ODOT TRAVELER INFORMATION SURVEY
AUGUST 2001
EXECUTIVE SUMMARY

PROFILE OF COMMUTERS
TRAFFIC & WEATHER INFORMATION SOURCES
RESPONSES TO TRAFFIC & WEATHER PROBLEMS
INTEREST IN NEW INFORMATION DELIVERY SYSTEM
TRIPCHECK.COM USE AND EVALUATION

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INTRODUCTION

The Oregon Department of Transportation (ODOT) commissioned the Oregon Survey Research Laboratory (OSRL) to conduct the Traveler Information Survey to help develop better ways to provide traffic and weather information and thereby reduce road congestion in the Portland tri-county area. One of the primary purposes of the survey was to find how commuters in the Portland tri-county area get information about traffic congestion and weather problems, especially their use and evaluation of ODOT's web-site Tripcheck.com. This report summarizes the major findings of this survey.

SURVEY METHODOLOGY

This section describes OSRL's procedures for developing and implementing the telephone survey instrument and the representative sample required to conduct data collection.

SURVEY INSTRUMENT

The survey instrument resulted from meetings and communication between ODOT and OSRL representatives, who collaborated to identify key concepts and operationalize them into survey questions. A few questions replicate those asked in previous OSRL surveys, to provide points of comparison; most questions, however, were originals. OSRL staff pretested individual questions for clarity, accuracy, validity, and variability of response. They also pretested the entire instrument for flow, comprehensiveness, length, and factors which affect respondents' cooperation and attention. The survey instrument was then programmed into OSRL's computer-aided telephone interviewing (CATI) system and further pretested.

OSRL obtained human subjects approval from the University of Oregon. ODOT approved the final version of the survey instrument.

The survey instrument was designed to select adults who traveled to work or school at least three times per week in the preceding six months, i.e., commuters. Once the survey's screening questions identified commuters, the ensuing survey interview comprised the following subject areas:

1) how commuters obtained information about traffic and weather in the Portland tri-county area in the preceding six months (television, radio, World Wide Web, special telephone numbers, word of mouth, and reader boards), frequency of use, source of the most information, and deliberate vs. accidental exposure;
2) commuters use of traffic and weather information to accomplish their daily commutes;
3) commuting behaviors, including mode, frequency, miles, minutes, highways, and ability to use flex time;
4) the importance of traffic and weather information to commuters and their interest in using new information sources;
5) commuters' use and evaluation of ODOT's web-site Tripcheck.com;
6) commuters' interest in this new method of delivering traffic and weather information; and
7) demographic and background information, including age, race, sex, education, zip code, ability to use the World Wide Web, driving as part of job duties, and ownership of cell phones, Personal Digital Assistants (PDAs), car computers, and home computers.

Section 2 of the three-ring binder provides a facsimile of the survey instrument, with embedded "topline" frequency results.

SAMPLE

OSRL's sampling procedure employs a random-digit-dialing (RDD) algorithm used in conjunction with our computer-aided telephone interviewing system (CATI). Sampling is pre-programmed and accomplished without interviewers' intervention. Telephone numbers are generated randomly by the computer and appear automatically on interviewers' computer screens. Telephone calls are placed with a computer keystroke, effectively preventing dialing errors. This sampling system avoids biases encountered from telephone books and similar lists. In addition, new and unlisted telephone numbers have an equal chance of being selected as established numbers.

For this study, 2,800 telephone numbers were randomly generated. Of those, 48% were disconnected, non-working, non-residential, fax/modem, or other types of telephone lines unsuitable for completing a survey. For 11% of the randomly generated telephone numbers, the telephone was consistently busy or never answered, and thus their suitability for interviewing could not be ascertained. For another 10% of telephone numbers, the adult in the household could not be interviewed because of illness or absence for the study duration, because no household member commuted to work or school at least three times per week sometime in the past six months, or because of a language barrier. (Surveys were only conducted in English.)

OSRL conducted interviewer training on August 7, 2001, and interviewing took place August 9th through August 27th on all days of the week at all times of the day (except Sunday

mornings). In order to reach commuters, however, OSRL stacked this study's interviewing hours more in the evenings and weekends.

