

APPENDIX Q

LINKED & UNLINKED TRIPS

DEFINITIONS

Understanding the difference between linked and unlinked trips is critical primarily for understanding transit trips. One problem pertains to how transit trips are reported. If you take a bus, then transfer to another bus, this is counted as 2 trips for the FTA National Transit Database (Section 15). However, this is considered one trip in regional transportation planning models.

Origin	Destination	Mode	Purpose
Home	Bus transfer station	Bus	change to another bus
Bus transfer station	Work	Bus	to work

Another transit trip linking issue relates to access and egress to the transit service. Transit trips may begin with a walk trip, a passenger ride in a car ("kiss and ride"), driving to a park & ride lot, or may involve both bus and rail. These access and egress choices may occur at both ends of the trip.

For the individual travelling, they view the entire sequence of home to work as one trip. For the transportation planner, this same travel may be considered as one linked trip composed of three unlinked trips.

Origin	Destination	Mode
HOME	Park & Ride Lot	Drive alone in private veh
Park & Ride Lot	14th St and 7th Ave	Bus
14th St & 7th Ave	WORK: 18th St and 8th Ave	Walk

The purpose of all three links is to reach the WORK destination. In the NPTS file, these are considered "segmented trips" and are only collected for trips in which at least one link or segment is on public transportation or Amtrak.

Note that during the NPTS telephone interview, the respondent could select a purpose of "changing travel mode," but these trips were subsequently edited into the segmented

trips during the data cleaning phase.

TRIP CHAINING

Linked and unlinked trips differs from the concept of trip chaining. Trip chains typically either begin or end at HOME or WORK and may include stops for different activities, but most likely have the same travel mode.

Origin	Destination	Activity/Purpose	Travel Mode
HOME	School	Drop off child	Drive w/passenger
School	Grocery Store	Buy doughnuts for office	Drive Alone
Grocery Store	WORK	Work	Drive Alone

One travel demand model for an MPO (Boise, Idaho) has incorporated trip chaining into a regional model using a tour-based approach. A tour was defined as a sequence of trip segments that start at home and end at home, with home-based WORK tours and home-based OTHER tours. (Citation: Yoran Shiftan and Stephen Decker, "A Practical Method to Estimate Trip Chaining" 1995 ITE Compendium of Technical Papers.) Cambridge Systematics (Thomas Rossi and Yoran Shiftan) are conducting additional work on tour-based models for Portland, Oregon metropolitan area as part of the U.S. DOT Travel Model Improvement Program (TMIP).