



Using the OpenSocial Platform to Develop Open, Exchangeable Web Based Biomedical Research Applications

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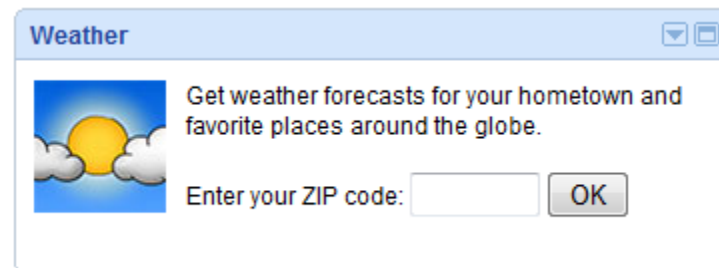
SDM is funded by: K22LM009135, R01LM009722, Grant from IU Biomedical Research Council,
Indiana University, the Showalter Trust and the Indiana Genomics Initiative

Indiana University School of Medicine Bioinformatics Core
Center for Computational Biology and Bioinformatics



WHAT IS OPENSOCIAL?

- Facilitates the development of social networking applications
- Can be used across multiple social networking sites that are container sites
- Is a set of common APIs
- Was released by Google, MySpace, and other social networks in November 2007





HOW DOES THE OPENSOCIAL PLATFORM WORK?

```
File Edit Options Buffers Tools SGML Modify Move Markup View DTD Help
?xml version="1.0" encoding="UTF-8" ?>
<Module>
  <ModulePrefs title="MutDB Minisearch" description="The goal of MutDB is to annotate human variation data with protein structural information and other functionally relevant information, if available. The mutations are organized by gene." author="Joshua Waymire" author_email="jdwaymir@iupui.edu" author_location="Indianapolis, Indiana" height="150" width="400" scrolling="true"
    screenshot="http://daedalus.compbio.iupui.edu/MutDB_openSocial_App/screenShot.gif" thumbnail="http://daedalus.compbio.iupui.edu/MutDB_openSocial_App/thumbnail.gif">
    <Require feature="opensocial-0.7" />
    <Require feature="views" />
    <Require feature="dynamic-height" />
    <Require feature="setprefs" />
    <Optional feature="settitle" />
  </ModulePrefs>
  <Content type="html" view="profile,preview">
    <![CDATA[
      <html>
        <head>
          <link rel="stylesheet" type="text/css" href="http://daedalus.compbio.iupui.edu/MutDB_openSocial_App/mutDBApp.css" />

          <script type="text/javascript">
            /**
             * Profile and Preview View
             */

            /**
             * Gets Search Term from Form and requests MutDB results from Server
             */
            function querymutDB()
            {
              var obj = document.getElementById('term');
              if(!obj)
              {
                return;
              }

              var term = obj.value;
              if(!term)
              {
                return;
              }

              var canvas_data = {'term': term};
            }
          </script>
        </head>
      </html>
    </![CDATA[
  </Content>
</Module>
```



WHY USE THE OPENSOCIAL PLATFORM?

Problem	Solution
Many useful biomedical informatics tools are located across the web	Centralize the tools you need by developing OpenSocial applications and using them in an enabled site
Locations are fixed with biomedical informatics applications	OpenSocial applications built from biomedical web based tools can be used in any site that supports the OpenSocial platform.
Sharing of results of biomedical informatics applications is limited	OpenSocial enables developers to produce biomedical informatics applications that share results with colleagues.



WHAT WE PRODUCED...

The screenshot shows the LaboraTree interface with a sidebar on the left containing navigation links like Home, Inbox, Networks, search, branch out, communications, tools, applications, and settings. The main content area displays a user profile for Joshua Waymire, a feed of 25 items, and several embedded application windows: PubMed Browser, Stanford Open Biomedical Annotator, and MutDB Minisearch. At the bottom of the screenshot, there is a copyright notice: "Copyright 2007-2008 IUPUI - A Service of the Indiana University School of Medicine Bioinformatics Core - Copyright Complaints - 1.2208".

PubMed Browser
Search Bookmarks
PubMed National Library of Medicine
Search: Go

www.ncbi.nlm.gov/pubmed/

Stanford Open Biomedical Annotator
Open-Biomedical Annotator
The National Center for Biomedical Ontology
Annotate

http://obs.bioontology.org/oba/OBA_v1.1_rest.html

MutDB Minisearch
Enter gene symbol:
 Go

<http://mutdb.org>



WHERE WE ARE GOING...

- Any Biomedical research application with web services can be used to develop an OpenSocial application
- We plan to develop new bioinformatics and data analysis tools
- Feel free to check out Laboratree.org

