Argonne NATIONAL LABORATORY

2006 Users' Meeting for the Advanced Photon Source

Workshop 11: Beam Line Controls at the APS

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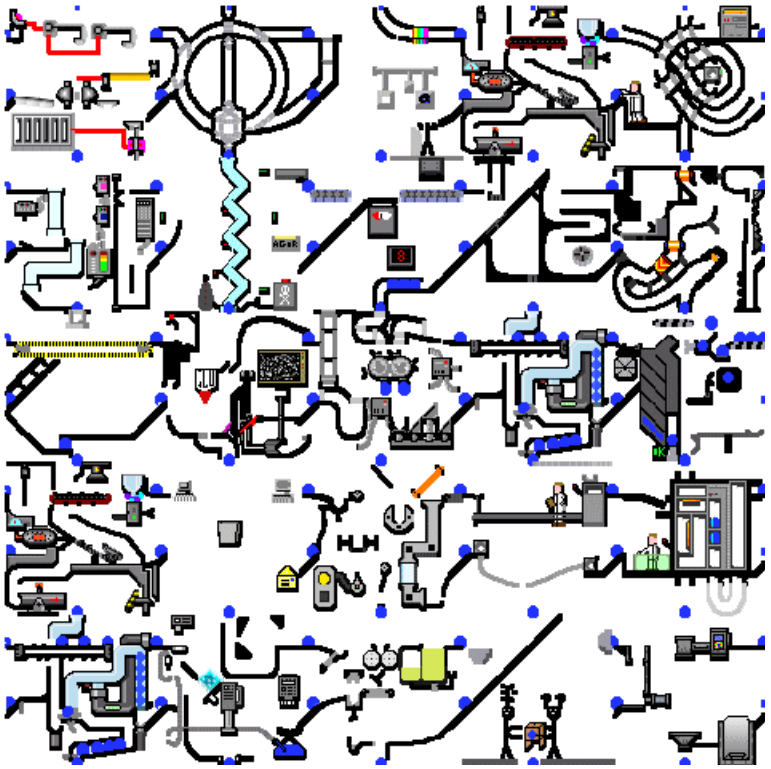
THE UNIVERSITY OF CHICAGO

Office of Science U.S. DEPARTMENT OF ENERGY

A U.S. Department of Energy laboratory managed by The University of Chicago

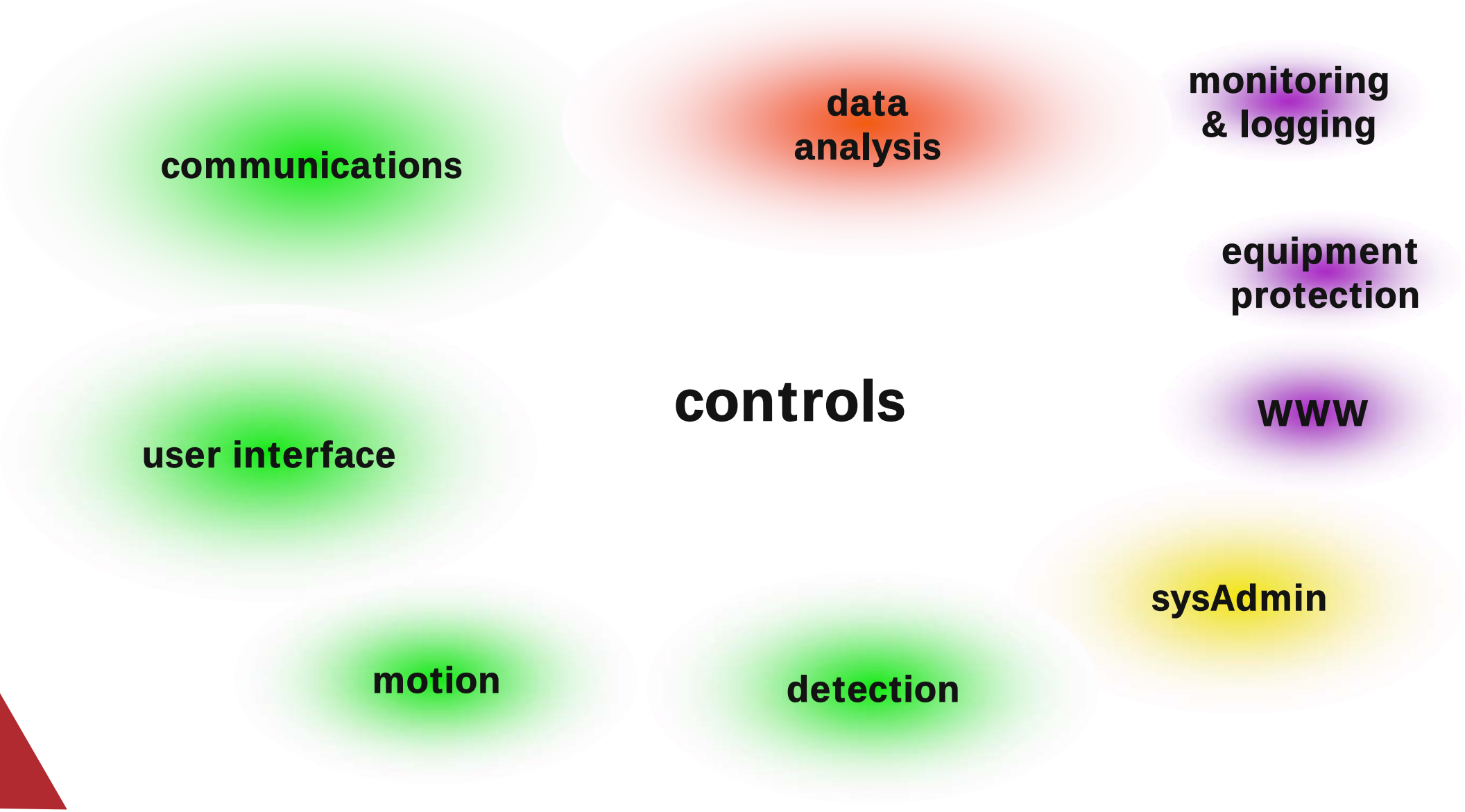
Welcome and Introduction

- After ten years of operations and experience, a variety of beam line control systems are in use at the APS.
- Research at APS is diverse
  - Absorption/Spectroscopy
  - High Pressure
  - Imaging
  - Protein Crystallography
  - Scattering
  - Optics Development



http://www.newportharbor.us/computerworks.htm

Aspects of beam line controls



Beam line controls: what you think of it

Beam line controls: interface you provide to your users

Variety of approaches

- The majority of beam lines base their controls on EPICS, while others have developed their own control protocols or adopted commercial control solutions.

