

Notes for the BFO Meeting at ICBO 2013 in Montreal

See also [BFO OWL meeting minutes](#).

Location: Montreal, site of ICBO

Date: July 10, 2013

Participants

Present: Stefan Schulz, Alan Ruttenberg, Barry Smith, Melanie Courtot, James Overton, Yongqun (Oliver) He, Mary Dolan, Andrew James, Sivaram Arabandi, Asiyah Yu Lin, Snezana Nikolic

Dial-in: Jie Zheng

Venue:

Montréal, Canada, MB - John Molson School of Business, 1450 Guy, Room MB 2.255,

Schedule

Session 1: 2pm - 3:30 pm

- Use cases (Jie Zheng, Oliver He, Bill Hogan, together 45 min)
- Release process (Alan Ruttenberg, 10 min)
- Interconnections
 - BFO specification (Barry, ? min)
 - BFO-FOL (Barry Smith, 10 min)
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Coffee Break

Session 2: 4:00 - 5:30

- Time-related issues
 - Temporalized relations (Alan, 45 min)
 - Temporally qualified continuants (Stefan, 45 min)

Minutes

Jie Zheng's use case

Jie: presents problems with beta cells ontology. Transitivity: not possible if cells are to be removed. Possible solution: restrict to cells in vivo.

transitivity depends on background assumptions.

Andrew mentions "ectopic" cell locations.

Stefan emphasizes that it may be useful to add also hasPart axioms, and that A subclassOf hasPart some B does not imply B subclassOf partOf some B.

Jie: all beta cells develop from something

More in-depth discussion off line:-> talk with Barry about patterns, talk with Alan about part of, check with Alex if this is always true re beta cells development

Oliver He's use case

(1) on process patterns- difference between speeding (process) and speed (process profile).

proposal: move process profile up under occurrent (by similarity with quality and material entity, in which qualities are not material entities themselves)

Barry wants to elaborate more on process patterns outside this meeting. Problem is that there will ensue massive multiple inheritance. Process patterns not real BFO universals but rather defined classes.

Process profiles should be dealt with outside of BO2 for Barry's entertainment ;)

(2) BFO convert (<http://bfoconvert.hegroup.org>)

maps RO#part_of to BFO_0000176 (part of continuant at some time)

James: tool need to check whether part of between occurrent or continuant, not enough to just go from partOf to continuantPartOf (string replacement not enough, file has to be inferred and use OWLAPI to determine object/subject of relations for replacement)

Supposed non-transitivity of partOf: (HeLa cells):

open issues - what does "current part" mean?

Alan: Probably patterns combining partOf and derivesFrom are needed.

Distinguishing also immediatelyDerivesFrom from derivesFrom

(3) Use case of vaccinee candidate: not vaccinated and 6 years of older. Controversy between Alan and Barry whether it is a quality or role.

Release process (Alan Ruttenberg)

What is a release process? Improve content in WG, BFO constructed by program from spec to produce OWL file (lisp from Alan) 1 small piece to be worked upon, but otherwise ok (little axiom generator such as mat entity only part of mat entity etc)

Release for comments in Graz. Ensuing discussion, especially temporalized relations such as part of. Current situation: no counter proposal evaluable for part of but well defined one considered “not good enough” so we will release with a fork in RO (regenerate parts that need to be temporalized)

Timeline of the release:

- Need trimmed down spec, augmented with notes to indicate deviations from the spec in the OWL and augmented with temporalized relations
- spec defines only forward and not reverse relations. Somebody needs to write those.
- some parts of the specs have been reworked and need review.

BFO specification (Barry Smith)

Replaced process profiles by process patterns. Will send around new process patterns documents. Getting a bit clearer to “defined classes”.

Full version of the spec needs to contain doc about how people should annotate processes such as “moving with constant speed x”. Process pattern existed before there were information artefacts.

Proposal

(1) for new universal in BFO: *history of quality* which is the sort of thing that can be represented by a time series graph. Treatment of process patterns also represent other kind of process patterns, e.g. racing car, symphony performance.

(2) new relation *has-process-pattern*

process patterns manifested by history of qualities

(3) those process patterns that are manifested by motion processes

<http://ontology.buffalo.edu/bfo/rate.docx>

supposedly possible model constant speed motion process with sufficient and necessary conditions.

Barry: I have temperature. There is a history of my temperature. There is a history of change in my temperature. Suggestion that sometimes we could say "heart rate is quality of your heart"

BFO-FOL (Barry Smith), Slides by Randy Dipert

CLIF and FOL versions of BFO.

BFO OWL group: Agreed rule to be a reading of the FOL for each piece of OWL: it may not be encoded in OWL if not possible, but there is an interpretation

Alan will make a slim - some parts of what Barry writes will not make it to OWL release as we can't express them.

Barry: Release will be the full spec with specific part for OWL.

Alan raises concerns. Melanie: hard to maintain. (Barry suggested to have a technical specification for OWL release, and a more complete doc including FOL etc.)

-> Alan, Melanie, James think it is confusing and too hard to maintain.

Approaching Michael Gruninger (extension to RCC 8 etc.)

Two committees: voting committee and consulting committee. Roles of both committees should be explicit. Open issue availability of graduate students

Apparently during PRO-PO-GO meeting the idea that voting committee gets final say was conveyed. This is a concern for the BFO OWL group who thinks there should be coordination with the OWL group. (the specs are AFAIK supposed to be somewhat in sync).

Fabian support coordination between FOL and OWL group.

Temporalized relations (Alan Ruttenberg)

Example:

nucleus part of cell

-> every instance of nucleus is part of some instance of cell at t?

What to do about time? We need to quantify over time to get rid of it in class expression.

-> at every time there exist C which is a cell, there is a n which is part of C

-> for all times t for which there is a n, a cell c exists such that n part of C at t

Temporally qualified continuants (Stefan Schulz)

continuants in OWL are to be always referred to in the context of a time frame

eg London during WW1, my left thumb now, my heart since my birth...

c@t1 and c@t2 are 2 different individuals in OWL (eg we can't say that the thumb of Alan at t1 is the same than the thumb of Alan at t2)

John[blank] means John during his whole life (matter of convention)