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Epics use in Industry - Sigray Inc.

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Sigray is a private company that develops and manufactures standalone room sized laboratory X-ray systems with performance comparable to Synchrotron Beamlines. Sigray produces Instruments for micro-xray fluorescence, computed tomography, and X-ray absorption Spectroscopy. These systems were developed using EPICS, possibly uniquely for a commercial company. Sigray has leveraged EPICS for low level integration and rapid development. Each system has just two computers, with EPICS and Synapps deployed on a Linux platform for motion controls, detector support, scanning and general monitoring. Engineering screens use MEDM. The customer facing screens use a bespoke Windows interface with Windows based high level applications.

Using EPICS in an industrial environment comes with aspects that differ from running in a Laboratory. Commercially, managing an installed software base on computers located all over the world, built of varying releases of EPICS/Synapps/Area detector, many without internet access, is challenging. In addition, there is a need to add APIs, remote execution, and asynchronous controls interfaces for higher level machine functions like interlocks, alignment, service, batch processing, and semi-standard integration required development to manage instrument state, faults and process tracking in parallel with EPICS controls. While some of these may be unique concerns to industrial users, many of these items seem to overlap well with the current developments within the EPICS communities. We look forward to adding Sigrays experience with these issues back into the community and see where the community looks to go in the future.

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