Tutorial:Cluster Maker

ClusterMaker

Biological Use Case: Find possible complexes, protein families, functional relationships and view in biological context.

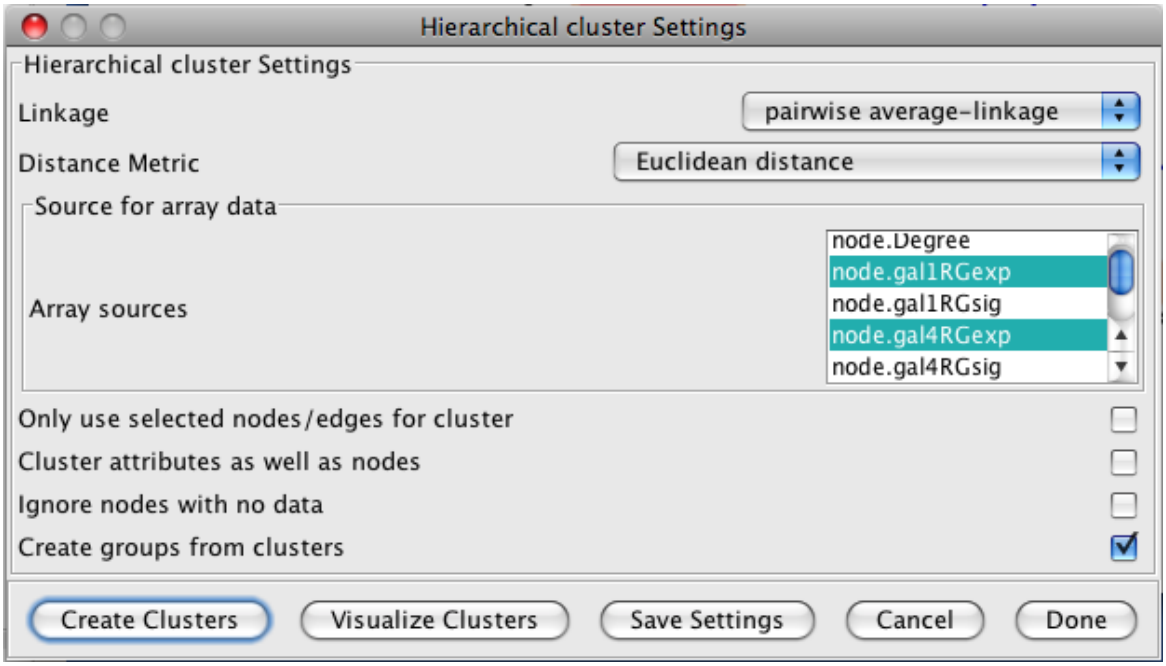
Dependencies: For group features, please also install the MetaNodePlugin2 and the NamedSelection plugin.

Procedure

1. Start with expression data for studies into mechanism for galactose utilization. Go to **File->Open** and select *galfiltered.cys* to load a session.

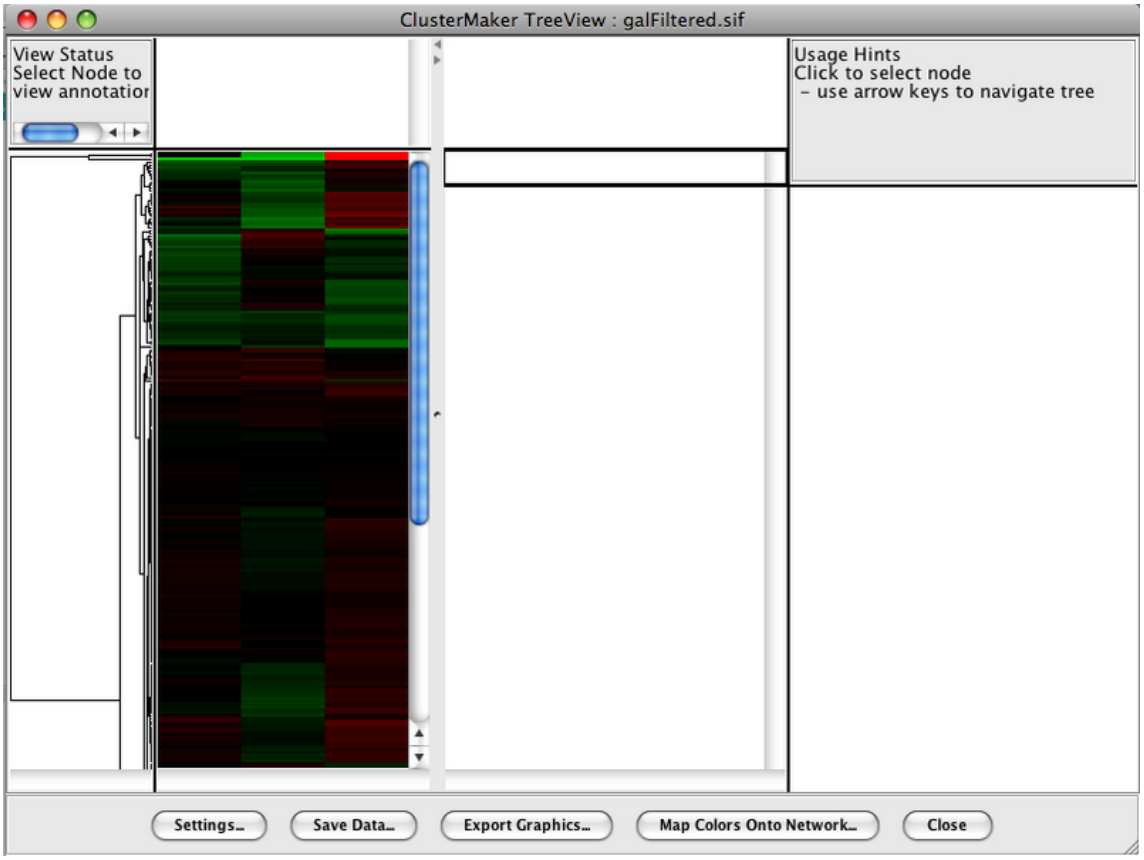
Run clustering to determine interesting subnets

