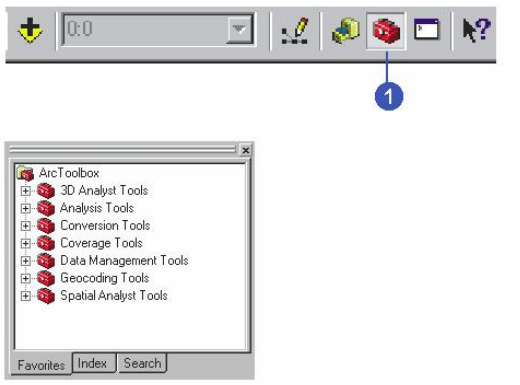
ArcToolBox: Analysis



ArcToolBox

ArctoolBox is available from both ArcCatalog and ArcMap.

A toolbox can contain tools, toolsets, and scripts and is organized according to the collection of geoprocessing commands it contains.

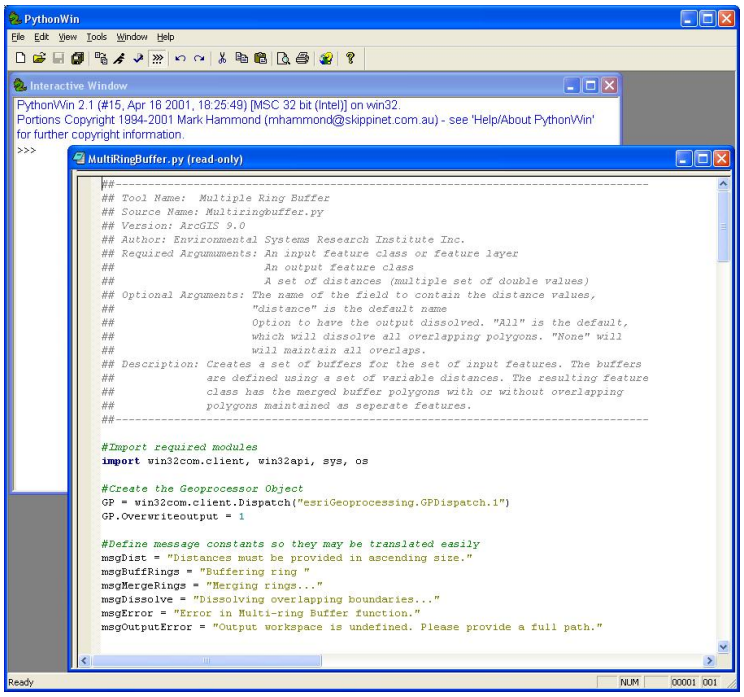
A toolset can contain tools, toolsets, and scripts and is organized according to the geoprocessing commands it contains.

A tool is a single geoprocessing command.

A script is a set of instructions usually stored in a file and interpreted, or compiled, at run time.

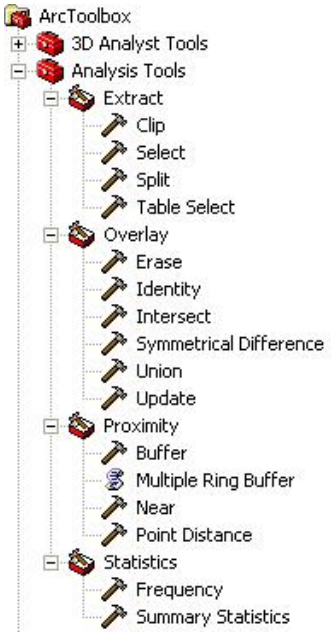
A model consists of one process or, more commonly, multiple processes strung together.

