

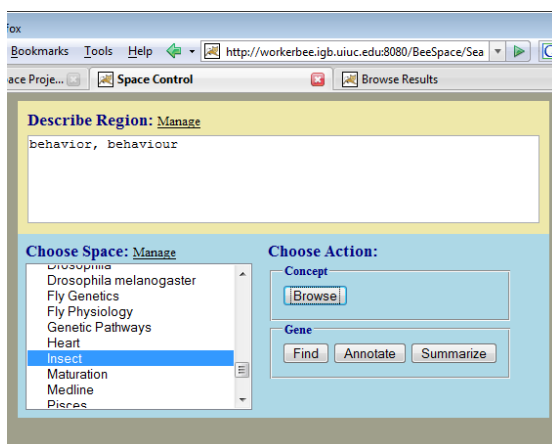
BeeSpace Navigator v3.6 Walkthrough Demonstration

In this demonstration, we will generate and optimize a collection of documents about insect behavior via steered semantic clustering.

1. To begin, type in the following URL: <http://workerbee.igb.uiuc.edu:8080/BeeSpace/>
2. The login page will appear, with the fields prefilled with `guest`. Click on **Login** to proceed.

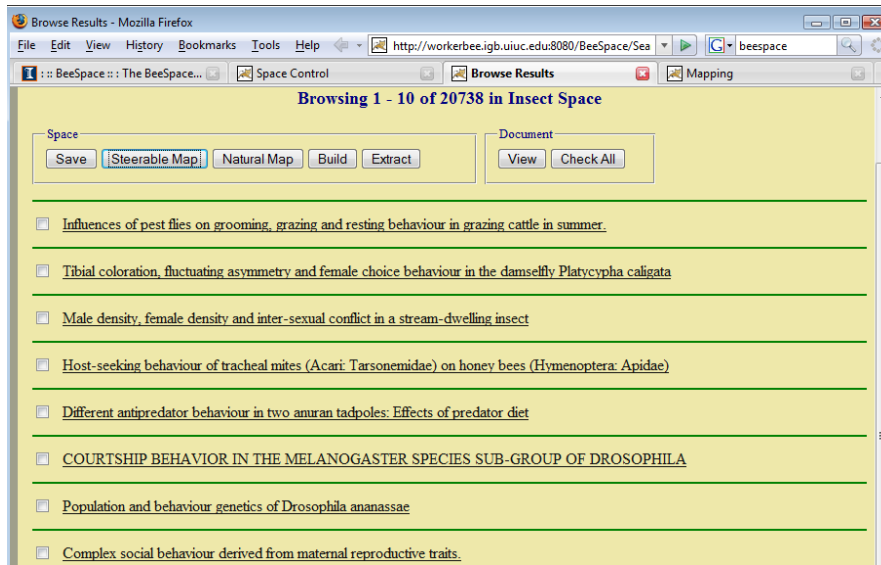


3. Describe what you want to search for using keywords. Type the following keywords into the **Describe Region** box: `behavior, behaviour`
(Note that these are two different spellings of the same keyword, to maximize search coverage.)
4. Next select a collection you would like to search within. Select `Insect` from the **Choose Space** drop-down menu, as shown below. Click on **Browse** to initiate the search.

