# Q2 Please describe the terms of the generalized cost function used to find shortest paths (e.g., time, tolls, auto operating cost, other).

Answered: 20 Skipped: 1

| # | RESPONSES | DATE |
|---|---|---|
| 1 | Time + Tolls | 10/25/2017 2:46 PM |
| 2 | Relative weighting of value of time and value of reliability | 10/22/2017 8:23 PM |
| 3 | GC = time (min) + (opcost($/km)*length(km) + tolls ($))*1/VOT(min/$) | 10/19/2017 11:48 AM |
| 4 | includes time and tolls (converted to time via vot) | 10/18/2017 10:23 AM |
| 5 | time + time equiv of toll | 10/17/2017 3:16 PM |
| 6 | time only | 10/17/2017 10:18 AM |
| 7 | The initial value for TIME along with the toll cost (monetized travel time) on the link is used to fill the cumulative cost of travel in the AB and BA direction for both the peak and off-peak periods by class (Auto and Truck) when TOD models are created (otherwise, daily models are typical in most small-to-medium study areas in Texas). The toll costs (if these exist) can be found in Auto_Toll_Cost and Truck_Toll_Cost input network attribute fields. Any toll cost for either the auto or truck class must be entered manually as a part of the network update process. Since tolls are expressed in dollars, TexPACK (TxDOT's model application system) uses two parameters from the Traffic Assignment stage to convert the minutes to dollars (monetized cost). These two parameters are Auto_VOT and Truck_VOT (Value of Time). The directional peak and off-peak cumulative impendences are dynamically updated based on the congested conditions resulting from the application of the traffic assignment stage after the initial impendences are updated by the Speed/Capacity utility. Auto Operating Cost are not included in the generalized cost function, per Caliper guidance. | 10/17/2017 7:52 AM |
| 8 | use a GC function with Time and Tolls for both non-toll and toll paths | 10/16/2017 2:16 PM |
| 9 | The VOT for autos were calculated by time period based on VOT by purpose and distribution of highway journeys by purpose over the day. | 10/16/2017 8:35 AM |
| 10 | Time, VOT, VOC, distance | 10/16/2017 8:19 AM |
| 11 | Highway shortest path is based on time. Costs are converted to time based on the VOT. We do not consider operating cost in our highway assignment path building. However, our mode choice model does use operating cost as well as out of pocket. Our transit assignment path building (TransCAD - PathFinder) is also based on time with all costs converted to time. | 10/16/2017 5:21 AM |
| 12 | time + distance (voc) + tolls | 10/15/2017 1:40 AM |
| 13 | vehicle operating costs = fuel plus maintenance costs plus labor time costs, including delay costs based on delivery time variability. | 10/13/2017 3:39 PM |
| 14 | I like to use GC = free-flow time + B1*delay + B2* tolls + B3*distance, where B1 is a parameter that varies by vehicle class, B2 is a parameter that varies by VOT class, and B3 is a parameter that varies by both vehicle class and functional class or facility type. I have used GC both simpler and more complex than this but I think this is a good general specification using perceived time as a proxy for reliability rather than more complex reliability measures. It's not only simpler but theoretically nicer, too. | 10/13/2017 3:03 PM |
| 15 | generalized path by purpose and vehicle occupancy time+toll (point\OD\link)+auto operating cost for some models, recently distance was removed since in congested areas it caused odd routing | 10/13/2017 2:58 PM |
| 16 | time, tolls, auto operating cost; auto operating cost rate per mile is segmented by facility type and whether maintained by a toll or managed lane operator. Different factors are applied for 2010 and 2015 auto operating cost rates to reflect observed differences in fuel prices. | 10/13/2017 2:37 PM |
| 17 | N/A | 10/13/2017 2:36 PM |
| 18 | generalized cost = TIME + DISTANCE X {AUTO OP COST}/{VOT} | 10/13/2017 2:30 PM |

| | | |
|---|---|---|
| 19 | cost is time plus toll (converted to time). | 10/13/2017 2:20 PM |
| 20 | like tolls, link tolls with distance based caps, ramp-to-ramp tolls | 10/13/2017 2:18 PM |