Project 1: Exploratory Visualization Prospectus

The Observatory of Economic Complexity is a tool that allows users to quickly compose a visual narrative about countries and the products they exchange. It was created at the MIT Media Lab.

The goal of this exploratory visualization is to give the users the tools to manipulate and understand the data themselves in order to see which countries are growing the fastest in terms of exports.

One of the requirements of a good exploratory visualization is the ability of the user to explore on their own with filters, sorts, tooltips, and transitions.

Visualization Taxonomies

I referred to the chart suggestions flowchart below to formulate my design iterations.

Chart Suggestions—A Thought-Starter Column Chart Line Chart Variable Width Column Chart Table or Table with Embedded Charts Cyclical Data Many Categories Two Variables per Item Categories Few Categories Few Periods One Variable per Item Over Time Among Items Column Histogram Single Variable Comparison Points What would you Line Histogram Distribution Relationship Many – Data like to show? Points Bubble Chart .00 Composition Scatter Chart Three Variables Changing Over Time 3D Area Chart Few Periods Many Periods Simple Share of Total Only Relative Differences Matte Relative and Absolute Differences Matter Relative and Absolute Differences Matter Only Relative Accumulation or Subtraction to Total Components of Components Stacked 100% Stacked 100% Stacked Area Chart Waterfall Chart Stacked 100% Column Chart Column Char Area Chart

© 2006 A. Abela — a.v.abela@gmail.com

In addition, I used the Financial Times Visual Vocabulary to guide my design choices.

I've decided that a scatter plot is the best way to allow users to spot export growth trends across different countries. In order to allow for multiple ways to explore these trends, I made a conscious design choice to include mouse-over tooltips, an option to show or hide labels with the button updating based on current state of visibility. I've attached a hover event to the circles to show the export values they represent with a tooltip - the tooltip only updates on hover to reduce clutter. Finally, we set the graph to display exports for 2010 through 2017 to allow for a cross-country comparison.

Alternatively, I thought about plotting this data on a map with darker colors corresponding to greater exports as shown below:

