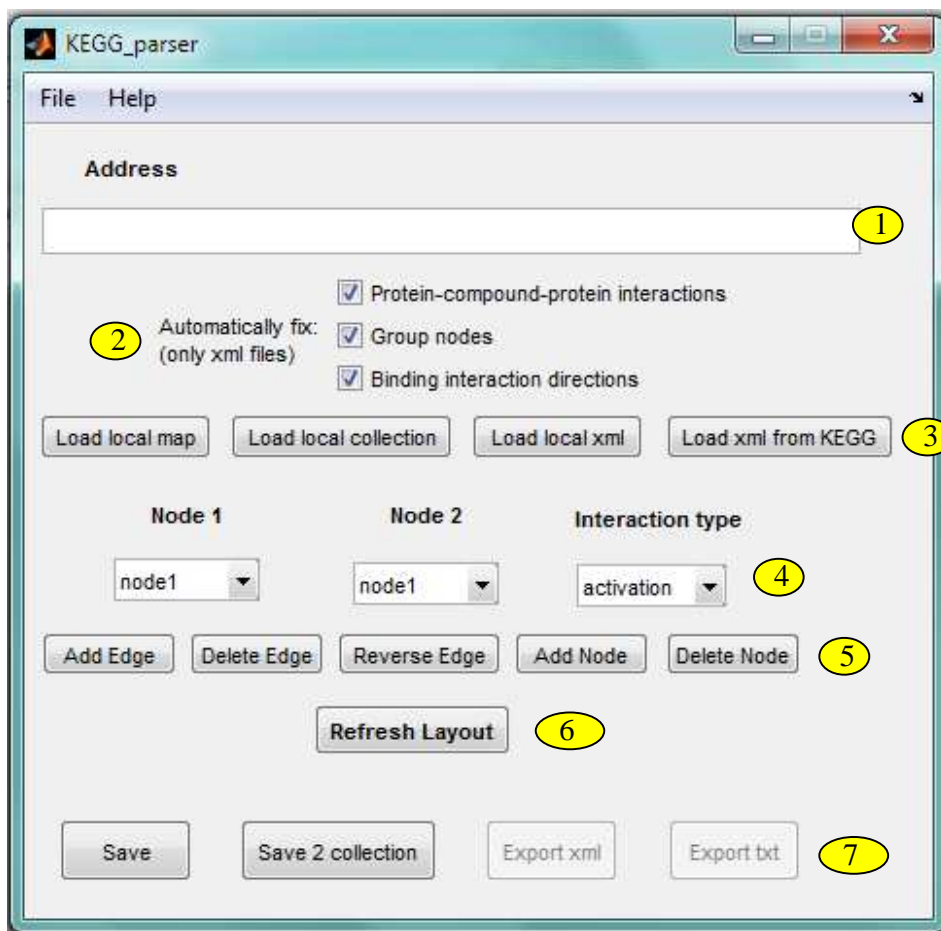


## KEGGParser tutorial

Create “KEGG parser” directory and unpack the archive there. In Matlab, set active directory to “KEGG parser” or add the directory to Matlab path.

To start KEGGParser type, KEGG\_parser command in Matlab command window.

