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INFORMATION USE AND TOURIST PREFERENCES FOR ADVANCED INFORMATION SYSTEMS

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Abstract

This paper studies information use by tourists when planning their recreational trips to unfamiliar places. A research is presented to investigate tourists' preferences for different types of information, its use in planning their trips, and the sources used by tourists. It was found that tourists need information about destinations and route guidance. Traditional information sources, such as maps, guide books, and talking to people, usually satisfy these needs. The research further showed that tourists are not yet interested in advanced, electronic information devices. Nonetheless, there already appears to be meaningful penetration of Internet use.

INTRODUCTION

Background and objectives

Advanced Traveler Information Systems (ATIS) are developed to assist tripmakers in trip planning and decision making on destination selection, departure time, mode, and route choices. They also help in congestion avoidance, route guidance, and improving the convenience, safety, and efficiency of travel (see ITS America National Plan, 1995). Most of the research on response of users to ATIS has focused on commute trips, which tend to be repetitive in nature and involve tripmakers who are familiar with the transportation system (see among others Hobeika et al, 1996, Liu and Mahmassani, 1998, Mahmassani and Jou, 1998, Ng et al, 1991). Limited information is available in the literature about responses to travel information of unfamiliar tripmakers, in particular tourists (Molnar et al, 1996). The main characteristic of trips to unfamiliar areas is that they are made infrequently, so the actions and decisions will be new for the tripmakers.

The types of travel information considered in this paper can be classified into static information and dynamic information (Barfield *et al*, 1991, Mahmassani *et al*, 1996, Streff and Wallace, 1993). Static information pertains to tourist attractions, events, visiting hours and costs, routes (both by car and public transport), transit time schedules, etc. Dynamic information consists of real-time traffic conditions, like incidents and congestion delays, road construction information and detours, parking availability and recommendations. It may also include weather information, as well as information on special events and announcements pertaining to tourist attractions such as unexpected closings and promotional activities.

Static information can be provided by traditional devices, like maps, brochures, guide books, radio, television, telephone services, as well as by advanced information systems, like kiosks, computers, personal digital assistance devices, typically operating in conjunction with stored databases that may be updated periodically. Providing dynamic information, on the other hand, requires advanced communication capabilities incorporated in information systems, like variable message signs, radio, (personal) telephone, personal digital assistance devices, laptop computers with access to the Internet, on-board information systems, etc. These devices typically are connected to real-time databases that are updated quasi-continuously. See for a comprehensive description of various information devices the Traffic Control Systems Handbook, chapter 10 (1996).

The principal objective of this paper is to characterize information use for recreational trips in unfamiliar areas, and to identify specific information items used for planning such recreational trips, along with tripmakers' preferences for information items and devices for supplying such information.

The research approach consists of focus groups and a mail-back questionnaire. This paper presents an exploratory analysis of the results obtained primarily from the mail-back questionnaire, though findings from the focus groups are also highlighted.

Outline of the paper

The next section describes the research approach. Next, the findings from the focus groups are highlighted. This is followed by a description of the mail-back questionnaire distributed in San Antonio, Texas, and the survey design. Then an exploratory analysis of the survey results is presented. The final section concludes the paper with a discussion of the preliminary findings and future research.

RESEARCH APPROACH

The above objectives were addressed primarily through a mail-back survey of visitors to San Antonio, Texas. However, in order to obtain the insights necessary to formulate meaningful hypotheses and design a useful survey instrument, focus groups were first conducted.

Focus groups consist of interviews with a group of people intended to discuss topics in depth, which in general cannot be asked in a written questionnaire (see Morgan and Krueger, 1998). The objectives of the focus groups in this research was to investigate the level at which travelers are familiar with the different features of advanced traveler information systems and to discuss the use of information items and devices while planning a recreational trip to an unfamiliar area. Because most participants (and the average citizen) were not familiar with advanced information systems, such as kiosks, personal digital assistance devices, and in-vehicle devices, these could be explained and discussed in detail. The discussion of preferences regarding information items and characteristics of advanced information devices was expected to provide valuable information, that could not be readily assessed in the mail-back questionnaire.

The objectives of the focus groups was to get in-depth information about the importance of information *items* and *devices* and the preferred characteristics of information devices. Information items include both static and dynamic information. Devices include both traditional devices (such as maps, books, radio, television, and telephone) and advanced systems, or new technologies (computer, kiosk, personal digital assistance, personal computer devices, etc.).