Scripts

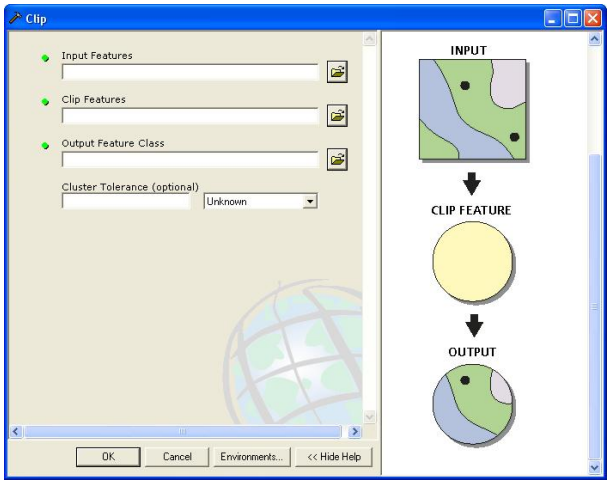


Toolsets

- Extract
- Overlay
- Proximity
- Statistics

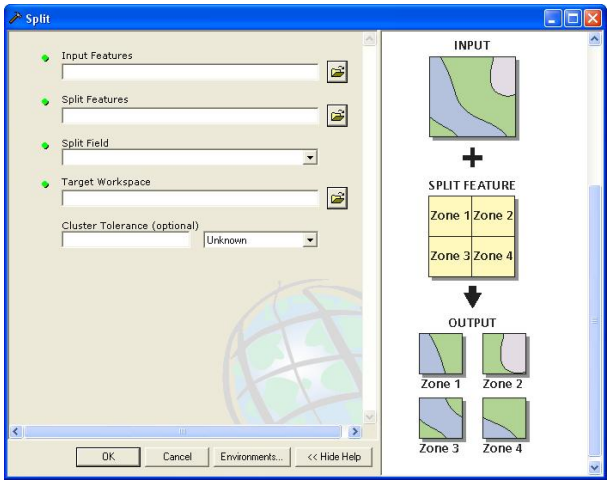


Extract - clip



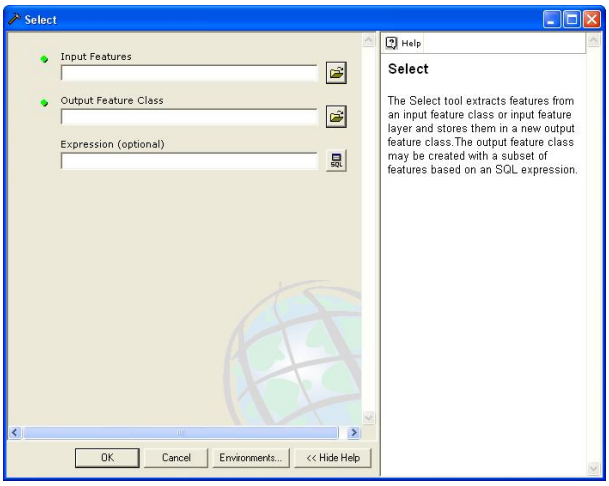
- Clip features must have polygon geometry.
- When using ArcMap layers as input, only the currently selected features are used in the CLIP operation.

Extract - split

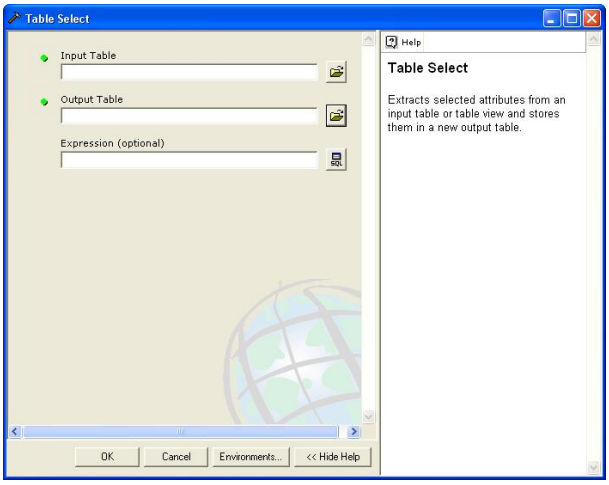


- Split features must be polygons.
- The Split Field datatype must be character.

