

# This Week's Wisdom:

## New Hexagon Tool for MapInfo Pro

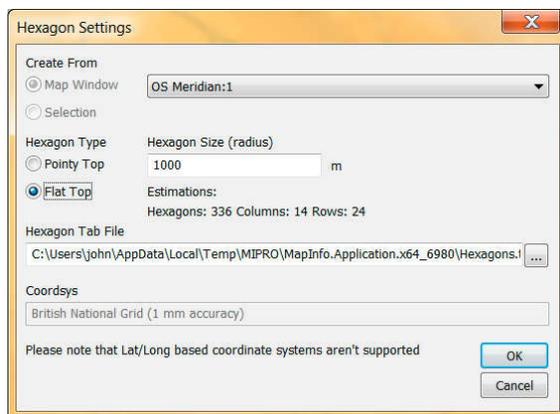
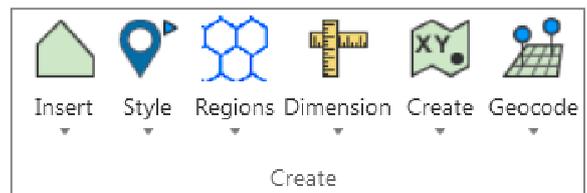
In Spatial Data Science, we use grids that are regular polygons repeating over a surface, edge to edge to cover any space without overlaps and gaps — a phenomenon called tessellation. Each cell can be assigned a unique id for spatial indexing (aggregating the points inside that cell). You may have used squares to cover a study area because they are easy to generate and are used in raster grids. However, we have known for many years that the hexagon is the best shape to use - and now we have a free tool available from the MapInfo Marketplace.

**Why Hexagons?** Tessellation is well studied mathematically and there are just three possible regular tessellations: equilateral triangles, squares, and regular hexagons. Regular hexagons are the closest shape to a circle that can be used for the regular tessellation of a plane and they have additional symmetries compared to squares. A hexagonal grid cell has six identical neighbouring cells, each sharing one of the six equal length sides. Furthermore, the distance between centroids is the same for all neighbours.

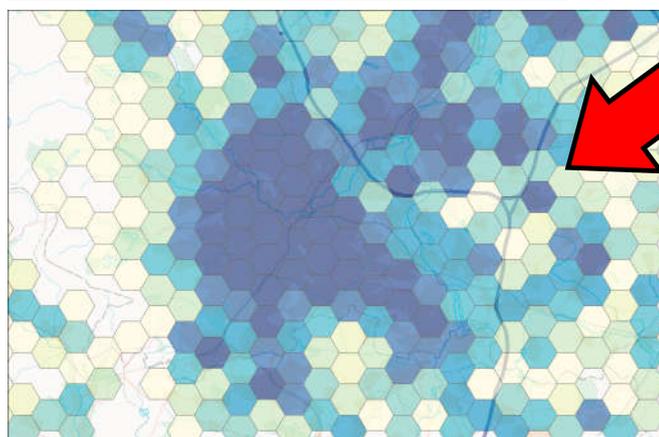
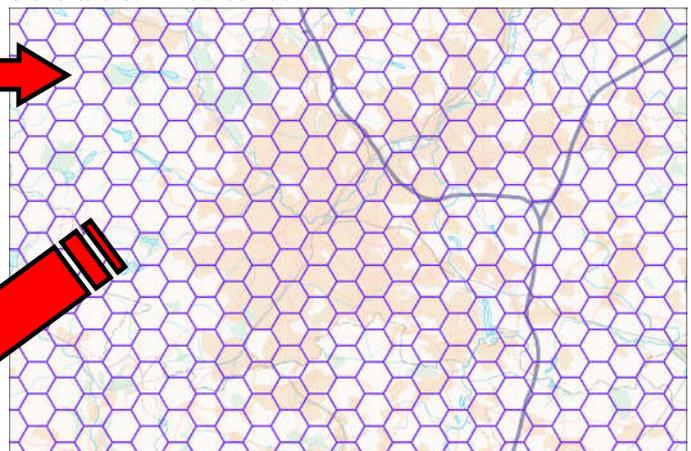
*And it can't be denied that hexagonal grids look far more impressive than square grids!*



Our good friend at Pitney Bowes, Peter Horsbøll Møller, has produced the Hexagon Tool for us all to enjoy. If you are using MapInfo Pro v17.0.4 you will find it in the Marketplace, from where you can install directly to your PC.



The tool is added to the Spatial ribbon under the Create > Regions. You have a number of settings that can be made to define the size of the hexagon and whether you want Pointy Top or Flat Top hexagons. Hexagons are generated for the current view extent and you will see an estimation of how many hexagons will be generated and where the table will be saved.



Then you are ready to complete your thematic mapping based upon your new hexagonal grid. Give it a go.

Keep a look out for some planned improvements such as support for long/lat projections and Set Brush and Pen style via a dialog, in the next release.