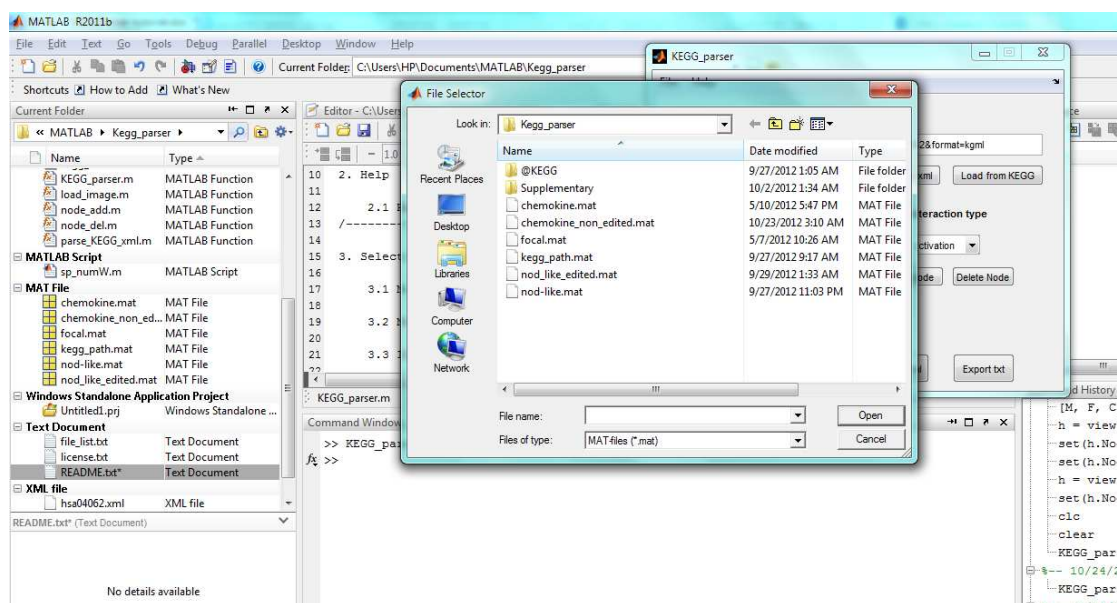


**1. The Address bar** shows the path to the file or is used to specify the pathway to be downloaded from KEGG website.

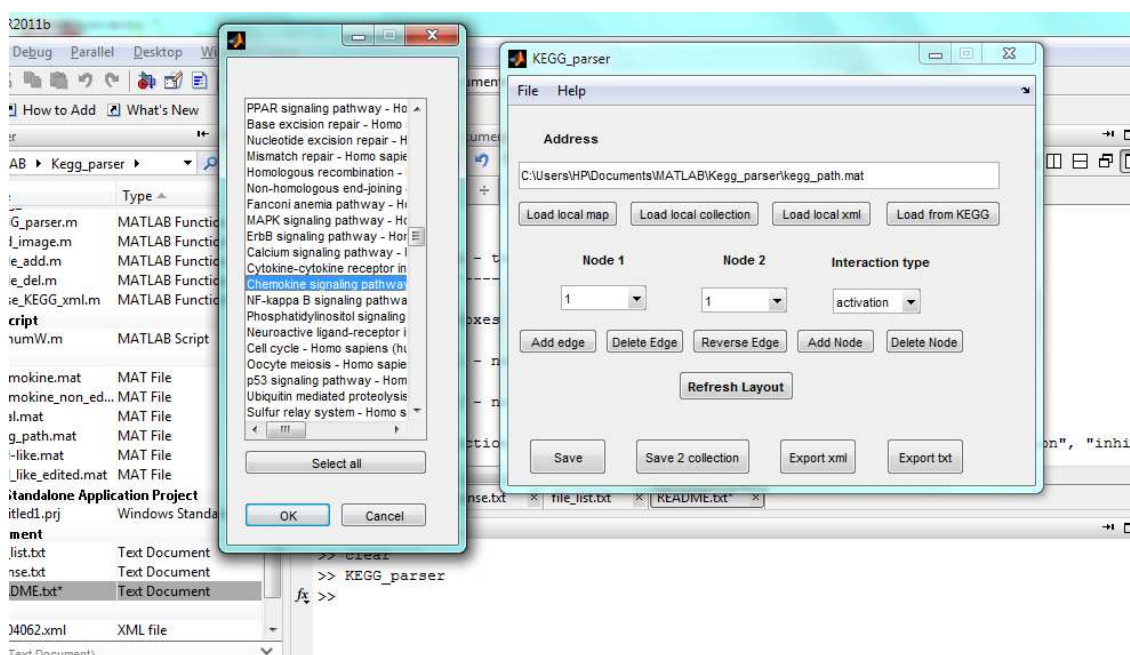
**2. The Automatically fix** option allows performing corrections during initial parsing of KGML files. To cancel any type of automatic fixing the corresponding checkbox should be unselected.

### 3. Data Loading

The **Load local map** button opens a dialog box for loading a pathway map stored in a .mat file.



