Service Planning Tool
Version 2.2
User Guide
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INTRODUCTION

Transit Planners have a good understanding of the current state of the transportation network within their region in terms of commuting patterns and capacity. The problem is trying to predict the repercussions within that network of changes to the status quo. For example:

- What would happen if transit fares were raised by 10%?
- How would a $5 downtown congestion charge change commuting?
- Would increased Park and Ride capacity encourage transit usage?
- How would the introduction of new light rail service alter commuting preferences?

The Transit Service Planning Tool (SPT) developed by Cambridge Systematics is designed to answer these questions by providing the Transit Planner with a number of tools for defining analysis models and analyzing the consequences of those models on the network.
BACKGROUND

The SPT application is implemented as a customized toolbar within ESRI’s ArcGIS 10.x Desktop Geographical Information System (GIS). The toolbar provides a number of menu options and tools to define various scenarios, and perform analysis on the Transit network based on those scenarios. The scenarios fall into 2 categories:

1. Trip Estimates; and,
2. Mode Shift.

Trip Estimates

The database underlying the SPT is populated from the results of a regional transit analysis model based on proposed Level of Service (i.e., Travel Cost and Time) for various Modes (i.e., Bus, Auto, etc.). With these closed pivot models, all Modes must be predefined so by default it is not possible to incorporate additional Modes (i.e., new Light Rail service).

The SPT application provides functionality to allow the number of trips for the additional Mode to be predicted based upon the most similar existing Mode. For example, base Light Rail Level of Service on existing Premium Bus levels.

Mode Shift

The main functionality of SPT is aimed at predicting the changes in the number of trips for each defined Mode based on changes to the existing Levels of Service. These changes can be in either absolute values (i.e., Auto Travel Cost increases by $5 if a congestion charge is applied), or as a percentage of the existing Level of Service (i.e., Premium Bus Travel Time reduces by 10% when a new bus-only lane is introduced).

The Mode Shift scenario allows the user to enter all of the Level of Service changes for all Modes. This scenario is then analyzed using a Mode Shift algorithm to predict the changes in the number of trips for each Mode.

Scenario Parameters

Each scenario is defined using a number of different components that vary slightly by the type.

Both Types

1. Basic parameters including Name and Description;
2. The Trip Purpose(s) (i.e., Home-based Work, Daily Commute, etc.) under consideration;
3. Origin Traffic Analysis Zones (TAZs); and,
4. Destination TAZs.
Trip Estimate Only
1. Mode to estimate; and,
2. Level of Service for the estimation Mode.

Mode Shift Only
1. The Time of Day (i.e., Peak, Off-Peak, etc.);
2. The Trip Estimate (if any) to be used as part of the Mode Shift; and,
3. Proposed Level of Service for each Mode.
REQUIREMENTS

For this extension to work, the following software must be installed on the local computer:

- Microsoft .Net Framework v2.0;
- ESRI ArcGIS 10.x with Microsoft .Net Framework Support; and,
- The appropriate database driver to access the SPT databases.

Note: Microsoft .Net Support for ArcGIS is installed automatically if .Net Framework 2.0 is on the user’s machine when ArcGIS Desktop is installed. If .Net Framework 2.0 is installed after ArcGIS Desktop has been installed, the .Net Support components need to be installed. To do this, go to the ‘Add or Remove Programs’ tool in Control Panel and ‘Change’ the installation. Follow the instructions to modify the installation to include the .Net Support components. The original ArcGIS Desktop installation media will need to be available during this process.
INSTALLATION

Microsoft .Net Framework v2.0

The Microsoft .Net Framework is a software component which can be added to the Microsoft Windows operating system. It provides a large body of pre-coded solutions to common program requirements, and manages the execution of programs written specifically for the framework. If necessary, the Microsoft .Net Framework version 2.0 redistributable package can be downloaded directly from the Microsoft website. Follow the instructions on how to install the package.

Application

To install the SPT application:

1. Double-click the ‘setup.msi’ installation package. An installation wizard will start to perform the install. Follow the instructions.

   Several files will be installed in the destination directory (i.e., ‘C:\Program Files\Cambridge Systematics, Inc.\SPT’):
   - SPT.dll (the application);
   - SPT User Guide; and,
   - SPT Cascading Stylesheet.

2. Update the database connection string in the eXtendable Markup Language (XML) configuration file. The XML file contains the connection parameters to the database as well as the path to the help file and style sheets that are accessed in the application. A sample XML configuration file is shown in “Appendix B – Sample XML Configuration File”.

**EXECUTION**

To open ArcGIS with the SPT toolbar, either:

1. Open ArcMap.
2. Select ‘File | Open...’. Using the File Dialog, select the ArcGIS Project (i.e., ‘c:spt\spt.mxd’).
3. ArcGIS should open and load the Project.

Or:

1. Navigate to the appropriate Project folder (i.e., ‘c:spt’).
2. Double-click the ArcGIS Project (i.e., ‘c:spt\spt.mxd’).
3. ArcGIS should open and load the Project.

If the SPT Toolbar is not displayed, either select ‘View | Toolbars’ or right click the mouse on the ArcMap Menu bar and select ‘CS Service Planning Tool’ from the list.

Once the application is opened, the SPT map is displayed.
USER GUIDE

The SPT Toolbar is divided into 5 menu options that control the various stages of the service planning application:

![SPT Service Planning Tool](image)

**Note:** The name of the Scenario menu changes between ‘Trip Estimate’ and ‘Mode Shift’ depending upon the type of the current scenario.

The options available on each of these menus are described below.

**File Menu**

This menu addresses the creation, editing, saving, duplication and other import/export operations for a scenario.

**Note:** To access the functionality within the SPT, the system needs to be logged in to. Selecting any of the starting-point options (Create, Open, Import or Delete) will cause the ‘User Login’ Dialog to be displayed. A valid Username/password combination must be entered.

![User Login Dialog](image)

After successfully logging in to the system, the various steps for running the tool can commence.
**File | Create**
This option is used for creating a new Trip Estimate or Mode Shift scenario.

**File | Create | Trip Estimate**
Initially, specify the Name, Description, Time of Day and the estimation Mode for the Trip Estimate scenario.

![Trip Estimate Parameters](image)

After creating the Trip Estimate scenario, a blank Trip Estimate Group Layer is added to the ArcMap Table of Contents.

**File | Create | Mode Shift**
Initially, specify the Name, Description, Trip Purpose and Time of Day for the Mode Shift scenario. Optionally, specify the Trip Estimate upon which the Mode Shift should be based and whether the Mode Shift should use the same Origins and Destinations as the selected Trip Estimate.

![Mode Shift Parameters](image)

After creating the Mode Shift scenario, a blank Mode Shift Group Layer is added to the ArcMap Table of Contents.

**File | Open**
Using this option an existing Trip Estimate or Mode Shift scenario can be opened from the database.
File | Open | Trip Estimate

A Dialog is displayed showing all of the Trip Estimate scenarios currently stored within the database for the User.

Once the required Trip Estimate scenario is selected:

- The Trip Estimate scenario is loaded from the database;
- A new Trip Estimate Group Layer is generated showing the defined Origin and Destination TAZs;
- The Trip Estimate Group Layer is added to the Map; and,
- The Map is zoomed to the extent of the Origin and Destination TAZs.

Note: If a Trip Estimate or Mode Shift scenario is currently open when this option is selected, the system will prompt to save the Trip Estimate/Mode Shift before proceeding.

File | Open | Mode Shift

A Dialog is displayed showing all of the Mode Shift scenarios currently stored within the database for the User.

Once the required Mode Shift scenario is selected:

- The Mode Shift scenario is loaded from the database;
- A new Mode Shift Group Layer is generated showing the defined Origin and Destination TAZs;
- The Mode Shift Group Layer is added to the Map; and,
- The Map is zoomed to the extent of the Origin and Destination TAZs.

Note: If a Trip Estimate or Mode Shift scenario is currently open when this option is selected, the system will prompt to save the Trip Estimate/Mode Shift before proceeding.

File | Save

Using this option, the current Trip Estimate or Mode Shift scenario can be saved to the database under the current Name.
**File | Save As**

This option allows the current Trip Estimate or Mode Shift scenario to be saved to the database under a new Name. This is useful if the changes are needed to the design of a scenario, yet the original scenario needs to be retained.

The Toolbar prompts to enter the name for the ‘Save As’ copy of the current scenario.

The new scenario will then be displayed on the Map.

**File | Export**

This option is used in case the details of the Scenario need to be viewed outside the ArcMap environment. It can also be used when multiple Users need to share the Scenario information but can’t due to access privileges. Only a Scenario under the current login can be opened in the system.

This option exports the Scenario to an XML file which can then be shared with other Users or displayed by any XML browser (i.e., Internet Explorer) to view the details of the Scenario.

