GMOD
Community
Meeting
13-14 Sept 2010
Cambridge UK

UNIVERSITY OF CAMBRIDGE

GATCGT TCCBIA TTACCG AGCCTA GAACGT Cambridge Computational Biology Institute

GMOD EUROPE 2010

Help Desk Update

Dave Clements
GMOD Help Desk
US National Evolutionary Synthesis Center (NESCent)
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September 2010 GMOD Meeting

13-45 September 2010

Agenda

- Help Desk
  - Events
    - Grant Proposal / GBrowse → JBrowse
      - New Stuff
        - Interesting Documents
          - GMOD on the Web

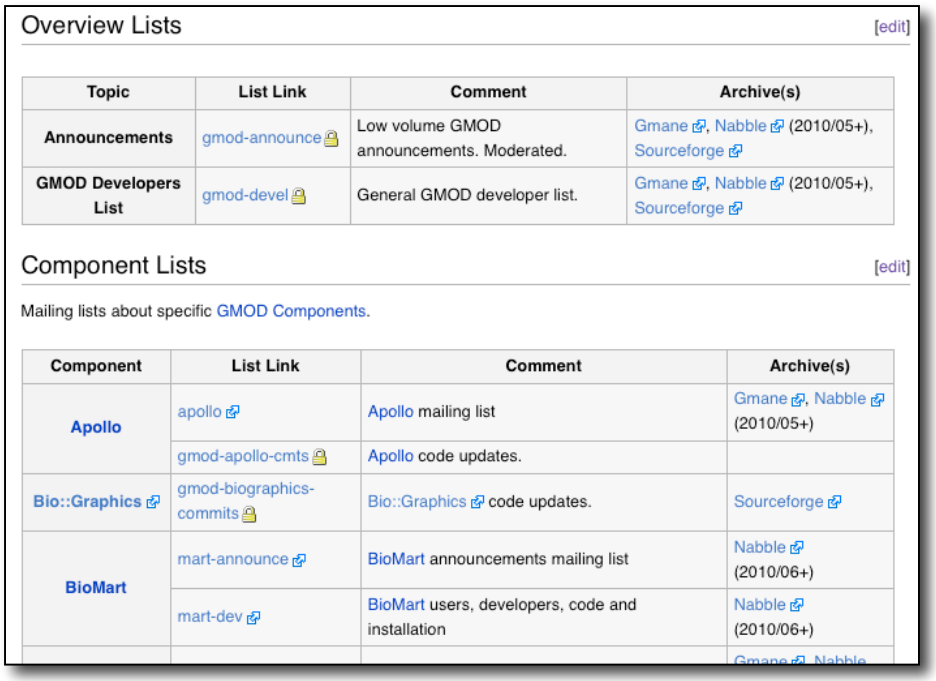
http://gmod.org/wiki/GMOD_Help_Desk

Mailing List Archive(s): GMOD @ Nabble

Unified search - no matter where list is hosted

All active lists

SF.net search < good



Overview Lists [edit]