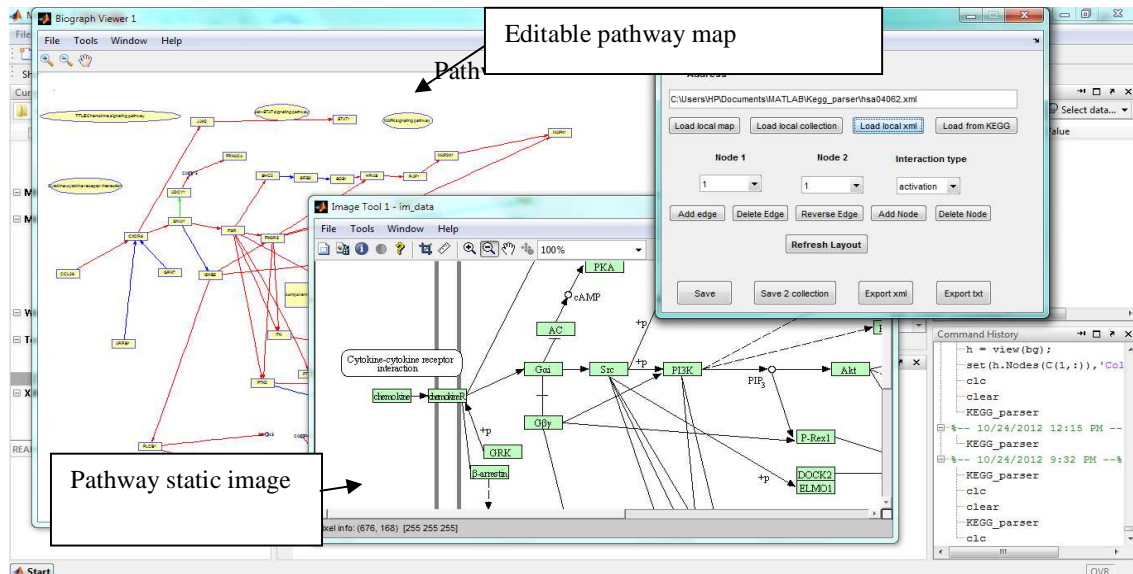
The **Load local collection** button opens a dialog box to choose a map from a collection .mat file. A collection file contains an array of structure variables, each containing a pathway graph object with associated information.



The **Load local xml** button is for loading downloaded KGML files. This button behaves similar to the **Load local map** button.

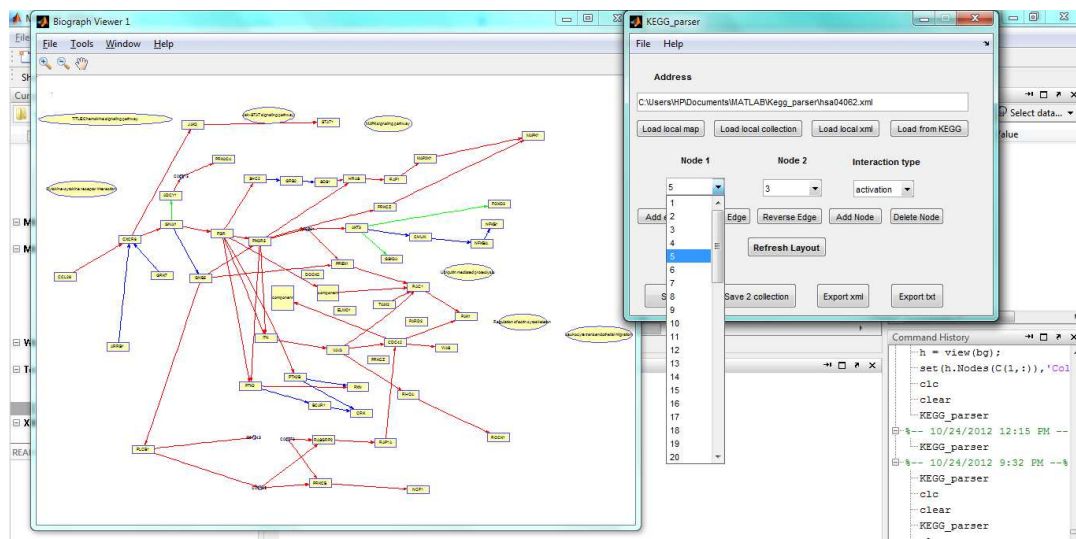
The **Load from KEGG** button is for downloading KGML files from KEGG web-site. Before pressing the button, the desired map ID should be specified in the **Address bar** (e.g. hsa04062).

