

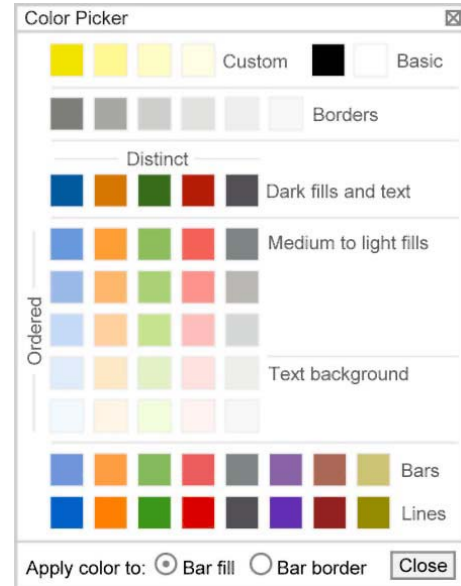
Chart Tamer: Color Design by Function

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Chart Tamer is a product from BonaVista that is a plug-in for Excel. Its goal is to enable users to easily create high-quality charts, graphs and tables, using the principles established by Stephen Few (who also worked on this product). Here are the original design goals created by Stephen:

- To simplify and make more efficient the process of assigning colors to objects in Excel.
- To encourage greater consistency in the application of colors to objects in Excel.
- To support the use of colors that work effectively for encoding data and as attributes for non-data objects, such as chart axes.
- To discourage the use of color in ways that undermine the effectiveness of data presentations.
- To educate users in effective uses of color for data presentation.



The produce supports formatted tables, graphs (bars, lines, and scatter plots), plus some very basic “heat maps,” which allow the user to use a color ramp to indicate quantity.

Like all design projects, a substantial part of the process was to establish the requirements and find the best solutions given the project constraints. In this project, it was important to build from the color models in Excel towards the more functional design envisioned by Andreas and Stephen. While Chart Tamer has its own color UI, the same colors will also appear in the standard Excel array for fill and text colors.

Andreas Lipphardt of BonaVista has been my primary collaborator for this project. Andreas originally proposed two separate palettes, one for distinct or labeling colors, and one for quantitative color ramps for the heat maps. We eventually decided to create a single set of colors, combined in an annotated palette. A key design decision was eliminate ramps optimized for quantitative data and include only text, line, fill, and table formatting colors. By limiting the total number of hues (and some careful design), the resulting colors can also provide an ordinal mapping for numeric data suitable for the simple heat maps provided by this version of the product.

My story will describe the journey from the original colors, which were designed by Stephen, to our final set (see figure), including the characteristics we optimized for each of these functions.