Group 1 Exercise 2 - Visualization Approach Report

Visual variables are ways used to better display elements of data on a map or graph. In our graph, we used Bertin's visual variables: size, value, hue, orientation, texture, shape, and position, to describe our data on the change of iPhones over time. Distinctions in our data are meant to be sharp and clear so each element of the data is recognized as different information.

The color was used in the line graph to show how prices increased as better phones were released. The hue spectrum ranges from blue to pink and the value of each color ranges from darker to lighter as you read across the graph from left to right. Blue signifies a lower price and pink signifies a higher price. For almost the entire history of the iPhone, prices had increased but the iPhone 3g actually dipped in price before it started steadily increasing [Wilson 2008].

The shape of each physical phone is also shown, holding their own data on the screen. A camera was used for the camera quality, RAM was used for the amount of memory, and a CPU was used for how powerful the CPU is. The background is blue because it blends well with the color gradient used for the graph. Each iPhone is positioned on the graph based on chronological order. The screen's size shows our fifth attribute without using a legend because they are accurate representations of the real phone. Viewers can see the sizes of the phones slowly increase as time goes by as the height gets taller and the width gets slightly skinnier. The icons within the phones have a square shape, which makes it easier to round our data. For example, if only half of an icon is present then it's only worth half of its original value. The texture of the icons makes it easier for people to understand what the values are measuring. The icons are orientated on top of each other to simulate a bar graph increasing with each new iteration of the phone.

Selective perception helped lead the viewer's eyes to different pieces of information. The first element noticed is the color on the graph, the color changes in hue and value vary from the bland blue background. These colors represent the most interesting and distinctive points on the slide and help it stand out from any other part of the presentation. The colors on the images are also more interesting than the blue background and the white of the graph/phone frames. This draws the reader's attention to the most important parts of the slide: the data.

Associative perception has the viewer ignore certain variables while focusing on a specific variable. Each phone is separated into regions using its physical model: the information within the phones (the photographic bar graphs) can be ignored when looking at the size of the phone itself. The changes will be interpreted as an increase in

all attributes because the amount of icons increases as the plot size (phone frame) also increases.

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