A sample XML export file is shown in “Appendix C – Sample XML Export File”.

**File | Import**

This option allows the Scenario XML file containing the Scenario details to be imported.

The User is prompted to select the XML file. After importing, the Scenario is loaded as the current Scenario in the system and the User can now view or edit or operate on it.

**Note:** Even though the scenario has been imported, it is not saved permanently to the database. To save it, select the File | Save or the File | Save As option.

**File | Duplicate**

This option allows a temporary scratch copy of the currently loaded Scenario to be made. This temporary copy is not saved to the database and can be used for making quick changes to the Scenario parameters like Origin/Destination TAZs or level of service and observe the effects of those changes in number of trips after running the analysis. Moreover, this copy can be made permanent by using the File | Save As option.

**File | Delete**

**File | Delete | Trip Estimate**

This option allows Trip Estimate scenarios to be deleted from the database, provided the selected scenario is not currently loaded in the application.
Once selected, the scenario is permanently deleted from the database.

**File | Delete | Mode Shift**

This option allows Mode Shift scenarios to be deleted from the database, provided the selected scenario is not currently loaded in the application.

Once selected, the scenario is permanently deleted from the database.

**Edit Menu**

The Edit menu provides options to navigate to the extent of the scenario Origin and Destination TAZs on the ArcMap document. It also allows the contents to be refreshed after changes to the scenario have been made.

**Edit | Redisplay**

If Trip Estimate or Mode Shift Group Layer is removed from the Map, this option can be used to redisplay the currently loaded scenario back on the Map.

**Edit | Zoom To Scenario**

This option is used to zoom to the entire extent of the scenario Origin and Destination TAZs.

**Scenario Menu**

The Scenario menu contains functionality for adding or editing various parameters that define a Trip Estimate or Mode Shift scenario.

**Note:** The name of the Scenario menu changes between ‘Trip Estimate’ and ‘Mode Shift’ depending upon the type of the current scenario.

**Scenario | Parameters**

This option is used to change the parameters of the scenario. The actual parameters depend on whether a Trip Estimate or Mode Shift scenario is currently loaded.
Trip Estimate

- Name.
- Description.
- Time of Day.
- Mode. The Mode for which trips are to be estimated.

Mode Shift

- Name.
- Description.
- Trip Purpose.
- Time of Day.
- Trip Estimate Name. The name of the Trip Estimate scenario upon which this Mode Shift scenario is based (optional).
- Use Trip Estimate ODs. If a Trip Estimate scenario is selected, defines whether the Mode Shift scenario will use the same Origin and Destination TAZs.

Scenario | Origin TAZs

This menu option is used to set Origin TAZs to the current Trip Estimate or Mode Shift scenario. When selected, the Origin TAZs for the current Scenario are highlighted on the Map and the ‘Select Origin TAZs’ Dialog is displayed allowing access to the selection functionality.
The ‘Select Origin TAZs’ Dialog can be used to:

- Start any of the TAZ selection processes;
- Define the method by which the current and new TAZ selections are combined; and,
- Enter the size of any buffer to use (where applicable).

**Selection Processes**

There are 6 basic methods of selecting Origin TAZs which can be started by selecting the appropriate tool on the Toolbar on the ‘Select Origin TAZs’ Dialog.

1. **Select by Query.** This option is used to select TAZs based on attribution. The ‘Select by Attributes’ Dialog can be used to build a Where clause based on the attribute fields.

2. **User Select.** This option is used to select TAZs by clicking-and-dragging a rectangle on the Map.
3. **Select by Polyline.** This option is used to select TAZs by drawing a Polyline on the Map. The Polyline is drawn by clicking each vertex and double-clicking to finish.

4. **Select by Polygon.** This option is used to select TAZs by drawing a Polygon. The Polygon is drawn by clicking each vertex and double-clicking to finish.

5. **Select by Feature.** This option is used to select TAZs by selecting features of interest (i.e., Bus Stops, Rail Routes, Counties, etc).
   
   When selected, the ‘Select by Feature’ dialog is displayed. When a specific layer is chosen, all the Features contained within the Layer are displayed. More than one feature can be selected using the ‘Control’ key along with the mouse.

6. **Clear Selection.** This option removes any current selection.

