

# **Animator : Animation in CytoScape**

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## **1. Introduction**

The Animator plugin also provides animation GUI to Cytoscape, so we may run animation of a given network in our favorite. In addition, we are able to create animation by script R through Animator-Script. For more detail, please look at the CytoScript manual. So Animator-Script is required to install CytoScript. We are able to select the properties of visualization through VizMapper on the GUI.

## **2. Animation by R**

1. Download Animator-Script.jar and put it in the Plugin folder of Cytoscape.
2. Write the program for the animation by mapping rules.
3. Import a network.
4. Choose Load a script plugin from Plugins menu. Basically, animation is performed by CytoScript. Following example is to find the strongly connected component and the result is shown by animation.

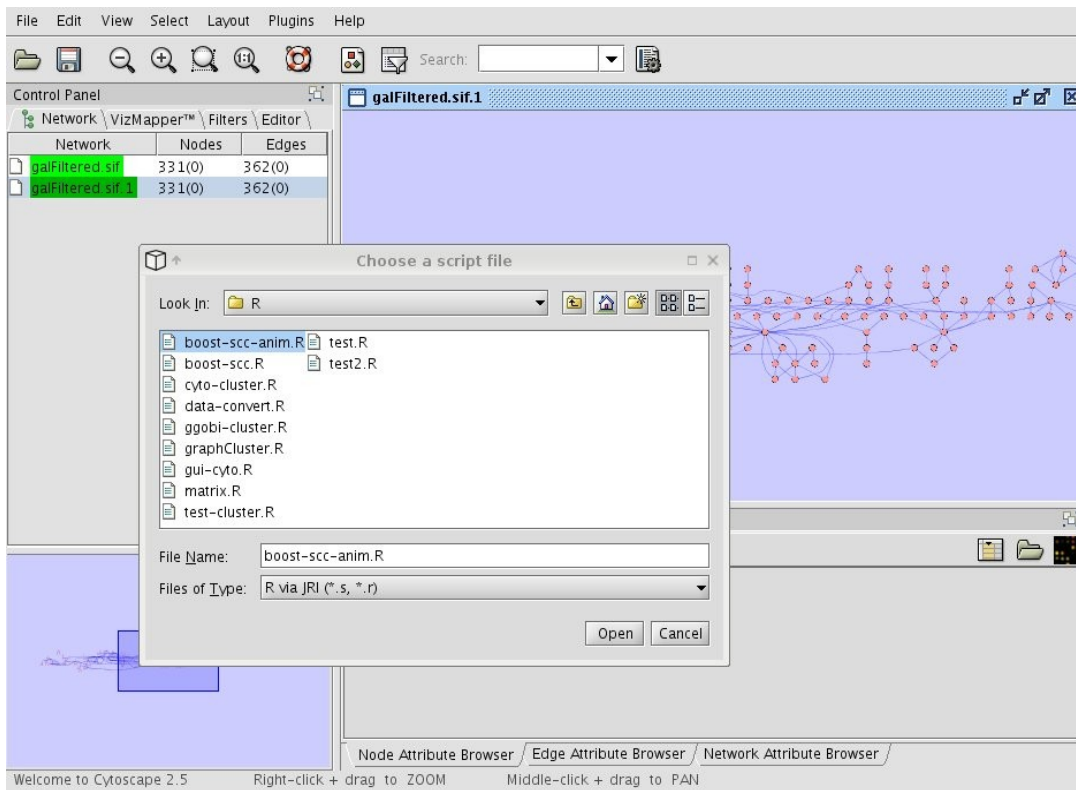


Figure 1: Load a program to run animation.

