DaySim Visualizer

Presented by
MILTON LOCKLEAR

12/10/2015
Daysim Step in NERPM_AB1v1

- **What is different?**
  - Trip generation
  - Distribution
  - Mode choice
  - Time of Day

- **DaySim Outputs are**
  - Day activity pattern generation (tours and trips)
  - Destination choice (tours and trips)
  - Mode choice (tours and trips)
  - Time-of-day (tours and trips)
  - Simulated persons and simulated trips (no fractions)
Daysim Output Files

DaySim output files used in Visualizer Tool
# Daysim output tables

| household | | person | | trip | | tour | | person_day |
|-----------|------------------|---------|--------|--------|---------|---------|------------------|
| hhno integer | zone_id integer | id integer | tour_id integer | id integer | person_id integer | id integer | person_id integer |
| fraction_with_jobs_outside integer | double | hhno integer | hhno integer | hhno integer | hhno integer | hhno integer | hhno integer |
| hhsize integer | hhvehs integer | pno integer | pno integer | pno integer | pno integer | pno integer | pno integer |
| hhwks integer | hhftw integer | pptyp integer | pptyp integer | pptyp integer | pptyp integer | pptyp integer | pptyp integer |
| hhret integer | hhoad integer | pagey integer | pagey integer | pagey integer | pagey integer | pagey integer | pagey integer |
| hhsr integer | hh515 integer | pwgend integer | pwgend integer | pwgend integer | pwgend integer | pwgend integer | pwgend integer |
| hhcu5 integer | hhincome integer | pwtyp integer | pwtyp integer | pwtyp integer | pwtyp integer | pwtyp integer | pwtyp integer |
| hhparcel integer | hhexpfac integer | pwpcpl integer | pwpcpl integer | pwpcpl integer | pwpcpl integer | pwpcpl integer | pwpcpl integer |
| hhhsc integer | samptype integer | pwtaz integer | pwtaz integer | pwtaz integer | pwtaz integer | pwtaz integer | pwtaz integer |
| hhref integer | household_day_iz integer | pwauntime double | pwauntime double | pwauntime double | pwauntime double | pwauntime double | pwauntime double |
| hhref integer | dexpfac integer | pwaudist double | pwaudist double | pwaudist double | pwaudist double | pwaudist double | pwaudist double |
| hhref integer | person_id integer | pstyp integer | pstyp integer | pstyp integer | pstyp integer | pstyp integer | pstyp integer |
| hhref integer | household_day_iz integer | psautime double | psautime double | psautime double | psautime double | psautime double | psautime double |
| hhref integer | jrindex integer | psaudist double | psaudist double | psaudist double | psaudist double | psaudist double | psaudist double |
| ownrent integer | househsp integer | puwmode integer | puwmode integer | puwmode integer | puwmode integer | puwmode integer | puwmode integer |
| hhref integer | huwmode integer | puwarrp integer | puwarrp integer | puwarrp integer | puwarrp integer | puwarrp integer | puwarrp integer |
| hhref integer | pwpcl integer | puwandep integer | puwandep integer | puwandep integer | puwandep integer | puwandep integer | puwandep integer |
| hhref integer | pwharrp integer | ptpass integer | ptpass integer | ptpass integer | ptpass integer | ptpass integer | ptpass integer |
| hhref integer | hhref integer | ppaidprk integer | ppaidprk integer | ppaidprk integer | ppaidprk integer | ppaidprk integer | ppaidprk integer |
| hhref integer | hhref integer | pdiary integer | pdiary integer | pdiary integer | pdiary integer | pdiary integer | pdiary integer |
| hhref integer | hhref integer | pproxy integer | pproxy integer | pproxy integer | pproxy integer | pproxy integer | pproxy integer |
| hhref integer | hhref integer | psexpfac integer | psexpfac integer | psexpfac integer | psexpfac integer | psexpfac integer | psexpfac integer |
| household_day | id integer | hhno integer | hhno integer | hhno integer | hhno integer | hhno integer | hhno integer |
| household_day | day integer | day integer | day integer | day integer | day integer | day integer | day integer |
| household_day | dow integer | dow integer | dow integer | dow integer | dow integer | dow integer | dow integer |
| household_day | jttours integer | jttours integer | jttours integer | jttours integer | jttours integer | jttours integer | jttours integer |
| household_day | phtours integer | phtours integer | phtours integer | phtours integer | phtours integer | phtours integer | phtours integer |
| household_day | fhtours integer | fhtours integer | fhtours integer | fhtours integer | fhtours integer | fhtours integer | fhtours integer |
| household_day | hdexpfac integer | hdexpfac integer | hdexpfac integer | hdexpfac integer | hdexpfac integer | hdexpfac integer | hdexpfac integer |

