

# How Working with Part 3 is Different from Parts 1 and 2

## INTRODUCTION

Extracting data tables from Part 3 is different from Parts 1 and 2, where you only picked one geographical end for tabulation. In Part 3, you will need to make a geographical selection at both the home (Residence) and work (Workplace) end for each session you create.

Also affecting how you will work with Part 3 is the fact that for some states the data files had to be split over two or more CDs. While working with multiple geographic selections adds a level of complexity, this documentation is designed to help you through the process. Do not get discouraged! Remember that you can call 202-366-5000 or email [ctpp@fhwa.dot.com](mailto:ctpp@fhwa.dot.com) for assistance.

## REINSTALL THE “NEW” EXTRACTION SOFTWARE

With Part 3, the CTPP Access Tool (CAT) software (a.k.a. the Extraction Software, Viewer or Browser) needs to be updated. The new software works with all three CTPP parts and should replace the earlier versions. The easiest thing to do for most installations is to reinstall the new browser on top of the old one. You will still need administrative privileges to do this for those of you in organizations that do not grant software installation privileges to all users.

## FAMILIARIZE YOURSELF WITH THE SOFTWARE

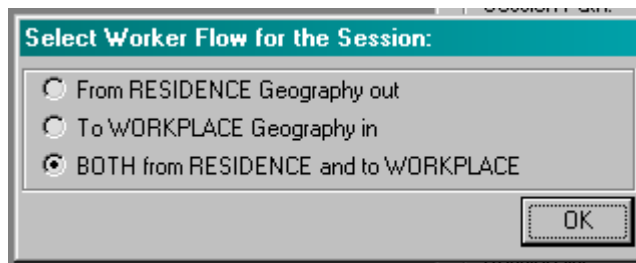
Once you have reinstalled the software, it is advisable to start working with Part 3 data with a smaller, simpler session to get a feel for how the software works and what to expect. It is best to start with home-to-work flows for large geographic units, such as county flows. Create a session with county-to-county flows. Once you get a feel for the software, move on to creating a session with small geography such as tracts, block groups, and TAZs, where applicable.

### Specific differences for Geographical Selection:

After you create and name your session, you may notice that the selection window is different. In Parts 1 and 2 you picked either home or workplace geography and then moved onto the table selection. Now you **must pick both home and work geography** before moving on to table selection. Part 3 provides information on workers flowing into or out of your area or both in and out of your area. You need to tell the software which directionality you want your commuter flow to be in.

### Selecting Worker Flow for the Session

**Figure 1:  
Initial  
Selection  
Box**



First option button: “**From RESIDENCE Geography out**” -- Click this radial button if you want to know the workplaces for residents in a particular area. For example, if you

want to know where workers who live in Suburb A commute. Do they go downtown, or to the largest employer, or do they go all over the region?

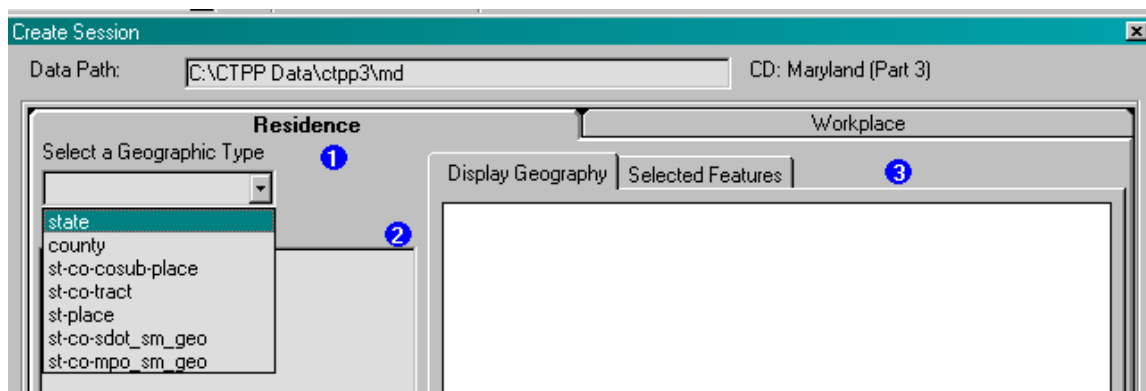
Second option button: “**To WORKPLACE Geography in**” -- Click this radial button if you want to know where the workers in a particular area live, that is where they are coming from. For example, you could look at the travel characteristics of all people who work “downtown” and find the distribution of all the places where they live.

