



## Block Grid tool – User instructions

The Block Grid tool is an ArcMap extension used for converting block boundary shapefiles in polygon format to (a) raster format and (b) a text file of X,Y point values.

The file of used X,Y point values can be used by the VESPER program (<http://www.usyd.edu.au/su/agric/acpa>) for kriging. The size of the grid used to generate the raster can be specified by the user.

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### System requirements

- ArcGIS version 9.2
- 3D Analyst or Spatial Analyst extensions for ArcGIS
- Microsoft .NET Framework version 2 (probably installed on most current machines)
- Microsoft .Net support for ArcGIS (installed by default by ArcGIS 9.2 installation program).

### Last update

13 December 2007

### Installation

Installation of the tool is in two main steps.

#### 1. Install the necessary files

- Locate and run the setup.exe file
- Step through the installation program, accepting the default settings

#### 2 Add the tool to the ArcMap user interface.

- Run ArcMap
- From the **Tools** menu, click **Customise**
- Click the **Commands** tab
- In the lower section of the window set **Save in:** to be Normal.MXT
- Locate and highlight **Precision Agriculture** in the **Categories** box
- Locate the **Block Grid Tool** in the commands box and drag this tool to a blank area on any toolbar.
- Click **Close** on the Customise dialogue window

## Using the program

Before running the tool you must open a polygon shapefile containing block boundaries. If a subset of the polygons is to be processed, select them using the ArcMap Select tool.

ArcMap must be in **Data View** (not Layout View) or the Block Grid Tool toolbar button will be disabled. When the toolbar button is clicked the window shown in

should appear.

- Choose the polygon shapefile to be processed from the drop-down list
- If you only wish to process a subset of polygons, ensure the **Selected Only** radio button is selected.
- Set the desired **grid size** (in metres)
- Specify the **Output directory** for the raster mask file and the text file of X,Y point data
- Click **Start**. The time for processing will depend the size of the polygon areas and the grid size.
- When processing is complete the new grid will be displayed in ArcMap, and the text file will have been created in the specified directory.
- When the window is closed the current settings are saved for the next time the tool is run.

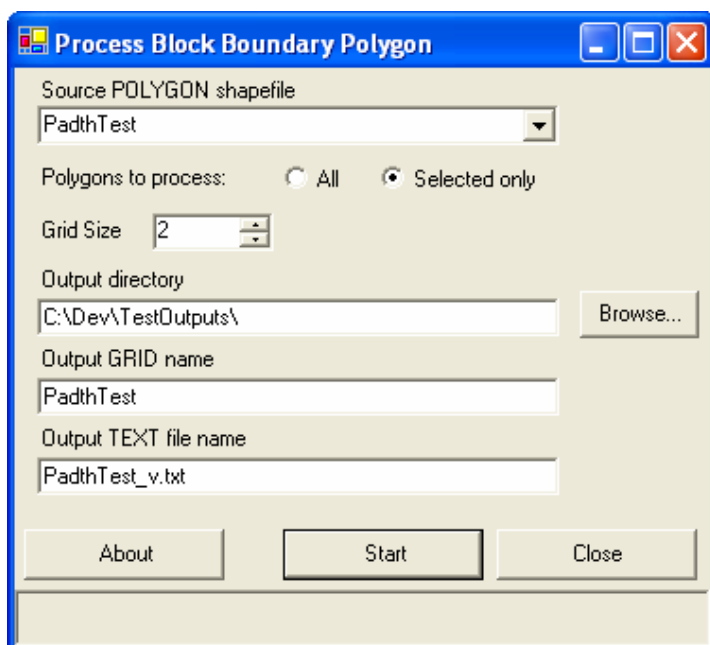




Figure 1: Block Grid tool - main dialogue window

## Maintenance

This tool was originally developed as an extension for ArcMap 9.1 in February 2006, to assist with Precision Viticulture research in June 2006. For queries, please contact David Gobbett from CSIRO Sustainable Ecosystems.

### Tip: How to create island/donut polygons in ArcGIS

1. In ArcMap, on the Editor toolbar, click Editor and select Start Editing.
2. From the "Task:" drop-down menu, select Create New Feature.
3. To cut a hole out of an existing polygon, click the Edit Tool  and double-click the polygon to see the edit sketch.
4. To create a new polygon with a hole in it, click the Sketch Tool and digitize the outer edge of the new polygon from which you want to remove a part. 
5. Right-click the edit sketch of the exterior of the polygon and click Finish Part.
6. Digitize the area within the polygon that will not be included in the larger, exterior polygon. When cutting a hole from an existing polygon, you must select the Sketch Tool first.
7. Right-click the edit sketch and select Finish Sketch. The hole will be removed from the area of the exterior polygon.

This information is from <http://kb.iu.edu/data/ancm.html> (where 2 other procedures can also be found).

### Notice

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**David Gobbett, CSIRO Sustainable Ecosystems**

Phone +61 8 8303 8741

Email [David.Gobbett@csiro.au](mailto:David.Gobbett@csiro.au)

Web <http://www.csiro.au/products/PrecisionViticultureSoftware.html>