



ICALEPCS 2015

International Conference on Accelerator
& Large Experimental Physics
Control Systems

Designing Control Systems for Change: Supporting a Facility's Science and Technology Evolution

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Poster: MOM303



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All new software for DAQ and instrument controls has been deployed to 6 SNS/HFIR beam lines with more ongoing

Original SNS DAQ and Controls

Windows with 5 sub-networks / beamline

Discrete software components with custom signaling network protocol

LabVIEW and custom network protocols

Lots of separate GUI applications

File based data translation to NeXus at end of experiment run

Digitization electronics incorporated in detector assembly with Channel Link interfaces between boards

In-house development of all software

New SNS DAQ and Controls

Linux with simplified network architecture

Client-server architecture

EPICS Channel Access and PV Access

Integrated GUI client using CS-Studio

Network based translation to NeXus concurrent with experiment run

In design phase

Leveraging existing software in the community and collaborations



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Designing the control and data acquisition system from the start to
allow for the ongoing science and technology evolution