Third option button: “**BOTH from RESIDENCE and to WORKPLACE**” – Select this button if you want to know all the interchanges back and forth between or among areas. This will give you all the flows from the area in your state to the entire country as well as the flows from the countrywide selection back into your state selection. For example if you pick tracts in County A in your state for the CD (state) specific selection, and then you pick the whole state and then the adjoining state for the nationwide selection, the software will select flows originating in the tracts in County A and going to work anywhere in the state (including in County A) as well as in the neighboring state. The software will also select flows for the people who live in your state and the neighboring state who work in the tracts in County A.

### SESSION EXAMPLE

Suppose I want to know where the workers residing in a state commute to work. First I open the Browser software and create a session for Part 3. Then I would select “From RESIDENCE Geography out.” Once on the Create Session screen I start by selecting my Geographic Type (next to the blue number 1 in Figure 2 below). In this example I picked the first summary level of State on the Residence end.

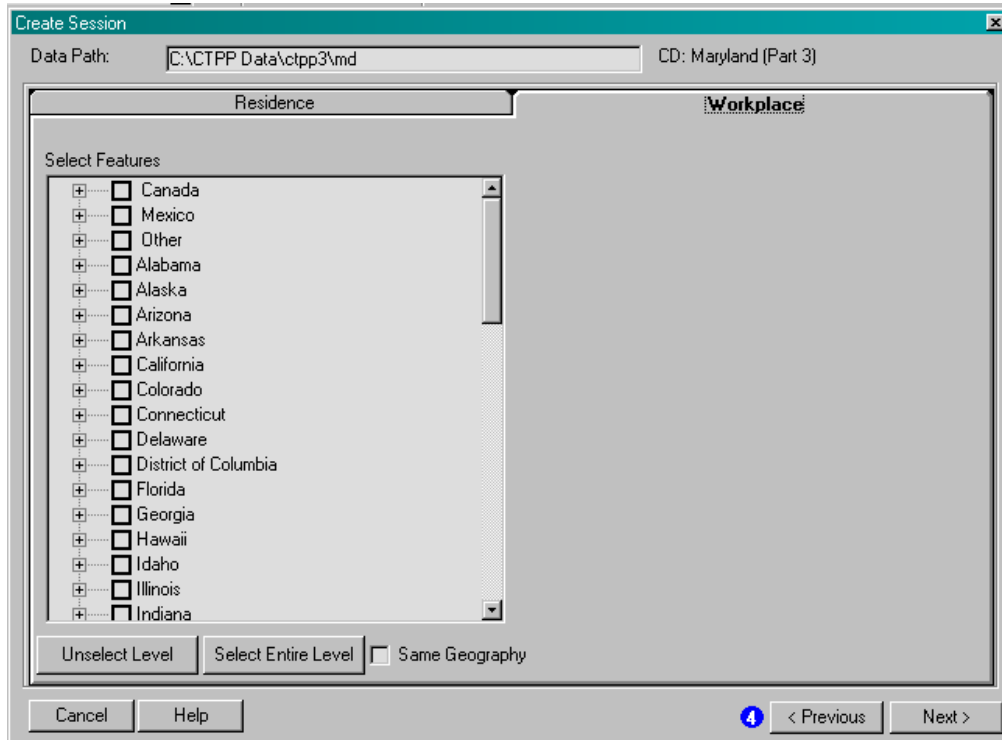
**Figure 2: Geographical Selection from Selected**



Selecting the Residence geography is essentially the same as in Part 1 or 2, however, then I must also pick my Workplace geography before going onto another summary level or going on to the table selection. Figure 3, below, shows the Workplace selection.