The daysim tables can be joined on keys. E.g. person can be joined to person_day on person_id and person_day person_id.
Please select between the tools below

- **MANAGE SCENARIOS**
  - Upload and define model outputs
  - Edit or delete existing scenario data

- **SQL**
  - Create new SQL views for your analysis
  - Edit or delete existing SQL views

- **ANALYSIS**
  - Graphically view and compare up to two models
  - Store maps, tables and charts for reports

- **REPORTING**
  - Start a new report template
  - Apply existing templates to new modelling scenarios
Manage Scenarios

DaySim: Travel Model Visualizer

New

- Scenario Name
  - Enter scenario name

- Description
  - Enter scenario description

- Analyst/Author
  - Enter scenario analyst/author name

- Special Notes
  - Enter special notes

- Config View
  - Enter config

Submit
Scenario Creation

DaySim: Travel Model Visualizer

New +

Edit Scenario

Scenario Name
Base Scenario

Description
Enter scenario description

Analyst/Author
Enter scenario analyst/author name

Special Notes
Enter special notes

Config View
Enter config

Drop Zip file here

Containing household.tsv, household_day.tsv, person.tsv, person_day.tsv, tour.tsv and trip.tsv
Check the measures you would like to have available throughout the site.

**Auto**
- Home-to-school distance distribution by student type
- Home-to-work distance distribution, by income group
- Home-to-work distance distribution, by worker type
- Number of autos per household, by income group
- Number of autos per household, by number of HH persons age 16+
- Number of autos per household, by number of HH workers
- Number of tours per household-day, by tour purpose
- Total VMT per household-day, by auto availability level
- Total VMT per household-day, by income group
- Total VMT per person-day, by person type

**Custom measures:**
- mode

**Trips**
- Activity time of day distribution, by activity purpose
- Number of activities per household-day, by activity purpose
- Number of activities per person-day, by activity purpose and person type
- Number of trips per household-day, by trip purpose type
- Number of trips per household-day, by trip purpose type
- Trip departure time distribution, by trip purpose type
- Trip distance distribution, by trip purpose type
- Trip mode shares, by trip purpose type
- Trips per household-day by residence location
Map Measures

Check the measures you would like to have available throughout the site.

Auto
- ✔ Autos per household by residence location
- ✔ Average income levels by residence location
- ✔ Average income levels by usual employment location
- ✔ Average school commute distance by residence location
- ✔ Average school commute distance by usual school location
- ✔ Average Vehicles per household per TAZ
- ✔ Average work commute distance by residence location
- ✔ Average work commute distance by usual employment location
- ✔ High income share by residence location
- ✔ High income share by usual employment location
- ✔ High income share by usual employment location
- ✔ Low income share by residence location
- ✔ Low income share by usual employment location
- ✔ Total households per TAZ

Custom measures:
- ✔ Average workers per household in TAZ

Trips
- ✔ Trips per household-day by residence location
- ✔ Trips per person-day by residence location
- ✔ Trips per tour by residence location
- ✔ Trips per tour by tour destination location

Custom measures:
- ✔ Transit ridership age 17 and under
- ✔ Transit ridership age 18-29
Add Measure
New Measure
New Measure

View (defines which tables are going to be joined)
- household
- household day
- person
- person day
- trip
- tour

Columns
First
- Household residence type

Second (optional - ignored for mapping)
- Household workers

Aggregation
- group count
- Average

Conditions

AND OR
- If Household own or rent
  - equal
  - Owned

Copy to advanced

Save
## New Measure

<table>
<thead>
<tr>
<th>Household workers</th>
<th>Own</th>
<th>Rent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21322</td>
<td>43695</td>
<td>65017</td>
</tr>
<tr>
<td>1</td>
<td>284512</td>
<td>56610</td>
<td>341122</td>
</tr>
<tr>
<td>2</td>
<td>158319</td>
<td>18585</td>
<td>176904</td>
</tr>
<tr>
<td>3</td>
<td>2087</td>
<td>2816</td>
<td>4903</td>
</tr>
<tr>
<td>4</td>
<td>4877</td>
<td>2557</td>
<td>7434</td>
</tr>
<tr>
<td>5</td>
<td>1755</td>
<td>319</td>
<td>2074</td>
</tr>
<tr>
<td>6</td>
<td>455</td>
<td>N/A</td>
<td>455</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>N/A</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>473347</td>
<td>124582</td>
<td>597929</td>
</tr>
<tr>
<td>Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">DaySim : Travel Model Visualizer</a></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2 (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Base</td>
<td>Please Select</td>
</tr>
</tbody>
</table>