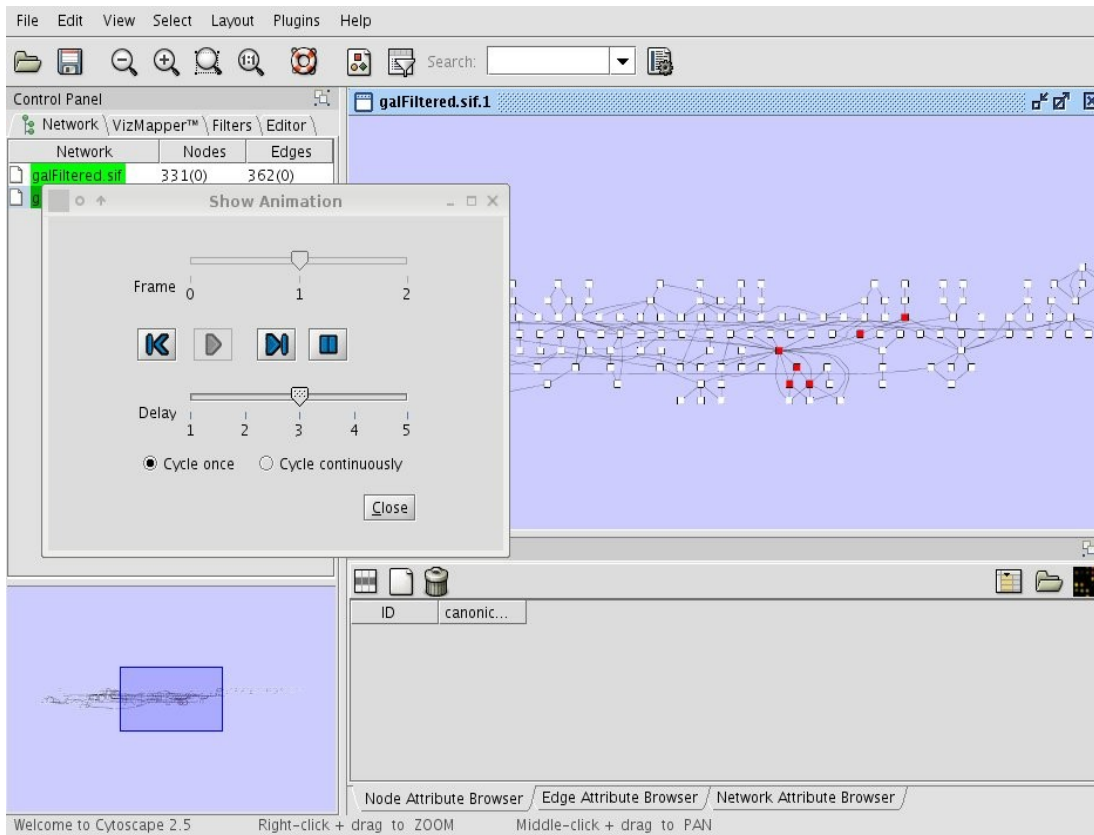
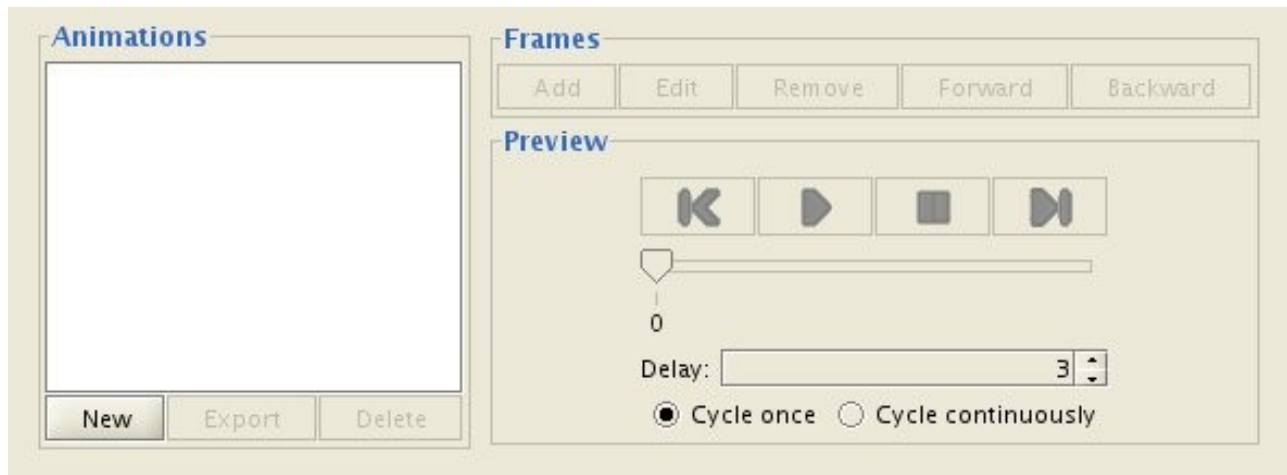