Workplaces for the selected residence geography can be anywhere in the country (or abroad). I can click specific states to see where commuters are going, or I can click Select Entire Level to see all the flows to work at the state level. Then I have the option of going back to the Residence selection tab to select another summary level or to go on to the Table Selection by clicking Next.

**Figure 3: Nationwide Geographical Selection**



Differences in the Tabular Selection:

If your entire state is on one CD, then you can proceed with the Tabular selection as you did in Parts 1 and 2. If you have multiple CDs, then you can either work from the CD that contains the tables you want to access or you can load the CDs onto your hard drive or a server. Keep in mind that you will need significant space to be able to load the entire state onto your hard drive. See the section HOW TO PUT MULTIPLE CDs “BACK TOGETHER” below.

If you choose to proceed by working off the CDs, it is still possible to create a session with tables from different CDs. You will need to create multiple sessions with the tables on each CD. You should make sure your geographical selection in each session is identical. Once you have the session from each CD, you should close the browser entirely. Go into the location you have stored the sessions and copy all the contents into one of the session folders. You will be copying over some files, but this is ok. Then reopen the browser with the session into which you copied the other session(s) and you will have all the tables together for your geographical selection. If you do not have the same geography, it still works, but you will not have all the tables for all the geography. This procedure is necessary because you cannot add additional tables from a different CD when editing an existing session because of the software cannot generate data from the original selection for the new tables.

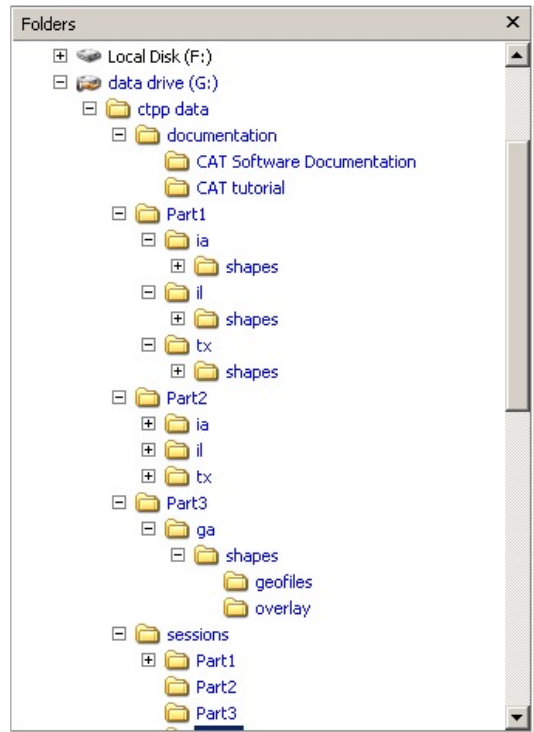
Remember that some of the tables in Part 3 have suppression thresholds applied. This means that for these tables, if the flow had fewer than 3 unweighted observations, then we were required to zero out the flow. These flows are identifiable by the zero in the Total for the table. The main tables that are not subject to suppression are Tables 1, 2, 8 through 11, and 14. Tables 3 through 7, 12, and 13 have suppression. See Appendix E for Table Titles.

## HOW TO PUT MULTIPLE CDs “BACK TOGETHER”

This is not mandatory for creating a session. The first CD contains all the files necessary for loading the software, the documentation, the geographical files for each state, and at least one table. The subsequent CD(s) will have the geographical files as well as the additional tables but not the software or documentation. Once you have loaded the software from the first CD, you can build a directory structure and put all the geography and tables in one place. Figure 4 is an example of a functional directory structure.