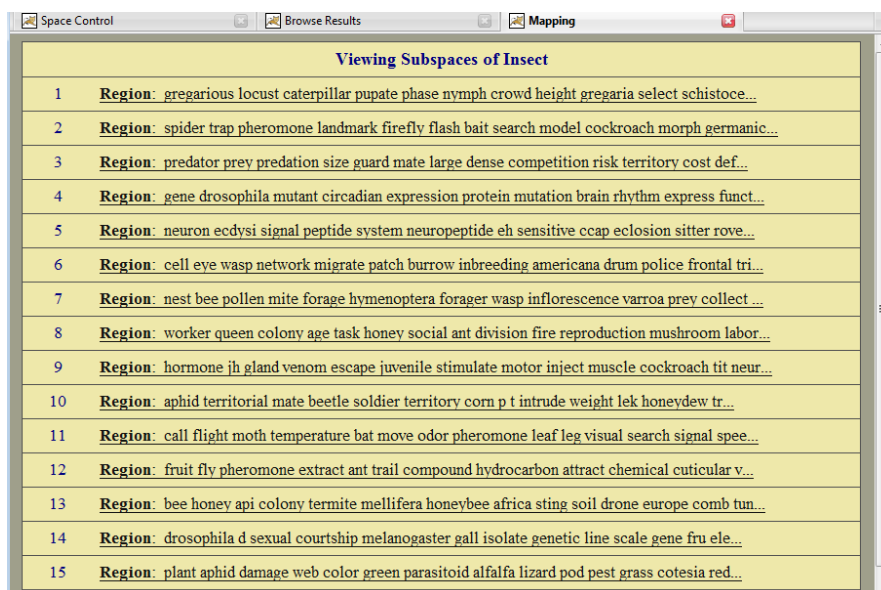


5. Your search should return more than 20,000 document titles, ranked by relevance.

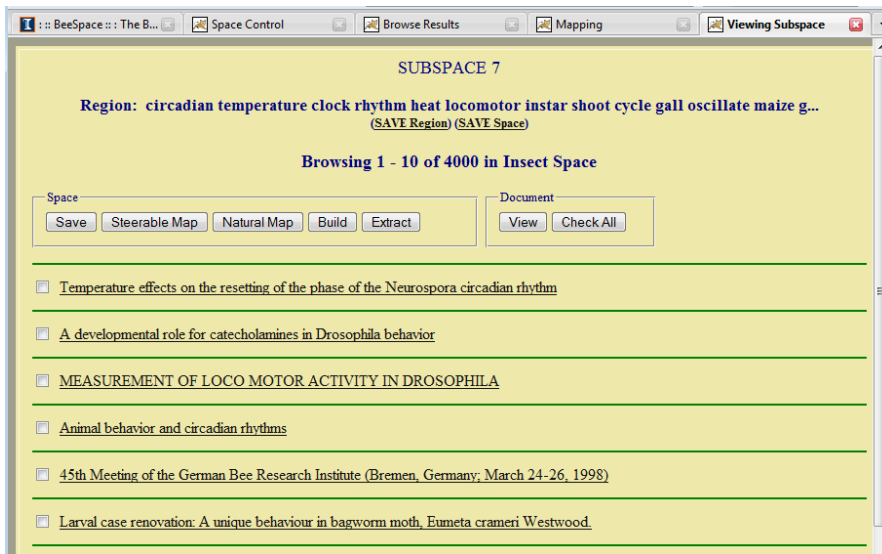
6. Next, you will use **automated document clustering** to break up this set of documents into **semantically related sub collections**. Do this by clicking on the **Steerable Map** button. (The clustering process could take a few minutes to complete. Please be patient.)



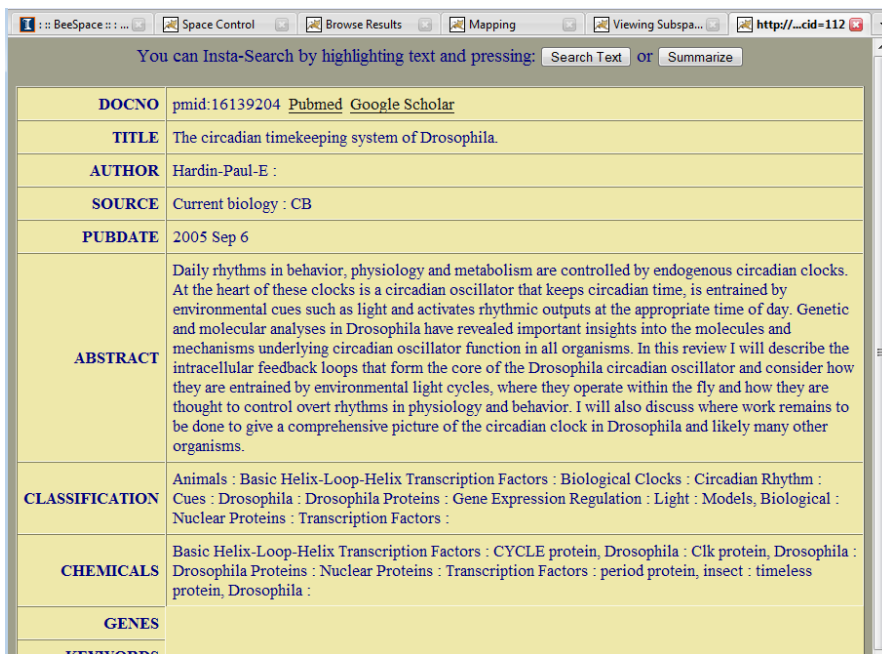
7. A list of clusters is returned, ranked in order of relevance. Each cluster describes a **region** of the current document **space**. **A region is a collection of terms that are most representative of the documents that occur in this cluster**. You can identify the concepts presented in a given cluster by looking at the first few terms of the region
8. Look for a cluster described by terms like “circadian clock rhythm”. Clicking on this entry in the list will take you to a list of documents within this cluster.