Altogether, OSRL interviewers dialed 6,944 telephone calls to conduct 405 completed interviews with adult residents in the Portland tri-county area who regularly commute to work or school. The overall survey response rate was 64% and the refusal rate was 3% [1]. This exceptionally low refusal rate and relatively high response rate suggests that commuters in the Portland tri-county area were eager to discuss the survey's topics. Completed interviews averaged nine and a half minutes in length.

SURVEY RESULTS

This section presents an executive summary of the telephone survey's main findings about commuters in the Portland tri-county area and their experiences with travel and weather information sources. More detailed analysis may be conducted by examining the banner tables and raw data file.

PROFILE OF SURVEY RESPONDENTS

The average age of survey respondents is 40 years old. Slightly more women are represented in the sample (54%, compared to 46% male), and 85% of respondents identified as white. Thirty-four percent had completed a college degree, 96% were employed at the time of the survey, and 36% reported driving as part of their job duties.

Fully 89% of the survey respondents can connect to the World Wide Web at home, work or another place, and 80% had actually done so in the preceding six months. Eighty-three percent have personal computers in the home, and 90% of that group can connect to the World Wide Web. The most common way of connecting to the World Wide Web is through a 56K modem, 19% have cable modems, and 10% have direct network connections; but 19% did not know their modem type or speed.

The majority of the survey respondents have cell phones (62%), while 18% have pagers, 10% have personal digital assistants (PDAs), and just 2% have in-vehicle personal computers.

Almost all the survey respondents, 96%, commute to work: 88% to work only and 8% to both work and school. Just 4% commute to school only.

Four-fifths of the respondents commute to work or school five or more days per week. Two percent travel seven days per week, 7% travel six days per week, and 70% travel five days per week. The remaining fifth of the commuter sample distributed as: 10% four times per week, 9% three times per week, and 1% one or two days per week.

Portland tri-county commuters' trip to work or school ranges from zero to 75 miles. Fourteen miles one way is the average distance (the mean), and 10 miles is the median

[1] The response rate was calculated in following manner: Completed interviews / (Eligible sample + ((Eligible sample / (Eligible sample + Ineligible sample)) * Sample with unknown status)).

distance (or halfway point in the distribution). More specifically, their commuting distances distribute as:

0 - 2 miles	8%
3 - 4 miles	8%
5 miles	9%
6 - 8 miles	11%
9 -10 miles	11%
11-14 miles	9%
15 miles	12%
16-20 miles	12%
20-29 miles	7%
30-39 miles	7%
40-75 miles	3%

The time it takes commuters to reach their destinations ranges from two to 180 minutes, with a mean of 26 minutes and a median of 25 minutes. Their return trips also range from two to 180 minutes, but with a mean of 31 minutes and a median of 26 minutes. The longer average return trip is shown below, in the percentage distributions of the length of commuters' trips to and from work or school in minutes, where larger percentages are evident in the longer minutes.

	To work/school	From work/school
2 - 9 minutes	7%	7%
10-14 minutes	12%	8%
15-19 minutes	13%	11%
20-24 minutes	17%	15%
25-29 minutes	12%	9%
30 minutes	15%	13%
35 minutes	5%	6%
40-42 minutes	5%	6%
45 minutes	6%	10%
50-60 minutes	6%	12%
65-180 minutes	3%	5%

Two-thirds of respondents' commuting trips require them to travel on Interstate 5, Interstate 205, Interstate 84, Highway 26, and Highway 217 (65%). All of the remaining respondents (33%) reported that they usually travel on another busy highway going to and from work or school.

