in this figure.

Third, the use of radio and television as a means for obtaining information for work-related travel appears to be declining, while for non-work-related travel it appears to be rising. As shown in Figure 2a, the share of commuters who "often" or "sometimes" use radio or television get travel information, either before taking a trip or while en-route, decreased between 1997 and 1998. Figure 2b shows just the opposite for non-work-related travel.

3.3. Why Travel Information is Sought

Several factors tend to motivate travelers to seek travel information. Some of these include bad weather, rush hour, running late, road construction, traffic accidents, and special events e.g., football games. Table 3 summarizes the extent to which each these factors motivate travelers to access travel information via the radio, television, or *SmarTraveler*.

Table 3: Factors Motivating Use of Traveler Information Services

Radio (1997)*	**Television (1997)***	***SmarTraveler* (1998)****
Bad Weather (76%)	Bad Weather (78%)	Rush Hour (84%)
Rush Hour (62%)	Rush Hour (48%)	Traffic Accidents (57%)
Traffic Accidents (56%)	Traffic Accidents (38%)	Bad Weather (45%)
Road Construction (42%)	Special Events (38%)	Road Construction (37%)
Running Late (40%)	Road Construction (32%)	Running Late (32%)
Special Events (39%)	Running Late (27%)	Special Events (20%)

*Radio (1997) includes all 1997 general phone survey respondents who said they use the radio to get travel information. Television (1997) includes all 1997 general phone survey respondents that said they use the television to get travel information.
***SmarTraveler* (1998) includes Intercept survey respondents. *SmarTraveler* Webpage users are not represented in this figure.

Based on the 1997 general phone survey, bad weather proved to be the single most important factor motivating travelers to access radio and television traveler information services. Bad weather was the third most important factor for seeking traveler information for *SmarTraveler* phone service users, according to the Intercept survey. For *SmarTraveler* the most important factor for seeking information though was rush hour. This is consistent with the finding that *SmarTraveler* phone service users tend to be commuters, as illustrated in Figures 2a and 2b. For all of the traveler information services, special events and road construction were relatively unimportant factors. This also makes sense given that both activities typically occur during the off-peak hours (e.g., in the evening or during the weekend).

4. *SMARTRAVELER* AND CUSTOMER SATISFACTION

This section considers the extent to which *SmarTraveler* is meeting the goal of guaranteeing customer satisfaction. The findings of the Intercept survey are used to measure in terms of a variety of parameters how satisfied *SmarTraveler* patrons are with

the information they receive from this service. The results of the 1997 general phone survey questions on customer satisfaction are used as a point of comparison. *SmarTraveler* phone service users will be surveyed again in the fall of 1999 so that changes in customer satisfaction over the next year may be measured.

4.1. *SmarTraveler* and Travel Behavior

One of the evaluation objectives is "to improve customer satisfaction with use of Partners In Motion for trip planning, en-route trip, and choice of travel alternatives." According to the Intercept survey findings, there is some evidence to suggest that this objective is being met by the *SmarTraveler* phone service. Specifically, the survey indicates that travelers are in fact changing their travel behavior based on the information they receive from *SmarTraveler*. Although these are perceived changes on the part of users, they do suggest that travelers are using the information for trip planning, en-route trip planning, and choice of alternatives.

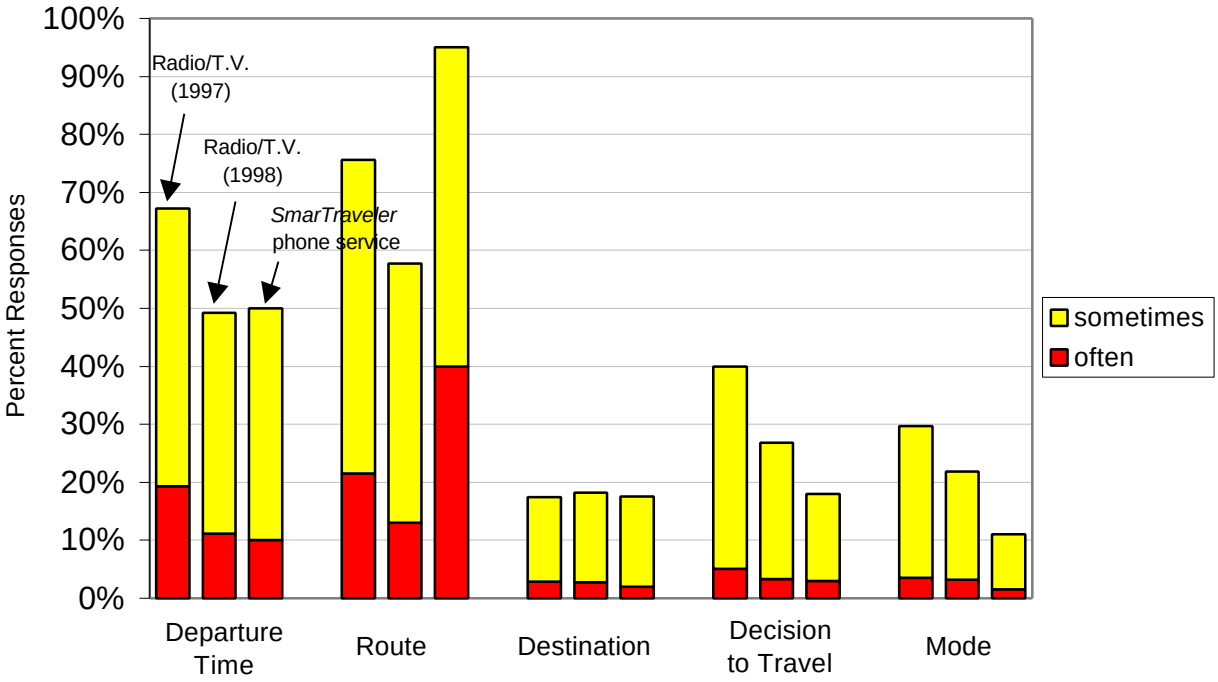
The *SmarTraveler* phone service appears to be having the largest impact on route choice behavior, as illustrated in Figure 3. Almost all *SmarTraveler* phone service users said they "often" or "sometimes" change routes after using the service. *SmarTraveler* users appear also to be making changes in their departure times as a result of the information they receive from the service. Roughly half of all *SmarTraveler* phone service users perceived to do so "often" or "sometimes."

