

Enhance your GIS Experience with Easily Overlooked Features

As we are writing this column from Florida, it is early January, and the trees are beginning to leaf out. I am reminded that spring is still three months away. So, looking forward to the spring, we are thinking of helpful, hidden (aka Easter eggs), and not-so-obvious features that are easy to overlook in GIS software programs. With the help of my colleagues, Chloe Eaton and Zac Winters, we compiled three GIS Tips and Tricks to increase your GIS workflow efficiency using not-so-obvious features.

TIP #1 — MODELBUILDER WITH GEOPROCESSING TOOLS AND VARIABLES Chloe Eaton works with raster analysis in ArcGIS Pro and often needs to analyze multiple rasters using the same workflow. This is an ideal scenario to construct a ModelBuilder model, which can include both geoprocessing tools and variables to streamline a repetitive workflow process.

The ModelBuilder Model (Figure 1) adds a new value to a raster dataset using a Raster Calculator expression, then takes that output and Mosaics it to a new raster, builds the raster attribute table, adds a colormap, and finally deletes all the intermediate files. The model reduced the time for this repetitive task from 10 minutes to less than 45 seconds, reduced errors, and increased efficiency.

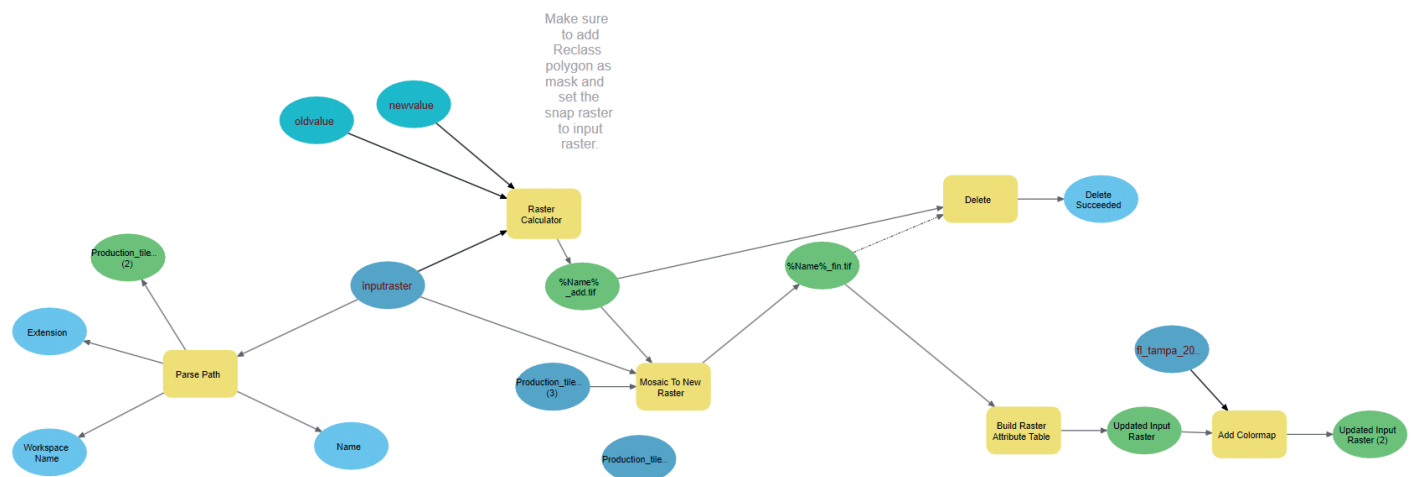


Figure 1. Esri ModelBuilder model incorporating both Geoprocessing tools and variables.

TIP #2 — KEYBOARD SHORTCUTS An “easy to forget” feature involves Keyboard Shortcuts. As most GIS software programs are based in the Microsoft Windows environment, we often forget that the standard Microsoft keyboard shortcuts (e.g. <CTRL>-C for copy, <CTRL>-V for paste, <CTRL>-A for select all, <CTRL>-S for save, etc.) work in the GIS environment too. In addition, each software package typically has a group of its own “default” keyboard shortcuts; usually accessible through the “Help” feature of the software or as a PDF. Most software packages also provide some way to customize or create keyboard shortcuts.

IN ARCGIS PRO 3.2 — The Esri ArcGIS Pro Resources page provides both videos and tables of the “standard” keyboard shortcuts (<https://pro.arcgis.com/en/pro-app/latest/get-started/arcgis-pro-keyboard-shortcuts.htm>). My GIS students are always amazed when I show them the Map navigation shortcuts because they work no matter to the current function being used. These include: Z (zoom continuously), O (Orient the view North), U/J (Zoom Out /Zoom in), and C (override the active tool with the “Explore/Pan” tool).

