
Meeting Minutes 23 April 2004

Autumn A Cuellar

- Autumn's update:
 - Have just added a whole bunch of old meeting minutes to the website. Unfortunately, since I waited so long to put them up, you've probably forgotten what we've discussed. However, if you happen to read through them and find that I've misinterpreted something, let me know. I'll e-mail Team CellML with a list of the newly added minutes.
 - I've also been working on the PDFs for the website (you may have noticed that the existing PDFs are not up-to-date or even existing in some cases). This requires me to get to know XSL-FO which is why the changes aren't happening immediately.
 - I e-mailed Stephanie Jor a couple of days ago to get a distribution of the Content MathML editor to put up on the website. She hasn't yet responded. Poul will e-mail her, as well.
- Poul's update:
 - Has been in discussions with Nigel Lovell and Dan Adam to help Peter organize a session at this year's EMBS conference in San Francisco. Dan has suggested we have a Physiome mini-symposium to (re-)introduce the IUPS Physiome Project to EMBS members.
 - Matt's been working on the anatomy ontology website generation from Mike's Protege [<http://protege.stanford.edu/>] files. Poul met up with Matt yesterday to discuss a couple issues. One problem Matt was having is that the anatomy ontology has many instances that have multiple inheritances. This makes it difficult to render a bigger picture of the tree. Poul suggested he just show the immediate parents and let people navigate their own way back through the tree, choosing which parent class they are interested.
 - Another question that they keep coming back to is how to deal with terminal classes. Mike has been defining the ontology so that if a class has no more sub-classes, it automatically becomes an instance, and all the classes properties are dumped into that instance. Poul thinks that is a bit arbitrary and should really be kept as a class. Later an instance can be created if there are enough inherited properties (Poul, do you want to clarify?). Shane suggests that maybe only query matches should be instantiated.
- Shane's update:
 - E-mailed Road Map suggestions to Team CellML (following). Autumn, bring copies of the Road Map to next week's meeting to re-visit all these suggestions.
 - Started putting his thoughts on FieldML down on paper in the form of a Road Map.
 - E-mailed Alan because he's curious about what expectation other groups have of FieldML (Alan made some enquiries about FieldML [20040326_meeting_minutes.html] a few weeks back). He's getting the impression that other people might be disappointed to see that FieldML only describes fields and elements and wonders about what alternate information other people would like to see in FieldML. Poul suggests he e-mails the CellML Discussion list because others might have opinions.

Hi,

My ideas for Roadmap content...

1.2.1 CellML Repository

Sync up instances that Cathrine made with the ontologies representation.
(Import scripts?)

Facilitate more than one person to work on the ontologies at once.

Set up FieldML database and connect that to the ontology representation.

Add script that enables multiple FieldML objects to be combined into larger objects on the fly (with AnatML this is all done statically).

Add a FieldML to VRML filter that the server can run on the fly.

Add pdb to FieldML filter to enable proteins to be loaded (see Connections to protein databases just below).

What are the other steps to making Ontologies useful
(I'm not sure what these are)....
i.e. implementation of reasoning
completion of hierarchies
useful ontology editing tools

Connections to protein databases

Peter has Srđan working on this right now. He is adding static links to particular proteins. If we had a workflow he could be adding instances to our cellml database instead, adding to the work rather than working independent of it.

What is the process for new models to make it onto the website....

i.e. has the pole zero constitutive law been worked on?

How does the cvs, database and website get updated with a new model.

How does the database take account of variations in models for different species or if someone improves/modifies a model to get it to work differently after the paper.

1.3 Repository Visualisation

A prototype web interface has been created by Matt.

We could develop this a bit further, allowing easy navigation and incorporating access to the CellML, FieldML and image libraries.

This could then replace AnatML.

2.2.2 Visualisation with the CMISS (cmgui) cell simulator.

I guess Andre told you that this no longer really exists. It could be revived but is currently not built into cmgui.

2.4.? Constitutive Laws

CellML is being used to describe constitutive laws for CMISS (cm) problems.
(Martyn, VJ, Andre, Holger, Kevin, Jae, Espen)

2.4.? Generalised CellML in CMISS (cm)

Duane is using CellML to set the coefficients for the diffusion equation in CMISS(cm).

He has done this by starting a generalised (non domain specific) Math importer for reading CellML into CMISS (cm). He has however only added his one problem type but presents an interesting pathway ahead.

2.4.? Computed variables

David is developing a set of computationally differentiable functional objects. Initially these are being stitched together programmatically (via python, perl, C or Matlab) but CellML may provide an more accessible way to describe much of this. (although the different levels of aim, CellML is aimed at either a conceptual and/or mathematical description whereas computed variables are necessarily a formulational level so they can be machine implemented.)

2.? Simulation Visualisation

CMISS (cmgui) is able to generate iso surfaces, glyphs and so on representing spatial geometry and solutions of computational problems.

3.1 Development of API implementations

I am personally convinced that it is a large waste of resource to have different implementations of an API for different languages.

I think we need a plan for a convergence of the API's we already have for CellML and a plan for migrating existing uses in the institute to whatever is new)

Shane.