

# GMOD RPC API

The almost RESTful GMOD API

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# Topics

- Background information
- Perl architecture details
- Future goals
- Demo

# Why?

- Fetch me all genes annotated with GO: 0003677 (DNA Binding) from *D. melanogaster*, *C. elegans*, *T. castaneum*, and *B. mori*. Then fetch the current ID, symbol and list of orthologs for each.

# How we do this today

- File downloads
- SQL calls to different DB systems
- Patchwork of parsing scripts
- Screen scraping



# How we should do this

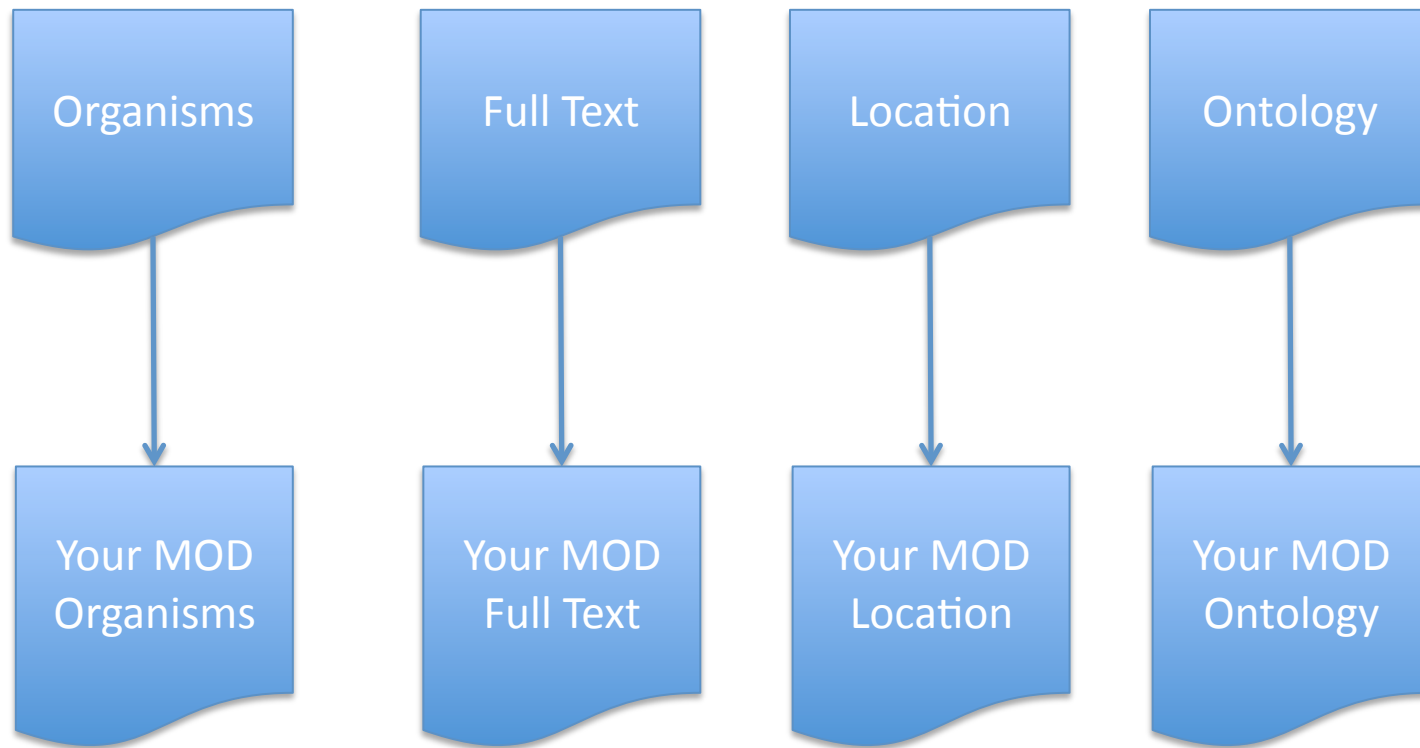
```
$ curl http://flybase.org/gmodrpc/v1.1/  
ontology/gene/GO:0003677
```

```
$ curl http://wormbase.org/gmodrpc/v1.1/  
ontology/gene/GO:0003677
```

# Services

- Organisms
- Full text search
- Location
- Gene ontology
- Orthology
  - Gene
  - Organism
- Fetch common gene page

# Implementation



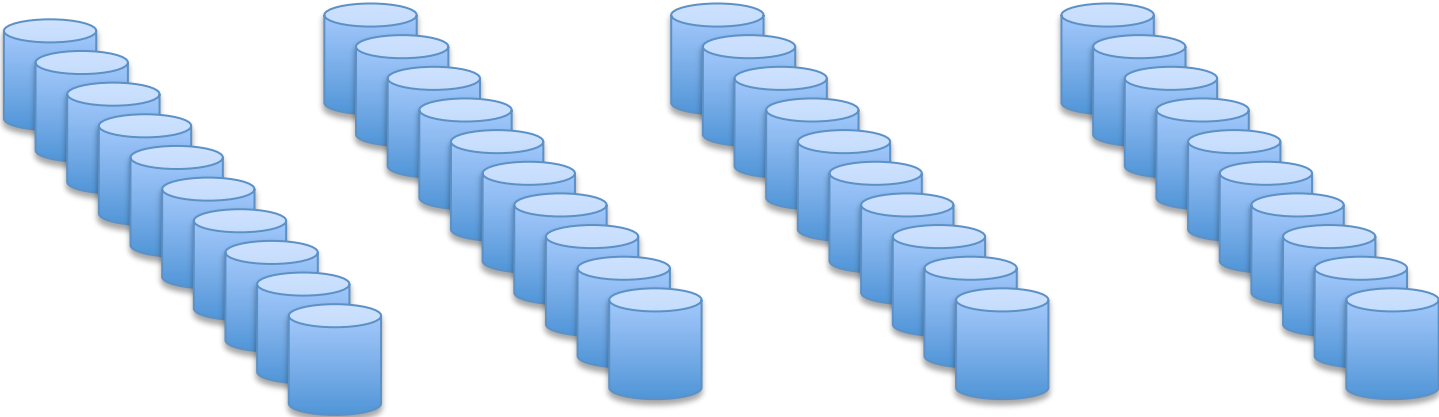
# In an ideal world



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GMOD RPC API



MODS



# Perl Architecture

- Strict MVC adherence
- Moose used for the model
- Template Toolkit for the view
- Perl's Dancer (<http://perldancer.org/>) for the controller
- Log::Log4perl for logging
- Standard Test::More unit tests

# Model with Moose

- GMOD RPC API will provide base code and utility functions
- You extend base class of each service to implement based on your environment

# Why Dancer?

- Simple and clean with minimal dependencies
- Can be run under CGI, PSGI (Plack), and FastCGI on a variety of web servers (Apache, Nginx and lighttpd)

# Short Term Goals

- Alpha release by end of October 2010
- Beta release by end of December 2010

# Long Term Goals

- DAS tie in
- Validation
- Java, PHP and Python APIs
- Evaluate additional API features

Live Demo

# How to participate

- Subscribe to gmod-devel
- [http://gmod.org/wiki/GMOD\\_REST\\_API](http://gmod.org/wiki/GMOD_REST_API)
- SVN code repos
  - <http://gmod.svn.sourceforge.net/viewvc/gmod/GMOD-RPC-perl/>
  - <http://gmod.svn.sourceforge.net/viewvc/gmod/GMOD-RPC-java/>
  - <http://gmod.svn.sourceforge.net/viewvc/gmod/GMOD-RPC-php/>