Four steps to create a custom keyboard shortcut include:

1. Press the F12 key anywhere in the application.
2. In an open project, click the Help tab on the ribbon.
3. In the Customize Group click “Shortcuts” (Figure 2) to open the Keyboard Shortcuts dialog box.

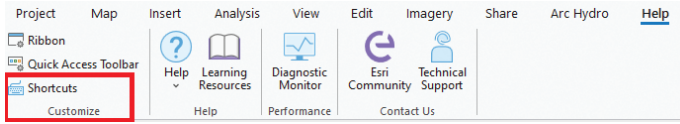


Figure 2. The ArcGIS Pro 3.2 Customize group highlighting the Shortcuts option on the Help ribbon.

“Modeling Magic: Use ArcGIS Pro Model builder for your tedious tasks!”
Chloe Eaton

In the Keyboard Shortcuts dialog box, press the “Add New Shortcut” button and follow the directions to add the custom keyboard shortcut. For features having a default Keyboard Shortcut, you can remove the shortcut (X on the dialog box) or modify it to your preference (Figure 3).

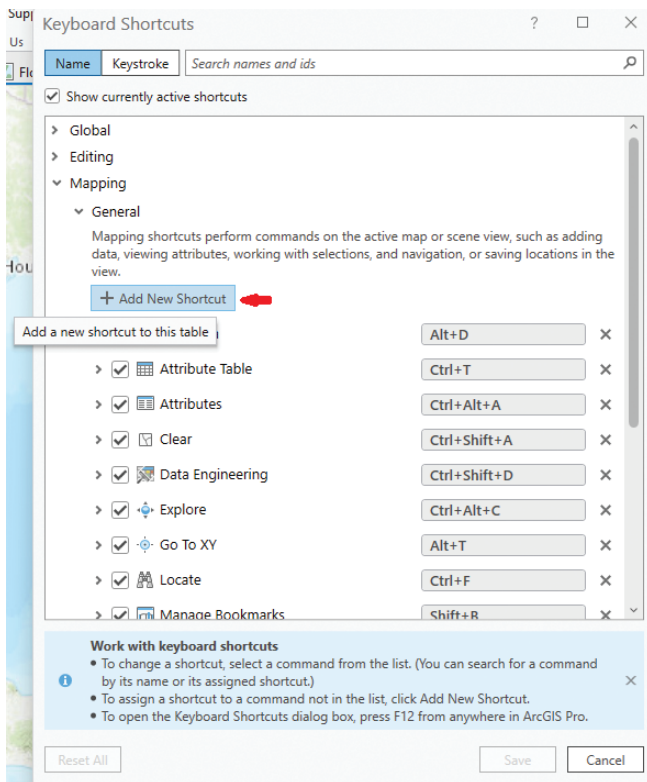


Figure 3. The ArcGIS Pro 3.2 Keyboard Shortcuts dialog box with the “Add New Shortcut” button highlighted.

IN QGIS 3.32.2 (LIMA) — Most QGIS functions are accessible through Keyboard Shortcuts, but I could not find a PDF listing. However, Open School Maps provides a web-link to the most frequently used QGIS keyboard shortcuts (https://openschoolmaps.ch/lehrmittel/qgis_cheatsheet/qgis_cheatsheet_english.htm).

In the QGIS application, a complete listing of the “default” Keyboard Shortcuts is obtained from the Menu bar (Figure 4), then choosing “Settings” and then “Keyboard Shortcuts”. This opens the Keyboard Shortcuts dialog box showing all of the default keyboard shortcuts (Figure 5).

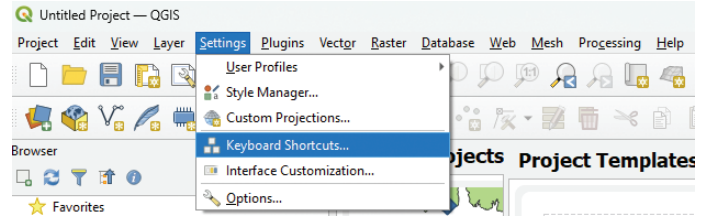


Figure 4. The Settings menu is QGIS 3.32.2 showing the Keyboard Shortcuts option.