9. The result will be a list of documents about circadian rhythms, displayed by title, in order of relevance.



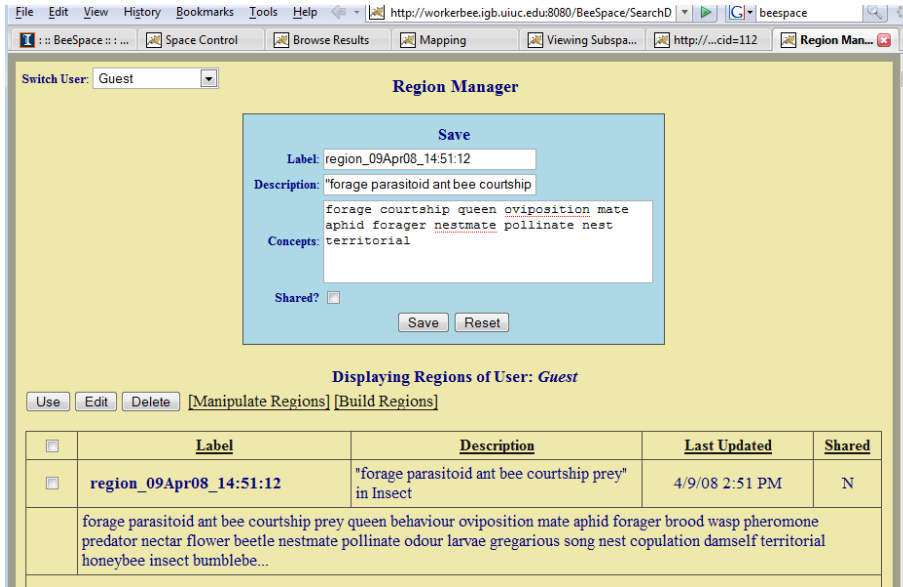
10. Clicking on the document's title will take you to its abstract, as well as a hyperlink to Google Scholar from where you can access full text if your university has access rights.



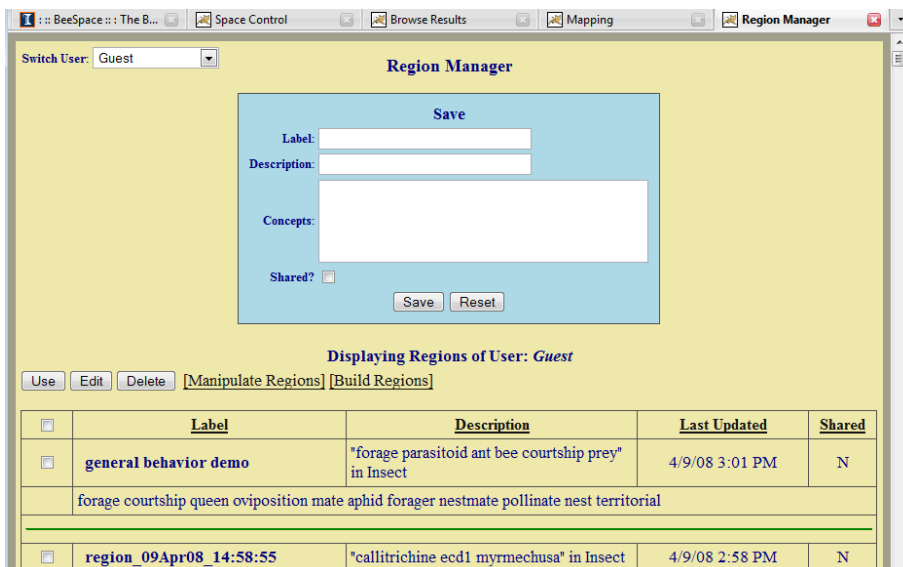
11. In the previous screen, we saw that there were documents in the search results which are not relevant to insects but other organisms. This indicates that we need to refine the search terms to narrow the semantic concept space within which we are searching.

