

Lab: PTV Vissim Tutorial

Hayden Atchley

18 September 2023

I created a working local simulation of the Vissim “First Steps” model by following the steps in the tutorial. This model is of an intersection near the PTV Group headquarters in Karlsruhe, Germany. See Figure 1 for imagery of the site.



Figure 1: Aerial imagery of modeled site.

Each iteration of the simulation ran for 30 minutes after a 5-minute startup period in order to allow the network to become loaded. The simulation ran for 10 iterations, and the delay measurements are presented in Table 1.

Table 1: Delay Measurements of Model

Run	Delay per Vehicle (s)	Total Delay (s)
1	32.61	22,596
2	31.46	22,651
3	30.51	22,792
4	28.07	20,017
5	30.41	21,315
6	32.66	21,851
7	26.61	19,157
8	30.35	20,459
9	29.50	22,509
10	30.34	20,690
AVG	30.25	21,404

The average delay per vehicle across all iterations is 30.25 seconds, which according to the Highway Capacity Manual's Level of Service values Table 2 rates this intersection at LOS C. This is generally desirable, and represents a serviceable intersection that is not over-designed.

Table 2: Signalized Intersection Level of Service

LOS	Delay per Vehicle
A	10 sec
B	10–20 sec
C	20–35 sec
D	35–55 sec
E	55–85 sec
F	>80 sec