To create a custom keyboard shortcut from the Keyboard Shortcuts dialog box,

1. Open the Keyboard Shortcuts... dialog box (Figure 5),

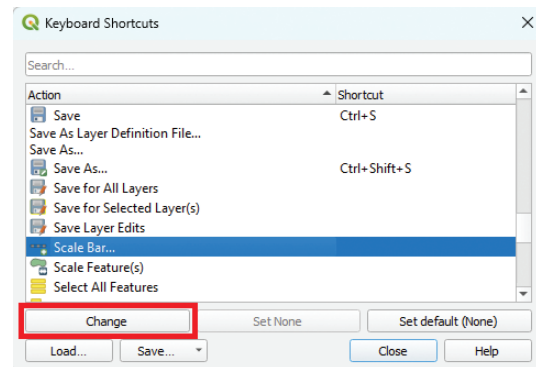


Figure 5. The QGIS 3.32.2 Shortcuts Dialog Box. The selected feature, Scale Bar... does not currently have a shortcut key sequence.

2. Select the QGIS feature that you want to assign a keyboard shortcut, (ex. Scale Bar...)
3. Press the “Change” Button, and
4. Assign a keyboard sequence to the feature.
5. NOTE: If you choose a feature that has a default shortcut, you can modify it using the “Change” button.

IN GLOBAL MAPPER v25.0 — As with ArcGIS Pro and QGIS, Global Mapper also provides multiple default Shortcut Keys (=Keyboard Shortcuts). The PDF listing can be found at:

https://www.globalmapper.it/helpv11/Global_Mapper_Shortcut_Key_List.pdf

As in QGIS, Global Mapper Shortcut Keys and functions are accessible through a dialog box.

1. From the Favorites Menu Bar, select the “Set up Favorites Shortcut Keys...” option (Figure 6),

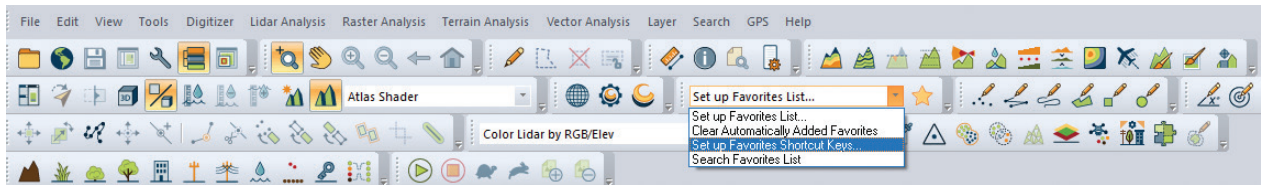


Figure 6. Global Mapper v25 Favorites Menu bar with the “Set up Favorites Shortcut Keys” option selected.

- From the Shortcut Keys Setup dialog, use the dropdown selector to select the Global Mapper function to customize (Figure 7) and

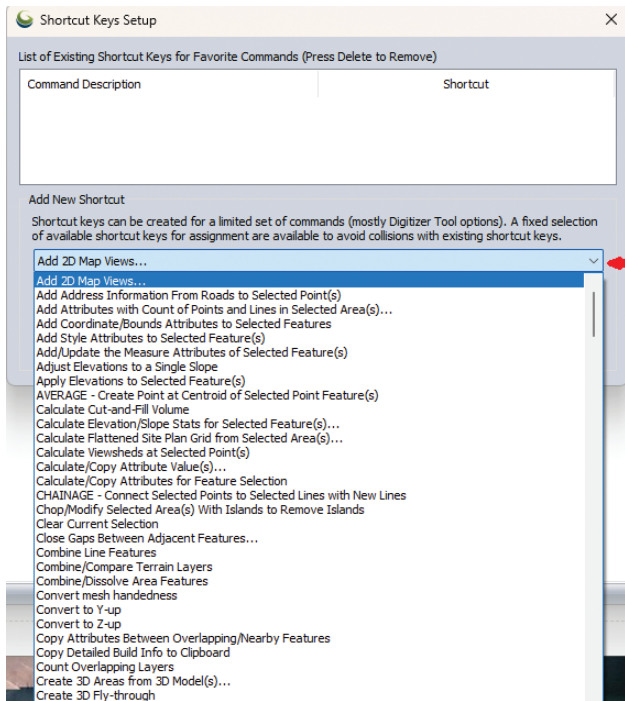


Figure 7. The Global Mapper v25.0 Shortcut Keys Setup dialog box.

