

Flow Informatics and Computational Cytometry Society (FICCS) Development Conference Call Summary

Attendees:

BCCRC: Ryan Brinkman, Josef Spidlen, Anna Krasnova
FCCC: Olga Tchuvatkina
UT Southwestern: Richard Scheuermann, Yu Qian (Max)
UM: Peter Wilkinson, Bastian Angermann
BD: John Dunne, Errol Strain

July 25, 2007, 10:30am PST

Summary:

- **MIFlowCyt**

MIFlowCyt has been reviewed by ISAC DSTF (Data Standards Task Force) members and is now posted for a general review by ISAC members. This review is 45 days long, which is going to end by the end of next week (August 4, 2007); Only very minor comments have been received so far.

Action Item: Ryan will prepare a cover letter to the editors of Nature Immunology; explaining the significance of this work and the difference between MIFlowCyt and other standards being published.

- **Gating-ML, Compensation-ML, and Transformation-ML**

Proposals have been submitted for review to the ISAC DSTF; they have been sent out to DSTF members and they should be initially discussed on the next ISAC DSTF conference call, which has preliminary been scheduled for Friday, August 10, 2007.

Minor technical issues concerning implementation of these proposals in R should be discussed in Seattle during and after BioC2007 (August 6-8, 2007). FlowJo should also become compliant soon (possibly within the next release). There seems to be no significant issues with these proposals so far.

Initial support in software has been focused on reading Gating-ML, Compensation-ML, and Transformation-ML. The next step should be writing these.

- **FuGE**

Use cases have been added to <http://wiki.ficcs.org/ficcs/FlowUseCases>

Olga has added an Investigation factor example (http://wiki.ficcs.org/ficcs/FuGEFlow?action=AttachFile&do=get&target=20070725_MIFlowCytToFuGEFlow.xls). It shows how experiment variables / factors having numerical values and time factors could be captured within FuGE.

Action Item: Olga verifies her approach with FuGE developers.

FuGE protocols (protocolApplications for instances) seems as a way to capture time-dependent experiment variables. Richard's group captures these as sequences of events within their ImmPort data model.

In general, FuGE may serve for two purposes (i) guide the development of a flow cytometry repository, (ii) as an XML format for exchanging MIFlowCyt compliant metadata.

Action Item: Due to a 90 minutes time limit, Olga's review of Peter's work (instrumentation) will continue during the next call.

Action Item: Peter's review of Max's work (Sample/specimen details) is postponed for the call.

Action Item: Max's review of DICOM is postponed for the call.

- **ACS “containers”**

Olga has prepared a “use case” x “data format” table to discuss data formats, our options and use cases

(http://wiki.ficcs.org/ficcs/FlowUseCases?action=AttachFile&do=get&target=20070725_UseCasesComponentsFormats.xls)

ACS containers may exist in different ways - as simple archive files (such as .tar .7z files) or as “virtual” containers connecting resources that actually live in a distributed environment.

RDF “within” a container can point out to all the resources (files) within the container; providing semantics for each of these (RDF itself could also serve as a virtual container in a distributed environment).

A live discussion was going on about mutable vs. immutable data in the ACS containers. There is an agreement on having the “binary” values immutable. There are different opinions on the other parts. This includes instrumentation description. Common instrumentation manufacturer viewpoint is to have this immutable; however, some researchers would prefer having these mutable to be able to correct/add and store this in a different form in a database, etc.

Is the mutable vs. immutable distinction for metadata a real one or an artificial one? Also, is this in the scope of our standardization or is this eventually a “company” policy that should be left out of data standards (i.e., if someone needs to assure that certain metadata has not been altered, they may for example sign it within the container or even sign the whole container). What about a central policy to capture the source/time of each bit of information?

... discussion may continue during the next development call ...

Next call: Wednesday, August 8, 2007, 10:30am PST (or eventually Wednesday, August 22, 2007 if not enough people can make it for the call in two weeks due to a time conflict with BioC2007)