



Lua Scripting

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What is Lua?

- Embedded scripting language in WindMil and WindMilMap
- Created by a University team in Brazil
- Used by several software and gaming companies

What can Lua do?

- Make modifications to circuit models
- Create new element fields for custom reports and data boxes
- Perform tasks on a schedule

Types of Lua Scripts

- .lua – make model edits and perform calculations on model data when script is ran
- .elua – creates element field in the field list
- .plum – script that can be ran automatically based on certain actions

Model Editing with Lua

- Example scripts for model edits
 - Insert transformer fuses(Arc Flash)
 - Connect consumers to closest transformer
 - Rephase elements from file
 - Rename elements
- Calculations
 - Total length of selected lines

Element Field Creation

- Lua scripts can create new element fields
- Defined as .elua files and must reside in C:\Milsoft\Programs\Scripts\eLua
- Perform calculations on existing data
- Upline and downline tracing/searching

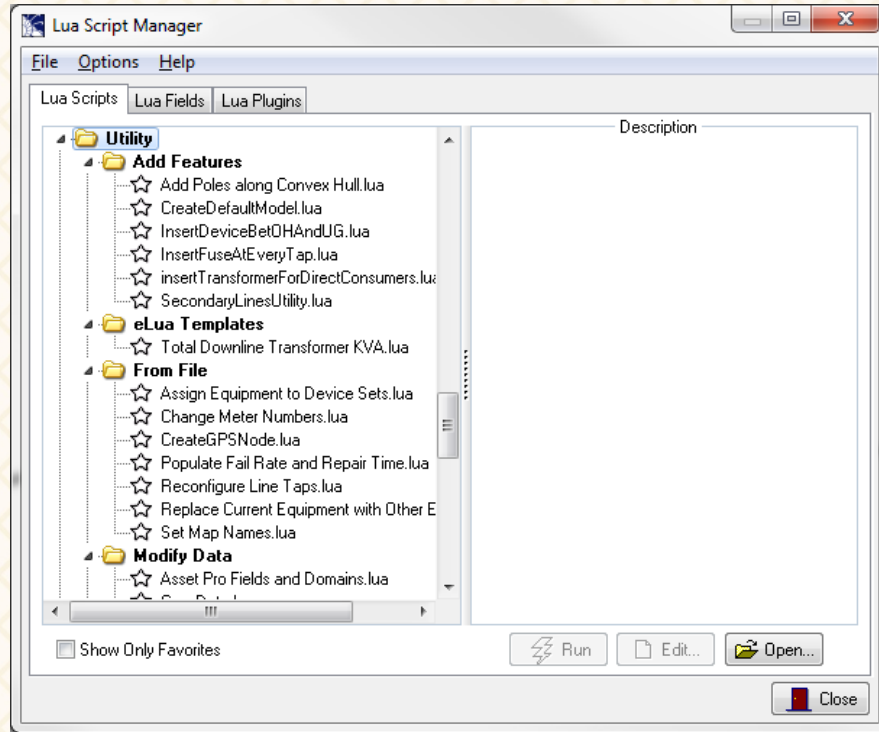
Example Element Fields

- Total kW Loss – summation of kW loss on all elements downline from selected
- Upline Device – search upline to find device and equipment of device
- Min Downline Voltage – Search downline and return lowest voltage downline

Running Scripts

- Utilities, Script manager
 - Select Script
 - Hit Run
- Scripts can be tagged as favorite and run from Utilities, Execute Script

Script Manager



Script Manager Features

- Create new scripts
- Run selected scripts
- Create scripts from templates
- Add eLua fields to Selected Elements tab

eLua Templates

- Allows user to easily create a new element field based on pre-defined template
- Milsoft provides templates

Assigning to Toolbar

- Frequently used script can be a toolbar button
- Right click on custom toolbar, assign Lua script
 - SumLength.lua

Plum Scripts

- Can perform task based on WindMil action
 - Rename elements immediately after added to model
 - OnGetGridName
 - OnAfterAddElement

Creating a Right Click Menu Option

- Right click menu can now have scripts added as options
- Use plum Lua scripts and specific header option
 - PopupMenuItem

Future Plans for Lua

- Replace Updatable Utilities with scripts
- Replace Global Editor Editing Utilities with scripts
- Enable scripting capabilities in other parts of WindMil (possibly Analysis)
- Provide more templates for easier script creation

Lua Resources

- Several web sites for reference
 - <http://www.lua.org/>
 - [http://en.wikipedia.org/wiki/Lua_\(programming_language\)](http://en.wikipedia.org/wiki/Lua_(programming_language))
- Milsoft Tutorial in Progress

Questions/Comments