How the TravelTime platform works

Each month the TravelTime platform calculates travel times to over a billion locations, returning results in milliseconds.

The TravelTime platform helps our customers (and their customers) to query locations by travel time. It calculates journeys 'as humans travel' because, well, we built it to help humans. A chemist can display the branch you can actually reach by bus before it closes. An HR team can understand the impact of an office move on each employee's commute. Each human is unique and so is each TravelTime search.

1 DATA
We build a database of every road, bus and train station, traffic light, footpath, cycle lane etc. Then we add data from 1000's of sources – such as all public transport timetables.

2 CRUNCH
We crunch all this raw data with our own models to find and cleanse any errors (which we report back to the data provider).

3 REPROCESS
We reprocess everything twice a week and check for historical differences. We verify all changes.

4 SPEED
When we know the core data is current and correct, we add travel speed profiles for all modes of transport. Some profiles are our own, some are industry standards.

5 HUMAN
At this point, we know how humans will actually travel on every possible route, by each mode of transport.

6 COMBINE
We then combine these modes so a single journey can include several different transport modes (e.g. walk + bus + train + subway + walk).

7 FACTORS
We accommodate a range of external factors such as time of day and the various international geographies.

8 TOP SECRET
Then we launch our secret algorithms and library to make this data searchable by a user's choice of travel time and transport mode, and return instant results.

9 SERVERS
We send all the data to relevant (dedicated) servers, based on geographic location.

10 SERVICES
We enable our API to deliver all these services at massive scale using the AKKA + Play Framework.

a. Travel modes within the API include:
　　i. Driving (peak & off-peak)
　　ii. Train, Bus, Ferry,
　　iii. Cycling,
　　iv. Coach,
　　v. Walking.

b. Features within the API include:
　　i. Search by thousands of latitudes and longitudes by any mode of transport and travel time for results in under a second.
　　ii. Create travel time maps,
　　iii. Create unions & intersections of areas by time.
　　iv. Download postcode data from inside TravelTime areas.
　　v. Calculate fuel season ticket cost data.

11 MONITOR
Second by second, we monitor the platform's speed and performance. Client by client & search by search.

12 IMPROVEMENTS
And we apply Kaizen methods to continuously improve the TravelTime platform.

iGeolise
Location. Simplified.