The mail-back questionnaire was distributed to a sample of tourists visiting San Antonio, Texas; it consisted of questions about the information items and devices they used for planning their trip to and within San Antonio.

The objectives of the questionnaire were to address the information items and devices unfamiliar travelers use when going to an unfamiliar area. Both pre-trip and on-location use was considered. Furthermore, preferences for information items and devices for planning a trip to an unfamiliar area were considered.

RESULTS OF FOCUS GROUPS

Demographics

The focus groups consisted primarily of alumni of the University of Texas at Austin working and/or living in Austin. One focus group consisted of UT staff. In total there were 18 participants in the focus groups (12 alumni and 6 staff members). The size of the groups ranged from 1 to 6 participants. Most participants were women (14 out of 18), in their 20's and 30's. Most participants live in 1 or 2 person households, without children. They all had a college or university education, although some did not finish it. Two-third of the participants go on overnight recreational trips more than once a year.

Information use

The most important information participants obtained when planning their trip is costs (air fares, hotel rates, rental car fees, etc.), the time of day of traveling (plane schedule, driving off-peak), and directions (from airport to hotel). Information about the destination includes mainly information on hotels, restaurants, and attractions or events.

The most frequently used information devices are the more traditional sources, like maps, guide books, and talking to a person (either travel agents, chamber of commerce, colleagues, friends or relatives, or at the hotel). But the Internet was also used by several participants. Most respondents are satisfied with the information devices currently available. When respondents were not satisfied it

was mainly due to information not being up-to-date, or being not able to find specific information, like directions or personal security considerations (safe and unsafe neighborhoods).

In general there is a stated willingness to pay for information and to use advanced systems. However, actual use will depend on the type, amount, and display of information. Participants did not seem willing to pay for devices that would not provide personalized, or better (up-to-date, real-time) information than traditional sources currently provide.

Preferences of information items and devices

Participants were asked to rank characteristics of information systems, such as ease of use; offering comprehensive information, irrespective of its complexity; portability; providing two-way communications; providing contact with a person, not totally computer based; and that it can be found at fixed locations (bus stops, gas stations, rest stops, etc.). Some participants added characteristics which were not on the original list, but which they considered important, such as that information needs to be updated; that such a system needs to be affordable, durable, reliable, and compatible between different cities. Table 1 summarizes the responses to these characteristics.

Table 1 Ranking of characteristics of devices.

	Number of participants that rank the characteristic as:				
System characteristics	**First**	**Second**	**Third**	**Fourth and higher**	**Overall Rank**
Ease of use	7	7	0	2	**1**
Offer comprehensive information	6	1	3	1	**2**
Portable	2	4	5	1	**3**
Provide two-way communication	0	3	1	3	**4**
Affordable	2	1	1	0	**5**
Available at fixed locations	1	0	2	3	**6**
Providing contact with person	0	0	2	2	**7**
Compatible	0	1	1	0	**8**
Providing updated information	0	0	2	0	**9**
Durable	0	0	0	2	**10**

The most important characteristic is ease of use. Second and third are "offering comprehensive information" and "portability". In the discussions no clear distinction was made between the desire to use the devices before traveling to unfamiliar areas and the desire to use these devices at the visited area.

Participants were also asked to rank information items, such as destination information (opening hours, parking availability, ticket cost, etc.), transportation mode (rented cars information, transit information, etc.), weather reports, navigation and route guidance information, and traffic reports (average speeds on the highways, congestion location, etc.). Table 2 shows the results for these information items.

Table 2 Ranking of information items.

	Number of participants that rank the characteristic as:				
System characteristics	**First**	**Second**	**Third**	**Fourth and higher**	**Overall Rank**
Destination information	7	4	4	1	**1**
Navigation and route guidance	4	3	5	2	**2**
Travel mode information	3	4	1	1	**3**
Weather reports	2	2	3	3	**4**
Traffic reports	1	4	1	3	**5**

The most important information item is information about the destination and navigation (directions). Participants consider information about transportation modes to be more important than weather and traffic reports. Some participants made a distinction between the desire for information items before traveling to unfamiliar areas and the desire for information at the visited area. Destination information was mainly desired before traveling and route guidance was mainly desired at the unfamiliar areas.