Figure 2 : Run animation by Scc

### 3.Animation GUI

A following example is shown in detail.

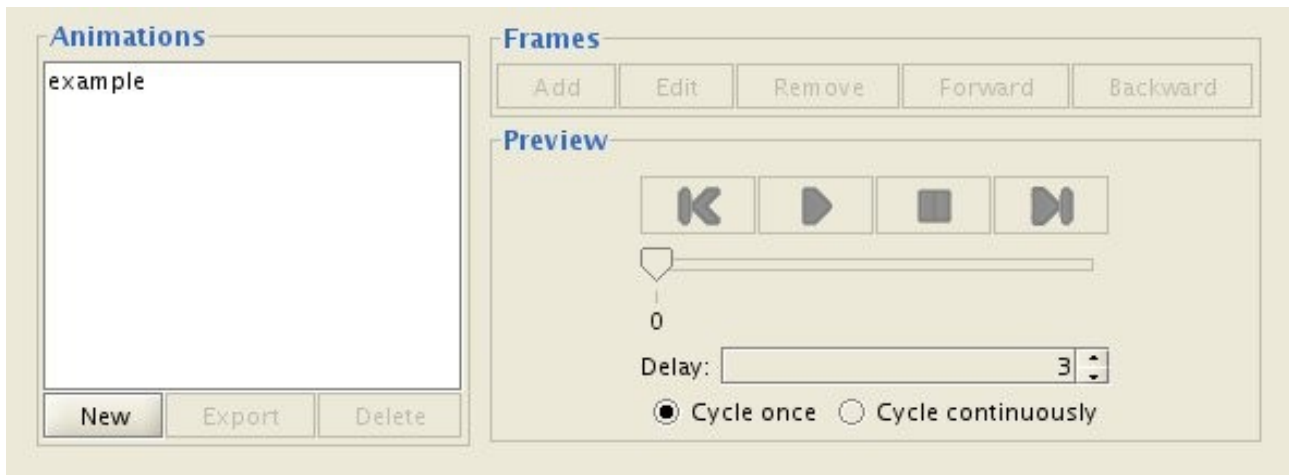
1. Download Animator jar file and put it in the Plugin folder of Cytoscape.
2. Import a network. For this example, we use a sample network, “GalFiltered.sif” and import node attribute file “galFiltered.nodeAtts1”.
3. Choose “Create Animation” on menu of Plugins. Animation GUI would be shown up as follows.



