

# Excel Enhancements for Building ProModel Models

ProActiveX & CSV LogFile creation


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This is NOT a beginner's course.  
Knowledge of how to build  
a ProModel model is assumed.

# Agenda – ProActiveX & CSV LogFile creation

- We are going to:
  - Use ProActiveX to rapidly create and modify portions of a model
  - Use Excel's text editing capabilities (copy/paste, fill down, concatenate etc) to aid in rapidly building model logic
  - Use ProActiveX to rapidly place multiple LOCATION & VARIABLE graphics nicely.
  - Use Excel to create pretty background graphic sign
  - Use WRITE & XWRITE to create an external CSV file to enable highly detailed analysis of a model run
  - Use Excel's PowerPivot database manager to store and analyze a model's external CSV
  - Provide helpful tips along the way

# ProActiveX

- Located where ProModel is installed

C:\Program Files (x86)\ProModel Corporation\ProModel\10.3\Power Tools\*ProActiveX.xlsb*

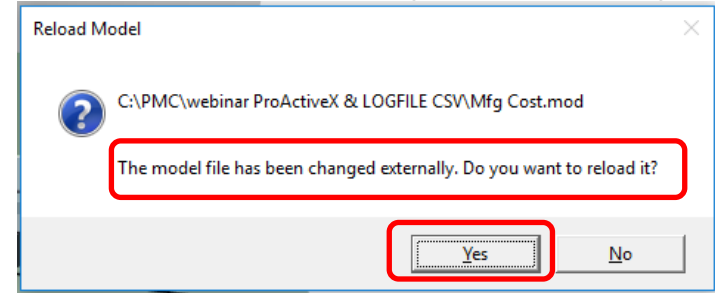
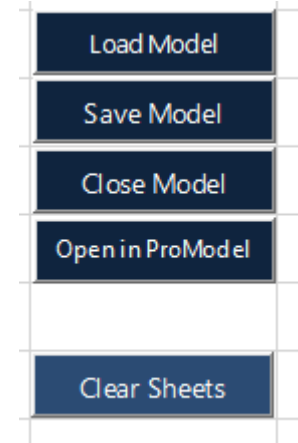
- Uses Windows ActiveX for Excel & ProModel to exchange data
- Open source VBA
  - ActiveX documentation in DOCS folder



# ProActiveX Process

Full Networks	VIEW	GET	BUILD	CLEAR	CLEAR and UPDATE
Processing	View	GET	BUILD	CLEAR	CLEAR and UPDATE
Resources	View	GET	BUILD	CLEAR	CLEAR and UPDATE
Scenarios	View	GET	BUILD	CLEAR	CLEAR and UPDATE

- LOAD MODEL into Excel's memory
- GET items of interest from ProModel into Excel
- Modify/Add items in Excel
- SAVE model
- OPEN IN PROMODEL
  - If model already open in ProModel...

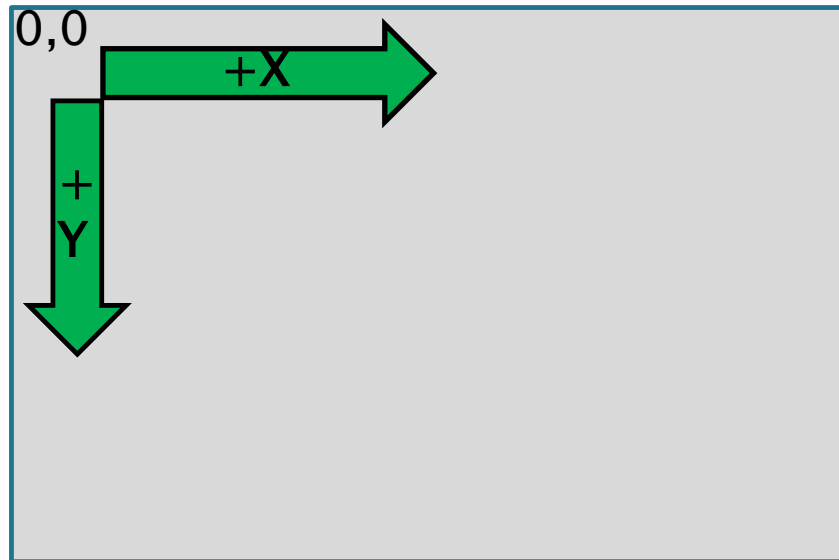


# ProActiveX – Add Stuff to Model

- Add multiple new machines
  - Add graphics for locations
- Add new PROCESSING & ROUTING
- Add multiple new VARIABLES
- Add background sign graphic
  - Place variable graphics within the new sign
  - MAPARR array to variables

# Layout Pixels

- All graphics are placed in the layout with an X-Y pixel position
  - (do not be concerned with the scaled pixel distance)



# Tips

- Evenly distribute graphics ...  
(Delta X/Y pixels of 1<sup>st</sup>-to-Last ) / ( Qty items – 1 )
- ProActiveX does NOT check for ProModel syntax errors
  - Always make a copy of your model in case of unwanted changes to the model
- Keep careful track of whether the latest version of your model is active in ProModel or Excel



# Tips

- NEVER CLEAR LOCATIONS or ENTITIES from Excel...  
Holes in Processing
- ALWAYS CLEAR , BUILD  
Location Graphics & Variables...  
So don't get duplicates
- TAB in ProModel logic window = next cell in Excel
- ALT/enter in Excel cell = New Line in logic window
- Try each type of element. See how it behaves. Use what makes sense.

# Brief Pause...

Let's take 5!



# CSV LogFile creation - Purpose

- Create an external CSV of desired “logs” of happenings in your model
- This CSV is essentially a database to be analyzed
  - Can use AutoFilter
  - Can use PivotTable/PivotChart
- Can include much data for post-run analysis  
e.g. Attributes
  - Detailed analysis beyond what Output Viewer can provide

# CSV LogFile creation - Process

- GET key elements from sample model
  - Example log file sub USING RES MOVE.mod*
- BUILD key elements into your model
- Place **s\_Log\_File** anywhere a logged entry is desired
  - Use ProActiveX to do this rapidly
- Use Excel or Access or PowerPivot to perform detailed analysis

# PowerPivot

- Free & Supported Excel add-in
- Adds SQL-server database model to an Excel workbook
- Allows very fast reading/storage of huge CSVs
- Links the database to PivotTable/PivotChart in workbook



Thank You!

Questions ??

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