

Create Custom Basemaps for Desktop or Mobile Applications

Emily Meriam ^a

^a Esri – EMeriam@esri.com

Keywords: Basemap, Cartography, Design, Coding, Online Mapping, Global, Multiscale, ArcGIS

Abstract:

A basemap is a foundational element for desktop and mobile map applications. They provide geographical context for the map subject while focusing the viewer to what’s important. Basemaps are multiscale and multifunction. They can perform roles as background elements or as active participants in the map story.

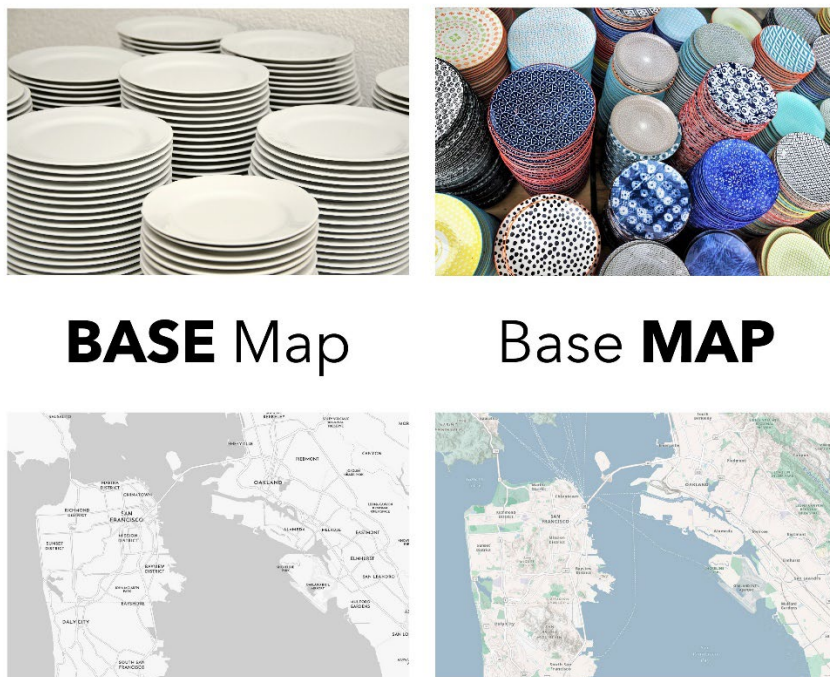


Figure 1: Look at these images of plates. They both serve food (or your map content). The light grey ones on the left serve as a neutral base and still retain locational information; while the colourful plates on the right provide much more information as well as have their own style.

Esri has released a tool called the Vector Tile Style Editor. This is an app that allows cartographers to have access to their core collection of vector tile basemaps. These can be customized and controlled at individual scale levels with every element of the basemap modified. Singular layers and their colours, pattern fills, line strokes, custom point icons, and labels are all editable. The app allows you to adjust the size and scale of basemap features, blend different basemaps together, or insert code from one basemap to another. Since the basemaps are routinely updated by the ArcGIS Living Atlas their content is always accurate and maintained.

Designing a multiscale basemap has many considerations. In this presentation basemap creation along with best practices will be discussed including:

- What is the role of the basemap? Is it in the background or an active part of the story?
- Where is the geographic focus area and what map scales are important?
- What font will be the most legible online and fit the map?
- How is the visual hierarchy and contrast on the map?
- What can you remove from the map to simplify its message?
- Has the balance and exchange of information been met?

Who is the audience?
Are their accessibility issues?

Next a live demonstration will show how to use the Vector Tile Style Editor to create a custom basemap. Tips and tricks will be highlighted throughout the presentation.

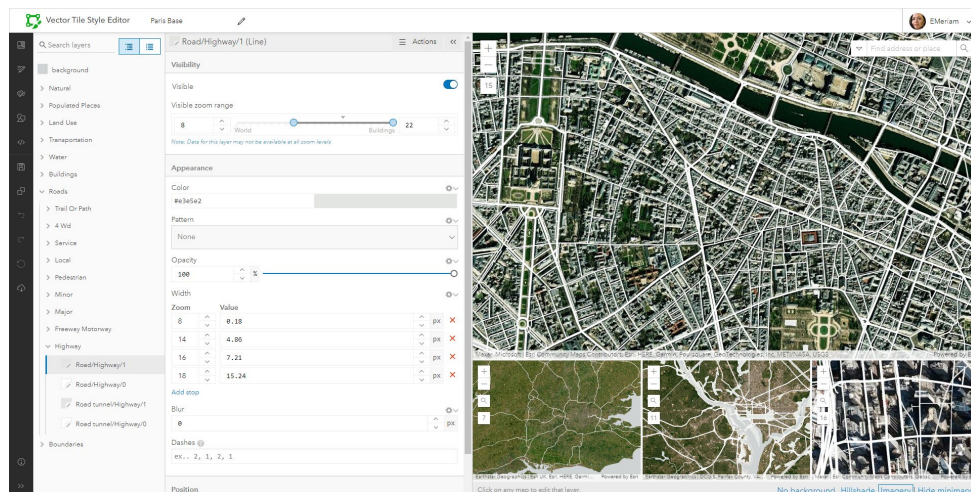


Figure 2: The interface of the Vector Tile Style Editor

The demonstration will conclude with examples of custom basemaps in ArcGIS Online and Pro and explain how they were designed to highlight the different types of vector and raster content that's used in desktop and mobile mapping applications.



Figure 4: Custom basemaps produced by the author

Acknowledgements

Dan Pisut, Aileen Buckley, and Andrew Skinner