12. Click on the **Browse Results** tab to return to that screen, and click the **Extract** button.
13. In the **Region Manager** window you will see all the terms which describe the current region. We will edit this list to get a group of more general terms to describe behavior in insects but not so general as to get irrelevant documents.

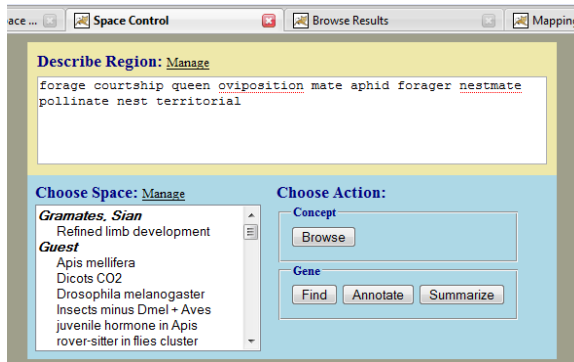
Delete all terms in the term list window except the following: forage, courtship, queen, oviposition, mate, forager, nestmate, pollinate, nest, territorial



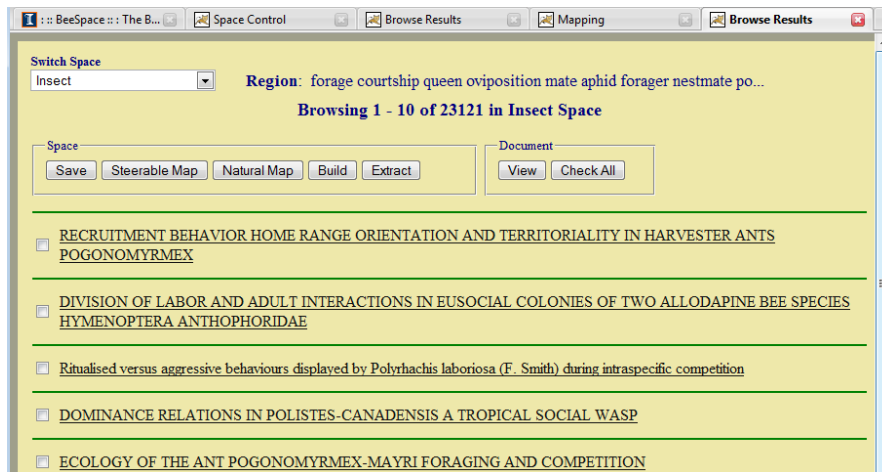
14. Now give this region a label (e.g. "general behavior demo") and click **Save**
15. Your named and saved region shows up at the top of the regions list
16. Select this region by selecting the check box next to it, and click the **Use** button