Traveler information services provided on the radio and television are also impacting route choice and departure time behavior. In terms of route choice however, these changes are relatively minimal in comparison to the changes made by *SmarTraveler* users. In 1998, there were approximately 60% of radio and television users who perceived to change their routes. Of this share, only 12% claimed to do so "often". This percentage is less than half the share of *SmarTraveler* phone service users who claimed to do the same with *SmarTraveler* information.

In 1998, radio and television had about the same impact on travelers' departure time choices as did the SmarTraveler phone service, as shown in Figure 3. At the same time however, the percentage of radio and television users who perceived to make changes in their departure time choices, as well as choices of route, mode, and whether or not to travel, actually declined between 1997 and 1998.[9]

[9] It should be noted that the responses reported in this section are "stated" responses rather than actual measurements. In other words, the responses represent the group's perception of impacts.

Figure 3: Traffic Information and Changes in Travel Behavior: Comparison of General Phone Survey and Intercept Survey Results



*Radio/T.V. (1997) includes all 1997 general phone survey respondents who said they use the radio and/or television to get travel information. Radio/T.V. (1998) includes all 1998 general phone survey respondents that said they use the radio and/or television to get travel information.
***SmarTraveler* (1998) includes Intercept survey respondents. *SmarTraveler* Webpage users are not represented in this figure.

In comparison to route and departure time choices, travelers' decisions concerning mode of transportation, destination, and whether or not to travel appear to be minimally influenced by existing traveler information services (i.e., radio, television, and *SmarTraveler* phone service. This was not surprising to find. In terms of mode choice, studies have shown that automobile users are relatively insensitive to changes in travel time or cost. That is, automobile demand with respect to travel time and cost is generally inelastic. As stated earlier, private vehicle is the primary mode of choice for *SmarTraveler* phone service, television, and radio users. Furthermore, for *SmarTraveler* users who are predominantly commuters, changes in decision to travel (i.e., to go to work) or destination (i.e., place of work) are not feasible.

The influence of a person's demographic and transportation characteristics on his/her propensity to change travel behavior were mixed. Demographic factors were not found to have a significant effect on someone's decision to change their departure time as a result of receiving travel information. It is likely that other factors, such as flexible work hours, play a more significant role. Route choice was significantly related to education, income, and race. In other words, more educated, wealthier, white travelers, like *SmarTraveler*

users, were found to be more likely to change their route after receiving travel information.

Age was found to have a significant effect [10](5% level of significance) on a person's propensity to change destination after receiving travel information.[11] Younger and nonwhite individuals were found to be more likely to make this change. In terms of a person's decision to travel, educational level and income were found to be significant factors.[12] Those with some college education completed and with relatively lower incomes were found to be more likely to change their decision to travel. For mode choice, younger and lower income individuals were found to be most likely to change their mode of travel after receiving travel information.

In terms of travel characteristics, individuals with longer commutes were found to be more likely to make route changes[13]. Propensity to change mode after receiving travel information was found to be significantly related to mode of transportation.[14] Individuals who drive alone were found to be the least likely to change their mode after receiving information.