Extract - select



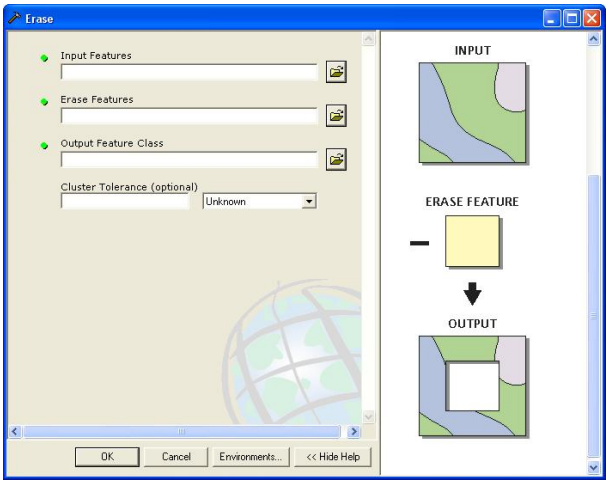
Extract - table select



Overlay Procedures

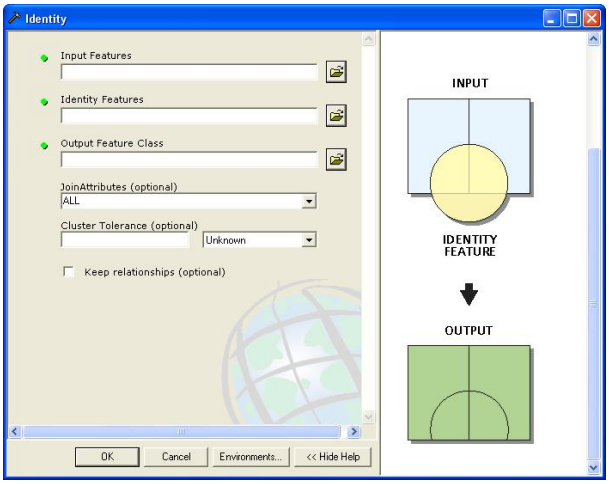
- Determine the spatial reference for processing. All the input feature classes are projected (on the fly) into this spatial reference.
- Crack and cluster the features.
- Discover geometric relationships (overlap) between the input features and the overlap features.
- Assign attributes based on the type of overlay.
- Remove features based on the combinations of attributes and overlay types.

Overlay - erase



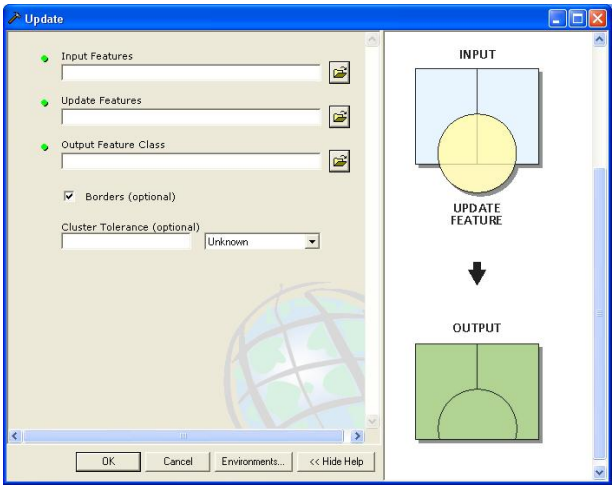
- Erase features must be polygons.