SURVEY DESIGN: QUESTIONNAIRE

Introduction

This section describes the mail-back questionnaire and associated survey design to determine travelers' desires and preferences regarding travel information and the resources of these travel information for travel to and in unfamiliar areas.

The questionnaire was distributed among visitors in San Antonio, during the summer of 1997. Respondents are asked about the transportation modes used, their trip planning behavior, information gathered, and information sources, specifically with regard to their visit to San Antonio. The questions included both revealed preference and stated preference questions. In the revealed preference questions, respondents were asked to indicate the travel information they actually obtained to plan the trip to San Antonio and the travel information sources they consulted to get this information. Respondents were also asked about the destination information obtained and the sources of this information while touring San Antonio. In addition, respondents were asked to report any information item they actually searched for, but did not find. The stated preference questions asked respondents to indicate, in general (i.e. without specific reference to the current visit to San Antonio), three primary information items that they would like to obtain when visiting an unfamiliar area and the three primary ways from which they would like to obtain this information.

Survey Design

Survey instrument: questionnaire

The questions included in the survey can be classified into four main parts:

Demographics.
This part contains questions about personal and household characteristics, such as age, gender, education, employment, household size, income, and their hometown.

Visit to San Antonio.
The first question asks the frequency with which respondents make recreational trips to unfamiliar areas. The remaining questions in this part are concerned with their trip to San Antonio. These questions can be further subdivided into specifics of the trip and questions concerning trip planning behavior. Trip specifics include main purpose, length of stay, familiarity with San Antonio, whether they stay at a hotel, and the transportation mode to San Antonio. The trip planning behavior questions include how far in advance they made their reservations and planned their destinations, the information they obtained (pre-trip; before going to San Antonio), and the information resources they consulted.

Touring within San Antonio.
This part contains questions concerning participants' stay in San Antonio. Some questions focus on one specific day (the day when they received the questionnaire) of their stay in San Antonio. These questions include their activity schedule, changes made in this schedule or the route, the transportation mode within San Antonio, the information obtained while in San Antonio, and interactions among members of their traveling party (who obtained the information, who made the decisions).

Preferences for information items and devices.
Two questions ask for preferences for information items and information devices respondents would prefer to use when traveling to unfamiliar areas.

The questions were formatted such that responses consist of a simple check mark. The questionnaire completion time was estimated at about 15 minutes. Two open questions were included, one about unsatisfactory or unavailable information, and another for miscellaneous comments about the survey.

Distribution Of Questionnaire and Response Rate

The questionnaires were manually distributed among visitors at selected locations in San Antonio. Questionnaires were only distributed to potential respondents who answered affirmatively about their willingness to participate. The mail-back nature of the survey, which meant it would be filled at their convenience, appeared to increase their likelihood to participate.

The distribution took place on three days in June (26th-28th) and one day in July (19th). In June, 1100 questionnaires were distributed, mainly in the historic downtown area. On July 19th, 500 questionnaires were distributed at the Sea World aquatic theme park. From the 1100 questionnaires distributed in the historic downtown area of San Antonio, a response rate of 27.9% was obtained. From the 500 questionnaires distributed at Sea World, a lower response rate of 14.5% was obtained. In total, the response rate of the questionnaire is 23.6%, which is within the expected range. Only two Spanish language questionnaires were returned. The exploratory analysis in the next section is based on the data from 378 questionnaires.

SURVEY RESULTS: EXPLORATORY ANALYSIS

In this section, the results of the survey are presented for each of the four parts of the above questionnaire.

Demographics

Table 3 Summary of demographics (N=378).

Individual characteristics		Responses (percentages)
Residential location		
	Texas	45.5%
	Rest of US	49.5%
	Outside US	2.9%
	Missing	2.1%
Gender		
	Male	37.0%
	Female	62.2%
	Missing	0.8%
Age		
	Less than 18	0.0%
	18 - 29	15.3%
	30 - 39	25.9%
	40 - 49	27.8%
	50 - 59	16.7%
	60 or above	14.0%
	Missing	0.3%
Educational level		
	Less than HS	1.3%
	Finished HS	11.4%
	Some College/University	29.9%
	Finished College/University	37.6%
	MS	15.3%
	Ph.D.	3.7%
	Missing	0.8%
Annual household income		
	Less than $25,000	6.9%
	$25,000 - $49.999	32.5%
	$50,000 - $75,000	24.6%
	More than $75,000	28.8%
	Missing	7.1%
Age of youngest person in household		
	0 - 4	18.3%
	5 - 11	20.9%
	12 - 15	6.3%
	16 - 17	4.0%
	18 - 20	5.0%
	21 and above	43.4%
	Missing	2.1%