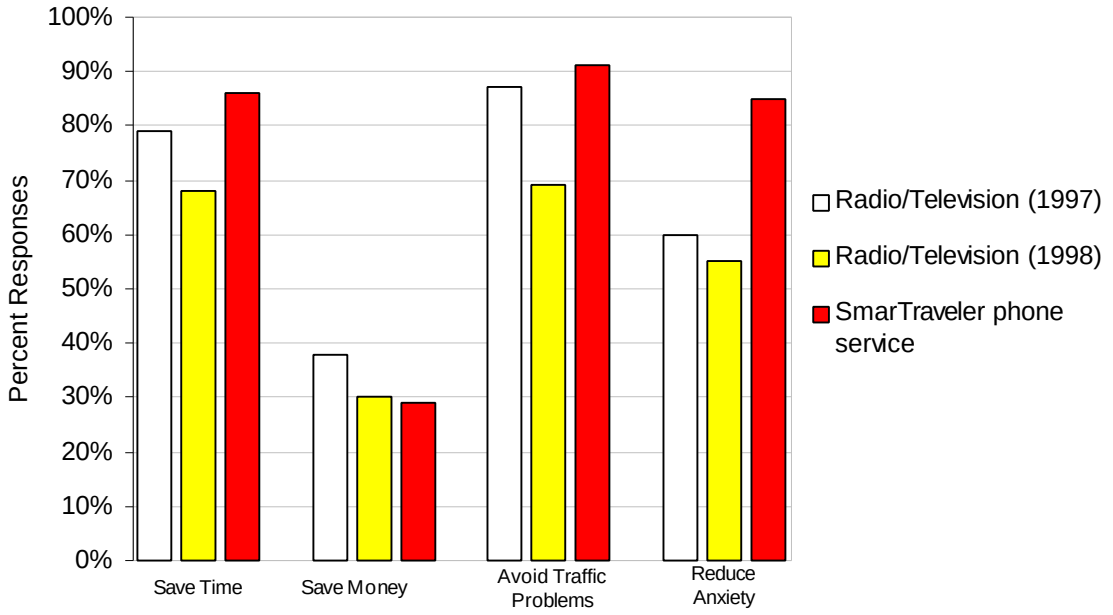
4.2. *SmarTraveler* and Benefits Received

SmarTraveler phone service users appear to be benefiting from the service, presumably by making better travel choices. The share of *SmarTraveler* users who said the service had helped them to save time, avoid traffic problems, and reduce anxiety was over 85% for each of these benefits, as shown in Figure 4. Radio and television users also perceive to receive benefits from the information they receive via the radio or television, although not to the same extent as *SmarTraveler* users. In 1998, the proportion of travelers who said they have saved travel time, avoided traffic problems, and reduced anxiety as a result of information provided via the radio or television, ranged between about 55% and 70%. This was a decline from 1997, at which time the proportion of travelers who said they benefited in terms of these factors ranged between 60% to 80%.

Interestingly, for each of the traveler information services (i.e., SmarTraveler phone service, radio, and television), only about 50% of those who claimed to save time from the services they use indicated that they also save money. This seems to suggest that there is a fairly large segment of the population who do not associate travel time with money.

[10] At 5% level of significance
[11] At 5% level of significance.
[12] At 1% level of significance.
[13] At 10% level of significance.
[14] At 1% level of significance.

Figure 4: Benefits Received From Traveler Information Services: Comparison of General Phone Survey and Intercept Survey Results



*Radio/T.V. (1997) includes all 1997 general phone survey respondents who said they use the radio and/or television to get travel information. Radio/T.V. (1998) includes all 1998 general phone survey respondents that said they use the radio and/or television to get travel information.
**_SmarTraveler_ (1998) includes Intercept survey respondents. _SmarTraveler_ Webpage users are not represented in this figure.

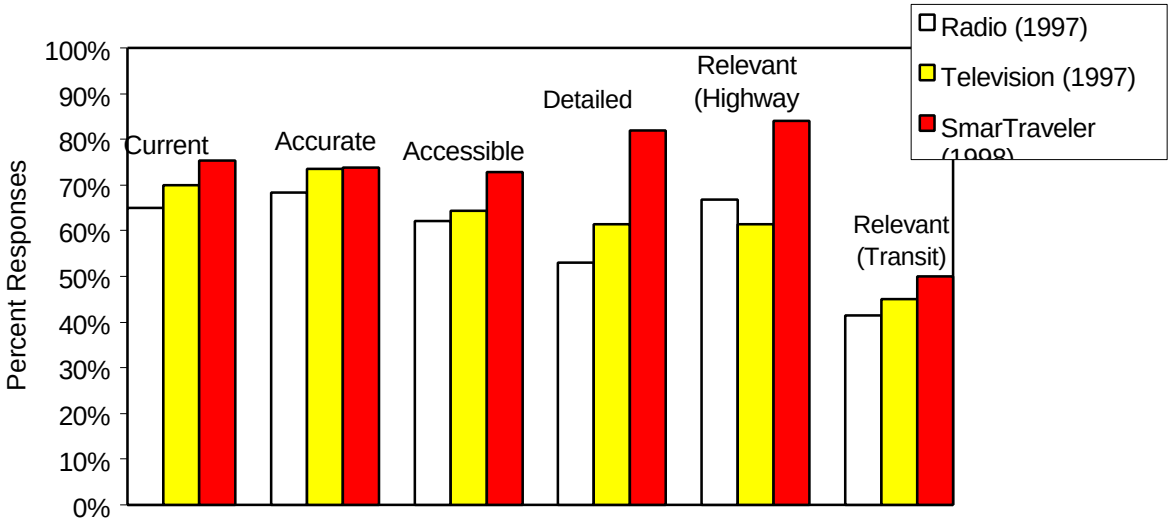
4.3. *SmarTraveler* Phone Service and Customer Satisfaction