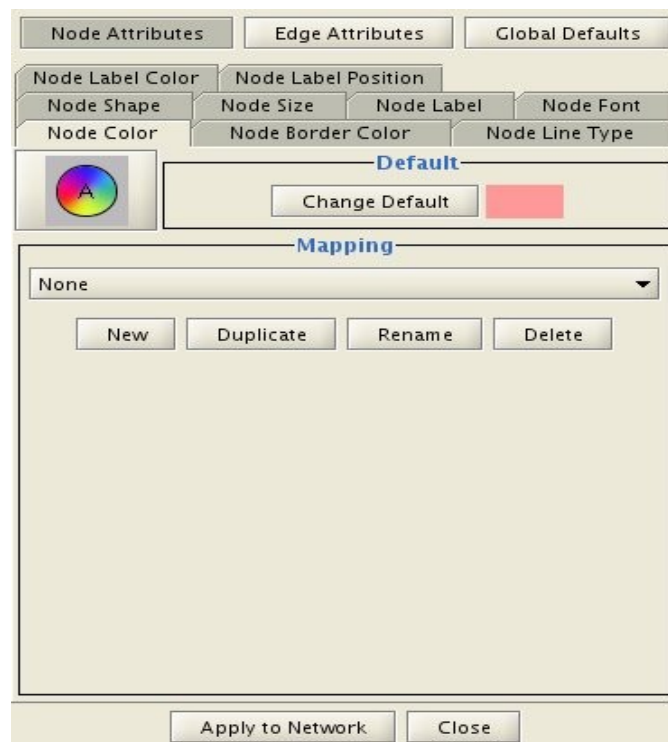
4. Click “New” button. This button is to create the name of animation.