Table 3 shows a summary of the respondents' socio-demographic characteristics. Respondents are classified based on their residential location into three main groups: Texas residents, residents of other states (but within U.S.A.), and residents of other countries. United States' residents represent 95% of the visitors sampled in San Antonio, of which nearly half are residents of the state of Texas, while tourists from other countries represent only about 3% of all respondents.

A large proportion of the sample, about 62.2%, are female. All age classes from 18 years and above are well represented in the sample. Nearly all levels of education are represented in the sample. About 13% have high school or less, 30% have obtained some education from a college or university, and 57% have finished college or university, including graduates (19%).

The low-income group, with annual household income below $25,000, represents only 6.9 % of the sample. Only 7% of the respondents did not indicate their household income, which is a relatively low percentage. A large percentage of the sample, 43.4%, do not have young children, and the youngest person in their household is 21 or older. On the other hand, a considerable percentage of the respondents, 39.2%, come from households where the youngest child is of age eleven or younger.

The collected information regarding the respondents' household structure includes the household size, the number of employed persons, and the number of people with driving license in the household. Table 4 summarizes the mean and the standard deviation for these three variables. The average household size of the respondents is three persons. On average, 2.13 household members have a driving license. And the average number of employed persons (for at least 30 hours a week) per household is 1.54.

Table 4: Descriptive statistics for household characteristics.

Variable	Mean	Standard Deviation
Household size	3.01	1.37
Number of people with driving license	2.13	0.81
Employed persons in the household	1.54	0.89

The results of the socio-demographic variables are similar to the visitors' profiles found in a survey among visitors in San Antonio, conducted by MSD & Company (1995).

Visit to San Antonio

Regarding the mode of travel to San Antonio, the car (both private and rental) was by far the most frequently used mode (60% for private car and 12% for rental car), followed by air (32%).

Respondents were asked to report the information items they used to plan their trip to San Antonio. Figure 1 shows the responses to the question about the information items obtained prior to the trip to San Antonio. Most of the respondents (69%) indicated that information on attractions (locations, opening hours, special events, etc.) was used in planning their trip to San Antonio. Next is a city map (62.2%), hotel information (45.5%), and restaurant information (34.1%). Information on prices and costs was sought by about 31% of respondents. Weather information was considered by about 23% of respondents. On the other hand, visitors to San Antonio hardly looked for information on transit and parking. Most respondents (73%) depended on private car or rental car as a travel mode to San Antonio and hence, transit information was not important. For the respondents who stated that they depended on modes other than private or rental car, only 6.1% asked for transit information before traveling to San Antonio.

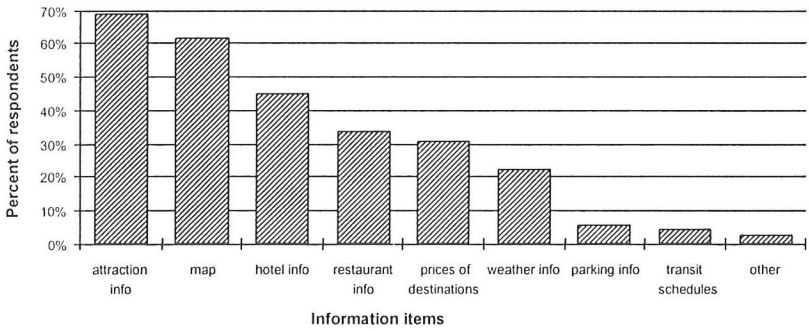

Figure 1: The information items obtained .

Tests of independence showed that respondents who sought hotel information were more likely to also obtain restaurant information and a city map. It may be expected that visitors staying in hotels (as opposed to staying with friends or family, or not staying overnight in San Antonio) are more likely to obtain their meals in restaurants. There is also a significant positive association between obtaining restaurant information and requesting a city map. Respondents who obtained information on attractions before their trip were found to also seek a city map, restaurant information, and information about ticket prices at the destination.