Two objectives of the evaluation are to improve customer satisfaction with the reliability, quality, and level of travel information, and to improve customer satisfaction with the specific dissemination device/tool. According to the Intercept survey, *SmarTraveler* patrons appear to be relatively satisfied with this service in terms of a number of parameters. Over 70% of all *SmarTraveler* phone service users surveyed "agreed" or "strongly agreed" that the information they receive from this service is current, accurate, accessible, detailed, and relevant to their highway travel needs. This is highlighted in Figure 5.

In comparison to *SmarTravler* phone service patrons, radio and television users appear to be less satisfied. For both radio and television, the percentages of travelers who "agreed" or "disagreed" with each of the statements concerning the currency, accuracy, accessibility, detail, and relevancy of the information provided were less than those reported by *SmarTraveler* phone service users. These discrepancies might be explained by differences in the nature of each dissemination tool or device. With the *SmarTraveler* phone service, travelers can obtain travel information on-demand, without having to wait for traffic updates, such as those provided on the radio and television. In addition, the service is somewhat more personalized than radio and television services, in that the

traveler can query the system for information relevant to the highway segment or rail line on which they intend to travel or are currently traveling. These findings suggest that Partners in Motion is improving customer satisfaction with the reliability, quality, and level of traveler information and with the use of specific dissemination devices.

Figure 5: Satisfaction With Traveler Information Services: Comparison of General Phone Survey and Intercept Survey Results



*Radio/T.V. (1997) includes all 1997 general phone survey respondents who said they use the radio and/or television to get travel information. Radio/T.V. (1998) includes all 1998 general phone survey respondents that said they use the radio and/or television to get travel information.
***SmarTraveler* (1998) includes Intercept survey respondents. *SmarTraveler* Webpage users are not represented in this figure.

5. SUMMARY

The general phone surveys, the *SmarTraveler* phone survey, and *SmarTraveler* web survey, conducted as part of the Partners In Motion evaluation, have provided some valuable information on the use and awareness of traveler information services in the Washington, D.C. metropolitan area. Some of these findings include the following:

- The overall use of traveler information services in the Washington, D.C. area has remained constant between 1997 and 1998. For each year, approximately 70% of the traveling population used at least one type of traveler information service. What has changed however, is the relative popularity of different traveler information services. Use of radio traveler information services has declined, while television use has increased.
- *SmarTraveler* currently has a small market share in comparison to the more traditional services offered via the radio and television.

- *SmarTraveler* appears to be having an impact on the travel behavior of individuals who use the service. In addition, many of these users perceive a benefit from the information they receive from the service, and from the changes in travel behavior they make as a result of this information. Furthermore, a greater percentage of *SmarTraveler* users perceive this than do users of other traveler information services. These findings suggest that customer satisfaction through use of Partners In Motion for trip planning, en-route trip, and choice of travel alternatives is being improved, which is one objective of the program.
- *SmarTraveler* users appear to be fairly satisfied with the information provided by the service. Satisfaction was defined in terms of the currency, accuracy, accessibility, detail, and relevancy of the information available. In comparison to users of other traveler information services, a greater percentage of *SmarTraveler* users perceive to be satisfied in terms of these criteria. These findings suggest that Partners in Motion is improving customer satisfaction with the reliability, quality, and level of traveler information and with the use of specific dissemination devices.

APPENDIX 1

PHONE SURVEY OF GENERAL PUBLIC

Name :_____ Call Number : _____.
Telephone Number :_____
Survey Date : _____ Survey Time : _____

(1) ***Introduction***
Hi. My name is _____, and I'm calling from George Mason University. We're doing a random survey on traffic reports and travel information. Can you answer some questions? It won't take more than 10 minutes.

☐ Yes ☐ No ☐ Not at this time/call back later (get day/time)_____

Disclaimer (Read)
First, I'd like to assure you that information from this survey will be strictly confidential, and all data will be reported anonymously.

SECTION I : TRIP CHARACTERISTICS

I'd like to ask you some questions about the trips you make.

(2) Do you commute to work?

❑ YES ❑ NO (Go to question 8)

(3) For work related trips, how do you usually travel?

- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE or MARC
- ❑ bus
- ❑ Other: _____

(4) Approximately how long would you say your commute *to* work is in *miles,* one way?

- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(5) Approximately how long would you say your commute *to* work is in *minutes,* one way?

- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(6) Do you have to arrive to work at a specific time?

❑ YES (go to question 8) ❑ NO (go to question 7)

(7) How much flexibility do you have in your arrival time?

