

New and future features

Ready-to-go and Sneak Peeks

Andrew Cogswell, Senior Analyst

Ugo Feunekes, VP Research & Development

September 29th, 2005

Overview

- New
 - Theme-based outputs
 - In-progress (inventory update)
 - Patch analysis
- Future
 - Dissolve slivers (shapefile simplification)
 - Access zones
 - Fire simulation modeling

Theme-based outputs

- A means of having Woodstock break apart output values for each of the attributes in a particular theme, *using a single output declaration*
- Drastically reduce the number of outputs that you need to build and manage

Theme-based outputs

Structure:

*OUTPUT code(_TH#) description

*SOURCE mask action yield

- Woodstock will build a single output whose values are separated for each of the theme attributes
- May be used in combination with other masks

Theme-based outputs

- Use in any section that you would use Outputs (Optimize, Reports, Graphs)
 - Reference specific attribute values in parentheses or use `_ALL` to access values for all attributes
- You can use theme-based, basic outputs in summary outputs, but you cannot reference specific theme
- Examples...

In-progress

- Form of inventory update
- Applies to period 1 preblocks
- Add a field to the shapefile database called *InProgress*
 - Numeric type, 2 decimals
- Insert fractional values indicating the percentage of the area that is complete
 - Completed portion transitioned and written to Areas section area adjusted by the InProgress value
 - Incomplete portion written to Lpschedule area adjusted by $1 - \text{InProgress value}$

Patch analysis

- Process shapefiles to calculate patch metrics based on a given forest condition/attribute (e.g., age)
- Akin to building spatial zones
- Modified proximity by size of patch
- Consider:
 - Management activities
 - Multiple time periods
 - Saved tables(Stanley solutions)

Patch analysis

- Statistics
 - Landscape (all patches)
 - Class (patches by attribute category)
 - Patch (statistics for each individual patch)
 - Shape index, fractal index
 - May be expanded

Dissolve slivers

- Resultant shapefiles sometimes overly complex, containing many records (slivers)
- What matters is the geographic groupings of development types (themes) and age classes
- Create a simplified shapefile eliminating unnecessary detail (arbitrary splits between otherwise similar strata)

Dissolve slivers

- Dissolve slivers
 - If poly is small, merge with neighbors
 - Merge resulting polys if less than some size (stanley has to merge anyway)
- Utility only merges identical neighbors
 - Development type and age must be identical
 - No affect on Woodstock
- Potentially large savings in resource demands and processing efficiency
 - Fewer records, fewer adjacencies, fewer things to keep track of

Access zones

- Zones = groups of development types
 - E.g. AA, block, map sheet, etc.
- Typically larger areas, or could be harvest units
- Control the sequence of activities
 - Establish an order
 - Make activities dependent on other units, or time
- Access is proportionate, open half of unit, get access to half of all classe...non-integral
- No change required to Woodstock model

Fire spread modeling

- Burn fires
 - Asymmetric fire spread model
 - Use to evaluate fire-smart management strategies
- Requires fuel types, and some estimate of weather
 - Character yields for fuel types in Woodstock
 - Define weather conditions for a fixed amount of time
- Select one or more ignition points
 - Burn fire until weather is processed
 - Elevations could be used as well

Questions?