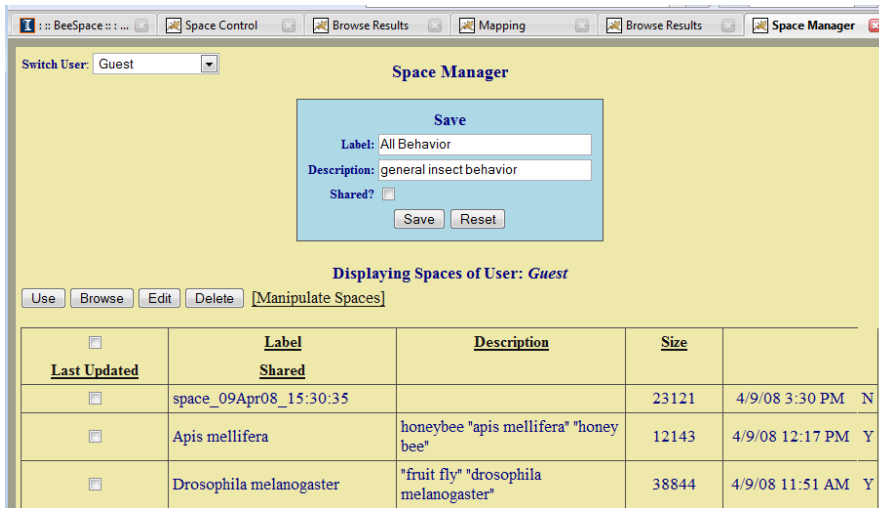
17. This will take you back to the **Space Control** window (which was the first window we visited). The list of terms from the region that you selected should have been pasted in the text box
18. Use these terms to browse Insect space again. This time, document abstracts being searched which did not explicitly contain “behavior” or “behaviour,” but which did discuss insect behavior, will now be searched. This semantic enhancement of the region (term list) should produce a much larger result set.
19. As before, select *Insect* from the **Choose Space** pull down menu, and hit **Browse** to retrieve a new result set of documents from the *Insect* space



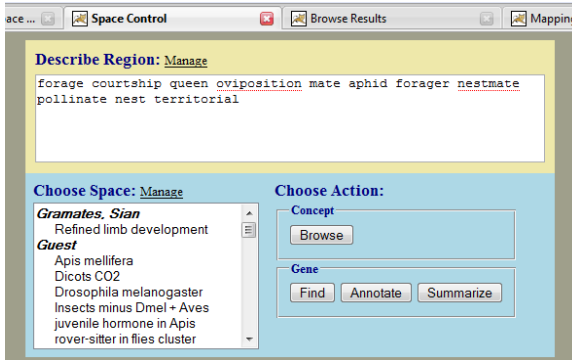
20. Now, using the **Build** function, you can divide the search results into customized clusters.



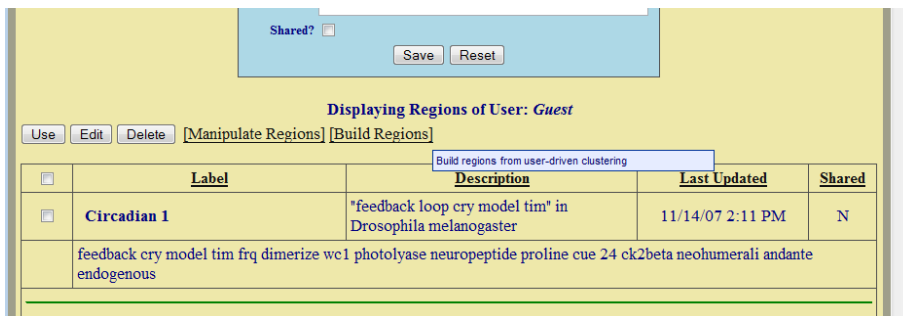
21. **Save** the search results obtained from this search, give it a name like “AllBehavior”.



22. In main **Space Control** page, click on **Manage next to Describe Region**.

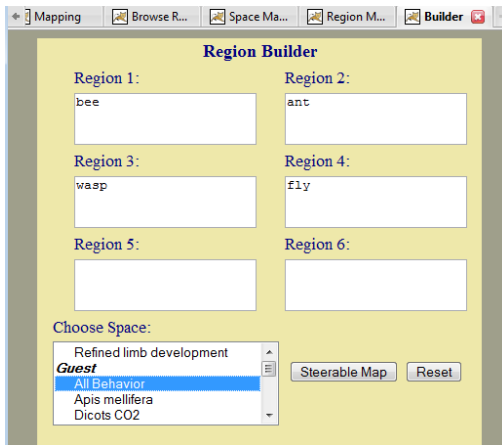


23. This will take you to **Region Manager**, click on the **Build Regions** button.



24. On the **Region Builder** page, you can now choose to have your new AllBehavior space divided into any kind of clusters. E.g. in each window you can type taxonomic groups like bee, ant, wasp, fly and so on.

25. Then select `AllBehavior` from the list of spaces and click on **Steerable Map**. (The clustering process may take a few minutes.)



26. The resulting list of semantic clusters will be ranked in the order in which the build terms appeared in the **Region Builder**.