**Selection Combination Methods**

The current and new TAZ selections can be combined in 4 different ways:

- **Create New Selection.** Discard the current selection and just highlight the new selection.
- **Add to Current Selection.** Append the new TAZ selection to the currently selected TAZs.
- **Remove from the Current Selection.** Remove any TAZs from the current selection that are also included within the new selection.
- **Select from the Current Selection.** Only highlight TAZs that are contained within both the current and new selections.

**Buffer**

The Buffer feature of the ‘Select Origins TAZs’ Dialog generates a buffer around the user selection Rectangle, Polyline or Polygon, or around the selected features. All TAZs that fall within the buffer are then used in the selection process. This is useful to select all TAZs within 1 mile of a Route, or within 500 meters of a subset of Bus Stops.

To set the buffer distance, enter the buffer size and units. This buffer will be used for all applicable selection operations until it is reset.
Scenario | Destination TAZs

This menu option is used to assign destination TAZs to the current Scenario.

When selected, the destination TAZs for the current Scenario are highlighted on the Map and the ‘Select Destination TAZs’ Dialog is displayed allowing access to the selection functionality.

The ‘Select Destination TAZs’ Dialog can be used to:

- Start any of the TAZ selection processes;
- Define the method by which the current and new TAZ selections are combined; and,
- Enter the size of any buffer to use (where applicable).

Selection Processes

There are 6 basic methods of selecting destination TAZs which can be started by selecting the appropriate tool on the Toolbar on the ‘Select Destination TAZs’ Dialog.

1. Select by Query. This option is used to select TAZs based on attribution. The ‘Select by Attributes’ Dialog can be used to build a Where clause based on the attribute fields.
2. **User Select.** This option is used to select TAZs by clicking-and-dragging a rectangle on the Map.

3. **Select by Polyline.** This option is used to select TAZs by drawing a Polyline on the Map. The Polyline is drawn by clicking each vertex and double-clicking to finish.

4. **Select by Polygon.** This option is used to select TAZs by drawing a Polygon. The Polygon is drawn by clicking each vertex and double-clicking to finish.

5. **Select by Feature.** This option is used to select TAZs by selecting features of interest (i.e., Bus Stops, Rail Routes, Counties, etc.).

   When selected, the ‘Select by Feature’ dialog is displayed. When a specific layer is chosen, all the Features contained within the Layer are displayed. More than one feature can be selected using the ‘Control’ key along with the mouse.

6. **Clear Selection.** This option removes any current selection.

**Selection Combination Methods**

The current and new TAZ selections can be combined in 4 different ways:

1. **Create New Selection.** Discard the current selection and just highlight the new selection.

2. **Add to Current Selection.** Append the new TAZ selection to the currently selected TAZs.

3. **Remove from the Current Selection.** Remove any TAZs from the current selection that are also included within the new selection.

4. **Select from the Current Selection.** Only highlight TAZs that are contained within both the current and new selections.

**Buffer**

The Buffer feature of the ‘Select Destination TAZs’ Dialog generates a buffer around the user selection Rectangle, Polyline or Polygon, or around the selected features. All TAZs that fall within the buffer are then used in the selection process. This is useful to select all TAZs within 1 mile of a Route, or within 500 meters of a subset of Bus Stops.
To set the buffer distance, enter the buffer size and units. This buffer will be used for all applicable selection operations until it is reset.

**Scenario | Levels of Service**

This option allows changes to the Levels of Service parameters for the various Time of Day periods and Modes to be defined. The menu option is used to select a specific time of day for which the changes need to be made to the levels of service for different modes. For example, select **Scenario | Levels of Service | Peak** for assigning level of services changes during peak period.

Each Level of Service parameter may have different units. For example, travel cost can be changed either as a percentage of the original value or by an absolute dollar amount.

**Trip Estimate**

With a Trip Estimate scenario, only the levels of service for the Mode being estimated can be entered.

Press the ‘Existing LOS’ button to display the existing level of service for the scenario. The weighted existing levels of service for the estimation Mode are displayed in a dialog.
Mode Shift

For a Mode Shift scenario, any valid level of service can be changed for any defined Mode.
Press the ‘Existing LOS’ button to display the existing level of service for the scenario. The weighted existing levels of service for the defined Modes are displayed in a dialog.

Note: If the Mode Shift scenario is based on a Trip Estimate scenario (as shown at the top of the Dialog), the assumed levels of service for the estimation Mode are shown.

Analysis Menu
This menu deals with the ability to analyze the current Trip Estimate or Mode Shift scenario and view the results.

Analysis | Execute
This option is used to execute the scenario analysis and view the results in a display window. Upon completion, the display window shows the results of the Trip Estimate or Mode Shift analysis.