1. Select **Plugins->Cluster->Hierarchical cluster**.
2. In the **Source for array data** box, select *node.gal1RGexp, node.gal4RGexp*, and *node.gal80Rexp*.
3. Deselect **Only use selected nodes/edges for cluster**.
4. Click **Create Clusters**.
5. When you have created the clusters, the **Visualize Clusters** clusters button should become active. Click **Visualize Clusters**.

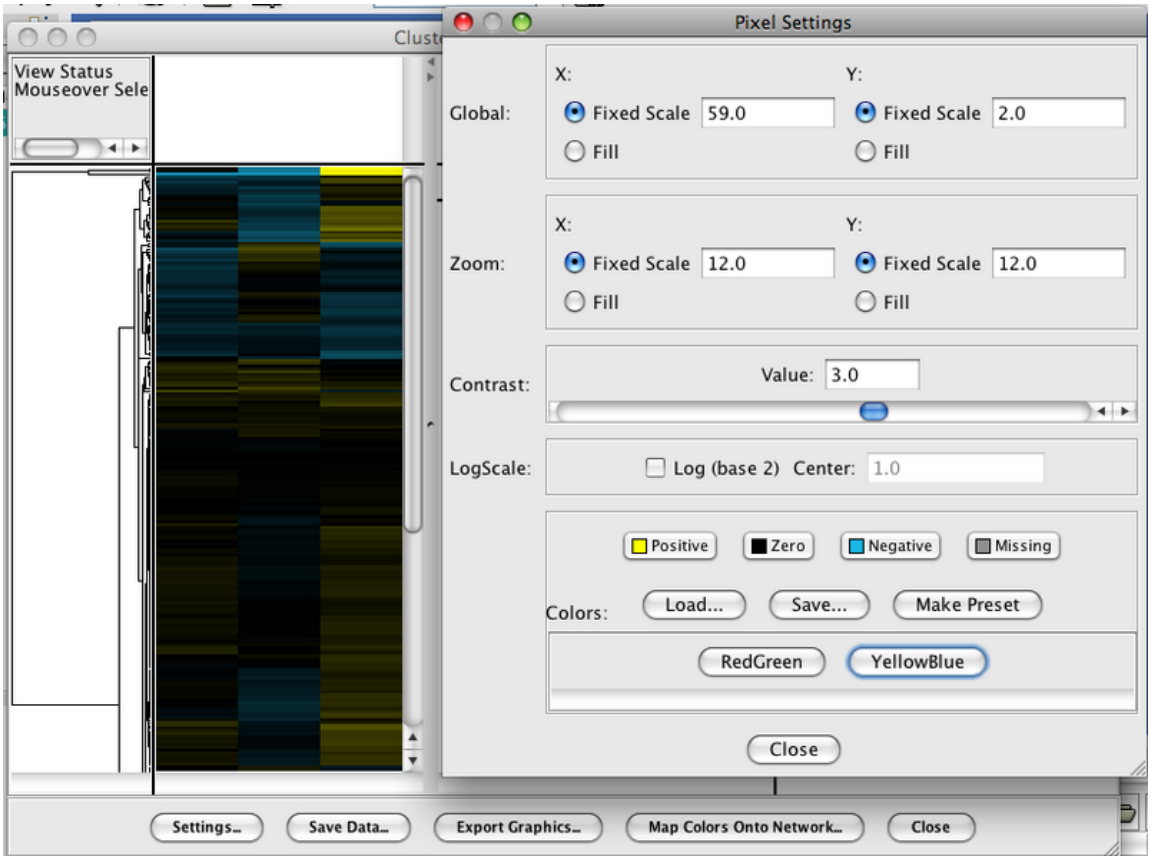


Visualize and navigate the clusters

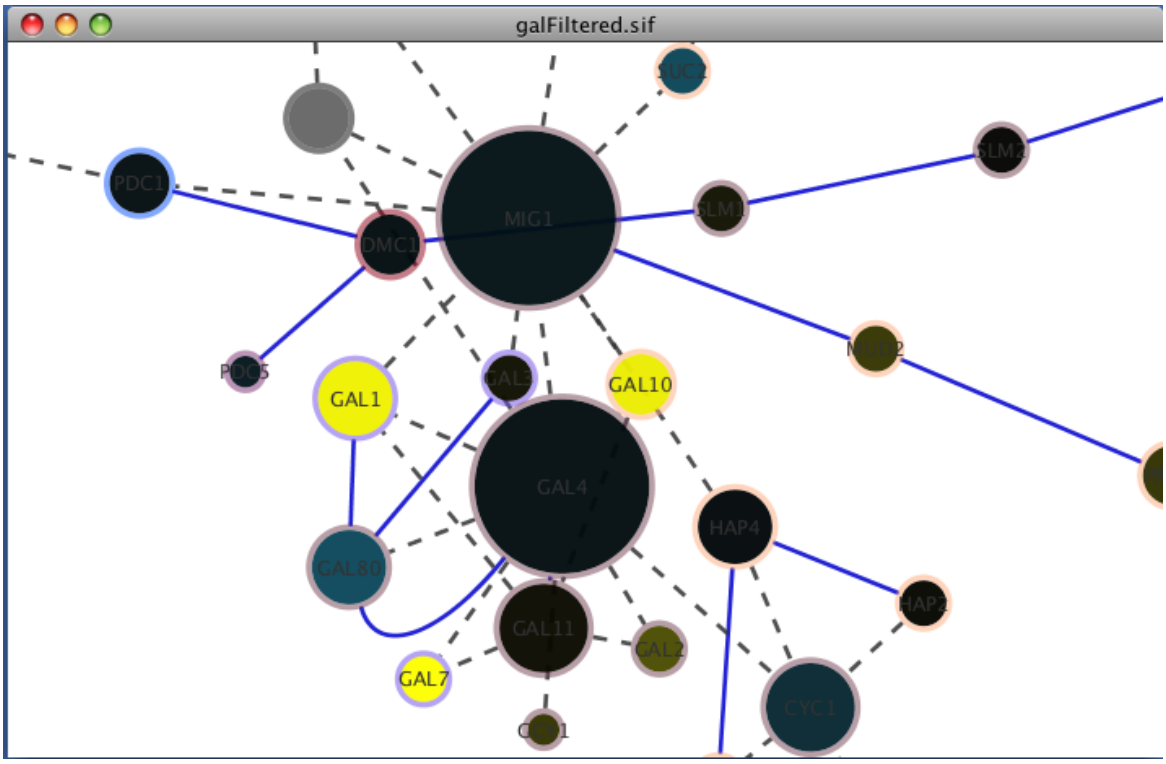
1. You will now see an Eisen treeview visualization. On the treeview window, explore by clicking on points on the dendogram. Clicking/selecting a particular row in the heatmap will result in the expression values for that column being overlaid on the network view.



1. Use **shift-drag** to draw a box and see results on network.
2. Use **shift-click** to pick individual columns.
3. Select an individual row by clicking on it.
4. You can adjust the color scheme and contrast by going to **Settings**. For this demo, select **YellowBlue** in the colors window. This will change the Red/Green color scheme to Yellow/Blue. Click **Close**.



1. Press **Map Colors Onto Network** and select one of the options from the *Attribute List*.
2. Click **Create Vizmap**. This will map the colors onto the network.



Animate expression values over time

1. Go to **Map colors onto network**.
2. On the pop-up screen, click on specific attributes to select. For this example, select *gal4RGexp* and *gal80Rexp*.
3. Press **Animate Vizmap**. This will animate the image on the main Cytoscape session screen.

Article Sources and Contributors

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