- Assign a key sequence to the feature. Notice that Global Mapper limits both the features and the key combinations available so as not to result in collisions with existing shortcut keys.

TIP #3 — CUSTOMIZING YOUR INTERFACE WITH CUSTOM TOOL TABS AND GROUPS The last “easy-to-forget” feature of ArcGIS Pro for this column is creating custom tool tabs and groups to facilitate your workflows. Zachary Winters often uses tools that are scattered throughout various tabs and remembering where each tool is and what tab it is under can add time and hassle to any project. A somewhat “hidden” method Zac found to alleviate this issue is to create custom tabs on the ArcGIS Pro ribbon or groups within an ArcGIS Pro tab that he typically uses. This allows him to have his commonly used tools all in one place and keeps him focused on the task at hand. The following steps show how to create a custom tab, and how to add tools to the tab. It is just as easy to create a custom Group on an existing Tab.

To create a Custom Tab or Group (within a Tab)

- Click the drop-down menu located in the Quick Access Toolbar (Figure 8).

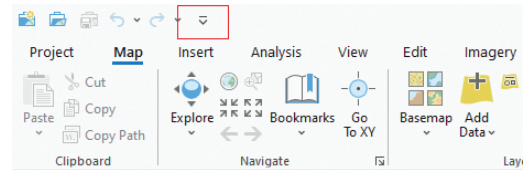


Figure 8. The ArcGIS Pro Customize Quick Access Toolbar dropdown.

- In this menu, select “Customize the Ribbon” (Figure 9) to open the Options dialog box (Figure 10),

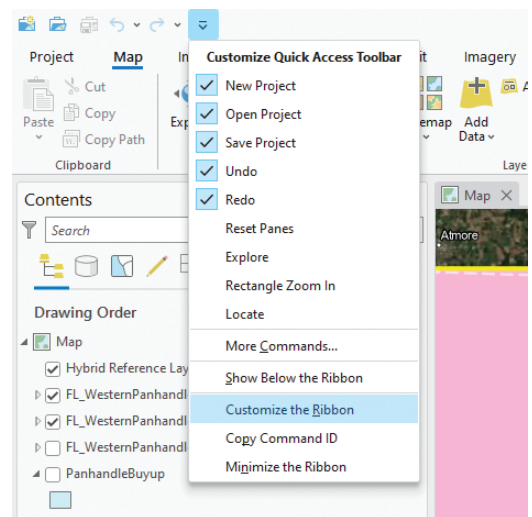


Figure 9. Available options on the Customize Quick Access Toolbar showing the “Customize the Ribbon” option.

- On the right side of this window, select “New Tab” or scroll to the existing tab in which you’d like to create a new Group, and select it to highlight the tab. In this example, I have the Edit Tab selected and opened, but will create a New Tab by clicking the “New Tab” button (Figure 10) rather than creating a New Group on the Edit Tab (my Edit Tab is pretty full already.)

NOTE: Clicking the New Group with the Edit Tab selected will create the New Group on the Edit Tab.

4. Select the commands or tools to add to this New Tab by scrolling to them in the left pane and clicking the Add button in the center (Figure 10). In this example, I added the Measure, Export Raster, and Explore tool to my custom tab (Figure 11).

Notes:

- The default to this window (Choose commands from) is to show “Popular Commands” (Figure 10). If you are unable to find the tool you need, switch this setting to “All Commands” (Figure 11), which will provide a search bar to help filter the options.
 - By selecting an item in the menu on the right, you can also “Rename” items. In this example, I renamed the “New Tab” (Custom) to “Zacs Group” (Custom) before I closed the window.
5. Selecting the OK button on the Options dialog box will close this window, and your new tab should be available on the ArcGIS Pro Ribbon (Figure 12).

If you chose to create a New Group on a selected tab, that new Group will appear on the selected tab on the ArcGIS Pro ribbon. Of course, you can use the up/down arrows on the Options dialog (Figure 11) to position groups on the tab. In this example, I moved the “Zacs Tools” to be next to the Clipboard Group on the Edit tab (Figure 13).

There are three not-so-obvious GIS Tips that can make you GIS-life easier. Happy mapping!

Send your questions, comments, and tips to GISTT@ASPRS.org.