Overlay - identity



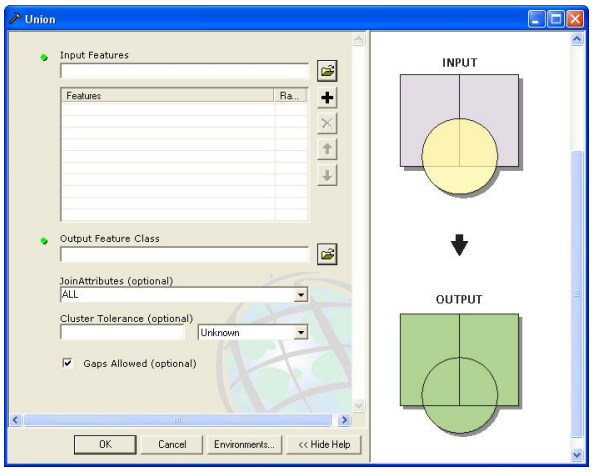
- Identity features must be polygons.

Overlay - update



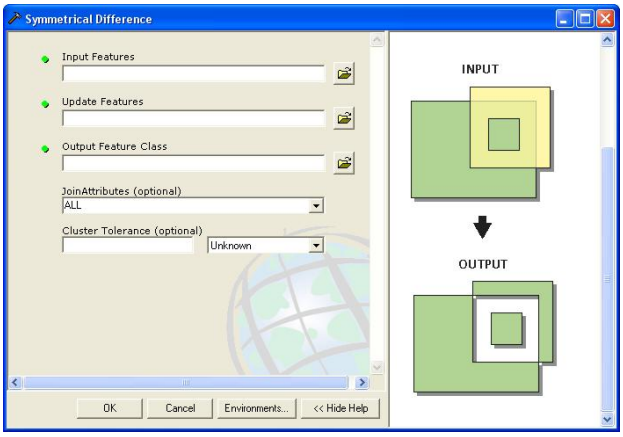
- Update features must be polygons
- The Input Features and Update Features field names must match

