

DaySim Features Comparison

Feature	----- DaySim Version -----		
	Person	Household	Copenhagen
MODEL COMPONENTS			
Long term models			
Usual work location	y	y	y
Usual school location	y	y	y
Auto ownership	y	y	y
Transit pass ownership	y	y	y
Pay to park at usual workplace	y	y	y
Day models			
Primary family priority time (quality at-home family time)			y
Household day pattern type		y	y
Joint half tours to work and school		y	y
Joint non-mandatory tours		y	y
Person-day activity pattern	y	y	y
Tour and trip models			
work-based subtours	y	y	y
tour destination	y	y	y
tour mode	y	y	y
tour destination arrival and departure times	y	y	y
intermediate stop generation	y	y	y
intermediate stop location	y	y	y
trip mode	y	y	y
trip arrival or departure time	y	y	y
Model features			
user-controlled model coefficient values via coefficient files	y	y	y
user-specified units of money (default \$), distance (default miles) and length (default feet)	y	y	y
constrained usual work location and school location choice via shadow pricing	y	y	y
work location availability reduced by exogenous external-to-internal flows	y	y	y
worker simulated days reduced by exogenous internal-to-external flows	y	y	y
importance-weighted destination sampling with user-specified sample sizes	y	y	y
Joint (nested) tour mode-time model		y	y
Flexible nesting of tour destination, mode and time structure			y
Number of tour arrival and departure time periods	48	6	6
Length of modeled trip arrival and departure time periods	30	10	10
Departure and arrival times simulated to the minute	y	y	y
Rigorous time window accounting	y	y	y
Distributed value of time	y	y	y
user-specified time and cost impedance parameters with nonlinear income-based VOT function	y	y	y
user-specified transit discount levels for various categories of children, students and seniors	y	y	y
Person types			
Number	8	8	7
Full time worker	y	y	y
Part time worker	y	y	y
Retired adult	y	y	y

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Nonworking adult	y	y	y
University student	y	y	
Driving age student	y	y	
University/gymnasium student			y
Child age 5 through 15	y	y	y
Child under age 5	y	y	y
Activity purposes			
Number of purposes	7	9	7
Work/business	y	y	
Work			y
Business			y
School	y	y	y
Escort	y	y	y
Personal Business/Medical	y		y
Personal business		y	
Medical		y	
Shopping	y	y	y
Meal	y	y	
Social/Recreational	y		y
Social		y	
Recreation		y	
Modes			
Walk	y	y	y
Bike	y	y	y
SOV	y	y	y
HOV2	y	y	
HOV3+	y	y	
Transit	y	y	y
Park and Ride	y	y	y
School bus	y	y	y
HOV Driver			y
HOV Passenger			y
Transit access path types			
Walk	y	y	
Park and ride	y	y	
Bike-park-ride-walk			y
Bike-park-ride-bike			y
Bike on board			y
Other transit access features			
Explicit walk access and egress with transit terminal choice		y	y
Explicit park and ride lot choice	y	y	y
park and ride lot capacity and shadow pricing	y	y	y
Bike access/egress and bike-on-board with transit terminal choice			y
SPATIAL DATA FEATURES			
Supports zone, microzone or parcel-based spatial data	y	y	y
Uses calculated buffer areas surrounding parcel or microzone centroid	y	y	y

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Uses all-streets network distance between parcels or microzones to improve zone-to-zone impedances	y	y	y
Parcel or microzone employment categories			
Number of categories	9	9	7
Education	y	y	y
Food	y	y	
Government	y	y	y
Industrial	y	y	y
Medical	y	y	
Office	y	y	y
Retail	y	y	y
Service	y	y	y
Agriculture and Construction	y	y	y
School enrollment categories			
K through 8	y	y	y
High school	y	y	y
University	y	y	y
Interfaces to external software			
coefficient files correspond to ALOGIT output form (f12)	y	y	y
Estimation mode generates ALOGIT data and control files	y	y	y
TransCAD matrix I/O supported	y	y	y
Cube matrix I/O supported	y	y	y
HDF5 I/O formats supported	y	y	y
User-specified impedance time periods, modes, and VOT categories	y	y	y
Runds as batch process in Microsoft Windows operating environment	y	y	y
Run options			
Random seed synchronization across runs	y	y	y
Run with specified fraction of the synthetic population	y	y	y
User-specified number of multithreads	y	y	y
exclude long term models from run	y	y	y