❑ 15 minutes ❑ half hour ❑ 45 minutes ❑ 1 hour ❑ more than 1 hour

(8) For trips *other than* work, how do you usually travel?

- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE or MARC
- ❑ bus
- ❑ Other: _____

SECTION II : SOURCES OF TRAVELER INFORMATION

Part A: Radio Use

(9) Do you use the radio to get traffic information?

☐ YES ☐ NO (Go to Part B: Television Use)

For the following questions, please answer "often", "sometimes" or "never".

	often	sometimes	never
(10) [If respondent commutes to work] *before* leaving for work, how often do you listen to the radio to get traffic information?	☐	☐	☐
(11) *before* leaving for trips *other than* work, how often do you listen to the radio to get traffic information?	☐	☐	☐
(12) [If respondent commutes to work] *During* trips to work, how often do you listen to the radio to get traffic information?	☐	☐	☐
(13) *During* trips *other than* work, how often do you listen to the radio to get traffic information?	☐	☐	☐

Part B: Television Use:

(14) Do you watch the television to get traffic information?

☐ YES ☐ NO (Go to Part C: Internet Use)

For the following questions, please answer "often", "sometimes" or "never".

	often	sometimes	never
(15) [If respondent commutes to work] before leaving for work, how often do you do you watch the television to	☐	☐	☐
(16) Before leaving for trips other than work, how often do you watch the television to get traffic information?	☐	☐	☐

Part C: Internet Use

(17) Do you have access to a computer and the Internet?

❑ YES ❑ NO (Go to Part D: SmartTraveler Use)

(18) Do you use the Internet to get traffic information?

❑ YES ❑ NO (Go to Part D: SmartTraveler Use)

For the Following questions, please answer "often", "sometimes" or "never"

	often	sometimes	never
(19) [If respondent commutes to work] *Before* leaving for work, how often do you use the Internet to get traffic information?	❑	❑	❑
(20) *Before* leaving for trips *other than* work, how often do you use the Internet to get traffic information?	❑	❑	❑

Part D: SnatTraveler Use

(21) Have you heard of *SmarTraveler?*

- ❑ YES
- ❑ NO (*Go to Section III: Use of Information* if respondent replied "yes" to either radio, TV, or internet or go to *Section IV: Demographics* if they answered "no to all.)

(22) How did you become aware of *SmarTraveler*?

- ❑ Word of mouth
- ❑ Newspaper articles
- ❑ Television news
- ❑ Billboard
- ❑ Bill Brochure insert
- ❑ Radio advertisement
- ❑ Transit signage
- ❑ Other: _____

i. *SmarTraveler* telephone service

(23) Have you ever called the *SmarTraveler* telephone service?

❑ Yes ❑ No (Go to question 30)

(24) Which of the following do you use to call the *SmarTraveler* telephone service?

- ❑ a land line telephone
- ❑ a mobile telephone?
- ❑ both?

For the following questions, please answer "often", "sometimes" or "never".

	often	sometimes	never
(25) [If respondent commutes to work] ***Before*** **leaving for work, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(26) [If respondent commutes to work] ***Before*** **leaving the office, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(27) ***During*** **trips for work, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(28) ***Before*** **leaving for trips** ***other than*** **work, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(29) ***During*** **trips** ***other than*** **work, how often do you call the *SmarTraveler* Telephone service?**	❑	❑	❑

ii. ***SmarTraveler*** **Web Page**

(30) Have you ever used the SmartTraveler web page?

❑ Yes ❑ No (Go to question 34)

	often	sometimes	never
(31) [If respondent commutes to work] ***Before*** **leaving** ***for*** **work, how often do you use the *SmarTraveler* web page?**	❑	❑	❑
(32) [If respondent commutes to work] ***Before*** **leaving the office, how often do you use the *SmarTraveler* web page?**	❑	❑	❑
(33) ***Before*** **leaving for trips** ***other than*** **work, how often do you use the *SmarTraveler* web page?**	❑	❑	❑

SECTION III: USE OF TRAVELER INFORMATION

Next, I'd like to ask about how you've used information received from any traffic reports you may have seen or heard.

Please answer "often", "sometimes" or "never" to the following questions. How often do traffic reports cause you:

	often	sometimes	never
(34) To Change your departure time?	❑	❑	❑
(35) To change your usual route?	❑	❑	❑
(36) To change your destination?	❑	❑	❑
(37) To change your decision to travel?	❑	❑	❑
(38) To change your means of travel (i.e. from private vehicle to bus)?	❑	❑	❑

Have you received any of the following benefits from traffic reports? Please answer either "yes" or "no".

	Yes	No
(39) Have traffic reports saved you time?	❑	❑
(40) Have traffic reports saved you money?	❑	❑
(41) Have you avoided traffic problems because of reports?	❑	❑
(42) Have traffic reports reduced your anxiety or frustration?	❑	❑

SECTION IV: DEMOGRAPHICS

Disclaimer (Read)
Again, I'd like to remind you that information from this survey will be strictly confidential and all data reported anonymously.