Overlay - union



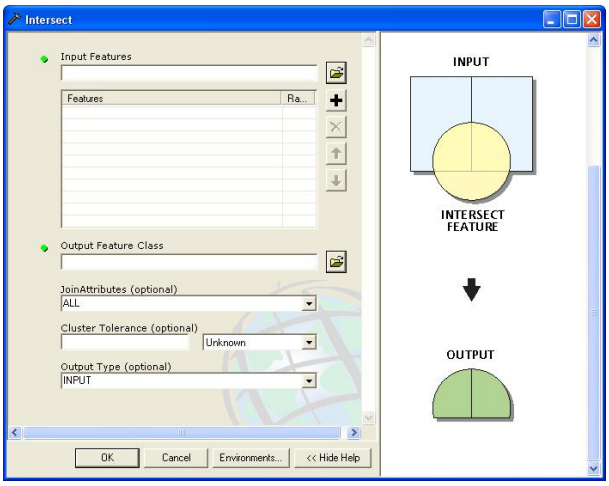
- Input features must be polygons

Overlay – symmetrical difference

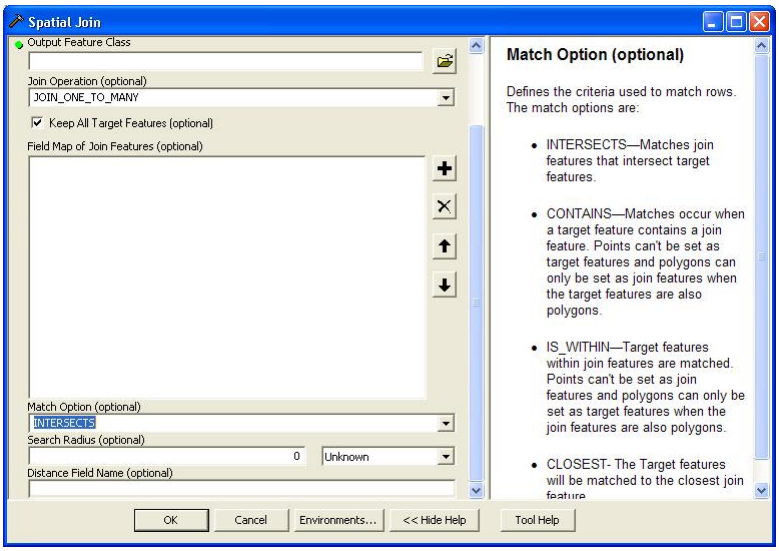


- Input and update features must be polygons

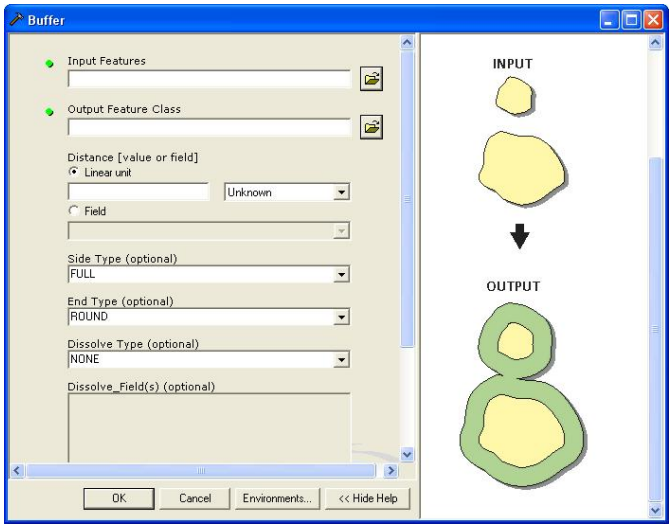
Overlay - intersect



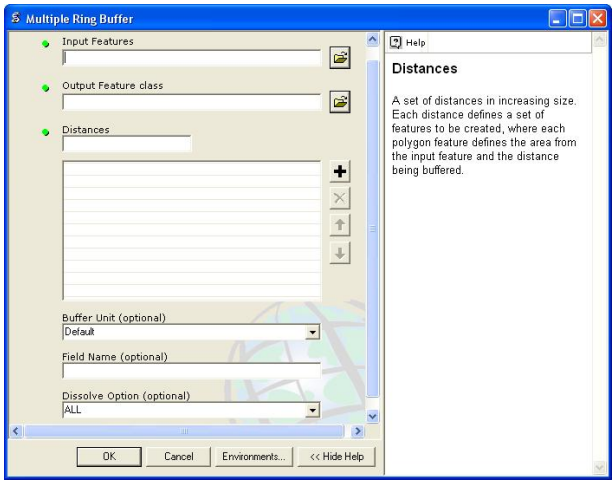
Overlay – Spatial Join



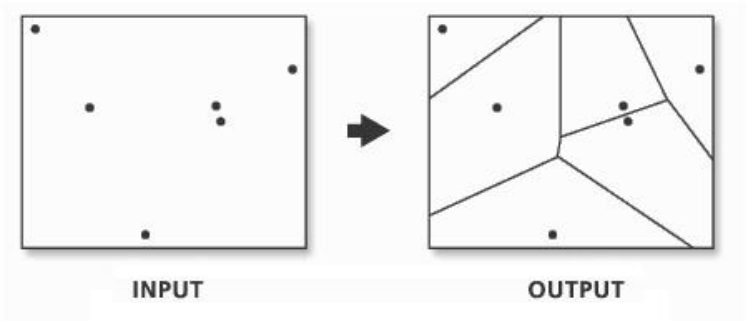
Proximity - buffer



