ARGONNE NATIONAL LABORATORY

INTRA-LABORATORY

MEMO

DATE: May 18, 2005

TO: Attendees

FROM: Ron Sluiter and Carlotta Lukowski

SUBJECT: BCDA Group Meeting – 05/16/05

ATTENDEES: John Maclean, Peter Fuesz, Ron Sluiter, David Kline, Ben-chin Cha, Kurt Goetze, Joe Sullivan, Carlotta Lukowski, Brian Tieman, Tim Mooney and Xuesong Jiao

ABSENT:

John:

- Welcomed Xuesong to the group.
- Feedback from OA visit not finalized.
- The group dryrun for the Murray meeting will be held on 5/20 in B4100 from 9:30-12:00. Kathy Whitney of the training group will observe the presentations. Please send John copies of your slides by noon of Thursday.

Tim:

- Orientation matrix for Harold Sinn. User interface TBD.
- synApps R5-1 on Gateway.

Peter:

- Sector 8 encoder cables.
- Dohn Arm's boards waiting on panels.
- Sector 7 needs part ordered.
- Cabinets arrived and will be mounted on walls.
- Met with HRC representative regarding Lemo orders.

Ben-chin:

- Worked on static build of epics extensions tools for linux-x86. It is found that only if the pure text user interface will function normally. If the application with GUI it will not work gives core dump.

- Spent time in studying Python and Tkinter programming and try to implement a multi-line plot program through using the available plot class from this book.

Ron:

- Fixed the "stale data delay" bug in the R3.14.x version of the motorRecord. Reviewed several through-put issues related to this problem. Determined that the throughput of one step, step scans can be greatly increased by increasing the OS clock rate; e.g., for VxWorks based IOC's, increasing the system clock from 60Hz to 100Hz decreased the delay from 78 ms/step to 40 ms/step.
- Attempted to assist with the Etching lab project by reviewing my own, unreleased, slit project using SNL, database and motorRecord Soft Channel device support.

Kurt:

- Sector 30; cannot get motors running until network problems are resolved after shutdown.
- Sector 3. B shutter support.
- Sector 1: testing Ulrich's tomography stage.

Carlotta:

- Assisted with User Meeting handouts and collected lunch tickets.
- Updated BCDA web pages.
- Updated EPICS web pages.
- Will conduct annual audit of resident users' JHQs.

Dave:

- Etching lab:
  - Complete first round of development for the state machine,
  - Had a status meeting with Mike and Kurt,
  - New MEDM wheel switch from Ken seems to work OK,
  - Shown Mike the GUI, he had some suggestions,
  - Many CA error messages are output when the softIOC exists,
  - Tour of sector 17 and discussion about a 16 channel thermocouple they would like to have incorporated to EPICS.
- Wireless laptop – not working.

Brian:

- Sector 2 sample changer.
- Update tomography. New JCA.
- Establishing network support for NANOCAT.
- Francesco (sector #2) has users doing time studies.

Xuesong:

- Becoming familiar with new environment.
- Completed all training.
- Computer setup.
- Problems with compiling EPICS reports.
- Finds EPICS getting started helpful. Anyone in group can help with EPICS.
- SPEC installed on Linux workstation; problems with installation; Tim to follow-up on potent ion solution.

Outlines of presentations to Murray:

John:

- History of BCDA
- Resources
- Graph of Effort
- Survey of needs from users
- Beamline support and how it works to link APS and Beamlines
- Web site
- EPICS training
- Gateway distribution – how – future

Ron:

- The EPICS motorRecord is my primary software development responsibility.
- Purpose: provide users with device independent single axis, non-coordinated, point to point motor motion.
- Usage
    - Almost every EPICS beamline has motorRecords.
    - Sector 1 has a total of 331 motorRecords among 7 IOC's (~ 47 motorRecords/IOC).
- Supported Device List; 24 different models of motor controllers are supported from 12 different vendors.
- Three other developers (Mark Rivers, Kurt Goetze, and Kevin Peterson) have made recent contributions to the motorRecord.
- Joe Sullivan and I are currently developing motorRecord device support for Compumotor models GT6K and 6K at the request of the Mechanical Group and IMCA-CAT.
- Other work:
    - On occasion I assist the Controls Group by debugging software modules of theirs that BCDA uses; e.g., EPICS base, VxWorks Board Support Packages (BSP's).
    - On occasion I assist with synApps system generation.

Joe Sullivan:

EPICS @ IMMY/XOR (8-ID)

- Goals of Beamline Control Conversion project
- BCDA synApps and EPICS Collaboration Results
- Continuing Development

Hardware Catalog and Knowledge Base

- BCDA Reference Material on the WEB
- Hardware Catalog – IRMIS Collaboration
- Knowledge Base - Online Engineering Notes
- Demonstrations

David Kline:

Software Engineering

- Topics
- Coding standards
- Coding metrics
- Code inspection
- Status
- What we hope to accomplish / benefit

To: Peter Fuesz
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