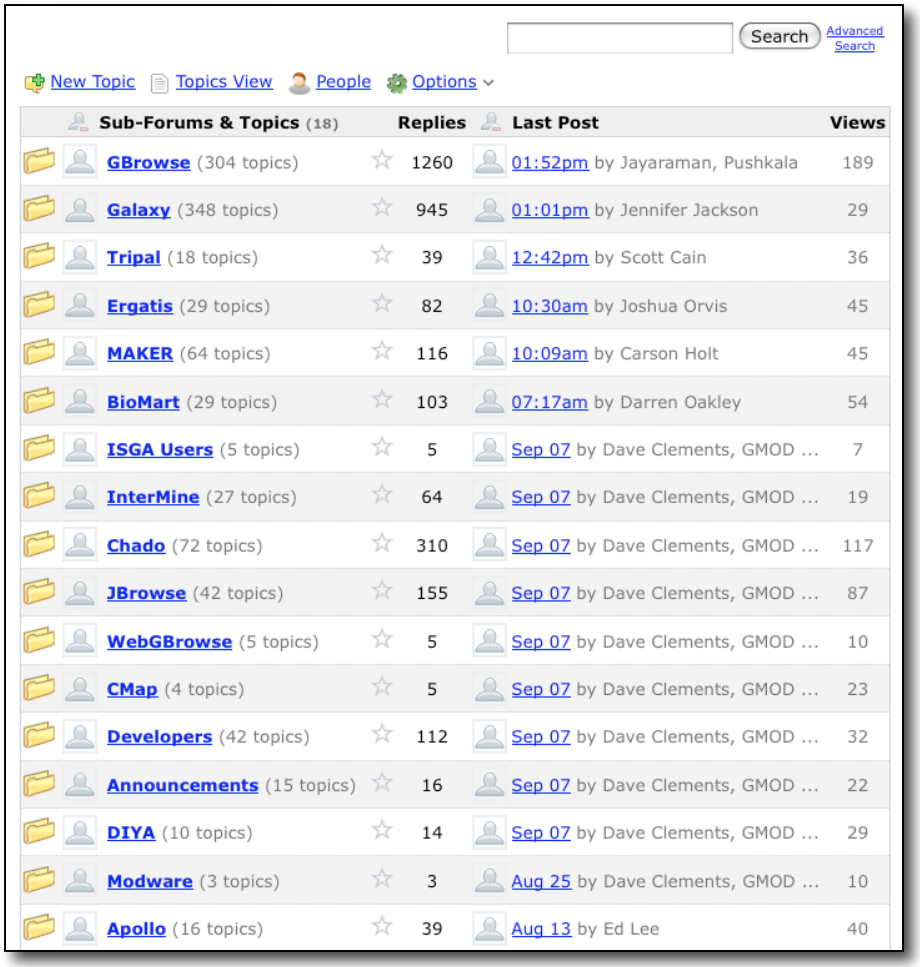
Topic	List Link	Comment	Archive(s)
Announcements	gmod-announce	Low volume GMOD announcements. Moderated.	Gmane, Nabble (2010/05+), Sourceforge
GMOD Developers List	gmod-devel	General GMOD developer list.	Gmane, Nabble (2010/05+), Sourceforge

Component Lists [edit]

Mailing lists about specific GMOD Components.

Component	List Link	Comment	Archive(s)
Apollo	apollo	Apollo mailing list	Gmane, Nabble (2010/05+)
	gmod-apollo-cmts	Apollo code updates.	
Bio::Graphics	gmod-biographics-commits	Bio::Graphics code updates.	Sourceforge
BioMart	mart-announce	BioMart announcements mailing list	Nabble (2010/06+)
	mart-dev	BioMart users, developers, code and installation	Nabble (2010/06+)

http://gmod.org/wiki/GMOD_Mailing_Lists



Search Advanced Search

New Topic | Topics View | People | Options

Sub-Forums & Topics (18)	Replies	Last Post	Views
GBrowse (304 topics)	1260	01:52pm by Jayaraman, Pushkala	189
Galaxy (348 topics)	945	01:01pm by Jennifer Jackson	29
Tripal (18 topics)	39	12:42pm by Scott Cain	36
Ergatis (29 topics)	82	10:30am by Joshua Orvis	45
MAKER (64 topics)	116	10:09am by Carson Holt	45
BioMart (29 topics)	103	07:17am by Darren Oakley	54
ISGA Users (5 topics)	5	Sep 07 by Dave Clements, GMOD ...	7
InterMine (27 topics)	64	Sep 07 by Dave Clements, GMOD ...	19
Chado (72 topics)	310	Sep 07 by Dave Clements, GMOD ...	117
JBrowse (42 topics)	155	Sep 07 by Dave Clements, GMOD ...	87
WebGBrowse (5 topics)	5	Sep 07 by Dave Clements, GMOD ...	10
CMap (4 topics)	5	Sep 07 by Dave Clements, GMOD ...	23
Developers (42 topics)	112	Sep 07 by Dave Clements, GMOD ...	32
Announcements (15 topics)	16	Sep 07 by Dave Clements, GMOD ...	22
DIYA (10 topics)	14	Sep 07 by Dave Clements, GMOD ...	29
Modware (3 topics)	3	Aug 25 by Dave Clements, GMOD ...	10
Apollo (16 topics)	39	Aug 13 by Ed Lee	40

http://gmod.827538.n3.nabble.com/

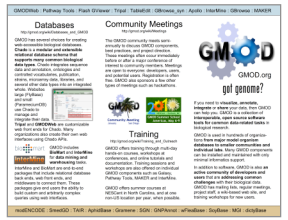
Software Membership Requirements

- Codified in Feb 2010, following Jan 2010 meeting
- Version 1 Requirements:
  - Meets a common need
  - Useful over time
  - Configurable and Extensible
  - Open source license for all users
  - Interoperable with existing GMOD components
  - Commitment of support
- Want to add:
  - Support mailing list that is publicly archived
  - Publicly accessible code repository
- Thoughts, changes?