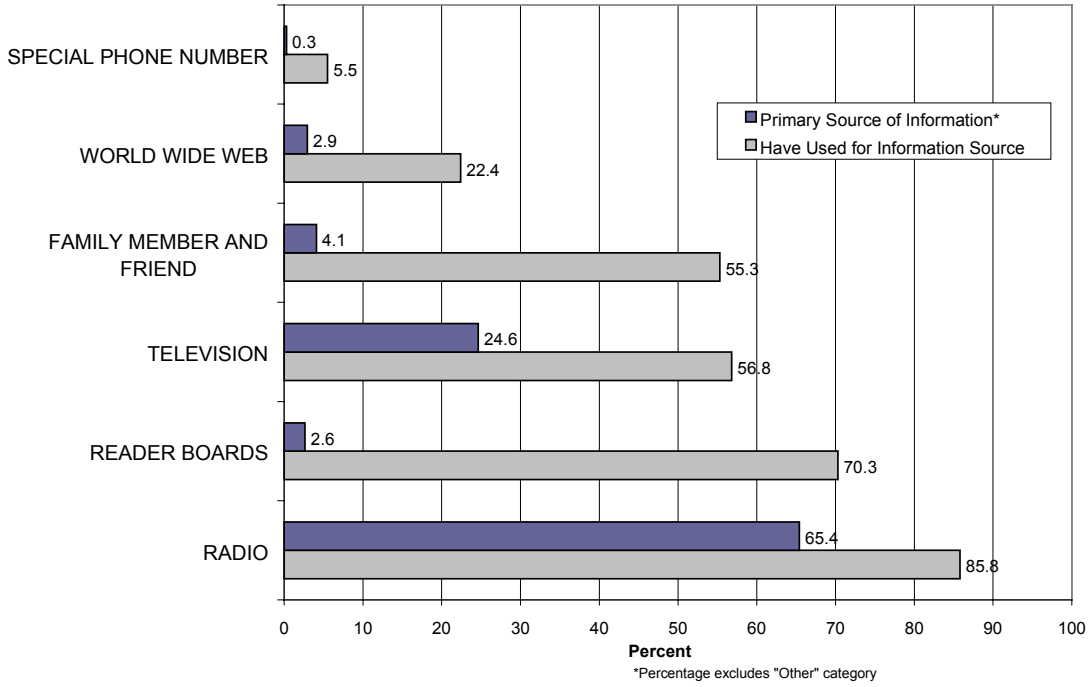
Over three-quarters of the survey respondents (77%) reported that they commute during peak traffic hours. To avoid traffic and weather problems, 59% of peak-hour commuters said that flex time is available to them in their jobs or school (i.e., the ability to leave early or arrive late), including 4% who said it is available but difficult to invoke. Three-quarters of those with flex time had used it to avoid peak traffic in the preceding six months.

SOURCES OF TRAFFIC AND WEATHER INFORMATION

Over half of the survey respondents (56%) obtain traffic and weather information either everyday or almost everyday (31% every day, 25% almost every day).

Figure 1 summarizes the information sources used by the survey respondents. Most respondents get their traffic and weather information from a variety of sources. The majority of respondents have used radio (86%), television (57%), reader boards (70%), and word-of-mouth from family and friends (55%) as sources of information. Considerably smaller proportions of respondents have used World Wide Web (22%) and telephone information services (6%) as sources of information.

Figure 1: Source of Traffic and Weather Information



Although different sources of information are available and utilized by respondents, most rely on the radio (65%) or on television (25%) as their primary information source about traffic and weather for commuting.

The majority obtain their traffic and information in passing (53%), just 38% deliberately seek information to guide their commute, and another 8% answered "both" or "it depends." For two-thirds of the respondents (68%), obtaining information about traffic and weather is important all year around, not just during the bad weather.