Whichever way for loading is used, a new window with a parsed pathway map is opened. If the map is loaded with the **Load local xml** and the **Load from KEGG** buttons, the static pathway image is also opened as a reference.



#### 4 and 5. Graph editing, node and edge manipulations.

Graph editing can be performed using selection boxes (3) and editing buttons (4). The **Node 1** and **Node 2** list boxes are used for selection of nodes for subsequent operations.



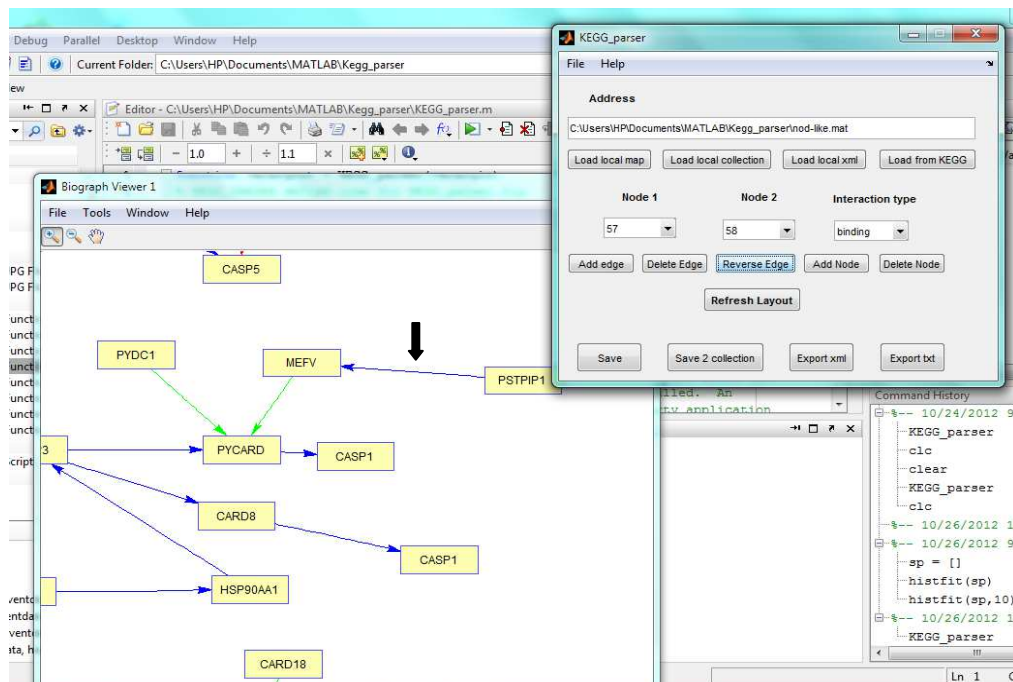
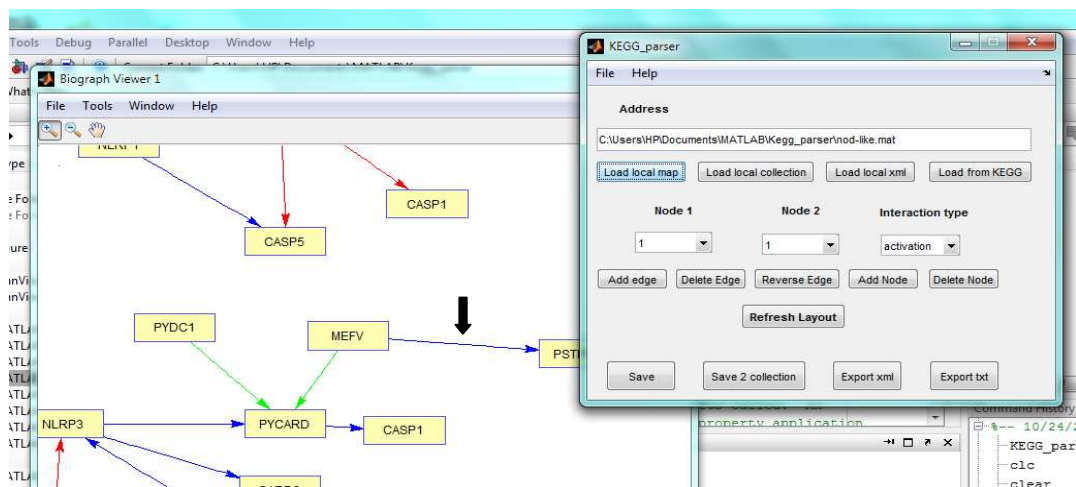
The **Node 1** list box is used for selection of nodes for **Delete node** operation. Node deletion also clears all the edges associated with the selected node.