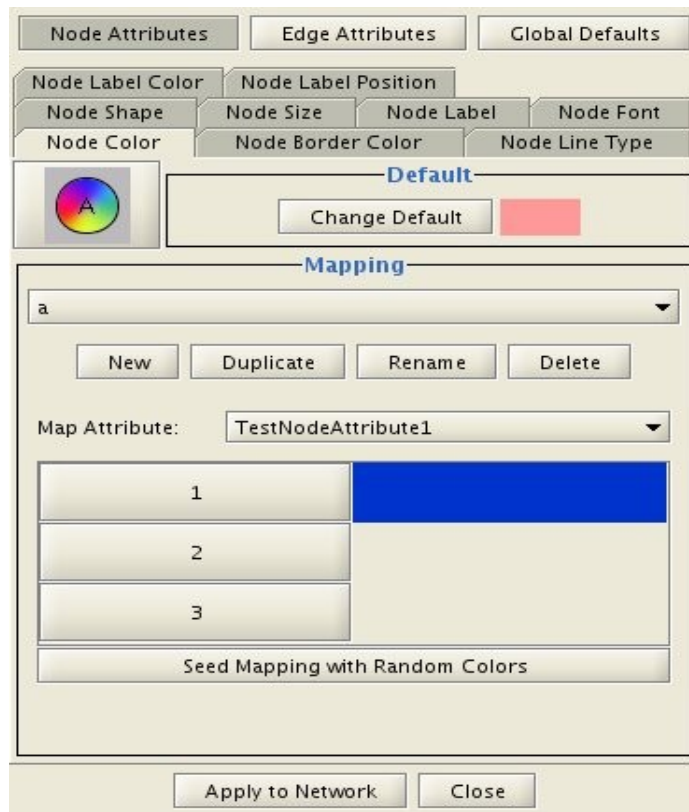


5. Click “OK” button. Then the animation name would be registered on the GUI.

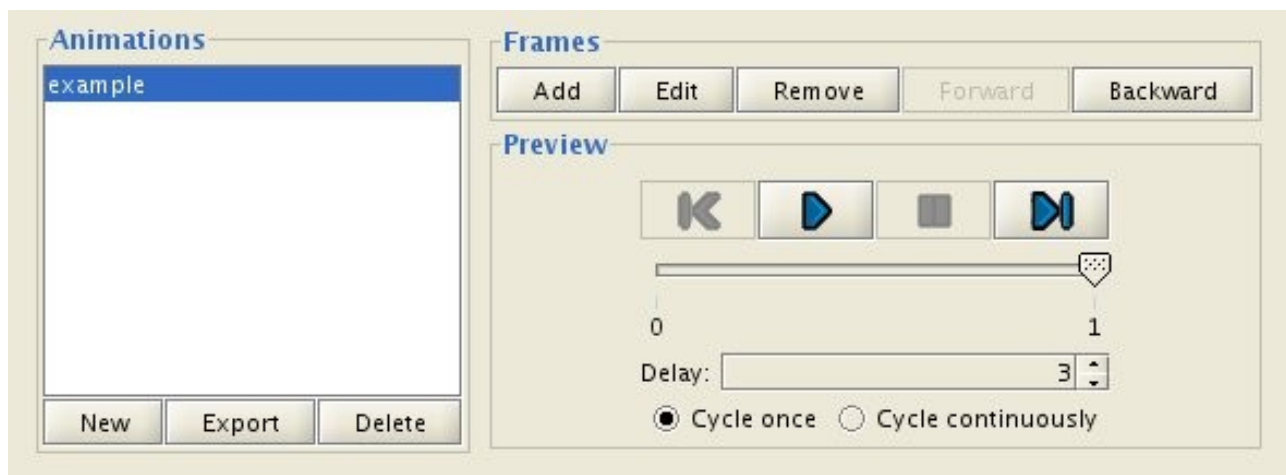


5. Automatically, the first frame is created. So let's set the visual properties of this frame.
6. Edit" button is to set up the visual properties on the frame. Click "Edit" button, then VizMapper would show up. Let do mapping. On VizMapper, Click "New" button to create new mapping rule on the mapping. Click "New" button ⇒ Choose a mapper on New Calculator ⇒ Click "OK" button ⇒ Input new name for calculator ⇒ Select "Map Attribute" ⇒ Set attribute values to map ⇒ Click "Apply to Network" button



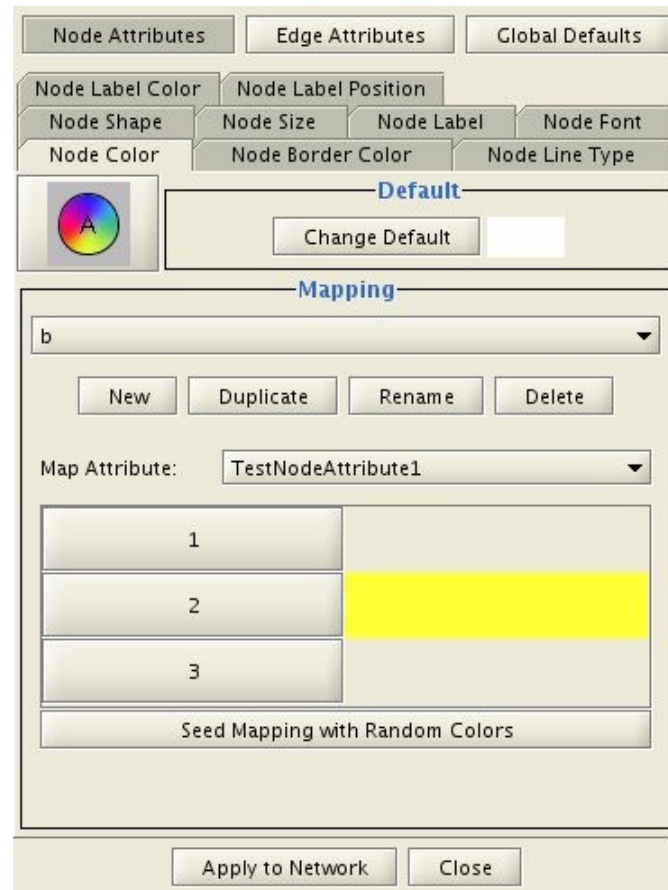


7. Let's create a new frame for the second frame by clicking "Add" button.



8. To set the new visual properties of the second frame, "Edit" button is used to set up the visual properties on the frame. Click "Edit" button, then VizMapper would show up. Let do mapping. Click "New" button to create new mapping rule on the mapping. On VizMapper, Click "New" button ⇒ Choose a mapper on New Calculator ⇒ Click "OK" button ⇒ Input new name for