Respondents were also asked to report the information sources they used to plan their trip to San Antonio. Figure 2 shows the responses. Asking friends or relatives to obtain travel information was the most frequent answer, 45.5%, followed by tourist information (33.9%). This indicates that people depend on word-of-mouth as a source of information. Other traditional sources of tourist information, such as guide books (28.0%), advertisements (26.2%), and travel agents (12.2%), were also used. A more recent information source, namely the Internet, was used by about 19% of the respondents. Radio and television are used very infrequently as a specific source of information for San Antonio visitors. Under the category "other" respondents mentioned the American Automobile Association (AAA) as a source of information and some stated their own experience from previous trips as source of information.

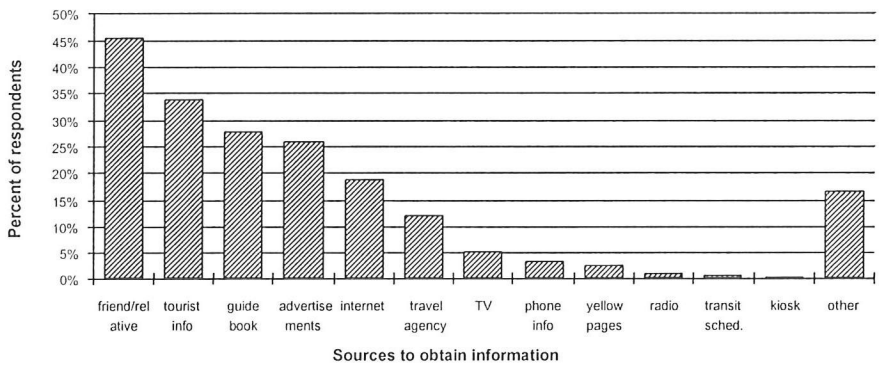

Figure 2: The sources used to obtain information .

Tests of independence (Chi-squared) revealed a significant negative relationship between a tripmakers' search for travel information on the Internet and preference to speak with a live person as a source of travel information. In other words, for travelers who prefer to speak with a live person to get travel information, the probability of using the Internet as a source of travel information is relatively low. In addition, there is significant correspondence between using the Internet and the

respondent's education level, reflecting greater awareness of the Internet as a source of travel information by respondents with greater educational attainment. Similarly, higher-income people appear more likely to use the Internet. Another interesting result relates to the consulted information sources and the respondents' state or country of residence. Same state visitors (i.e. from Texas) were more likely to receive information from advertisements before traveling to San Antonio. On the other hand, visitors from other states or countries were more likely to depend on travel agencies to obtain pre-trip travel information.

Table 5: Information items obtained from various sources prior to the trip.

Information source	Associated information items
Internet	Weather information Hotel information Restaurant information
Advertisement	Hotel information Prices or costs of specific destinations Information on Attractions
Guide books	Map of the city Hotel information Information on Attractions
Visitors bureau	Information on Attractions Restaurant information Map of the city

The relation between the information items obtained by travelers before traveling to San Antonio and the information sources from which these items are obtained was also tested. Table 5 shows the principal information items obtained from each source, on the basis of a significant (at 1% level) positive association between the particular information source and corresponding item. For instance, the Internet appears to be a significant source of weather, hotel, and restaurant information. Advertisements were a good source of hotel information, information about costs and prices of specific destinations, and information on attractions. Guide books are consulted to obtain a map of the city as well as hotel and attraction information. Finally, there is a relationship between consulting a visitors bureau and obtaining attraction and hotel information as well as a map of the city.

Touring within San Antonio

Figures 3 and 4 depict, respectively, the percentage of respondents who obtained particular information items about destinations visited within San Antonio, and the percentage of those who used particular sources to obtain this information. The most important information about destinations pertain to their respective location (65%), directions to get there (53%), opening hours (51%) and entrance fees and/or available discounts (41%). About 23.8% of the respondents inquired about special exhibitions or attractions. Other information items, such as parking availability and parking cost, did not seem to be of concern in San Antonio, where visitors usually expect to find an affordable parking space near their destination. Information about children activities (beyond what might be conveyed by the type of destination or general information about the destination) was also of limited concern.

