

## 2002 On Board Survey Summary

An on-board survey of the UTA system was conducted in the fall of 2002 in support of model development. The survey covered all three of the bus operating divisions and the operating light rail lines. The survey was conducted by an interviewer handing a questionnaire to selected individuals as they boarded the transit vehicle and collecting the questionnaire before they left the vehicle. The sampling procedure included a random selection of blocks of work and the selection of riders getting on at each stop based on specified rules. The expansion of the survey to the universe of transit boardings was based first on an expansion from the selected rider to the number of boardings at each stop and an expansion by time period and route grouping to boarding counts taken on a monthly basis and finally to a total by operating division based on the monthly counts. (A more detailed description of the questionnaire, the sampling method, and the expansion process is available.)

The survey collected approximately 4300 useable questionnaires. The responses were distributed as shown below.

### On Board Survey Response by Mode and County

		Origin county				
		Weber	Davis	Salt Lake	Utah	Total
Mode	Local	173	146	1761	449	2529
	Express	44	65	323	207	639
	LRT	2	22	1030	37	1091
	Total	219	233	3114	693	4259

### On Board Survey Trips by Mode and Trip Purpose

		Trip Purpose				
		HBW	HBO	HBC	NHB	Total
Mode	Local	1121	530	516	364	2531
	Express	533	17	63	30	643
	LRT	331	167	338	257	1093
	Total	1985	714	917	651	4267

The expanded survey represents approximately 114,000 daily boardings and 85,000 linked trips. Some of the basic characteristics of the primary classes of transit users are shown below along with the comparative information for the general population from the 2000 Census:

	TRAX	Salt Lake Bus	Other Bus	General Population
Average Household Income	\$44,000	\$35,300	\$31,300	\$48,600
Autos per Household	1.84	1.2	1.56	1.95
Average Household size	3.36	3.23	3.71	3.04

The expanded survey was the basis for recalibration targets for the mode choice model.

Characteristics of transit users and the trips they make which were of particular interest were the relationship between access mode, transit mode and trip purpose. Observation of off peak trips might suggest that TRAX users have higher incomes, own more cars, and use the system for non-work trips more often when compared to bus riders. Figure 2 below shows 4 graphs of cross tabulations of the survey data that address trip purpose, mode of access and income. The data suggest that mode of access is more important in differentiating between transit users than transit mode and that much of the difference between the average bus user and the average rail user can be explained by the mode of access. Much of this is as would be expected. More income means more vehicles which would translate into a higher likelihood of accessing transit by park and ride. The higher percentage work trips using park and ride isn't necessarily explained by either auto ownership or income. Table 5 further stratifies trips by auto ownership.

### Trip Purpose Distribution by Mode. Mode of Access, and Auto Ownership

		TRAX				Salt Lake Bus				
		HBW	HBO	HBC	NHB	0	HBW	HBO	HBC	NHB
Walk	0	32.28%	26.10%	8.24%	33.38%	0	40.17%	31.49%	5.78%	22.56%
	1	39.30%	13.17%	21.59%	25.94%	1	42.34%	23.46%	17.89%	16.31%
	2+	28.84%	10.97%	14.33%	45.87%	2+	38.97%	26.06%	17.57%	17.40%
Drive	0	*	*	*	*	0	*	*	*	*
	1	57.92%	32.23%	6.67%	3.18%	1	55.70%	25.63%	5.74%	12.93%
	2+	48.13%	15.05%	26.69%	10.13%	2+	57.41%	11.16%	27.07%	4.35%

\* The survey did include a small number of trips where respondents reported zero vehicles by drove to a park and ride lot

Other characteristics of interest include rate of transfer. The figure below shows the percentage of trips by number of transfers, mode and auto ownership.