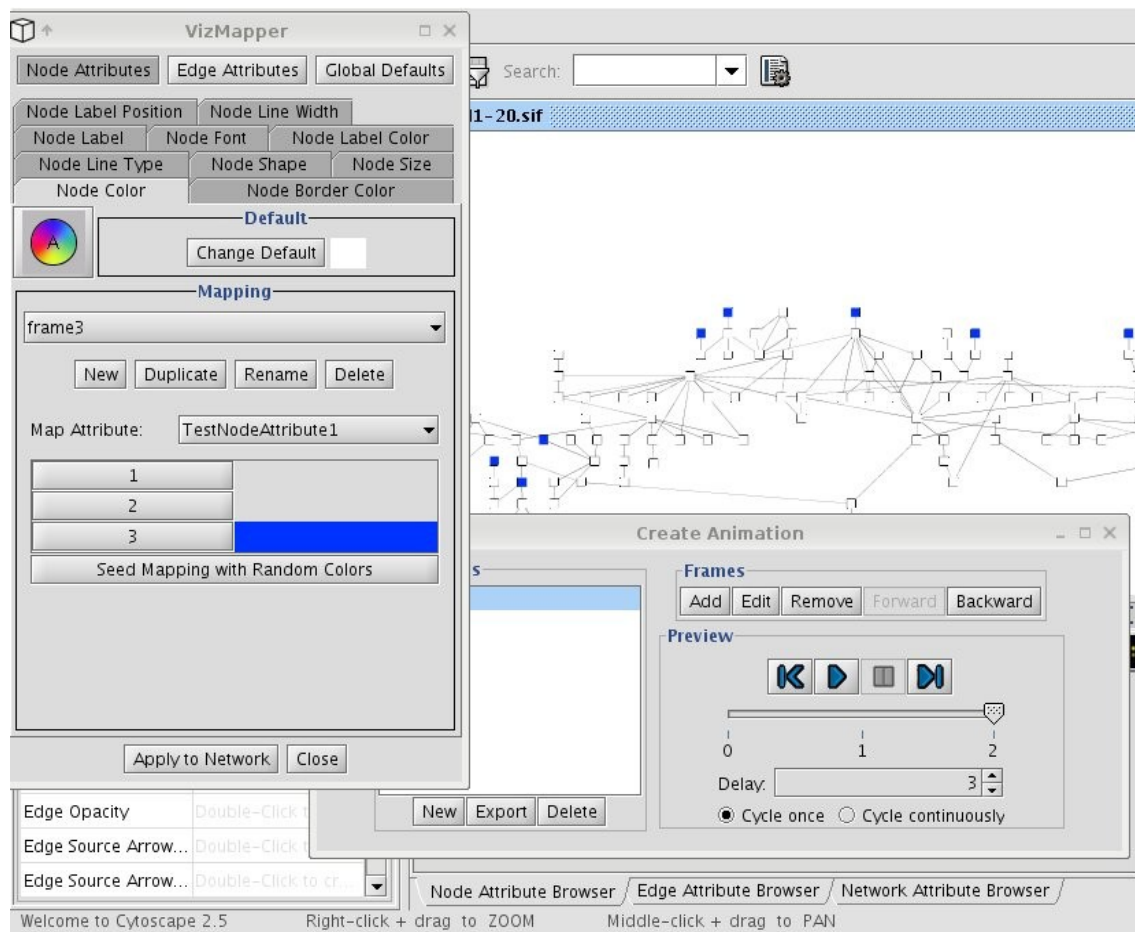
calculator ⇒ Select “Map Attribute” ⇒ Set attribute values to map ⇒ Click “Apply to Network” button Click “Add” button to create new frame. Click “Edit” button to create the visual mapping for this frame. The method is same as one to set up the visual mapping. It is same as 6 steps.