Independence tests indicate a significant positive relationship between asking about the location of a destination and asking for directions to reach it, as might be expected. Similarly, there is a relationship between asking about parking cost and parking availability, as well as between parking cost and entrance fee information, reflecting cost-conscious travelers.

Several significant associations were identified between the characteristics of the visitors and the information items they reported obtaining about specific destinations. For instance, travelers who have previously visited San Antonio are less likely to ask about the location of destinations. It is also found that visitors who reported being concerned about congestion when traveling for recreational activities were more likely to seek directions to the destination. In addition, it was found that asking about children activities at the destination was significant related to the age of the youngest child in the household, which is very plausible.

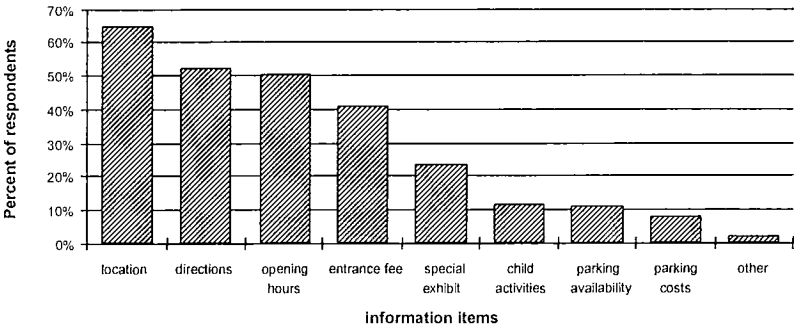

Figure 3: Information obtained about destinations visited in San Antonio.

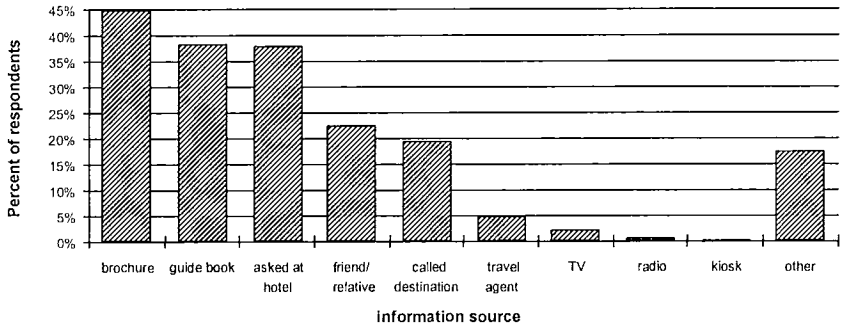

Figure 4: Sources used to obtain information about the visited destinations.

As shown in Figure 4, the most commonly used information sources were brochures, guide books, and asking at the hotel (44.7%, 38.4%, and 37.8% respectively); 22.5% of the respondents stated that they depended on friends or relatives to obtain the destination information and 19.6% called the destination directly to obtain the information. TV and radio were not frequently used as sources of travel information. Other information sources such as kiosks were virtually not used, to a large extent because not many kiosks are currently deployed in San Antonio. In general, people are unfamiliar with kiosks and other advanced systems such as personal devices. In addition, 17.5% of respondents stated that they depended on other information sources such as the Internet, tourism offices, maps, and phone directories (yellow pages).

No particular patterns were present among the respondents' use of different information sources, nor among the respondents' characteristics and their use of a particular source. However, significant association exists between certain destination information items and the sources from which these items are obtained, summarized in Table 6. In particular, directions to reach a particular destination are often obtained by asking at the hotel, calling the destination, or from brochures. Information about parking cost, entrance fee, and opening hours is also usually obtained by calling the destination. Brochures are a frequent source of information about opening hours, location of destination, and children activities. Guide books are frequently consulted to obtain the location of the destination, the opening hours and the entrance fee at the destination.

When asked to report any information item that they could not find, about 23% of the respondents identified some additional information items. Among those, 27% requested route guidance, 26% wished for more information about available transportation modes, 23% wanted to know more about attractions, and about 22% asked for enhanced and more detailed maps, brochures, and guidebooks.

Parking information and route condition information were found missing by only 4.7% and 3.5% of the (23% of) respondents (who indicated a desire for additional information), respectively.

Table 6: Information items about destinations in San Antonio and related sources.