(43) [INTERVIEWER RECORD]

❑ male ❑ female

(44) Into which of the following age categories do you fall?

- ❑ Under 18
- ❑ 18 to 24
- ❑ 25 to 34
- ❑ 35 to 44
- ❑ 45 to 54
- ❑ 55 to 65
- ❑ over 65
- ❑ Refused [DO NOT READ]

(45) What is the zip code where you live? _____

(46) What is the zip code where you work? _____

(47) What level of education have you completed?

- ❑ Some high school
- ❑ High school graduate
- ❑ Some college
- ❑ College graduate
- ❑ Some graduate school
- ❑ Graduate school degree
- ❑ Refused [DO NOT READ]

(48) Into which of the following categories does you total annual household income fall before taxes?

- ❑ Under $20,000
- ❑ $20,000 to $29,000
- ❑ $30,000 to $39,000
- ❑ $40,000 to $49,000
- ❑ $50,000 to $75,000
- ❑ $76,000 to $100,000
- ❑ Over $100,000
- ❑ Refused [DO NOT READ]

(49) Into which racial category would you place yourself?

- ❑ Black
- ❑ White
- ❑ Asian
- ❑ Latin
- ❑ American Indian
- ❑ Refused [DO NOT READ]
- ❑ Other:_____

CALL INTERCEPT FORM

Intercept #:_____
Date :_____ Time : _____

Hello. This is _____ from the SmarTraveler Office. Could you take a minute to answer a few questions, and then I will immediately connect you back to the system?

[IF NO, THANK YOU AND PUT CALLER THROUGH TO AUDIOTEXT]

Have you participated in this survey already?

❑ Yes [Thank-you and put caller through to Audiotext] ❑ No

We will be conducting a follow-up survey of SmarTraveler phone service users in a couple of weeks.
Would you be interested in participating in this survey?

❑ Yes [Thank-you and put caller through to Audiotext] ❑ No

What is your name and a telephone number where we can reach you in the evening?

First Name_____
Telephone Number_____

Thank-you. I will connect you to the system now.

SMARTRAVELER TELEPHONE SERVICE SURVEY

Date:_____
Time:_____
Name:_____
Telephone Number:_____
Survey Date:_____
Call Origin:_____
Survey Time:_____

(1) **Some days ago when you called *SmarTraveler*, your call was intercepted and you indicated that you'd be willing to answer some follow-up questions about your experience using the service. This shouldn't take longer than 10 minutes and your feedback would be very helpful. Is this a good time?**

- ❑ Yes [Go to question 2]
- ❑ No [Attempt to get another time to call]

SECTION I: TRIP CHARACTERISTICS

First, I'd like to ask you some questions about the trips you make.

(2) **Do you commute to work?**

❑ Yes ❑ No (Go to question 7).

(3) **For work related trips, how do you usually travel?**

- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE or MARC
- ❑ Bus
- ❑ Other:_____

(4) **Approximately how long would you say your commute to work is in miles, one way?**

- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(5) **Approximately how long would you say your commute to work in minutes, one way?**

- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(6) **For trips other than work, how do you usually travel?**

- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE or MARC
- ❑ bus
- ❑ Other_____

SECTION II: SMATRAVELER USE

Part A: SmarTraveler Phone Service

(7) How would you become aware of this SmarTraveler telephone service?

- ❑ word of mouth
- ❑ newspaper articles
- ❑ television news
- ❑ bill brochure insert
- ❑ billboard
- ❑ radio advertisement
- ❑ television advertisement
- ❑ transit signage
- ❑ Other:_____

(8) Which of the following do you use to call the *SmarTraveler* telephone service?

- ❑ a land line telephone?
- ❑ a mobile telephone?
- ❑ both?

For the following questions, please answer "often", "sometimes" or "never".

		Often	Sometimes	Never
(9)	**[If respondent commutes to work] *Before* leaving *for* work, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(10)	**[If respondent commutes to work] *Before* leaving the office, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(11)	**[If respondent commutes to work] During trips for work, how often do you use the *SmarTraveler* telephone service?**	❑	❑	❑
(12)	***Before* leaving for trips other than work, how often do you use the *SmarTraveler* telephone service?**			
(13)	**During trips other than work, how often do you call the SmarTraveler telephone service?**	❑	❑	❑

For the following questions, please answer "often", "sometimes", or "never". Do any of the following circumstances make you call the *SmarTraveler* telephone service?