EPICS

IDL

MX

Certified Scientific Software

LabView

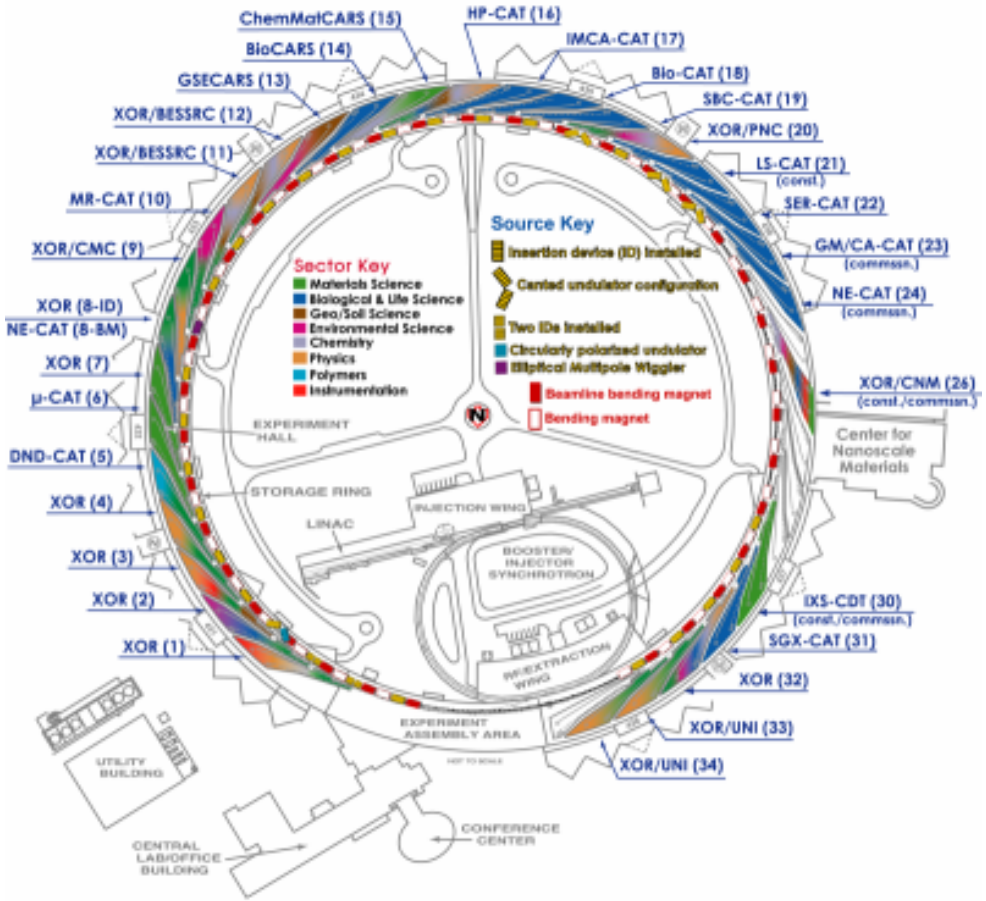
TCL POWERED

MATLAB & SIMULINK R2006a

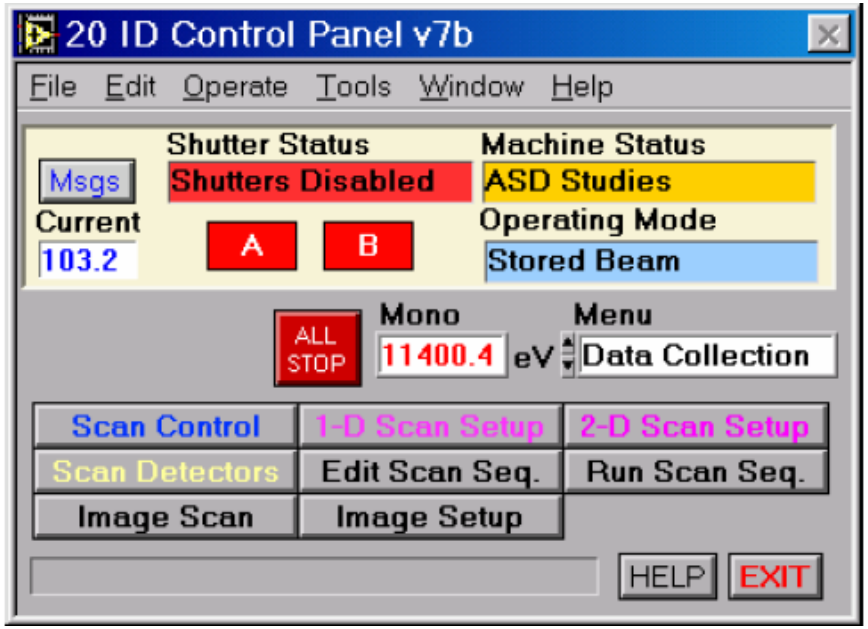
python™

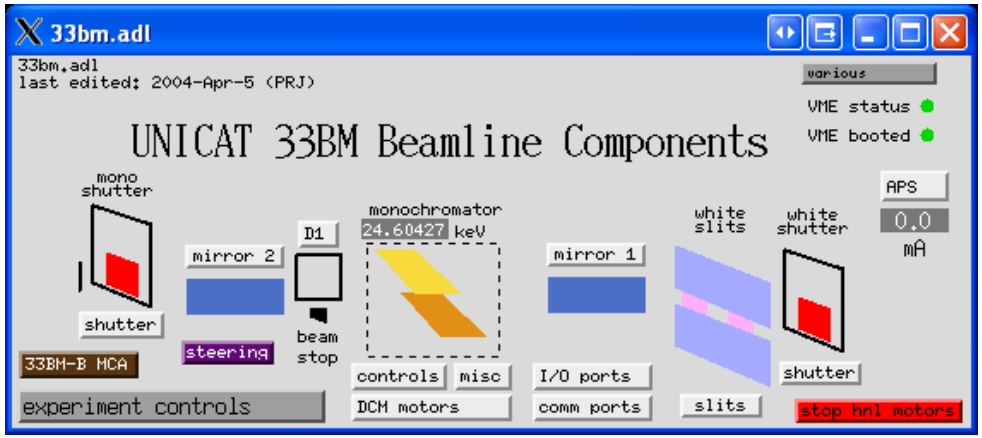
SCIPE

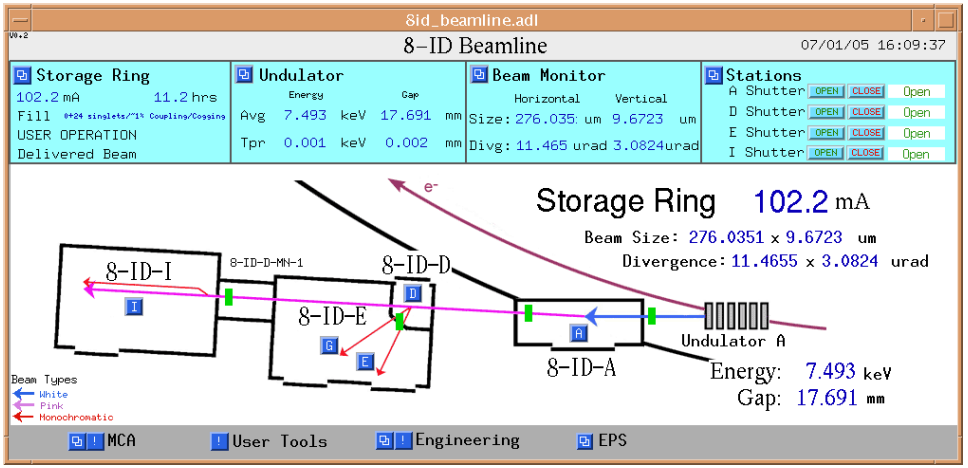
IGOR Pro



Different paint, same functions: move and detect







EPICS Collaboration Meeting

- **Argonne National Laboratory, Argonne, Illinois USA**
  June 12 - 16, 2006
- **May 24, 2006: Registration & Accommodations Deadline**
- Preliminary Agenda is on the WWW
- http://www.aps.anl.gov/News/Conferences/2006/EPICS/index.html