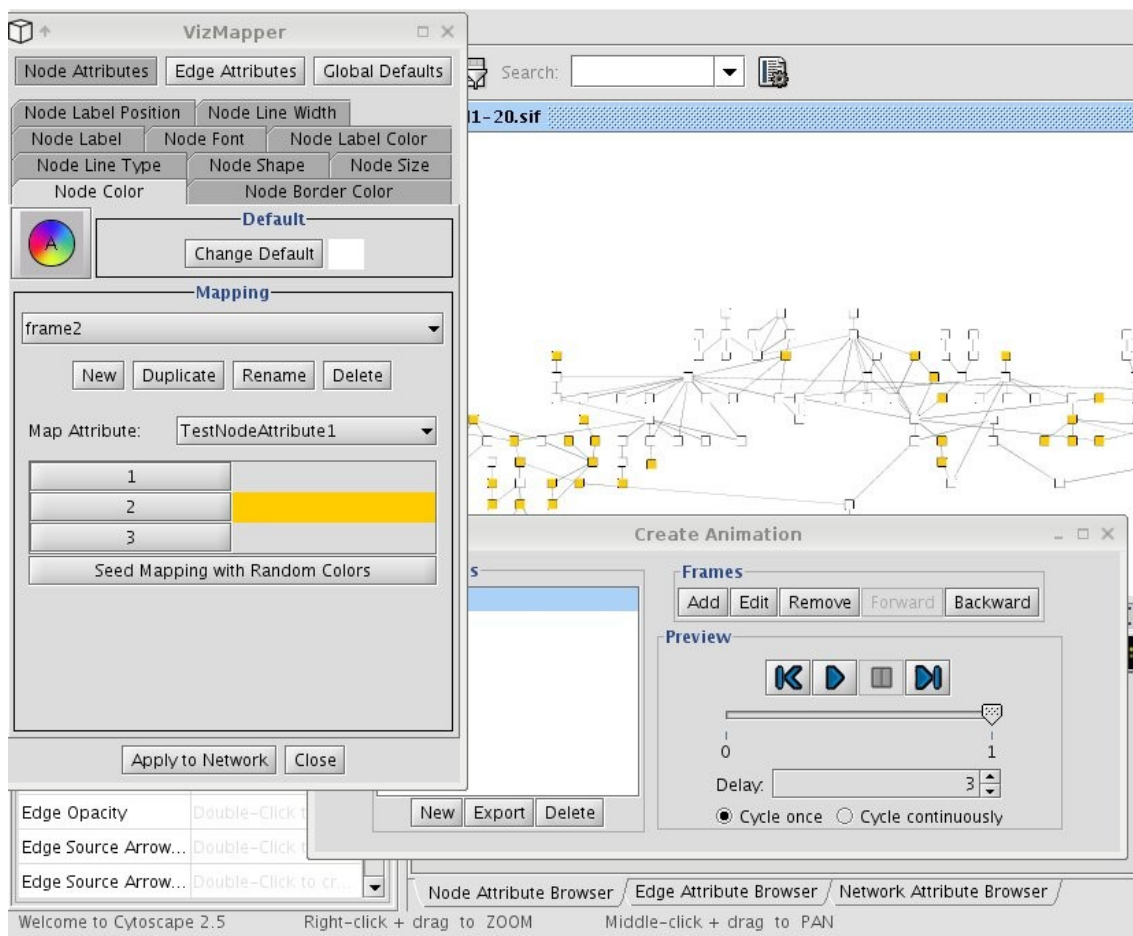


**Comment : If we don't create new mapping for each frame, it does not show the created mapping for each frame. It would show only the last mapping through whole frames because VizMapper share whole information of mappings. Even we set up new mapping on the previous mapping, VizMapper updates new mapping information, not remembering previous one. Thus, we need to set up new mapping for each frame.**

9. If changed mapping does not show the network view, please move frame bar on the Preview

section. Let us run our animation. To do this, click “Play” button. We can see the animations we created. Each frame is shown as follows.





10. For more explanation, on the Preview, we can see the frame bar. Through this frame bar, we can see visual style of animation on each frame. On the Frame, “Backward” button moves the frame on the backward and “Forward” button moves the frame on the forward.