Information source	Associated information items
Asking at hotel	Directions to reach destination
Calling destination	Parking cost Entrance fee Opening hours Directions to reach destination
Brochure	Opening hours Location of destination Directions to reach destination Children activities
Guide books	Location of destination Opening hours Entrance fee

Stated Preferences for information items and devices

Respondents were asked two general questions, not specific for their current visit to San Antonio, regarding the principal information items that they would like to have when visiting an unfamiliar area, and the primary sources from which they would like to obtain this information. Respondents were given two lists: one for information items and the other for information display devices and then asked to check the three preferred items on each. Figure 5 depicts the respondents' preferred information items; information about the destination (opening hours, costs, parking availability, etc.) was cited by 90.2% of the respondents. Route guidance information was next, with 84.1%, indicating that they considered it important. Transportation mode information ranked as the third most important information item, cited by 40.7% of the respondents, indicating that rental car and public transport information are important for travel in unfamiliar areas. Other items, which may be grouped under attraction-related information, were reported by only 7.9% of the respondents.

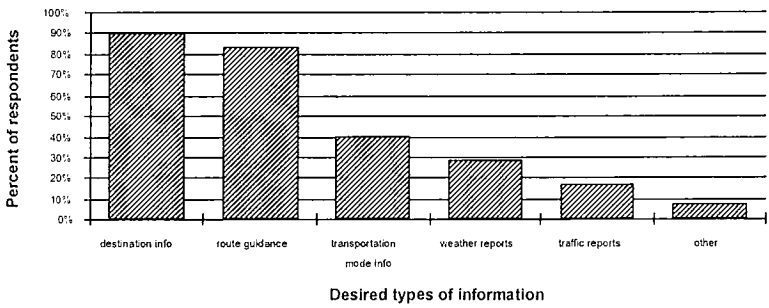

Figure 5: Respondents' preferred information items when visiting unfamiliar areas.

Statistical tests of independence did not reveal any significant association between preferences for the different information items. Some significant correspondence appears to be present between the stated preference and the revealed responses regarding the desired information items. Respondents who indicated a preference for destination information requested information about attractions prior to their trip, at a 5% level of significance, and about opening hours of the destinations within San Antonio, at a 1% level of significance. Stated preference for route guidance information was found to be corresponding with revealed responses of requesting for locations and directions to destinations. Respondents who indicated a preference for information about transportation modes are more likely to require transit schedules prior to their trip to San Antonio. Finally there is a significant correspondence between the stated preference for weather information and the revealed response for requiring weather information, prior to their trip.

Respondents who indicated a preference for information about transportation modes are more likely to be residents of states other than Texas who traveled to San Antonio by airplane and respondents who either depended on walking or transit bus for their travel in San Antonio. On the other hand, respondents who used their own cars did not indicate a desire for such information.

Figure 6 depicts the preferred sources of travel information reported by the respondents, revealing a strong preference for the traditional sources such as guide books and maps (73.5% and 64.6% respectively). About 33.1% of the respondents prefer obtaining travel information by word of mouth from friends, relatives, or colleagues. Telephone information lines and the Internet are reported by about 29.1% and 26.5% of respondents, respectively. Other information sources such as personal electronic devices and electronic kiosks did not register with most of the respondents, with only about 5% expressing some preference for such devices. This response may well be due to lack of familiarity and insufficient availability. Other preferred information sources indicated by about 6% of the respondents include hotel desks and tourism bureaus.

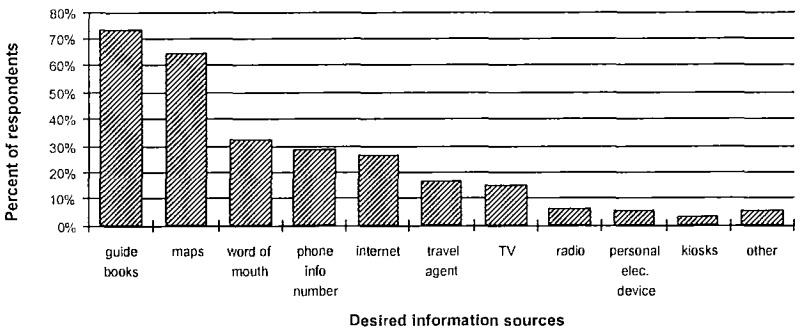

Figure 6: Respondents' preferred sources for travel information.

