

MINUTES

CCP in working Tomography Meeting: Agenda

9th November 2011, Research Complex at Harwell

Attendees:

Phil Withers	(PW)	philip.withers@manchester.ac.uk
Peter D. Lee	(PDL)	peter.lee@manchester.ac.uk
Will Thompson	(WT)	W.Thompson@maths.manchester.ac.uk
Manuch Soleimani	(MS)	M.Soleimani@bath.ac.uk
Bill Lionheart	(BL)	bill.lionheart@manchester.ac.uk
Mark Basham	(MB)	Mark.Basham@diamond.ac.uk
David Worth	(DW)	david.worth@stfc.ac.uk
Mike Curtis-Rouse	(MCR)	mike.curtis-rouse@stfc.ac.uk

Apologies:

Cathryn Mitchell	(CM)	c.n.mitchell@bath.ac.uk
Adrian Wander	(AW)	adrian.wander@stfc.ac.uk
Alison Davenport	(AD)	a.davenport@bham.ac.uk

Morning: PW, PDL, BL, WT, MB

Discussed what should be in the first stage of the CCP

1. Agree and assemble/generate a set of phantoms and real data to test both algorithms and interfaces with. These should cover (in order of priority)
 - a. Parallel beam
 - b. Cone beam
 - c. Phase Contrast / Phase retrieval
 - d. Colour (multi-energy and multi-modal)
2. Test existing schemes (from many modes, e.g. lab, synchrotron, ET, PET) that are openly available to
 - a. Fix a best practice starting point
 - b. Give code to test interfaces with
 - c. Provide validation cases for new algorithms
 - d. Give a working framework for users to start providing feedback on
3. Agree on, and develop wrappers for:
 - a. Input of geometry
 - b. Interfacing with computational engines
 - c. Interfacing with output

Afternoon

Introductions

Quick introductions were done. PW gave an introduction to the project

Committee Membership

Initial members suggested by PW:

Daresbury team

Phil Withers (UoM)

Peter Lee (UoM)
Maneuch Soleimani (Bath)
Cathryn Mitchell (Bath)
Bill Lionheart (UoM)
Alison Davenport (Bham)
Mark Basham (Diamond)
EPSRC Fellow
Andrew Ramsey (Xtek)

Simpleware
Graham Davis (QMW)
Ian Sinclair (Soton)
Mark Williams (Warwick)
I13 team member
I12 team member

Suggested have we add: Per Christian Hansen (as world expert),
Tanasis Fokas, Andy Wathen.

Working Group Activities

PW outlined the following activities:

- 6 monthly management meetings
- Decide on short exchange funding
- Decide on international exchanges/year
- Decide on funding of 3 video shorts promoting imaging work
- Decide on Annual workshops
- Monitor Core activities
- Monitor EPSRC project activities

Action: BL to sort hosting of website for discussions etc

Action CCP staff: to put our CCP on their website

2.2 Core STFC support

Regarding datafile structure MB commented that there an agreement within several synchrotrons: PAN-Data, Nexus HDDF5, and has a tomography

Action: MB to email a link for Nexus standard

Action: PW/CCP-STFC to investigate what other standards CCP use that might be appropriate

Action: BL/CCP-STFC to organise an informal software support/development workshop

Action: CCP to organise in liaison with PL 3D analysis tools workshop for the network.

2.3 Research Activity: 3D analysis toolkit

½ person year / yr will be in this area. The same action

Action: PW/PDL/AD to agree a way forward.

Action: CCP-STFC to decide if this support should be at Daresbury

2.4 Research Activity: 3D reconstruction

1 person year / yr CCP & 3yr PDRA will be in this area

Action: PW to put out advertisement for PDRA post

PW reviewed what was discussed in the morning, see above.

5. Mid-term Critical Success

The points presented by PW in the original proposal were presented and all agreed they were still reasonable.

Action: MS to contact EPSRC-CCP contact person, and explore additional reconstruction toolbox options: 4D imaging /direct reconstruction for motion; multi-modal; very high speed imaging; getting a test-bed XMT system at RCaH for testing the developments; link with RCNDE