Fashionista Phil: Trending Now High Level Design (HLD) Document

1. Introduction

The Problem

Fashionista Phil is very devoted to understanding non-hipster fashion trends within the fashion world. In order to dominate the market, he must first know what the people want now, and in the future.

Your Assignment

Fashionista Phil has asked you to help him with his endeavors to rule the world of fashion. He wants you to construct a model that will help him understand the spread of fashion throughout a elect population by making either a system model (using Vensim) or an agent model (using AgentSheets or NetLogo).

2. Subject Matter Experts Agreement List

Name	Title/Role	Mandatory Reviewer (Y/N)	Approved
Your Name	Developer	Y	
Phil List	Supervisor	Y	
Eric Horton	Intern-apprentice wrangler	Y	
Mentor's Name	Mentor	Y	

3. Requirements

The Challenge

You want to have a good simulation (not prediction) of the spread of different colors in a given area over the span of 10 years. People will be walking around and interacting with each other. Once a color becomes popular (65% of people are a certain color), people will start to change to

another color, to make the model more accurate to real fashion trends. This model should be able to be paused at any given time to inspect.

Variables you can Change

- Number of people
- Number of years (10 or more) where the time steps are set to every week

Variables you are watching (it would be a good idea to make a graph of this)

- Number of people in Blue
- Number of people in Red
- Number of people in Green
- Number of people in Yellow
- Number of people in Purple
- Number of people in Orange

Your Presentation

You will present your model to your mentor exactly as you would present to Fashionista Phil. Make sure to answer the following questions in your presentation:

- What were major trends that you found from the model?
- Why is it a good idea to use a model like this to show trends?
- What was the most challenging part of making this model?
- Do you think this model is accurate to a real life scenario?
- What would make this model more accurate?

You Need to Complete

One of two models, an agent model (AgentSheets or Javascipt), or a system model (Vensim)

4. Timeline

This is due within the next 5 days (by Friday, June 20th). You should try and finish this beforehand because procrastinating is never a good idea.

5. Desired Behavior / Components

Agent Model:

At the beginning of the model, x number of people agents will be spawned in to the canvas. They will be randomly assigned one of the six colors (blue, red, green, yellow, purple, and Orange). These agents walk around randomly on

the canvas and when they collide with another agent, one of three things will happen (which each have a 33% probability):

1. Person 1 changes to the color of person 2
2. Person 2 changes to the color of person 1
3. They remain the same color and continue to move randomly.

Once a color has been spread to 65% of the population, people will start wanting to change away from it. This happens by randomly changing the color of agents that are part of the popular color.

Agents:

1. People
    - They are randomly generated across the canvas
    - They are randomly assigned a color which should be set to 16.66% for each color allowing a relatively even distribution
    - They move randomly on the canvas so that they will collide with other people
    - When they collide with other people agents, there is a 33% chance or either: person 1 adopting the color of person 2, person 2 adopting the color of person 1, or nothing at all and they just continue moving randomly
2. Environment
    - These agents should be set up behind the people giving them an area on which they can move around.

System Model:

Create a model which has six main values, representing the six colors, which always add up to 100%. Have these linked together so that there is always a small percentage (which should be adjustable, or chosen randomly) that the colors will move into another group. If one of these is significantly higher than the others, it will lead to the drastic rise in one color. Once a single color makes up 65% of the population, the rate of people changing color should increase leading to a decrease in the population of the popular color and increasing all the other colors.

6. Conclusion

The goal is this activity is to have the ability to write and correctly follow a HLD by creating a model for the Fabulous Fashionista Phil.