http://gmod.org/wiki/GMOD_Membership

Promotion

- Why?
  - Increased visibility
    → Increased adoption
      → More projects contributing back
  - Increased adoption & development → funding
- How?
  - Cite GMOD, GMOD Components
  - Powered by GMOD icons
  - Speakers at your event
  - Graphics & slides for your presentations, posters
  - Presentation and event promotion
  - Brochures (GMOD project, events)
  - Bling!



http://gmod.org/wiki/GMOD_Promotion

GMOD Logo Program

Logos by John Aikman's Spring 2010 Advanced Design class @ Linn-Benton Community College, Albany, Oregon, United States

GMOD Community Meeting 13-14 Sept 2010 Cambridge UK

http://gmod.org/wiki/Spring_2010_Logo_Program

GMOD Europe 2010 Meeting Satellites Workshops Cambridge, UK 13-16 September

2010 GMOD Community Survey is Coming

- 2008
  - Covered components and project wide topics
- 2009
  - Focused on genome and comparative genomics browsing
- 2010
  - Will cover components and project wide topics
  - Use it to produce a *GMOD Project publication*.
  - Suggestions for general topics to cover?
  - Free bling to random survey takers!

http://gmod.org/wiki/200[89]_GMOD_Community_Survey

Agenda

Help Desk

Events

Grant Proposal / GBrowse → JBrowse

New Stuff

Interesting Documents

GMOD on the Web

http://gmod.org/wiki/Calendar

Satellites

- Birds of a Feather
- Wednesday, 9:30am, Part II Room
- Can still sign up!
- Topics:
  - Post Reference Genome Tools
  - You've got two days to come up with other topics
  - Rare opportunity to meet with others facing similar issues

Summer Schools

- 2010: 4th school, 3rd year
  - In May @ NESCent, North Carolina, US
  - 62 applicants for 25 slots
- 2011
  - During Summer @ NESCent
  - Will charge tuition; seeking sponsors
- Summer school sessions become online tutorials:
  - Starting and ending VMware images
  - Step by step instructions
  - Example datasets
  - Apollo, Artemis-Chado Integration, BioMart, Chado, CMap, Galaxy, GBrowse, GBrowse_syn, JBrowse, MAKER, Tripal

Upcoming Events of Note

- Biocuration 2010
  - October, Tokyo, Japan
- Pathway Tools Workshop
  - October, Menlo Park, California, US
- GMOD Evo Hackathon
  - November, Durham, North Carolina, US
- Computational and Comparative Genomics
  - November, Cold Spring Harbor, New York, US
- Plant and Animal Genome
  - January, San Diego, California, US
- Workshop on Molecular Evolution
  - January, Cesky Krumlov, Czech Republic
- Galaxy Developers Conference
  - 2011, Europe

http://gmod.org/wiki/Calendar

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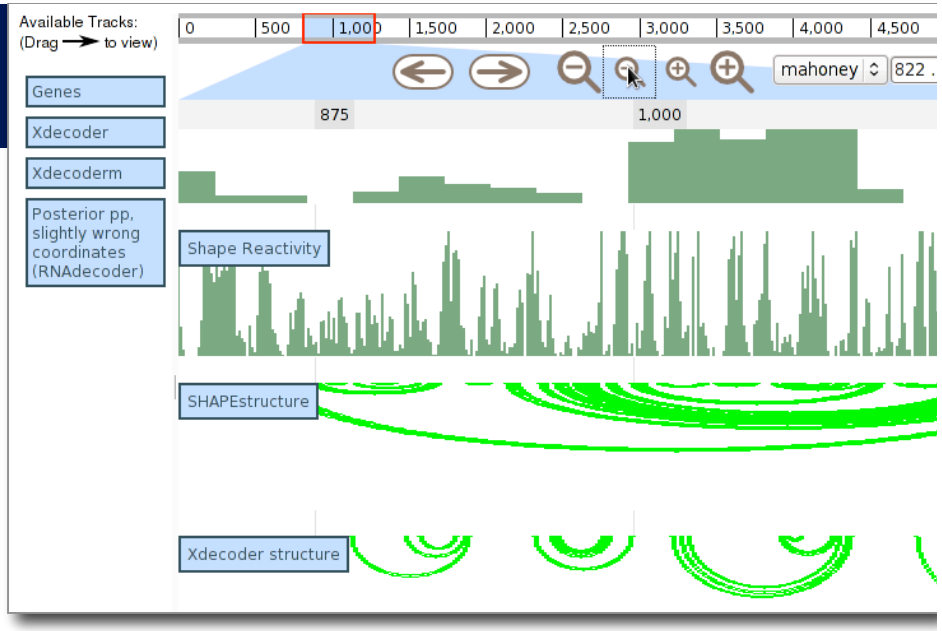
Grant Proposal