The **Node 1** and **Node 2** list boxes are used for selection of nodes to perform **Add edge**, **Delete edge** and **Reverse Edge** operations on interactions between those.

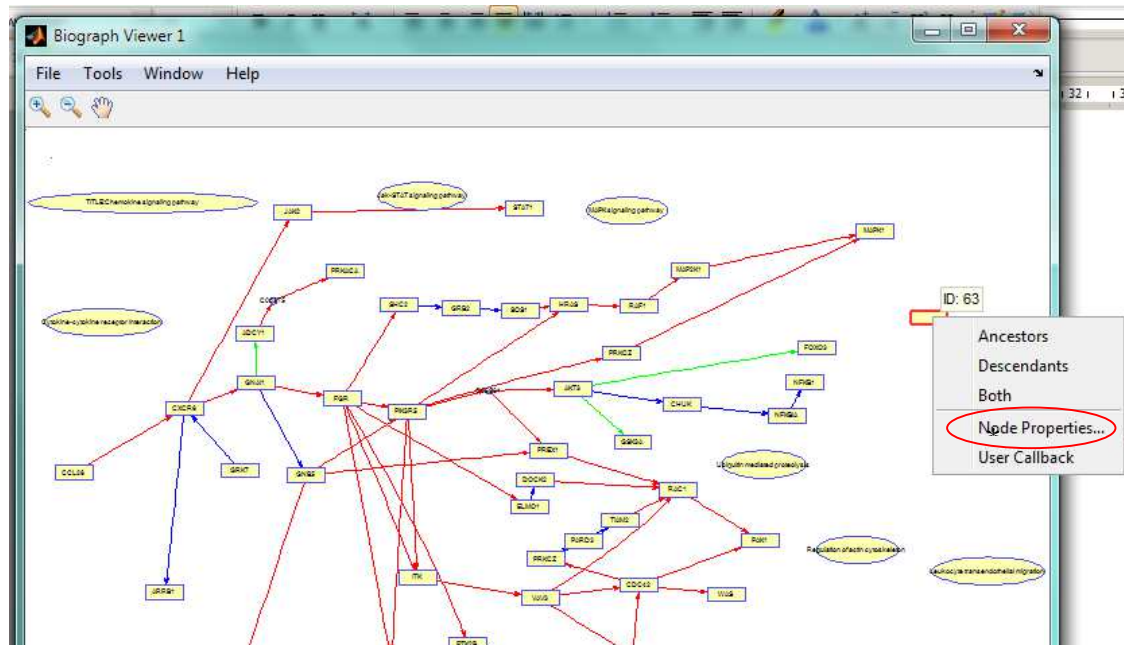
The **Add Edge** button adds edges between nodes defined by the **Node 1** and **Node 2** list boxes. The interaction type is defined by the **Interaction type** list box values. There are three types of interactions: "activation", "inhibition", and "binding". The default is activation.

The **Delete Edge** button deletes edges between nodes specified by the **Node 1** and **Node 2** list boxes.

The **Reverse Edge** button reverses the edge direction between nodes specified in by the **Node 1** and **Node 2** list boxes. The edge should exist, otherwise an error is returned. The interaction type is preserved.



The **Add node** command adds a new node to the pathway. The node properties can be specified with right click and selection of **Node Properties** from the context menu.



## 6. Layout

You can change node and edge positions in a graph window by clicking on the corresponding node and dragging it to the desired position. To confirm layout changes press the **Refresh Layout** button.

## 7. Data Saving

Currently two options for map storage are provided:

The **Save** command stores the pathway graph structure in Matlab specific format (\*.mat).

The **Save 2 collection** command stores the pathway graph in a Matlab collection file.