### Maps
- [Activity time of day distribution, by activity purpose](#)
- [Home-to-school distance distribution by student type](#)
- [Home-to-work distance distribution, by worker type](#)
- [Number of activities per person-day, by activity purpose and person type](#)
- [Home-to-work distance distribution, by income group](#)
- [Number of autos per household, by number of HH workers](#)
- [Number of autos per household, by income group](#)
- [Number of autos per household, by number of HH persons age 16+](#)
### Activity time of day distribution, by activity purpose

### Home-to-school distance distribution by student type

### Home-to-work distance distribution, by worker type

### Number of activities per person-day, by activity purpose and person type

### Home-to-work distance distribution, by income group

<table>
<thead>
<tr>
<th>Distance</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>75K or more</td>
<td>300620</td>
<td>60787</td>
<td>53002</td>
<td>37785</td>
<td>23821</td>
<td>14260</td>
<td>8447</td>
<td>11347</td>
</tr>
<tr>
<td>50K-75K</td>
<td>181000</td>
<td>32890</td>
<td>27280</td>
<td>18826</td>
<td>10966</td>
<td>6025</td>
<td>3987</td>
<td>5504</td>
</tr>
<tr>
<td>15K-50K</td>
<td>352610</td>
<td>46529</td>
<td>33244</td>
<td>20845</td>
<td>11334</td>
<td>6401</td>
<td>3822</td>
<td>5087</td>
</tr>
<tr>
<td>0-15K</td>
<td>130382</td>
<td>9157</td>
<td>4887</td>
<td>2771</td>
<td>1255</td>
<td>681</td>
<td>386</td>
<td>509</td>
</tr>
</tbody>
</table>

### Number of autos per household, by number of HH workers

### Number of autos per household, by income group
### Transit share by age

<table>
<thead>
<tr>
<th>Age</th>
<th>17 and under</th>
<th>18-29</th>
<th>30-64</th>
<th>65 and older</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.09%</td>
<td>30.80%</td>
<td>18.96%</td>
<td>38.35%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### Transit share by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46.61%</td>
<td>53.39%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### Transit share by income

<table>
<thead>
<tr>
<th>Income</th>
<th>less than $25K</th>
<th>$25K-$50K</th>
<th>$50K-$84K</th>
<th>$84K or more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>68.90%</td>
<td>15.65%</td>
<td>8.66%</td>
<td>6.79%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
Analysis - Charts

DaySim: Travel Model Visualizer

Scenario 1
- 2010 Base

Scenario 2 (Optional)
- Please Select

Maps

Charts

Tables

By value ⌂ By percent

Activity time of day distribution, by activity purpose

Home-to-school distance distribution by student type

Home-to-work distance distribution, by worker type

Number of activities per person-day, by activity purpose and person type

Home-to-work distance distribution, by income group

Add to report template

- Income = 75K or more
- Income = 50K-75K
- Income = 15K-50K
- Income = 0-15K

Number of autos per household, by number of HH workers

Number of autos per household, by income group
<table>
<thead>
<tr>
<th>Measure</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit ridership</td>
<td>Income less than $25</td>
</tr>
</tbody>
</table>

Split 5 colors | Greys | N/A Color | Red |

Add to report template
Reporting – Adding a Template

Add Report Template

Enter a template name below. After you have created the template, go to the analysis section to add tables, charts, and maps to the template using the Add to report template links on the analysis page.

Template Name:

Close  Save
### Number of autos per household, by income group

<table>
<thead>
<tr>
<th>HH income</th>
<th>0-15K</th>
<th>15K-50K</th>
<th>50K-75K</th>
<th>75K or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21680</td>
<td>9426</td>
<td>2127</td>
<td>1893</td>
</tr>
<tr>
<td>1</td>
<td>38841</td>
<td>102632</td>
<td>32454</td>
<td>22335</td>
</tr>
<tr>
<td>2</td>
<td>10823</td>
<td>72837</td>
<td>56391</td>
<td>97311</td>
</tr>
<tr>
<td>3</td>
<td>1181</td>
<td>16697</td>
<td>16558</td>
<td>40462</td>
</tr>
<tr>
<td>4</td>
<td>497</td>
<td>6085</td>
<td>5015</td>
<td>15856</td>
</tr>
</tbody>
</table>