- *Enhancing the GMOD Suite of Genome Annotation and Visualization Tools*
  - JBrowse, GBrowse → JBrowse, Help Desk
  - Submitted Summer 2010
  - If approved, will start early 2011
- Help Desk
  - JBrowse, GBrowse → JBrowse, NGS data, transcriptomics, developmental atlases, population genomic and natural diversity data, workflow and pipeline tools for processing large data sets, and software interoperability
  - Continue with documentation, user support, gmod.org, training, (longer) summer schools, outreach, annual survey

JBrowse Development

- 1.1 just released
  - Scalability: very large data sets, including NGS reads, human EST/SNP tracks
  - Extensibility: custom tracks
  - *Backward incompatible* JSON format
- 1.2 Release (December 2010)
  - improved NGS display (paired-end reads, possibly read-to-genome alignments)
  - reduced memory usage for NGS
  - minor UI enhancements including y-axis labels for wiggle tracks



JBrowse 1.1 custom tracks
e.g., base-pairing interactions
of RNA secondary structure

JBrowse Grant Proposal

- GBrowse → JBrowse
  - JBrowse concepts have proven themselves
  - Scalable to coming data set sizes
  - GBrowse development will wind down during the grant.
- New Features:
  - JBrowse ecosystem on par with what GBrowse has
  - DAS and web services support
  - Scalability and NGS
  - Large numbers of tracks
  - Community annotation (upload/publish, tagging, comment, …)
  - Mobile device support?
- GBrowse → JBrowse Migration Support
  - Migration Scripts: Config files, data (data is easy)
  - Simultaneous GBrowse and JBrowse support
  - JBrowse running on top of GBrowse config and data

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New Components

- ISGA: Chris Hemmerich *et al*. at Indiana U.
  - Bioinformatics pipeline service software built on Ergatis
  - Newest GMOD component
- WebGBrowse: Ram Podicheti *et al.* at Indiana U
  - Hosted GBrowse and GUI for GBrowse configuration
  - Nominated and approved, almost in.
- SOBA: Ginger Fan *et al.* U of Utah
  - GFF3 file analysis and reporting
  - Tabular and graphical reports
  - Nominated and approved, code being refactored
- GMOD-DBSF, genes4all, …: Alexie Papanicolaou at CSIRO
  - Drupal based toolkit for building organism web sites
  - Submitted for publication; not yet nominated

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Some Interesting Documents

- How to load a Chado Database into BioMart
  - AO Keliet, J Amselem, S Derozie, and D Steinbach, all @ INRA URGI
  - http://gmod.org/wiki/BioMart
- Choosing a genome browser for a Model Organism Database: surveying the Maize community
  - TZ Sen, LC Harper, ML Schaeffer, CM. Andorf, TE Seigfried, DA Campbell, and CJ. Lawrence
  - How and why MaizeGDB picked GBrowse
  - Appeared in *Database,* http://database.oxfordjournals.org/

Nature Methods Supplement on visualizing biological data, March 2010

- Visualizing biological data - now and in the future
  - SI O'Donoghue, *et al.*
- Visualizing genomes: techniques and challenges
  - CB Nielsen, *et al.*
- Visualization of multiple alignments, phylogenies and gene family evolution
  - JB Proctor, *et al.*
- Visualization of image data from cells to organisms
  - T Walker, *et al.*
- Visualization of macromolecular structures
  - SI O'Donoghue, *et al.*
- Visualization of omics data for systems biology
  - N Gehlenborg, *et al.*

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GMOD.org

- Moving from CSHL to OICR
  - ~~In Jan/Feb 2010~~ Real soon now
  - MediaWiki upgrade
  - Probably lots of new extensions
  - Maybe a modified skin
- Look into adding
  - User log section
  - Scrapbook for contributed code
  - Membership directory (TableEdit based)
  - Semi-automated publication listing/linking

Should GMOD have a *social* presence?