COMMUTERS' RESPONSES TO TRAFFIC AND WEATHER PROBLEMS

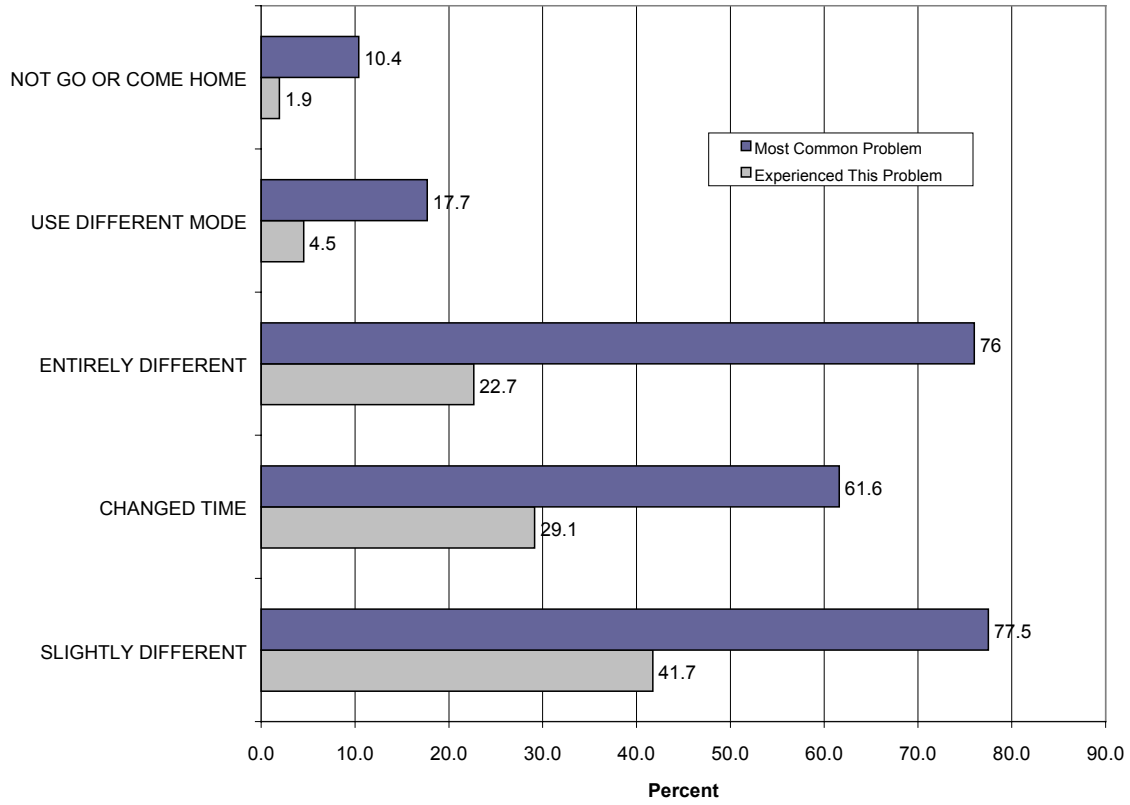
Figure 2 summarizes the results of survey questions regarding what commuters did when they heard about traffic and weather problems along their usual routes to or from work or school in the preceding six months. Majorities of commuters reported:

- changing the time they left their home or workplace (62%),
- using an entirely different route to work or home (76%), or
- using a slightly different route to work or home (78%).

Considerably smaller proportions of commuters reported

- using an entirely different mode of transportation (18%) or
- being unable to go to work or get home (10%).

Figure 2: Traffic and Weather Problems



When asked what they did most often when they experienced traffic and weather problems, a plurality of respondents reported using slightly different routes (42%), followed by changing their departure time (29%), and using an entirely different route (23%).

COMMUTERS' INTEREST IN A NEW INFORMATION DELIVERY SYSTEM

Over four-fifths of the survey respondents said getting traffic and weather information that could affect their commute was important: 40% very important and 42% somewhat important.

The survey asked these respondents if they would be interested in a telephone or paging service that delivers traffic and weather information. Over half, 54%, voiced interest in such a service: 17% very interested and 36% somewhat interested.

Among those respondents interested in a telephone or paging service for traffic and weather information, 66% would like to receive information tailored to their individual needs, and 29% would like information for the entire Portland tri-county area. For the timing of information delivery, 45% prefer receiving the information before they depart on a trip to or from work or school, and 52% said both before leaving and while commuting. Only 3% prefer to receive the information only while commuting.

TRIPCHECK.COM USE AND EVALUATION

Among the commuter respondents interviewed, 89% can connect to World Wide Web at home, work, school, or some other location, and 80% have done so in the past six months. Of those, 63% reported that they have used the World Wide Web for road and weather information in the past.

