

VDDT- Path Modeling Rollup Tutorial: Advanced Topics

Treg Christopher

Integrated Landscape Assessment Project

Institute for Natural Resources

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Introduction

The first tutorial covered ILAP's steps for rolling up data into a Path modeling database with the assumption that the initial modeling database was created within VDDT. This tutorial discusses the steps for 2 other topics: Rolling up data using a Path database as the initial model source; creating a "RelativeArea/NoGIS" Path database. This advanced tutorial assumes that you are already familiar with the ILAP data rollup process, acronyms, software versions, etc. that are discussed in detail in the first tutorial.

Rolling up data using a Path database as the initial model source

As VDDT becomes phased out, the Path software will become the primary modeling environment for testing and modifying individual models. Since Path does not allow you to translate these models back into VDDT, you will need to repeat the data rollup steps provided in the rollup tutorial. For the DRQT 3.2 tool, the only change is to select the "Path DB" option. Run the tool which will update the data rollup DB. However, you will need to make some minor modifications to a copy of your Path Db before running the GIP tool.

The "TemplateForPath" Db is used by the GIP tool to parse the models (found in the Common scenario) into Multipliers and Runs scenarios and populate the modeling strata with GIS specific area information applied to each state within each modeling strata. In the rollup tutorial, this database was created by importing models from VDDT into a new Path Db.

A previously populated Path Db cannot be used as a substitute for the TemplateForPath Db without some modifications, described below. This is most likely due to the DRQT software's need to create query relationships between tables using the primary ID field in each table. Since many of these IDs are created with Access's auto-numbering, any number already used can never be used again, even if that record is deleted. The steps below are meant to be used as "workaround" for this problem until funds become available for modifying GIP tool's code or Path has been updated to allow the user to create a new path Db from an "Import from Path-Using Definitions from Import" option.

Assumptions

- A TemplateForPath Db is not available and cannot be recreated from a VDDT Db; or:
- Individual states have been added or dropped from a Path model so that the individual states no longer exactly match the states within the original TemplateForPath Db.

Pre-GIP rollup steps

- Follow the steps in the ILAP Modeling Rollup Tutorial doc
- With the DRQT tool, the only change is to select the “Path DB” option. Run the tool which will update the data rollup DB.

GIP steps

Creating a new TemplateForPath Db from an existing ILAP Path Db

- In the Path software, choose File>New>Blank Project
- Add the following sub-folders to the “User Scenarios” folder:
 - Common
 - Multipliers
 - Runs
- Save the new Db with the prefix “TemplateForPath_” and close Path
- In MS Access, open the new “TemplateForPath” Db and import the following tables from the previously populated Path Db:
 - CEAGeneral, MBFolderScenario, Scenario ...these will automatically have a “1” added to the end of the name since there is already a table with the same name
 - Use these imported tables to populate the template tables (with the same name) in exactly the same order below:
 1. Scenario1: copy the 1st record only into the new Scenario table (ScenarioID=1)
 2. CEAGeneral1: copy the 1st record only into the new CEAGeneral table
 3. MBFolderScenario1: copy the 1st record only into the new MBFolderScenario table
 4. Delete these imported tables from the Db
- Now import the following tables and copy all the records into the corresponding, template tables: DeterministicTransition; StateClass; StateLabelX; StateLabelY; Stratum; Transition; TransitionGroup; TransitionTSTGroup; TransitionType; TransitionTypeGroup
- The instructions below assume that your Db does not have results saved in the tables. If it does, then instead of “copying all”, for the tables that have a “Scenario ID” field, copy only the records that have ScenarioID=1.
 1. StateLabelX1: copy all records to the template table of the same name
 2. StateLabelY1: copy all records to the template table of the same name
 3. StateClass1: copy all records to the template table of the same name
 4. TransitionType1: copy all records to the template table of the same name
 5. TransitionGroup1: copy all records to the template table of the same name
 6. Stratum1: copy all records to the template table of the same name
 7. TransitionTypeGroup1: copy all records to the template table of the same name