Trip Estimate
The Trip Estimate Analysis results detail proposed changes in the Levels of Service and the estimated number of trips for the estimation Mode.
To rebalance the model, the equivalent number of trips are subtracted from the non-transit mode(s).

**Mode Shift**

The Mode Shift Analysis results detail proposed changes in the Levels of Service for each of the Modes, and the changes in the Mode trips.
Help Menu
This menu contains copyright information and the help system.

Help | Help
When selected, this option displays the help document for the application.

Help | About
When selected, this option shows the copyright information.
How To...

Create a new Mode Shift Scenario

A new Mode Shift scenario needs to be created to run an analysis on potential level of service changes and to view the results on trips generated between a given set of origins and destinations. Once created, a scenario can then be used for assigning origins, destinations and level of service changes. The steps for creating a new scenario are:

1. Select **File | Create | Mode Shift**.

2. If not currently logged in, the login window opens up. Input the username and password in the login window.

3. The Mode Shift scenario Parameters dialog is displayed:

4. Enter:
   - Scenario name;
   - Scenario description (optional);
   - Trip Purpose;
   - Time of Day;
   - The Trip Estimate that this Scenario will be based upon (optional); and,
   - If the Mode Shift scenario is based on a Trip Estimate scenario, should the Scenario use the same Origins and Destinations as the Trip Estimate?

5. Press OK.

6. Select **File | Save**. The Scenario is now saved.

Open a Mode Shift Scenario

By creating a Scenario, a new model is defined in the system that has its name, description, time of day and trip purpose as basic elements. To run an analysis on a scenario, origins, destinations and levels of service changes need to be defined. In case the desired scenario is
not currently loaded into the application, this option is available to load the scenario. This option will only show all the scenarios previously created under the current login. If there is no scenario created previously, the a new scenario needs to be created (Refer to “Create a new Mode Shift Scenario” in the “How To” section).

The steps for opening a Scenario are:

1. Select File | Open | Mode Shift.
2. If not currently logged in, the login window opens up. Input the username and password in the login window.
3. Select the Mode Shift scenario name to be opened from the list of available scenarios.
4. A Mode Shift Group Layer will be generated showing the selected Origins and Destinations for the scenario. If the Mode Shift scenario is based on a Trip Estimate scenario, the Trip Estimate Origins and Destinations are also displayed.
5. The Mode Shift Group Layer is then inserted into the ArcMap Table of Contents.

Change the Scenario Parameters

Once a scenario is created, the parameters that define it, like the scenario name, scenario description, time of day and trip purpose can be changed in the future. In order to do this, the scenario has to be the currently loaded scenario in the application (Refer to “Open a Mode Shift Scenario” in the “How To” section). Once loaded, the steps for changing scenario parameters are:

1. Select Scenario | Parameters to display the parameters for the current Trip Estimate or Mode Shift scenario.
2. Change the scenario name, description, time of day and trip purpose if desired.
3. Press OK to accept the changes.

Change the Scenario Origin/Destination TAZs

The origins and destinations TAZs represent the origin-destination groups for which the analysis will be run. The changes in the levels of service impact the number of trips on the origin-destination groups for the scenario. To assign origin and/or destination TAZs for a scenario, the scenario needs to be loaded into the application (Refer to “Open a Mode Shift Scenario” in the “How To” section). Once loaded, the steps for choosing origin and destination TAZs for a scenario are:

1. Select Scenario | Origin TAZs to add/change the Origin TAZs.
2. Press OK and verify the origin TAZs layer added to the Scenario Group Layer in the ArcMap Table of Contents.
3. Select Scenario | Destination TAZs to add/change the destination TAZs.
4. Press OK and verify the Destination TAZs layer added to the Scenario Group Layer in the ArcMap Table of Contents.

**Change the Scenario Level of Service**

The changes in the level of service reflect periodic changes that would affect the number of trips generated between origin-destination groups. An example of a level of service change would be if the travel cost for auto increases by 10%. These changes need to be incorporated into a scenario for which the impacts need to be studied. To assign changes in the level of service for a scenario, the scenario needs to be loaded into the application (Refer to “Open a Mode Shift Scenario” in the “How To” section). Once loaded, the steps for assigning the changes in levels of service to a scenario are:

1. Select the appropriate Time of Day under Scenario | Levels of Service to display the Level of Service dialog for the current Trip Estimate or Mode Shift scenario.
2. Add/change the levels of service for the selected scenario.
3. Press OK to accept the changes.