### Number of autos per household, by number of HH persons age 16+

### Number of tours per household-day, by tour purpose
Reporting – Editing the Template

**DaySim: Travel Model Visualizer**

**Select Report Template**
- Report 1

**Apply scenarios to template**
- Scenario 1
- Scenario 2
- Please Select

**Report information (header in the export)**

**Name:** Report 1

**Description:**
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

**Delete Report**

**Report Elements**

**Element Header:** Table header

**Element Text:**
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

<table>
<thead>
<tr>
<th>HH Income</th>
<th>0-15K</th>
<th>15K-59K</th>
<th>50K-75K</th>
<th>75K or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21680</td>
<td>9425</td>
<td>2127</td>
<td>1893</td>
</tr>
<tr>
<td>1</td>
<td>38841</td>
<td>102632</td>
<td>32464</td>
<td>22335</td>
</tr>
<tr>
<td>2</td>
<td>10823</td>
<td>72837</td>
<td>56381</td>
<td>97311</td>
</tr>
<tr>
<td>3</td>
<td>1161</td>
<td>16697</td>
<td>16558</td>
<td>40462</td>
</tr>
<tr>
<td>4</td>
<td>497</td>
<td>6085</td>
<td>5615</td>
<td>15856</td>
</tr>
</tbody>
</table>

**Element Header:** Map header

**Element Text:**
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
Report 1
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Table header
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

<table>
<thead>
<tr>
<th>HH income</th>
<th>0-15K</th>
<th>15K-50K</th>
<th>50K-75K</th>
<th>75K or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21680</td>
<td>9426</td>
<td>2127</td>
<td>1893</td>
</tr>
<tr>
<td>1</td>
<td>38841</td>
<td>102632</td>
<td>32045</td>
<td>232236</td>
</tr>
<tr>
<td>2</td>
<td>10823</td>
<td>72837</td>
<td>56391</td>
<td>97311</td>
</tr>
<tr>
<td>3</td>
<td>1181</td>
<td>16697</td>
<td>16558</td>
<td>40462</td>
</tr>
<tr>
<td>4</td>
<td>497</td>
<td>6085</td>
<td>5015</td>
<td>15856</td>
</tr>
</tbody>
</table>

Map header
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
http://www.fsutmsonline.net/index.php?/model_pages/comments/nerpm_ab_version_1/

NERPM-AB version 1.0 model is available for download below:

The file includes the 2010 base-year scenario, and the 2030 and 2040 future-year scenarios.

Click a file below to download:

NERPMAB1.zip (Released on 07/23/2015)

INSTALLATION
For installation instructions please visit
https://rsginc.atlassian.net/wiki/display/NRPMAB/NERPM+Home+Page
NERPM Home Page
Created by Stephen Lawe, last modified on Jun 12, 2015

NORTHEAST REGIONAL PLANNING MODEL: ACTIVITY BASED

PREPARED FOR: North Florida Transportation Planning Organization

SUBMITTED BY: RSG

Recent space activity
Stephen Lawe

- SUPPORT updated Sep 16, 2015 • view change
- FREQUENTLY ASKED QUESTIONS updated Sep 16, 2015 • view change
- NERPM Home Page updated Jun 12, 2015 • view change
- 6.0 CONFIGURING A SCENARIO created Jun 01, 2015
- 5.2 RUNNING THE MODEL updated Jun 01, 2015 • view change
SUPPORT

Created by Stephen Lawe, last modified on Sep 16, 2015

For support, please first check "Frequently Asked Questions". If additional information is needed, please click the link below.

NERPM_Support@rsginc.com

Thank you very much.
FREQUENTLY ASKED QUESTIONS

Created by Stephen Lawe, last modified on Sep 16, 2015
**NERPM_AB1v1 Improvements**

**Completed:**
- Runtime
  - Feedback Loops: One less loop
  - Highway Traffic Assignments: Amended assignment sequences
- Assignment Parameters: tighter convergence 0.0001 relative gap

**Post Process Analysis**
- Select Links Analysis
- Ability to save Skim files

- Interim population synthesis data sets from 2010 thru 2040

**Testing Mode:**
- Tools
  - Visualizer Tool
  - Editing Tool

**Planned:**
- Update Freight Tables
THANK YOU!

MILTON LOCKLEAR
mlocklear@NorthFloridaTPO.com
904-306-7503