8. TransitionTSTGroup1: copy all records to the template table of the same name
 9. DeterministicTransition1: copy all records to the template table of the same name
 10. Transition1: copy all records to the template table of the same name
- Delete these newly imported tables from the TemplateForPath Db (all the names ending in "1")
 - Close the Db, and open in the Path software
 - In the Common scenario, populate the parameters that are outlined in the Template Path Database section of the Rollup tutorial, beginning with step 6 ("Double click on the 'Common' scenario and specify model parameters with the following information")
 - Save this project and close the Path software

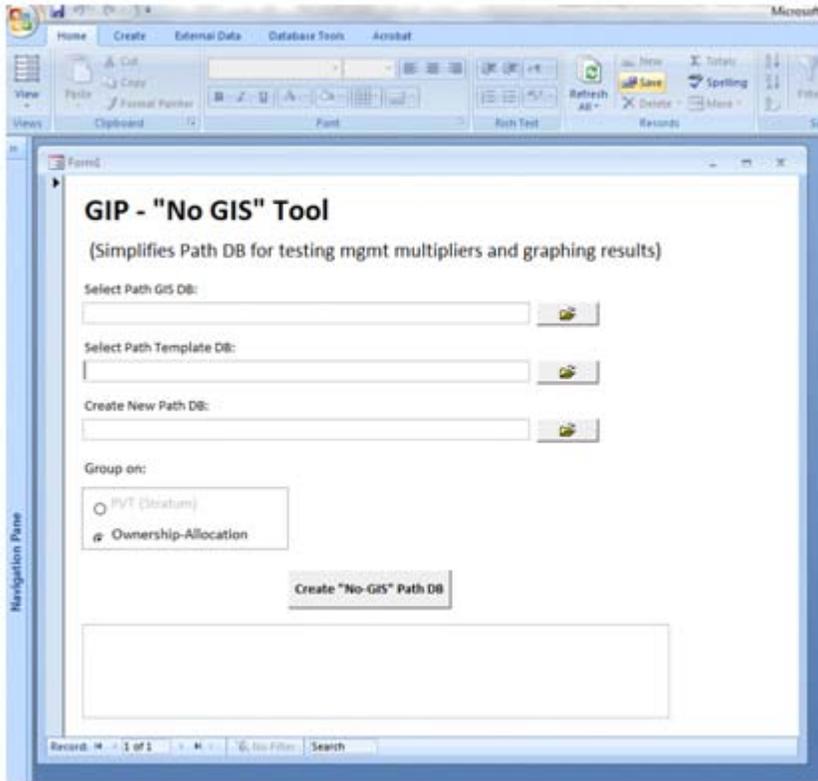
Run the GIP tool with the newly created TemplateForPath Db.

Create a "NoGIS" Path Db for testing purposes

If you need to make any adjustments to your models (e.g. adjusting transition multipliers) or want to view approximate (non-landscape-specific) results using the Path database's graphing tool, you can build a "No-GIS" Path database for testing purposes. This will transform all the Initial Conditions from your newly created Path Db (area for each state in each modeling strata) as proportions of 1. This will also group your strata into ownership-allocation types (see figures below).

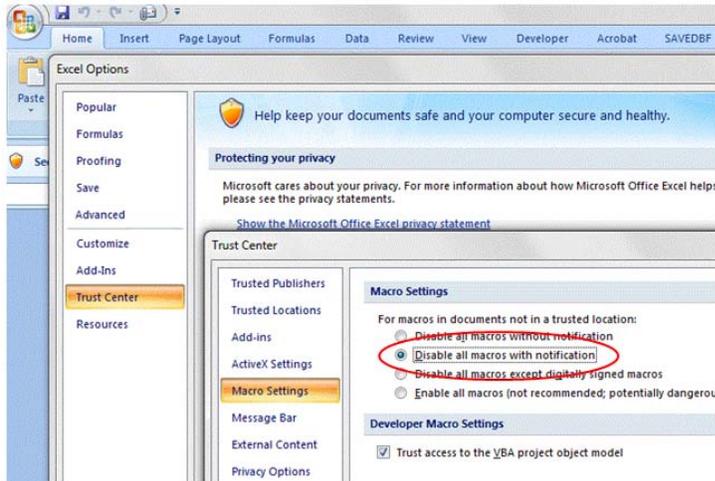
- Download the NoGIS GIP tool from the ftp site (<ftp://131.252.97.79/ILAP/Modeling/Tools>). The tool is currently built using VBA within MS Access. When more funding becomes available this will be rebuilt in C# as an option within the normal GIP tool.

