

Task 4: Connecting and analysing the various results – Gate Transformer and Space-movement correlation analysis

Description

This exercise introduces the Gate Transformer tool and the QGIS spatial join functions to produce a simple space-movement correlation analysis. This exercise requires the pedestrian count dataset, the OS Meridian2 line analysed dataset and the catchment network dataset from the previous exercise.

1) Prepare the project

- a) Make the Pedestrian counts layer visible
- b) Make the OS Meridian2 analysed road centre line visible
- c) Make the Catchment network layer visible

2) Run Gate Transformer – Resize

- a) The aim of this step is to resize the movement gates so it has a constant length for visualisation
- b) Start the "Gate transformer" tool by clicking on the gate transformer button or go to "SSToolkit" -> "Gate Transformer"
- c) Select the "Pedestrian count" layer
- d) Click on the "resize" radio button
- e) Set the length to "25" metres
- f) Click 'Transform'
- g) This resizes the movement gates to the same length of "25" metres

3) Visualise the Pedestrian counts layer

- a) Start the "Attributes Explorer" SST tool
- b) Select the newly created join layer
- c) Select "Symbology" tab
- d) Select the "Pedmov" attribute
- e) Set colour range as "Classic"
- f) Increase the line width to 0.5
- g) Set Intervals to "Equal Intervals"

- h) Click the "Apply Symbology" button
- i) This is the standard display for the pedestrian movement data
- j) You can add arrows by going to the 'Style' panel of the layer
- k) Save an image of the map window

4) **Run Gate Transformer - Rotate**

- a) The aim of this step is to rotate the movement gates so it intersects with the segment layer
- b) Start the "Gate transformer" tool by clicking on the gate transformer button or go to "SSToolkit" -> "Gate Transformer"
- c) Select the "pedestrian count layer"
- d) Click on the "rotate" radio button
- e) Set the angle at "90" degrees
- f) Click 'Transform'
- g) The gates are now rotated by "90" degrees.
- h) If the gates do not intersect with the segment layer, rotate again with a different angle until it intersects.
- i) Make sure the gates intersect the correct corresponding segment.

5) **Pedestrian count gate and space syntax measures spatial join**

- a) The aim of this step is to join the pedestrian count gate data layer and the OS Meridian2 analysed map
- b) Go to the "vector" menu at the top - "data management tools" - "join attributes by location"
- c) Select the "pedestrian count" layer as target layer
- d) Select the "OS Meridian2 analysed" layer as join vector layer
- e) Check the intersect button
- f) Leave the other parameters as default
- g) Press run to create a temporary join layer
- h) The temporary layer contains both the movement data and the space syntax measures where the two intersect

6) **Pedestrian count gate and catchment analysis spatial join**

- a) The aim of this step is to join the pedestrian counts gate data layer and the catchment analysis map
- b) Go to the "vector" menu at the top - "data management tools" - "join attributes by location"

- c) Select the “pedestrian count layer” as target layer
- d) Select the “catchment network layer” as join vector layer
- e) Check the intersect button
- f) Leave the other parameters as default
- g) Press run to create a temporary join layer
- h) The temporary layer shows both the movement data and the distance to tube stations where the two intersect

7) Statistical scatterplot analysis of two variables

- a) Start the "Attributes Explorer" SST tool
- b) Select one of the newly created join layer
- c) Select "Charts" tab
- d) Select "Scatter plot" button
- e) Under numeric attributes or X-axis, select "INT" (or the name of a tube station)
- f) Under Y-axis, select "Pedmov"
- g) The scatterplot shows the regression line, the equation of the line and the r^2 (goodness of fit)