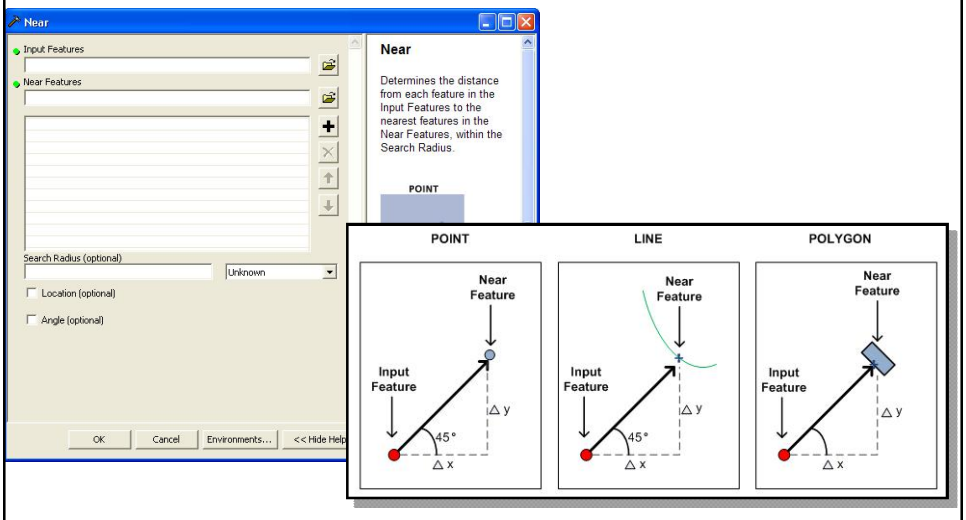
Proximity – multiple ring buffer



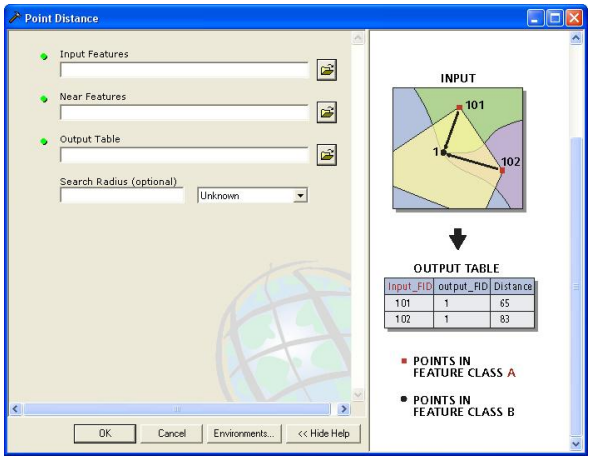
Proximity – create Thiessen polygons



Proximity – near
- generate near table

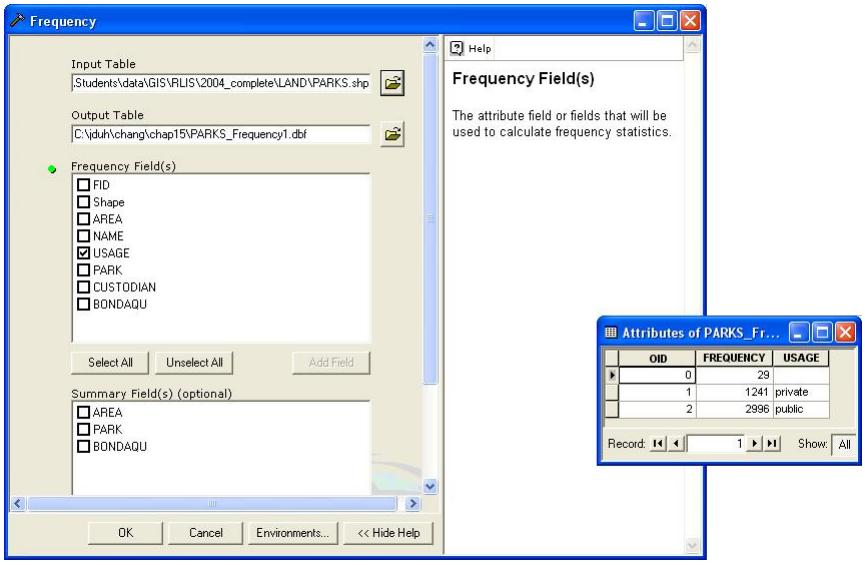


Proximity – point distance



- Both input and near features (layers) must have point geometry.

Statistics – frequency



Statistics – summary statistics