Figure: The NoGIS-GIP tool



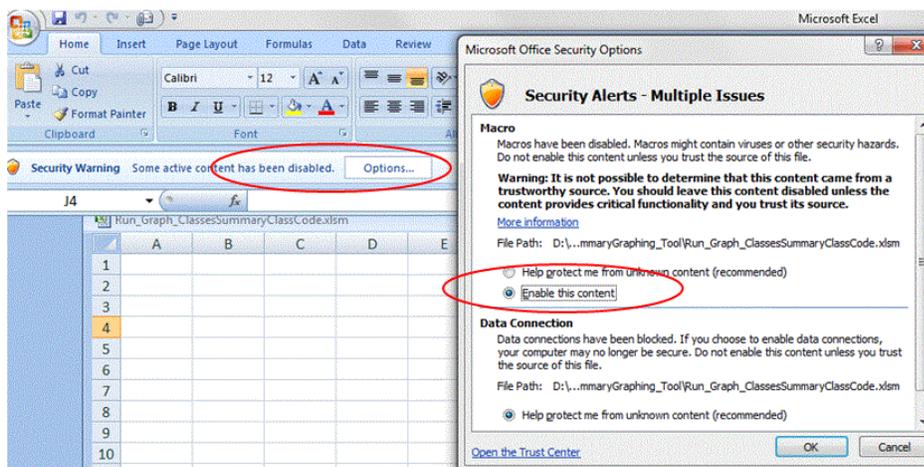
- Open the Access Db, “Run_GIP-NoGIS” and the form for the tool should automatically be displayed. However, often your security settings will prevent “macros” from being run, so you will need to make some adjustments.
 - Access Office Button(top left)>Access options>Trust Center> Trust Center Settings>Macro Settings>Change to disable macros with notification (Figure below)(“Enable all macros” would be preferable so you won’t have to keep re-doing step 6 every time you need to run the tool. However, there may be a slight risk of exposure to malicious macros if a user was to download an Excel file from an unknown source.)

Figure: Enabling macros (Excel is shown in the figure but is the same for MS Access)



- Save the Access Db, close and re-open. If the form still does not open:
 - Select “Options” from the security ribbon
 - Select “Enable this content” and OK. The form should now pop-up automatically (but you will probably need to re-do this step every time you open the file).

Figure: Enabling macros (Excel is shown in the figure but is the same for MS Access)



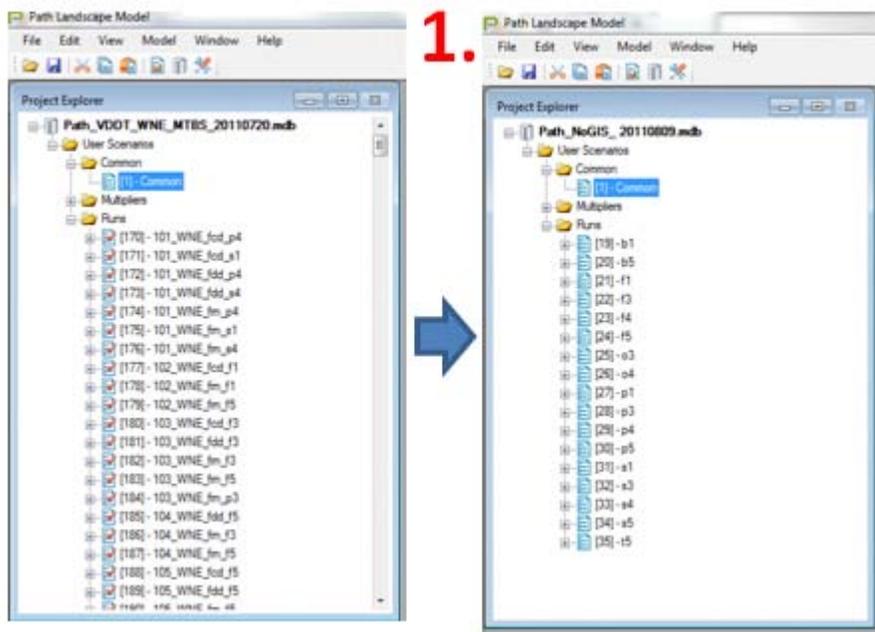
- Select the options for this tool and choose “Create Pivot Chart” to run. If there are errors, then it is likely that some “references” need to be loaded in Access (figure below)(this will be a one-time update to the Access software (not the specific file) on your computer):
 - In the VBA module, Select Tools->References
 - If there are references at the top of the dialog box that are checked but begin with “MISSING...”, then uncheck them before proceeding.
 - Browse for and check the following to references
 - Microsoft ADO ext. 2.8 for DDL and Security (or highest version)
 - Microsoft ActiveX Data Objects 2.7 Library (or highest version)
 - Click OK