**Hint:** If your state is on multiple CDs, it is much easier to work with Part 3 if you load all the files for your state(s) onto your PC or a Server.

Figure 4:  
Directory  
Structure for  
CTPP Parts 1- 3



For your state, you need to create a folder with the state abbreviation. This will be where you will copy your geography files and the tables. In Figure 5 below, Tables 3-001 and 3-002 are split up. They are each split into 4 pieces or separate files.

Figure 5:  
Table files  
from CD

table3-001_1.zip	5,928 KB	WinZip File
table3-001_2.zip	5,638 KB	WinZip File
table3-001_3.zip	5,708 KB	WinZip File
table3-001_4.zip	3,983 KB	WinZip File
table3-002_1.zip	6,809 KB	WinZip File
table3-002_2.zip	6,402 KB	WinZip File
table3-002_3.zip	6,387 KB	WinZip File
table3-002_4.zip	4,420 KB	WinZip File

They are split because of record limitations in the software, but the splitting of the tables masks the file limitation seamlessly in the software browser. In the current example, you must have all 4 pieces of each table to have access to the entire table. The naming convention is “table3-0XX.zip” where “3” represents the CTPP Part and “XX” denotes the table number. Note that all of the Part 3 tables are compressed due to their size. This is OK as the software works with zipped files, however if you unzip the files they will revert

to the proprietary ivt format that you may be familiar with from Parts 1 and 2. **It is important to make sure that you copy all the pieces of each table in your Part 3 state data folder. Otherwise you might not be able to select records in all summary levels.**

The geography is identical on each CD for your state. You only need to copy it once from the CD. You need the shapes folder (including its subfolders) as well as a number of files from the state directory. The additional files are the \*.MDX and \*.dbf files for each summary level and the CDNAME.PAR file as you can see below in Figure 6.

**Figure 6: Geographical files to Copy**

shapes	
COSUB_C.MDX	4 KB
COSUB-PLACE_C.MDX	1,695 KB
COUNTY_C.MDX	230 KB
DOT_C.MDX	12,598 KB
MPO_C.MDX	57,002 KB
PLACE_C.MDX	1,228 KB
STATE_C.MDX	10 KB
TRACT_C.MDX	8,416 KB
Cosub_C.dbf	1 KB
Cosub-Place_C.dbf	2,116 KB
County_C.dbf	284 KB
DOT_C.dbf	15,760 KB
MPO_C.dbf	71,332 KB
Place_C.dbf	1,531 KB
State_C.dbf	8 KB
Tract_C.dbf	10,529 KB
CDNAME.PAR	1 KB
table3-001_1.zip	5,928 KB
table3-001_2.zip	5,638 KB
table3-001_3.zip	5,708 KB
table3-001_4.zip	3,983 KB
table3-002_1.zip	6,809 KB
table3-002_2.zip	6,402 KB

Once you have copied the table files from all the CDs into a common directory, you can proceed to create a session with any tables for the state with any of the applicable geography.

## RESIDUAL GEOGRAPHY

In Part 2, you may have had to deal with residual geography for cases where we were not able to geocode respondents to an acceptable street block face. In these cases, we attempted to allocate the respondents off similar respondents' workplace geography. While many cases we were successful, in some were not able to allocate all necessary geography. Some of these individuals are left at the tract, place, or county level. Therefore they show up as residuals in Part 2. This also applies to the Workplace end of the flow for Part 3. You will need to make sure you select residuals if you want them in the Part 3 geographical selection. As in Part 2, you can only select the records for the residual geography from the list selection of geographic areas. You cannot select them from the map selection, because they are not shown on the map.

For more information on residuals, see Appendix N in the Docs folder on the CD-Rom. The main difference is that in Part 2, residuals were of concern in summary levels 082, 140, 150, 935, and 940. In Part 3, 935 and 940 are replaced with 942 and 944. 942 is the summary level for statewide small geography and 944 is the summary level for MPO small geography.