Statistically significant association is present between preferences to use maps and guide books. On the other hand, respondents who do not prefer using maps and guide books indicated preference for sources such as the Internet, television, and radio. A statistically significant association is also present between stated and revealed preferences of sources. In general, respondents indicate a preference for sources which they already used prior to their trip or within San Antonio. For example, respondents who used sources such as guide books, travel agencies, asking friends or relatives, and the Internet prior to their trip to San Antonio are found to indicate a preference for using the same sources. Respondents who used guide books or asked people for information while touring within San Antonio are found to prefer using the same sources.

Furthermore, respondents who prefer to consult travel agencies are more likely to be residents of states other than Texas and to report a longer stay duration in San Antonio. Respondents who prefer to use the Internet are found to have high income and are more likely to indicate a preference for using a computer or other electronic devices rather than speaking to a live person. Finally, unlike the revealed preference case, no correspondence is found between the travel information items that were stated to be important and the preferred information sources.

CONCLUDING COMMENTS

This paper has presented the results of a study to characterize information use for recreational trips in unfamiliar areas, and to identify specific information items and devices used for planning such recreational trips, along with tripmakers preferences for information items and devices for supplying such information. The study consists of two parts, focus groups, and a mail-back survey, distributed among visitors in San Antonio.

Although only 18 participants were included in the focus group sessions, important differences in trip planning behavior were detected, particularly in terms of the time in advance that people plan their trip and in the level of detail of their planning. There was some consensus on the information desires and preferences. Most participants were willing to use "advanced" information systems, but the stated willingness to pay appears to be very low. Overall, they were satisfied with the existing, traditional information sources, except for some cases where information was not up-to-date or where very specific information was unavailable. Regarding the desirable characteristics of advanced devices, most important is the ease of use. Next in importance are the comprehensiveness of the information (for one-stop information acquisition about aspects of the trip and the destination) and the portability of the device. The most important information items, when traveling to unfamiliar areas, pertain to activities at the destination and navigation or route guidance. Information about the transport modes was considered more important than weather or traffic reports.

The information use and preferences survey, distributed among visitors in San Antonio, had a response rate of nearly 24%. Nearly half of the respondents live in Texas, the other half in the rest of the United States, with very few overseas residents. Most respondents are female (63%). The average household size is three, and 45% of the respondents do not have children. The lower end of the income spectrum (households with an annual income below $25,000) is not well represented. All age classes above 18 are adequately represented.

The information sources used most frequently were friends or relatives, tourist information, and guide books. The information items obtained most frequently were information about the destination (70%), maps, hotel and restaurant information, and prices. Information items about the destinations mainly contain the location, directions, opening hours, and entrance fee. The main sources used are brochures, guide books, and asking at the hotel. Some respondents stated that they needed more information on route directions, on transit, taxi and car rental, on attractions, and more detailed maps.

Regarding the stated preferences for information items, respondents almost unanimously checked destination information and route guidance. The most preferred information sources are the traditional resources, such as guide books and maps. Word of mouth, telephone lines, and the Internet were also checked frequently. Kiosks and personal electronic devices were hardly checked, probably due to lack of familiarity with such devices. The results from the questionnaire confirm the findings from the focus groups on use of and preferences for information items and sources.

Overall, both the focus groups and the mail-back questionnaire suggest that people appear satisfied with and rely on existing, traditional information sources. The traditional information sources, such as maps, guide books, and asking others (friends, family, colleagues, travel agents, at hotels, etc.) are preferred by many respondents. It seems that many people are not yet interested in advanced, electronic information devices, though this may reflect lack of familiarity or some sort of technophobia among the population at large. Tourists (or recreational travelers in general) are probably less concerned with traffic, because they usually travel off-peak, when traffic congestion is not of major concern, at least in San Antonio. They need more information about destinations and route guidance. Traditional information resources usually can satisfy these needs. However, history suggests that new information sources and/or capabilities tend to create their own demand, by opening the door to heretofore unseen possibilities. The present study is not aimed at such technological forecasting, but is rather focused on the more modest task of documenting current use and preferences for known forms of information. Nonetheless, there already appears to be meaningful penetration of Internet use, and signs of early adoption of advanced devices, which are not untypical of the diffusion curves for technological innovation.

The analysis in this paper is mostly exploratory in nature. More extensive analysis supported by formal model building to relate tripmaker behavior and preferences to various explanatory factors remain underway.

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