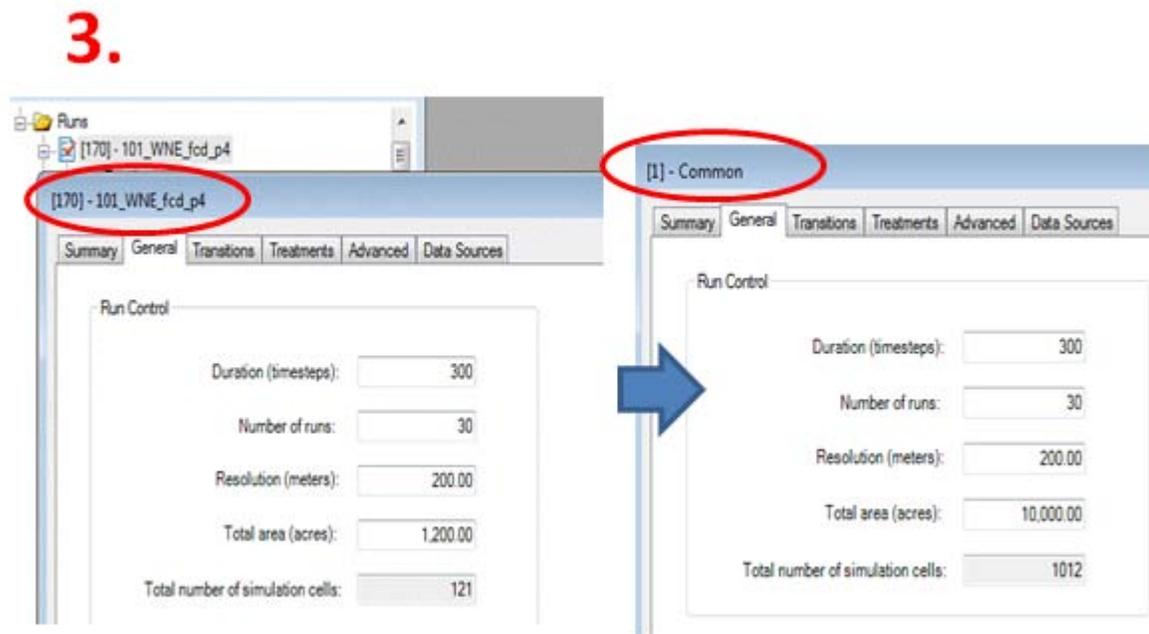
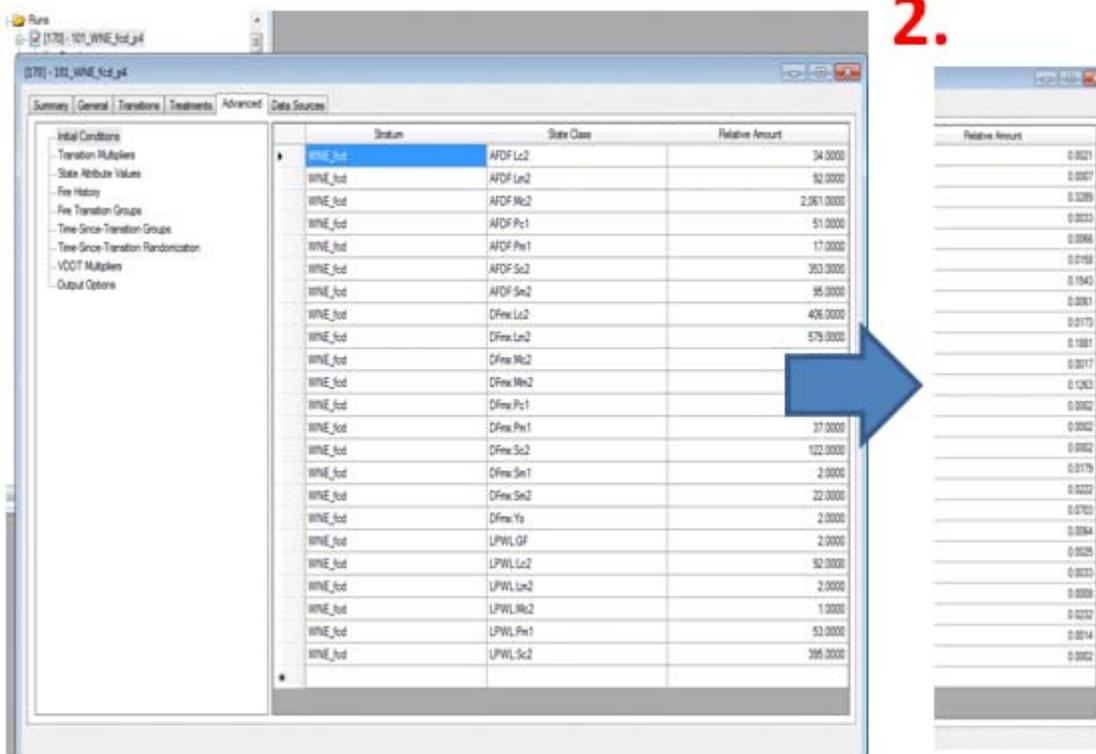
- Save and close Access, then re-open
- Populate and run the form
- You have now created a NoGIS Path Db
- Once you have created this Db, open it up in Path
- Change the common parameter values to whatever you'd like. You may also want to change the output so that it is saved in Path (rather than ILAP's output to a csv file). This will allow you to graph directly within Path.
- Run the scenarios and make modifications to transitions, states or transitions multipliers as desired

