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

1. Introduction

The goal of this model is to understand color trends and fashion. Build a model that will simulate color trends over a period of 15 years. Include a graph containing the rise and fall of each color and make the model pausable.

2. Subject Matter Experts Agreement List

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

3. Requirements

The requirements for this model include:

- People, (Possibly a color counter object), The world
- People should have multiple depictions, each with a different color to signify their favorite color. (BONUS: The world's color should change based on the most popular color)
- People will move around randomly in the world. When two people collide a few things could happen:
  - Give each person a random resistance to change from 1-99. If that doesn't happen then there is a 50% chance Person 1's color will be adopted and 50% chance for Person 2.
  - BONUS:
    Person 1 adopts Person 2's color. (35% Chance +-15% based on

popularity)(If popularity is <10% or >90% then it has a 10% chance, if popularity is >50% and <=90%, then it has a 50% chance.)
- Person 2 adopts Person 1's color. (35% Chance +-15% based on popularity) (If popularity is <10% or >90% then it has a 10% chance, if popularity is >50% and <=90%, then it has a 50% chance.)
- Nothing (30% Chance)(Or whatever the remaining chance is.)

- Activities take place when two people collide.
- Timeline is 15 years. Timesteps should be in days..

a. An Agentsheets model showing the interactions of agents which exhibit the following behaviors:
    i. Human Agent
        1. Is assigned a random color and Percent Chance to resist
        2. Moves around in a world randomly.
        3. If is touching another Person will have a Random chance to change color of them or it.

    ii. World Agent
        1. Bonus: Changes to the most popular color.
        2. The world should be 20x20.
            a. BONUS: Make the world changeable by the user.

    iii. Counter Agent (Optional)

        1. You may have an agent to count the number of each color, or you may use another method.
        2. Displays Graph of each color.
        3. Resets the count then broadcasts each timestep.

4. Timeline

This is due within five days of receipt of the task (that would be Friday, June 20 for those receiving this Monday, June 16). It is better to complete this sooner, so that you can begin implementing an HLD that one of your classmates has written.

5. Desired Behavior / Components

Behavior 1: Moving Randomly. (Agent: Person)

a. **Find a random direction to move.**
b. **Check if it is empty.**
c. **If it is, move there, else go back to a.**

Behavior 2: Color Checking (Agent: Person)

a. **Check if there is a Person touching you.**
b. **If there is, there is a chance that you will take their color. (1 – your Resistance chance)**
c. **There is also a chance that they will take your color (1 – their Resistance chance.)**
d. **If neither experience occurs, then nothing else happens.**
e. **If a new color is adopted, then the sprite (or depiction) will change and the graph/variables for each color will be updated.**

Behavior 3: Color Changing (Agent: World)

f. **Check the most popular color**
g. **Change color based on what "f" is.**

6. Conclusion

The goal is this activity is to learn about fashion trends throughout the ages and to learn to create HLDs and models for them.