# Using Snap! as a Presentation Tool Project: Network Redundancy



**Specs:** In this project we are going to see an example of how to use Snap! as a presentation tool cycling through slides and creating animations. PowerPoint is a superior tool for a slideshow, but Snap allows us to create a wider range of animations. It is hoped that after this example you will be able to use Snap! to create your own presentations, tailoring it to your needs.

Note that in the file linked below:

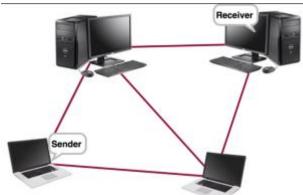
- Up arrow cycles through the presentation slides
- Space bar signals the end of the slides and prepares the stage for the animation
- Keys 1,2 and 3 step through the animation demonstrating the meaning of "Network Redundancy"

Open the Snap! file <u>linked here</u> to get a feel for the Snap! presentation we will develop titled: "Network Redundancy".

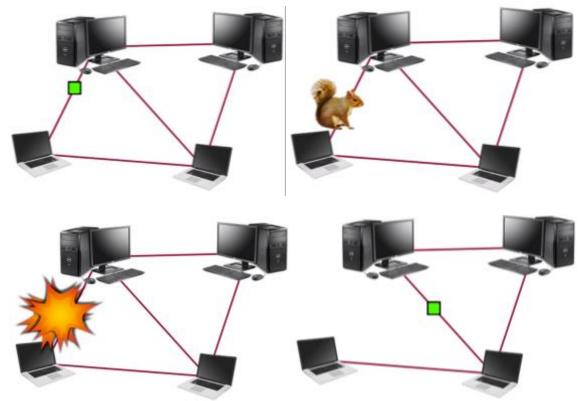
Here is the sequence of events in the presentation. First, the presenter cycles through these presentation slides using the Up arrow key.



Then, the presenter presses the Space bar to end the slide show and set the stage for the animation. Nodes in this network are represented by the computer stations with the Sender and Receiver Nodes indicated.



Finally, the presenter presses keys 1,2 and 3 to activate different stages of the animation. Key 1 shows a message traveling from the sender to the receiver in the original network. Key 2 shows a squirrel causing a breakdown at a part of the network Key 3 shows how the message still manages to travel from the sender to receiver in the broken network due to the redundancy built in the network.



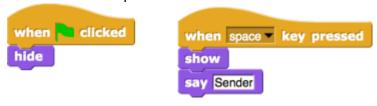
Here is a student file <u>linked here</u> with all the sprites needed already created for you. Also included are the necessary costumes and sound files. You will now write the code for each sprite to create the presentation. Try to write this code on your own. If you get stuck the next pages will give some possible solutions.

### **Solutions:**

Here is the code for the stage. This code will let the presenter cycle through the slides.



## Code for Node 1 sprite:



## Code for Nodes 2 and 3 sprites:

```
when space key pressed
```

## Code for Node 4 sprite:

```
when space key pressed

hide

show

say Receiver
```

Code for the Network sprite:

```
when space key pressed drawNetwork1

when 2 key pressed broadcast Failure wait 2 secs drawNetwork2
```

Code for the custom blocks drawing different versions of the Network:

```
+ drawNetwork1+

clear

go to Node1 

set pen size to 3

set pen color to pen down

go to Node2 

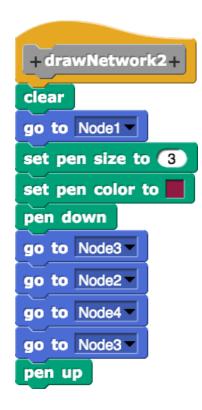
go to Node3 

go to Node2 

go to Node4 

go to Node4 

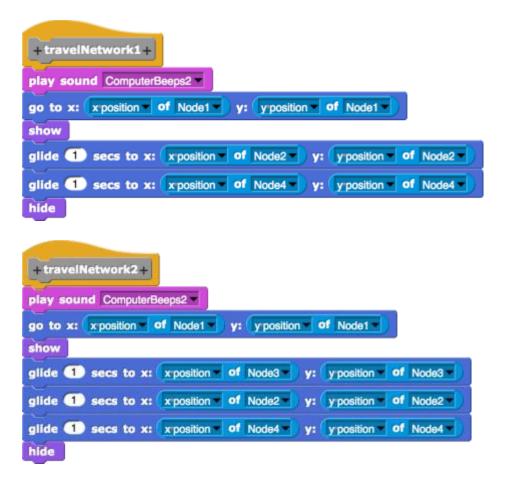
pen up
```



Code for the Message sprite traveling the Network:



Code for the custom blocks for the Message sprite to travel different versions of the Network:



Code for the Failure sprite which alternates between a squirrel and an explosion as costumes:

```
when I receive Failure show
switch to costume Squirrel2(2) play sound Rattle wait 1 secs
switch to costume explosion play sound Screech wait 1 secs
```

Test that everything works as intended.