Once you have modified your models to suit, you will need to rerun the (normal) GIP tool to recreate a Path Db with real initial conditions. If you have added or dropped states, you will need to recreate another template Db before running GIP (using the steps described in the section above).

The figures below show how an ILAP Path Db has been transformed into a NoGIS Path Db:

1. Original Db has hundreds of "Run" Scenarios, whereas new Db is grouped into Ownership-Allocation
2. Original Db has Initial Conditions with actual acres from GIS data. New Db has relative amounts summed to 1 for each run-scenario/stratum.
3. Original Db has area (in acres) specified for each Stratum. New Db's total area is set in Common-Scenario and can be changed to any amount.





Currently, the tool assumes that the Transition Multipliers values are the same across owner-mgmt categories. This works fine for ILAP's NoMgmt scenarios because all of these values are the same (all

management multipliers are set to zero). If this is not true, then you will need to do some additional modifications, manually while using this tool. You will also need to use the data rollup db, which is created in the rollup process (see Rollup Tutorial)

- In your data rollup db, copy the Transition Multipliers table and update all values so they match across columns.
- Run the GIP tool and name this Path db something like, "Temp_Path_forNoGIS"
- Run the GIP-NOGIS tool with this temporary Path db and call db something like, "Path_NoGIS"
- Open Path, open first Multipliers Scenario->Advanced tab->Export Transition Multipliers, save as something like, "temp_Template_TransMult_ExportFromPath_forNoGIS"
- Make as many copies of this as you have mgmt types
- Export your transition multipliers (crosstab format) from the data rollup db to Excel
- Copy those values into each of your trans mult copies
- Make sure the pvt and transitions match and then replace the current values with the values that are specific to that mgmt type
- Open Path and for each TranMult Scenario, delete the existing values in the TransMult table and import the new values from the updated Excel table