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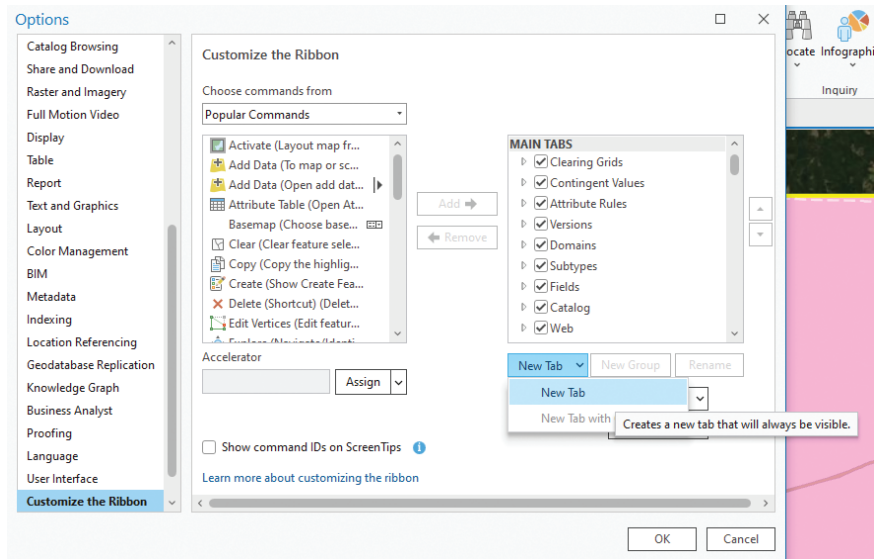


Figure 10. The dialog box on the Customize the Ribbon option with the “New Tab” selected.

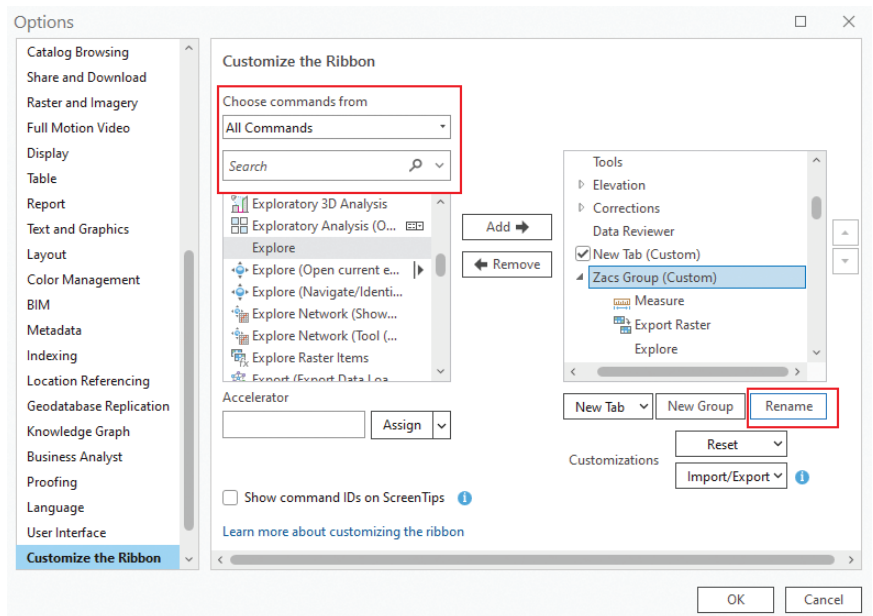


Figure 11. The Customize the Ribbon dialog box showing “All Commands” on the left, the selected features added to the new Tab on the right and renaming the new Tab to “Zacs Group”.

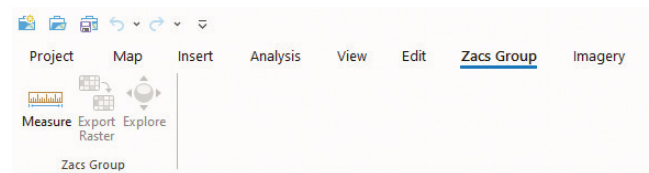


Figure 12. The ArcGIS Pro ribbon with the new “Zacs Group” Tab.

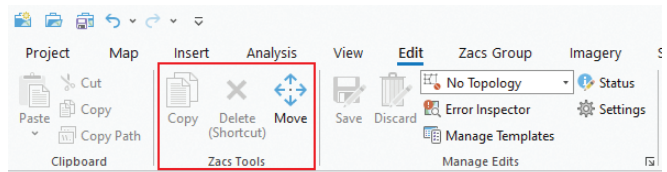


Figure 13. A New Group (Zacs Tools) added to the Edit Tab on the ArcGIS Pro ribbon. Note the new Tab (Zacs Group) to the right of the Edit Tab.