How to use statistical models in PTM

1. Travel time:
2. Establish relationships of travel time and environmental conditions
3. At particular moment/location, calculate the travel time. This will be mean travel time for this particular moment/location
4. Assume that travel time at this moment/location follows Gaussian distribution with (σ = 1 should be varied??? and μ = mean travel time calculated @ step 2).
5. Pick a random number from a uniform distributed (0,1) random number generator.
6. Using the random number as the probability to calculate x from a standard Gaussian (σ = 1, μ =0) distribution.
7. Subtract this travel time from particle travel time to calculate particle swimming velocity
8. Adjust swimming velocity through the simulation to match up the travel time from the statistical model
9. Survival rate:
10. Follow the fish track locations (specific locations or nodes???) to calculate survival rates
11. Pick a random number, if less than the number survive
12. Route selection