

# Interactive Web-based Visualization for Accessibility Mapping of Transportation Networks

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## Abstract

*This supplemental material comprises precise timing measurements for the performance evaluation and comparison.*

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	4292	75.365	1.140	0.350	76.855
2	162	88	19203	68.385	3.515	1.055	72.955
3	671	359	79682	101.800	13.040	4.005	118.845
4	1901	1006	227113	174.095	34.350	10.765	219.210
5	3543	1880	422843	292.065	62.375	21.205	375.645
6	6547	3484	780938	492.710	114.460	38.460	645.630
7	10454	5568	1245175	978.010	170.040	58.675	1,206.725
8	14874	7950	1764089	915.515	199.655	64.955	1,180.125
9	20202	10813	2390039	1,216.260	268.255	87.875	1,572.390
10	25821	13829	3051326	1,567.105	345.165	112.765	2,025.035

**Figure 1:** Timings for Leaflet line rendering approach using Firefox browser (version 44.0).

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	4292	45.200	11.055	1.405	57.660
2	162	88	19203	134.055	58.585	9.870	202.510
3	671	359	79682	91.740	178.215	29.425	299.380
4	1901	1006	227113	155.660	421.640	74.110	651.410
5	3543	1880	422843	274.255	821.380	147.415	1,243.050
6	6547	3484	780938	380.240	1,468.445	266.895	2,115.580
7	10454	5568	1245175	608.895	2,199.270	392.185	3,200.350
8	14874	7950	1764089	759.975	3,066.625	536.890	4,363.490
9	20202	10813	2390039	1,045.760	4,274.105	789.865	6,109.730
10	25821	13829	3051326	1,896.485	5,200.065	914.190	8,010.740

**Figure 2:** Timings for Leaflet line rendering approach using Chrome browser (version 48.0).

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	4292	26.000	84.000	292.975	402.975
2	162	88	19203	54.000	136.450	294.685	485.135
3	671	359	79682	95.000	242.255	305.135	642.390
4	1901	1006	227113	136.000	412.095	335.030	883.125
5	3543	1880	422843	222.000	692.355	507.010	1,421.365
6	6547	3484	780938	382.000	1,265.080	909.875	2,556.955
7	10454	5568	1245175	571.000	1,832.860	1,250.630	3,654.490
8	14874	7950	1764089	941.000	2,721.000	2,192.000	5,854.000
9	20202	10813	2390039	1,030.000	3,372.600	3,535.555	7,938.155
10	25821	13829	3051326	1,800.000	2,996.470	6,359.515	11,155.985

**Figure 3:** Timings for the GeoJSON-based approach using Firefox browser (version 44.0).

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	4292	23.660	59.915	251.585	335.160
2	162	88	19203	26.040	85.480	274.760	386.280
3	671	359	79682	58.680	283.025	247.165	588.870
4	1901	1006	227113	116.710	433.115	285.985	835.810
5	3543	1880	422843	187.260	660.120	261.875	1,109.255
6	6547	3484	780938	299.400	1,504.855	289.140	2,093.395
7	10454	5568	1245175	499.290	1,693.070	281.230	2,473.590
8	14874	7950	1764089	790.700	2,259.295	311.270	3,361.265
9	20202	10813	2390039	2,060.000	3,131.565	284.100	5,475.665
10	25821	13829	3051326	1,190.000	3,643.855	289.885	5,123.740

**Figure 4:** Timings for the GeoJSON-based line rendering approach using Chrome browser (version 48.0).

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	3723	76.760	0.135	0.320	77.215
2	162	88	16222	89.875	0.155	0.440	90.470
3	671	359	67436	86.920	0.155	0.500	87.575
4	1901	1006	190813	135.060	0.190	0.655	135.905
5	3543	1880	356062	194.555	0.255	1.220	196.030
6	6547	3484	658275	311.535	0.360	1.910	313.805
7	10454	5568	1051718	530.575	0.495	3.015	534.085
8	14874	7950	1496876	673.100	0.595	1.840	675.535
9	20202	10813	2038677	808.795	0.715	2.395	811.905
10	25821	13829	2520067	1,230.385	0.855	3.115	1,234.355

**Figure 5:** Timings for the glTF-based approach using Firefox browser (version 44.0).

selected_travel_time [min]	vertices [1]	edges [1]	data_size [b]	transmission [ms]	mapping [ms]	rendering [ms]	total [ms]
1	36	20	3723	28.990	0.415	1.800	31.205
2	162	88	16222	58.500	0.575	2.175	61.250
3	671	359	67436	80.925	0.670	3.165	84.760
4	1901	1006	190813	136.755	0.800	4.760	142.315
5	3543	1880	356062	184.235	1.345	4.465	190.045
6	6547	3484	658275	292.680	1.820	4.125	298.625
7	10454	5568	1051718	426.690	1.865	3.510	432.065
8	14874	7950	1496876	585.160	2.735	3.975	591.870
9	20202	10813	2038677	889.675	4.090	3.095	896.860
10	25821	13829	2520067	1,112.555	5.045	7.960	1,125.560

**Figure 6:** Timings for the glTF-based approach using Chrome browser (version 48.0).