

GeoJob – Developer Manual

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2 OVERVIEW

This manual covers the technical design of the GeoJob system. For information on basic access and usage of the system, please see the user manual. The technical components can be divided into the following categories: UniData files, SB/XA processes, SB/XA definitions and code files. Each of the categories will be explored in this document.

3 UNIDATA FILES

The following is a list of all the UniData files created specifically for use by GeoJob.

- EMPLOYEES
- JOBS
- LOCATIONS
- PARTS
- VEHICLES

The file names are the only explanation required to get a basic idea of what each file stores. For a list of fields, please check the relevant dictionary file within UniData. The LOCATIONS file is central to the overall system because many other files reference records within it.

4 CODE FILES

- GEOJOB/PP/postcode.py – Converts a UK postcode to a latitude and longitude for internal use.
- GEOJOB/PP/route_planner.py – Main script that plots efficient routes through jobs based on their location, time since the job was filed and the job start date if provided.
- GEOJOB/WEB/index.html – HTML file describing the web interface.
- GEOJOB/WEB/geojob.css – CSS file describing the style for the web interface.
- GEOJOB/WEB/geojob.js – JavaScript file tasked with retrieving route data from SB/XA and rendering it on a Google Map.

5 SB/XA PROCESSES

5.1 SELECTION

- JOBS.SEL – Select all jobs.
- LOCATION.SEL – Select all locations.
- OUR_LOCATIONS.SEL – Select all locations where OUR_FACILITY is 'y'.
- OUR_LOCATIONS_DESC.SEL – Select all location descriptions where OUR_FACILITY is 'y'.
- PART.SEL – Select all parts.
- VEHICLE_REG.SEL – Select all vehicles.

5.2 PARAGRAPH

- P.CONVPOSTCODE – Convert postcodes to latitudes and longitudes and update routes accordingly.
- P.SET_CHANGED – Set the CHANGED flag in a location record to indicate that latitudes and longitudes should be recalculated from the provided postcode.

5.3 INPUT SCREENS

The following process names are presented in the format I**FILE_NAME***DEFINITION_NAME*.

- I*EMPLOYEES*ADD_EMPLOYEE
- I*JOBS*EDIT_JOB
- I*LOCATIONS*ADD_LOCATION
- I*PARTS*ADD_PART
- I*VEHICLES*VEHICLE_INPUT

5.4 REPORT WRITER

R*JOBS*PRIORITY_VIEW is the basic route viewer report process.

5.5 SHELL WRAPPER

- S.CONV_POSTCODE - Executes the Python script in GEOJOB/PP/postcode.py that converts UK postcodes into latitudes and longitudes.
- S.ROUTE_PLANNER – Executes the Python script in GEOJOB/PP/route_planner.py that plots efficient routes through the active jobs.