**Analyze a Mode Shift Scenario**

To analyze the impact of levels of service changes to a Mode Shift scenario:

1. Load the Mode Shift scenario (Refer to “Open a Mode Shift Scenario” in the “How To” section).
2. Select Analysis | Execute to run the analysis on the scenario. The results will be displayed in the Analysis results window.
APPENDIX A - GLOSSARY OF TERMS

• ArcMap - The desktop GIS interface inside which the Service Planning Tool resides.
• Analysis - The process that runs the algorithm to evaluate the impact of Level of Service changes for a given Scenario.
• Buffer - A zone defined at a specified distance around feature(s).
• ESRI – Developers of ArcGIS suite of GIS software.
• GIS - Geographic information system (GIS), also known as a geographical information system or geospatial information system, is any system for capturing, storing, analyzing, managing and presenting data and associated attributes which are spatially referenced.
• Level of Service - Level of Service (LOS) is a measure by which transportation planners determine the quality of service on transportation devices, or transportation infrastructure for example: traffic density, travel time etc.
• Scenario - An entity that represents a model for generating trips between origins and destinations.
• TAZs – Traffic Analysis Zone. The basic unit that refers either to an origin or a destination for a trip.
• Trip Purpose - The reason for travel (i.e., Work).
• Time of Day - The period of travel (i.e., AM Peak, Midday).
• XML – eXtendable Markup Language. A general-purpose specification that allows users to define their own elements for custom markup languages and thereby share data across different information systems.
APPENDIX B – SAMPLE XML CONFIGURATION FILE

A sample SPT XML configuration file is shown below. It contains various configuration parameters for the application.

```xml
<?xml version="1.0" encoding="utf-8"?>
<CSsetupConfig xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance>
  <XMLVersion>1.0</XMLVersion>
  <CSApplications>
    <CSApplication>
      <Name>SPT</Name>
      <Version>2.1</Version>
      <Parameters>
        <Parameter>
          <Key>OleDB Connection String</Key>
          <Value>Provider=SQLNCLI;Server=sdesql1;Database=SPT;Uid=dev;Pwd=dev;</Value>
          <Description></Description>
        </Parameter>
        <Parameter>
          <Key>OleDB Database Owner</Key>
          <Value>dbo</Value>
          <Description></Description>
        </Parameter>
        <Parameter>
          <Key>CSS Path</Key>
          <Value>D:\Projects\SPT\SPTGlobal.css</Value>
          <Description></Description>
        </Parameter>
        <Parameter>
          <Key>Helpfile</Key>
          <Value>D:\Projects\SPT\Docs\SPT.chm</Value>
          <Description></Description>
        </Parameter>
      </Parameters>
    </CSApplication>
  </CSApplications>
</CSsetupConfig>
```
APPENDIX C – SAMPLE XML EXPORT FILE

A sample SPT scenario export XML file is shown below.

```xml
<?xml version="1.0" encoding="utf-8"?>
<Scenario>
  <ScenarioID>0</ScenarioID>
  <UserID>3</UserID>
  <Name>New Light Rail</Name>
  <Description />
  <OriginTazs OriginCount="2">
    <TAZ>813</TAZ>
    <TAZ>814</TAZ>
  </OriginTazs>
  <DestinationTazs DestinationCount="7">
    <TAZ>369</TAZ>
    <TAZ>370</TAZ>
    <TAZ>371</TAZ>
    <TAZ>372</TAZ>
    <TAZ>373</TAZ>
    <TAZ>379</TAZ>
    <TAZ>381</TAZ>
  </DestinationTazs>
  <TPurposeID>1</TPurposeID>
  <TPurpose>Homebased Work</TPurpose>
  <TODID>1</TODID>
  <TOD>Peak</TOD>
  <LOSValues ElementCount="2">
    <Element>
      <ModeID>1</ModeID>
      <TODID>1</TODID>
      <LOSID>4</LOSID>
      <TypeID>3</TypeID>
      <IsPercentage>True</IsPercentage>
      <Delta>-10</Delta>
    </Element>
    <Element>
      <ModeID>1</ModeID>
      <TODID>1</TODID>
      <LOSID>11</LOSID>
      <TypeID>3</TypeID>
      <IsPercentage>True</IsPercentage>
      <Delta>-10</Delta>
    </Element>
  </LOSValues>
</Scenario>
```