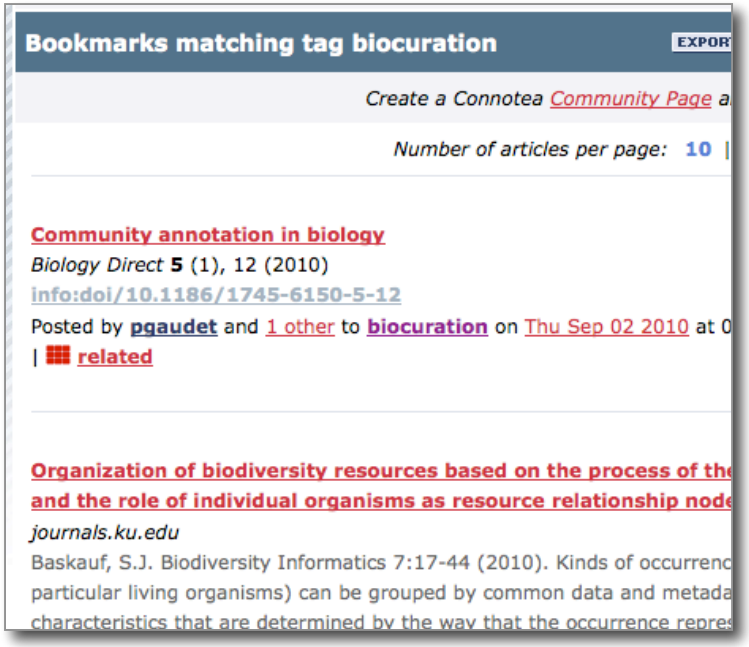
GMOD already has mailing lists, wiki, GMOD News (RSS), IRC

What should the goals be?

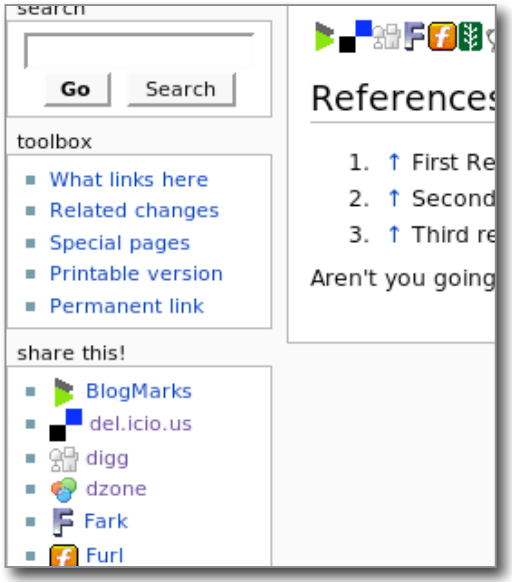
- Community building / forums?
- Social bookmarking?
  - ISB uses Connotea to bookmark biocuration, text mining, and semantic annotation papers
- Outreach?

Which tools?

- Twitter, Facebook, Connotea, StumbleUpon, Technorati, …



http://www.connotea.org/tag/biocuration



http://www.mediawiki.org/wiki/Extension:ShareThis

Textpresso Update

- Textpresso
  - Stand-alone tool for text analysis.
  - Hard to tightly interface with external website
  - Dated user interface
  - Nathan Liles of Jim Hu's group at Texas A&M is working with CalTech on these issues
- Textpresso developers also have plans for a community website and mailing list.

Odds and Ends

- Get a name tag at next break!
- Hang on to it.

- Upload your talk, or just send it to me:
  - clements@nescent.org

Acknowledgements

Summer School Oregon NESCent TAMU
GMOD Europe PAG LBCC Hackathon

Scott Cain
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Lincoln Stein
Jim Hu
Peter Van Buren
Daniel Renfro
Todd Vision
Nathan Liles
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James Taylor
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Hilmar Lapp
Candace Brown
Jon Auman
Dan Blankenberg
Dave Matthews
Steve Heller
John Aikman
Robert Buels
Richard Smith
Nicole Washington
Suzi Lewis
…

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Thank You!

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