

TARA - for geocoding and cleaning your travel survey data

We have developed the **T**ransport **A**ddress **R**esolving **A**pplication (TARA) as a comprehensive solution for cleaning and geocoding travel survey data in an integrated computer system.

The challenge

Getting accurate data is an important aspect of all large-scale travel surveys, yet this information is often difficult to obtain. Travel surveys are both expensive and time consuming to undertake. Survey responses are often incomplete or inaccurate. While most people know the post code for their own home and place of work, how many of us could supply complete addresses for our local shopping centre, railway station or doctor's surgery, if asked?



TARA - The effective solution

Our Transport Address Resolving Application (TARA) is a single, integrated, and sophisticated application for cleaning and outputting survey data for transport planning purposes.

The main benefits of using TARA are:

- fast, accurate, and consistent geocoding of your survey data using the Post Office Address File (PAF);
- high quality GIS mapping;
- integrated customisable gazetteers;
- output data formatted to your requirements - easting, northing, full postcode, other fields.

How TARA works

TARA cleans survey data in a three-stage process.

- Stage 1: Auto Clean Addresses;
- Stage 2: Manual Cleaning By Geocoding Team Using TARA's Cleansing Tools;
- Stage 3: Post-Processing Algorithms.

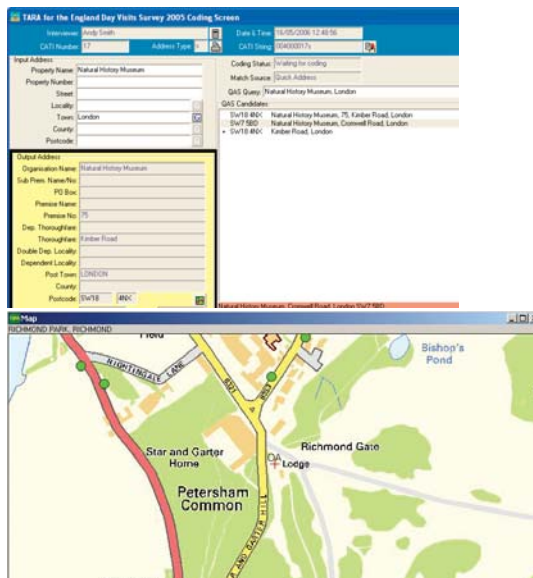
TARA's first pass is to 'auto-clean' addresses using advanced address cleaning algorithms. The records that fail the auto-cleaning are then passed to the geocoding team for stage two.

TARA provides each member of the geocoding team with an integrated set of tools that enables them to clean quickly the remaining addresses manually.

The tools include gazetteers (place names, localities, businesses, airports, and ports), an address capture tool (QuickAddress) and an advanced mapping (GIS) display. Geocoder performance can be monitored by supervisor users.

In stage three the minority of addresses remaining, are post-processed by TARA, to resolve all outstanding addresses using location intelligence.

All of TARA's address data, gazetteer data, and mapping data can be customised for your particular project and data output requirements.



TARA in action - recent data cleaning projects

TARA was originally developed for the London Area Travel Survey 2001 (LATS) - a large scale household travel diary survey and on-mode surveys of passengers travelling by road, bus and rail, managed by Research International. The survey data processing included attaching geocodes to the trip origin, trip destination and home addresses to provide Transport for London (TfL) with accurate reports on travel behaviour.

We also supported Research International in large scale geo-coding for the National Rail Travel Survey on behalf of the Department for Transport (DfT). We provided modifications to the TARA software to function on a national scale, as well as support and maintenance for the system.

We handled geo-coding for the Natural England's England Day Visit Survey using a modified version of TARA to enable use during telephone interviews (CATI).

The TARA software has also been applied to surveys on Congestion Charging in London and to local studies in Edinburgh, Dumfriesshire, and Clydebank.

We undertook modifications to the TARA software in support of the 2009 programme of on-bus surveys, and in support of the 2009 programme of roadside interviews. Once the modifications had been completed, we installed the systems at Transport for London (TfL), trained their staff in their use, and provided on-going support and maintenance.