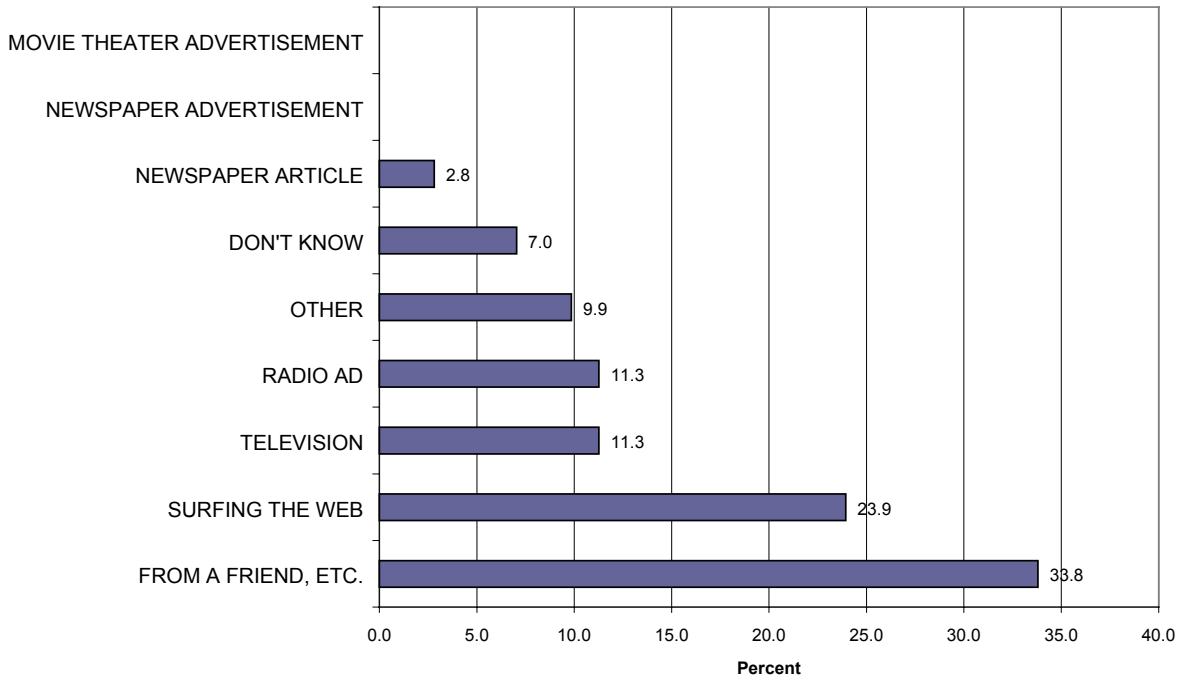
Almost one quarter (22%) of World Wide Web users have heard about Tripcheck.com, which is 18% of overall sample. Of those, 39% have actually visited Tripcheck.com; but this is only 7% of the overall sample, or 28 persons.

Figure 3 summarizes how these respondents learned about Tripcheck.com. Most commonly, they learned about it from family and friends (34%) or by surfing the web (24%), followed by television advertisements (11%) and radio advertisements (11%). None reported seeing movie theater screen advertisements or newspaper advertisements.

Of the 28 persons who have visited Tripcheck.com, nine used it ten or more times, five used it five to nine times, six used it three or four times, four used it twice and four used it once. (One visited it for the first time while during his interview OSRL interview.)

When they visited Tripcheck.com, 61% of users were looking for something in particular, 29% were just exploring, and 11% said they were doing something else.

Figure 3: How Learned about Tripcheck.com



The users' rating of Tripcheck.com was very positive:

- 94% of people who visited Tripcheck.com to get particular information said that they found the information they sought;
- in comparison to other web-sites, 86% rated Tripcheck.com either excellent (11%) or good (75%);
- 82% rated Tripcheck.com either excellent (29%) or good (54%) on accuracy of information provided.

Regarding ease of use, one-third rated Tripcheck.com easier than other web-sites (32%) and 57% said it was about the same. All of the users (100%) responded that they will use Tripcheck.com again.

The section of this report entitled "Narrative Answers to Open-ended Questions" tells what respondents looked for on Tripcheck.com, and what they would do to change or improve the web-site, in their own words.