

QGIS workflow – Unravelling the Threads of Connectivity, Journal of Archaeological Science

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Shortest path (point to layer) algorithm

- 1) Run as batch process to calculate from any point in Icrates vector layer to all other points
- 2) Start point: add value by expression + fill down

Add values by expression:

```
aggregate(layer:='ICRATES_Sites',  
          aggregate:='array_agg',  
          expression:=$geometry  
)
```

- 3) Shortest path: TEMPORARY_OUTPUT
- 4) Topology tolerance: 0,15
- 5) Merge vector layers → single layer

Least cost path analysis

- 1) Rasterize Orbis vector: GDAL rasterize (vector to raster) algorithm
 - a. Input layer: ORBIS
 - b. Field for burn-in value: s
 - c. Width/horizontal resolution: 1
 - d. Height/vertical resolution: 1
 - e. Output raster size units: Georeferenced units
 - f. Rest default settings
- 2) Least Cost Path algorithm
 - a. Cost raster layer: Orbis_Rasterized
 - b. Cost raster band: Band 1
 - c. Start point layer: ICRATES_Sites (iterate)
 - d. End point layer: ICRATES_Sites
- 3) Merge vector layers