Summary of APSUO Technical workshop for Protein Crystallography

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NE-CAT

Goals of Workshop

1) Probe desirability of promoting control system or GUI standards amongst PX CATs.

2) Define other topics for inter-CAT interaction that will promote improved logistical efficiency of APS PX CATS and minimize duplication of effort.

3) Define ways in which APS can better support the PX CATs.

Motivation for Workshop:

1) Second Generation of PX beamline development under way

Sectors 22-24 will use canted-tandem undulators to produce 10-12 new dedicated PX lines - doubling of PX capacity.

PX APS presence increases from 23% of all branch lines to 36% (including new non-PX lines).

2) First Generation PX beamlines are moving towards sample loading and alignment automation.

Chance to minimize incompatibilities and duplication of effort between PX beamlines.

3) University of Chicago Review.

The APS management should be more involved with the macromolecular crystallography CATS. Most of the beamlines are already built, but a coordination should be implemented for robotization and avoid different and incompatible control systems and interfaces. This could be done with a National Institutes of Health (NIH) partnership.

Technical Workshop for Protein Crystallography CATs
Sponsored by the APS Users Organization

Tuesday, 13 January 2004
Room A1100

8:30 am	Steve Durbin, APSUO chair	Welcome & Introduction
8:45 – 9:15	Sergei Stepanov (GM/CA)	Bridging BluIce & EPICS
9:15 – 9:45	Keith Brister (BioCARS)	Beamline control issues
9:45 – 10:15	Krzysztof Lazarski (SBC)	User Interface developments
10:15 – 10:30	Coffee Break	
10:30 – 11:00	Lisa Keefe (IMCA)	Sample Robot implementation
11:00 – 11:30	Deming Shu (XOR)	Overview of SBC robot project
11:30 – 12:00	John Chrzas (SER)	Integration: robotics, telepresence…
12:00 – 1:00	Lunch break	
1:00 – 1:30	John Quintana (DND, LS)	Telepresence, remote operations
1:30 – 2:00	Malcolm Capel (NE)	Middleware & standardization
2:00 – 2:30	Discussion	Topics: resources & support needed to keep at the state of the art; external funding?; topics & speakers for May workshop
2:30	Steve Durbin	Close-out, action items.

Consensus

1) PX CATs are not presently interested in participating in a control system standardization effort, but may be interested in reformulating their respective GUI's towards a common navigation scheme .

2) Broad interest in telepresence and remote access.

3) Central Data Archiving and DVD burning facility.

4) Further reduction of beam position instabilities.

Improved white beam position sensing and position feedback in PX beamline FOE's.

5) APS assistance in dealing with power-loading issues arising from move to higher operational current.

Other Areas of Interest

1) Robotics and sample alignment.

2) post-CCD Detector Development.

3) Network performance optimization.

Follow On

APSUO will poll PX CAT membership via email for action areas missed in deliberations to date.

One workshop session at the upcoming APSUO meeting will be dedicated to Shared PX Technology Development.

APSUO is currently seeking topic and speaker suggestions for this workshop.

Contact

Steve Durbin Lisa Keefe Steve Ginelle
John Rose Malcolm Capel

Formation of TWG subgroup for Technology Development in Macromolecular Crystallography.

Charge:

Determine technologies which need common development (CATs and ANL/APS)

- remote access, Tele-Crystallography
- central data archive, backup facility
- beam stability

Identify areas where standardization is desirable / required – and define common standard (CATs – may need support from APS)

- control and data collection interfaces
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Members:

- Chairs: Malcolm Capel, John Chrzas

- DND J. Quintana
- BioCARS R. Pahl, R. Henning, K. Brister
- IMCA L. Keefe
- SBC S. Ginell, R. Alkire
- SER J. Chrzas, G. Rosenbaum
- LS S. Weigand
- NE M. Capel
- GM/CA W. Smith, N. Sanishvilli
- SGX ??
- COM ??
- APS J. Carwardine, J. Maclean, T. Mooney

First Meeting:

TBA (1^{st} week of February)