		Often	Sometimes	Never
(14)	**bad weather**	❑	❑	❑
(15)	**rush hour**	❑	❑	❑
(16)	**running late**	❑	❑	❑
(17)	**road construction**	❑	❑	❑
(18)	**traffic accidents**	❑	❑	❑
(19)	**special events (e.g. football games)**	❑	❑	❑

(20) On a scale from 1 to 5, 5 being the best, how would you rate this service? 1 2 3 4 5

On a scale of 1 to 5, with 1 indicating that you "strongly disagree", 3 that you are "neutral" and 5 that you "strongly agree", how would you rate each of the following statements about travel information you receive through the *SmarTraveler* telephone service? **1 2 3 4 5**

(21) Travel reports from the *SmarTraveler* telephone service are current. 1 2 3 4 5

(22) Travel reports from the *SmarTraveler* telephone service are accurate. 1 2 3 4 5

(23) It's easy to get travel information using the *SmarTraveler* telephone service. 1 2 3 4 5

(24) The *SmarTraveler* telephone service provides detailed information about travel reports. 1 2 3 4 5

(25) The *SmarTraveler* telephone service traffic reports cover major highways delays along the routes I travel. 1 2 3 4 5

(26) The *SmarTraveler* telephones service transit reports cover the transit routes I take. 1 2 3 4 5

Next, I'd like to ask about how you've used information received from the *SmarTraveler* telephone service.

Please answer "often", "sometimes" or "never" to the following questions. How often does the information you receive from this service cause you:

		Often	Sometimes	Never
(27)	**To change your departure time?**	❑	❑	❑
(28)	**To change your destination?**	❑	❑	❑
(29)	**To change your usual route?**	❑	❑	❑
(30)	**To change your decision to travel?**	❑	❑	❑
(31)	**To change your means to travel (i.e. from private vehicle to transit, or from transit to private vehicle)?**	❑	❑	❑

Have you received any of the following benefits from this telephone service? Please answer either "yes" or "no".

		Yes	No
(32)	**Travel time savings**	❑	❑
(33)	**Monetary savings**	❑	❑
(34)	**Avoidance of travel problems**	❑	❑
(35)	**Reductions in anxiety or frustration**	❑	❑

Part B: Use of Other SmarTraveler Services

(36) Have you heard of the *SmarTraveler* web page?

❑ Yes ❑ No (Go to question 40)

(37) Have you ever used the *SmarTraveler* web page?

❑ Yes ❑ No (Go to question 40)

(38) When do you use this web page?

❑ Before departing to/from work
❑ Before departing to/from trips other than work
❑ Other:_____

(39) How often do you use this web page?

❑ Often
❑ Sometimes
❑ Never

SECTION III: DEMOGRAPHICS

Again, we' d like to remind you that information from this survey will be strictly confidential and all data reported anonymously.

(36) Sex:

- ❑ male
- ❑ female

(37) Into which of the following age categories do you fall>

- ❑ Under 18
- ❑ 18 to 24
- ❑ 25 to 34
- ❑ 35 to 44
- ❑ 45 to 54
- ❑ 55 to 65
- ❑ Over 65

(38) What is the zip code where you live? _____

(39) what is the zip code where you work? _____

(40) What level of education have you completed?

- ❑ Some high school
- ❑ High school graduate
- ❑ Some college
- ❑ College graduate
- ❑ Some graduate school
- ❑ Graduate school degree

(41) Into which of the categories does your total annual household income fall before taxes?

- ❑ Under $20,000
- ❑ $20,000 to $29,000
- ❑ $30,000 to $39,000
- ❑ $40,000 to $49,000
- ❑ $50,000 to $75,000
- ❑ $76,000 to $100,000
- ❑ Over $100,000

(42) Into which racial category would you place yourself?

- ❑ Black
- ❑ White
- ❑ Asian
- ❑ Hispanic
- ❑ American Indian
- ❑ Other: _____

Thank you for your cooperation

George Mason University, on behalf of a group of public and private agencies "Partners in Motion", is conducting a survey abou *SmarTravel.* We want to find out how effective this Web site is, and how people are using the information provided. The survey should take about 5 minutes to complete, and your opinion is very important to us.

First, we' d like to assure you that information from this survey will be strictly confidential, and all data will be reported anonymously.

SECTION I

TRIP CHARACTERISTICS

I' d like to ask you some questions about the trips you make.

Work Section

(1) **Do you commute to work?**
- ❑ Yes
- ❑ No (If no, proceed to question 5)

(2) **For work related trips, how do you usually travel?**
- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE or MARC
- ❑ bus
- ❑ Other: _____

(3) **Approximately how long would you say your commute to work is in miles, one way?**
- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(4) **Approximately how long would you say your commute to work is in minutes, one way?**
- ❑ 0-5
- ❑ 6-15
- ❑ 16-30
- ❑ 30-45
- ❑ Over 45

(5) **For trips other than work, how do you usually travel?**
- ❑ private vehicle
- ❑ carpool
- ❑ Metro, VRE, MARC
- ❑ bus
- ❑ Other: _____

SECTION II: TRAVELER CHARACTERISTICS

(6) **How did you become aware of this *SmarTraveler* Web page?**

- ❑ word of mouth
- ❑ newspaper articles
- ❑ television news
- ❑ bill insert
- ❑ Other: _____

