Flowmap Questions & Answers

Version 1.03 - september 2023 - TdJ

Analysis | Regular Catchment Area Analysis

- **Can Catchment Areas overlap?**
- No, by definition origins or destinations are assigned once only to the nearest facility that has sufficient capacity. Trade Areas, however, can overlap.

Analysis | Transport Network Analysis

- **There are islands in my study area, can I still apply transport network analysis?**
- Yes, but to test connectivity either ferry links need to added or exactly one extra central origin/destination in each unconnected island must be selected

Conversions | BNA | BNA -> MapInfo (MIF)

- **When done in Flowmap geometric results need to be made available in ArcGIS for post processing, what is the correct procedure?**
- Flowmap has no direct function for producing Shape Files, but Flowmap geometric data sets can be converted to MapInfo Interchange Files (MIF) that can be directly used (or imported) in ArcGIS using the Data Interoperability Tool. When converting from Flowmap to MIF the options are either to add all necessary information about the Geographic or Projected Coordinate System in Flowmap (and have ArcGIS use this included coordinate system information on import) or to go for the "Unknown Projection" option Flowmap (and See Tips & Tricks on how to add the coordinate system information in ArcGIS). See "Tables | Copy Fields across Tables" section for making Flowmap attribute data available in ArcGIS

Conversions | Shape File to BNA

- **Is it always correct to cut off the transport network at the boundary of the study area?**
- No, even if both origin and destination are inside the study area the connecting shortest (/quickest /cheapest) path may very well travel partly on the outside. For instance, the shortest path between the Dutch cities Terneuzen and Maastricht travels largely through the neighboring country Belgium. Depending on the research topic the transport network should always contain the actual shortest path between all origins and their (potentially) relevant destinations.

Imports | BNA -> Flowmap

- **Flowmap reports many (overpass and bypass) topological errors in my dataset, can I ignore these and continue regardless?**

- No, if your dataset concerns polygons (areas) try cleaning the data first (Edits / Clean). If your dataset concerns lines (transport network) it depends on the source. Data harvested directly from Open Street Map may contain many of both overpass and bypass topological errors and needs to be split first (Edits / Split) to revive all intersections to full functionality. In case the data is obtained from car navigation sources, roads with two-way traffic may simply be fully duplicated once in each direction thereby generating mostly overpass errors in Flowmap. In this case the data must be adjusted to the Flowmap approach (one geometric line with two attributes that contain the impedance (length / time / cost) in each of the geometric directions (negative value denies passage). Note: topological error locations are automatically stored as BNA point files so in case there is just a few it might be considered to investigate if there are any concentrations that could be addressed by hand or duplications that can be removed before conversion to Flowmap. See Support for more information

Preparations | Create Network Distance Table

- **Some roads are not physically connected to the main body of the transport network; do they need to be removed before import into Flowmap?**
- No, in case the missing connections are not based on an error but for instance caused by border effects they can be left in provided they are deactivated before the table creation by overwriting the access attribute all unconnected segments with a negative value. See Tips & Tricks topic "Deactivating unconnected network segments".

- **There are unconnected islands in my study area. Can I still create a transport network distance table that works for all Flowmap functionality?**
- No, impossible connections are marked with a negative distance value that can't be handled by several functions like potential value measures and gravity modelling. To avoid these problems is it better add ferry links (or bogus connections) with (impossibly) high distance values.

Tables | Copy Fields across Tables

- **When done in Flowmap attribute results need to be made available in ArcGIS for post processing, what is the correct procedure?**
- Attribute data created in Flowmap is stored in a *Flowmap*1.dbf (for point & polygon data) or a *Flowmap*3.dbf (for line data). The matching table in ArcGIS would be a ShapeFile.dbf file. Copy Fields across Tables is carried out using a key field in both tables that contains similar unique values. In Flowmap that is usually the "LABEL" field. In case the Flowmap data set is based on an imported shape file the same unique import field can be used again on the ArcGIS side. Close ArcGIS before starting the copy procedure, otherwise the newly copied fields will not be recognized. Alternatively, the Flowmap1/3.dbf table can be directly joined to the original Shape File in ArcGIS provided that the unique key fields are of the same type (both text or both numerical). To make Flowmap Geometric data available in ArcGIS see the "Conversions | BNA | BNA -> MapInfo (MIF)" section
- **Why is the copying of fields across tables sometimes very slow?**

- Probably has to do with the data types of the unique key variables. In case these differ different sorting orders may result. Which in its turn can lead to correct but very slow identification of matching records. A solution would be to convert the key variable in the original GIS dataset from numeric to text and rerun the import procedure from the start.

Views | Clear Screen

- **Instead of clearing the screen entirely, can also only the latest draw or display action be undone?**
- Yes, check out Views | Remove Top Legend Entries
- **When moving the Flowmap Window on my screen(s) it gets fully cleared, can this be avoided?**
- Yes, when clicking the title bar of the Maximized (Full screen) Flowmap Window you not only are able to move it around, but you also trigger a 'Resize' event. Any 'Resize' event causes Flowmap to clear the screen. Two solutions / workarounds are available. The first solution is not to work in Full Screen or Maximized mode but with a somewhat smaller Flowmap window instead. After the start click on the title bar and pull down slightly or click the 'Restore Down' button. Then resize the Flowmap window to the desired dimensions and start working. This Flowmap window you can move around without clearing the screen as long as you do not apply a 'Maximize' or 'Resize' action. 'Minimize' and 'Restore Minimize' actions are fine. The second solution entails keeping the control button (Ctrl) depressed while operating the mouse to move Flowmap window around. Make sure to only release the mouse button when window is positioned to the top docking position of anyone of your screens. This allows you to peek at what is hidden behind the Flowmap window or to move the Flowmap window from one screen to the other without invoking a 'Resize' event.
- **Is it possible to have Flowmap redraw my Maps and Legend after a 'Resize' or 'Clear Screen' action?**
- Yes, but this requires that you had explicitly recorded all your 'Draw and Display' actions in an incremental log-file. The correct procedure is to open a 'Logs | Incremental Log' after a 'Resize' or 'Clear Screen' action, do your 'Draw and Display' actions and close the log file before engaging in a new 'Resize' or 'Clear Screen' action. Provided the same files are still (or again) open in the project, at any time later you can choose the 'Logs | Run Log in Batch mode' option to rerun all the recorded steps with the current window dimensions and (adjusted) view settings.