Part A: *SmarTraveler* Use

For the following questions, please answer "often", :sometimes" or "never"

	often	sometimes	never
(7) **[If respondent commutes to work]** *Before* leaving *for* work, how often do you access this *SmartTraveler* Web page to get travel information	❑	❑	❑
(8) [If respondent commutes to work] *Before* leaving *from* work, how often do you access this *SmarTraveler* Web page to get travel information?	❑	❑	❑
(9) *Before* leaving for trips other than work, how often do you access this *SmarTraveler* Web page to get travel information?	❑	❑	❑

For the following questions, please answer "often", "sometimes" or "never". Do any of the following circumstances make you access this *SmarTraveler* Web page to get travel information?

	often	sometimes	never
(10) bad whether	❑	❑	❑
(11) rush hour	❑	❑	❑
(12) running late	❑	❑	❑
(13) road condition	❑	❑	❑
(14) traffic accidents	❑	❑	❑
(15) special events (e.g. football games)	❑	❑	❑

On a scale of 1 to 5, with 1 indicating that you "strongly disagree", 3 that you are "neutral" and 5 that you "strongly agree", how would you rate each of the following statements about travel information you access using this *SmarTravel* Web page?

	Strong Disagree		Neutral		Strongly Agree
(16) Travel reports on this *SmarTraveler* Web page are current.	**1**	**2**	**3**	**4**	**5**
(17) Travel reports on this *SmarTraveler* Web page are accurate.	**1**	**2**	**3**	**4**	**5**
(18) It' s easy to get travel information using this *SmarTraveler* Web page.	**1**	**2**	**3**	**4**	**5**
(19) This *SmarTraveler* Web page provides detailed information about travel repots.	**1**	**2**	**3**	**4**	**5**
(20) The *SmarTraveler* Web page traffic reports cover major highway delays along the routes I travel.	**1**	**2**	**3**	**4**	**5**
(21) The *SmarTraveler* Web page travel reports cover transit delays along the routes I travel.	**1**	**2**	**3**	**4**	**5**

(22) Have you heard of the SmarTraveler telephone travel information service?
- ❑ Yes (Go to next question)
- ❑ No (Skip to Part B)

(23) If yes, have you ever used the SmarTraveler telephone travel information service?
- ❑ Yes (Go to next question)
- ❑ No (Skip to Part B)

(24) If yes, do you use:
- ❑ a telephone?
- ❑ a mobile telephone?
- ❑ both?

(25) If yes, when did you use this service?
- ❑ Before departing to/from work
- ❑ During trip to/from work
- ❑ Before departing to/from trips other than work
- ❑ During trips other than to/from work
- ❑ Other: _____

(26) How often fo you ise the SmarTraveler telphone travel information service?
- ❑ Often
- ❑ Sometimes
- ❑ Never

Part B: Use of Information

Next, I' d like to ask about how you' ve used information received from this *SmarTraveler* Web page.

Please answer "often", "sometimes", or "never" to the following questions. How often do traffic reports cause you:

	Often	Sometimes	Never
(27) To change your departure time?	❑	❑	❑
(28) To change your usual route?	❑	❑	❑
(29) To change your destination?	❑	❑	❑
(30) To change your decision to travel?	❑	❑	❑
(31) To change your means of travel (i.e from private vehicle to transit, or from transit to private vehicle)?	❑	❑	❑

Have you received any of the following benefits from the information provided in this *SmarTraveler* Web page? Please answer either "yes" or "no".

	Yes	No
(32) Has information from travel reports on the *SmarTraveler* Web page saved you time?	❑	❑
(33) Has information from travel reports on this *SmarTraveler* Web page saved you money?	❑	❑
(34) Have you avoided travel problems because of reports from the *SmarTravel* Web page?	❑	❑
(35) Have travel reports from this *SmarTraveler* Web page reduced your anxiety or frustration?	❑	❑

SECTION III: DEMOGRAPHICS

Again, we' d like to remind you that information from this survey will be strictly confidential and all data reported anonymously.

(36) Sex:

- ❑ male
- ❑ female

(37) Into which of the following age categories do you fall>

- ❑ Under 18
- ❑ 18 to 24
- ❑ 25 to 34
- ❑ 35 to 44
- ❑ 45 to 54
- ❑ 55 to 65
- ❑ Over 65

(38) What is the zip code where you live? _____

(39) what is the zip code where you work? _____

(40) What level of education have you completed?

- ❑ Some high school
- ❑ High school graduate
- ❑ Some college
- ❑ College graduate
- ❑ Some graduate school
- ❑ Graduate school degree

(41) Into which of the categories does your total annual household income fall before taxes?

- ❑ Under $20,000
- ❑ $20,000 to $29,000
- ❑ $30,000 to $39,000
- ❑ $40,000 to $49,000
- ❑ $50,000 to $75,000
- ❑ $76,000 to $100,000
- ❑ Over $100,000

(42) Into which racial category would you place yourself?

- ❑ Black
- ❑ White
- ❑ Asian
- ❑ Hispanic
- ❑ American Indian
- ❑ Other: _____

Thank you for your cooperation