

BESSY II BEAMLINER CONTROL - SYSTEM STATUS & FUTURE PLANS

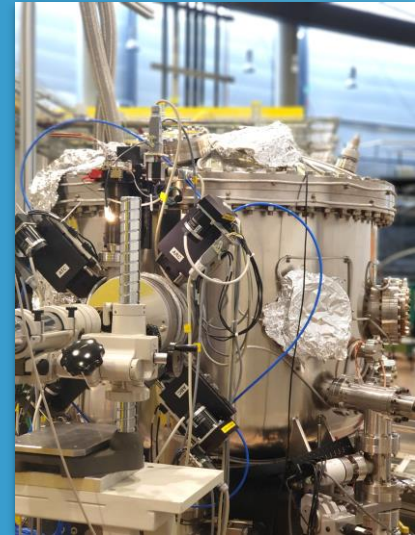
04.06.2019

Anna Ziegler

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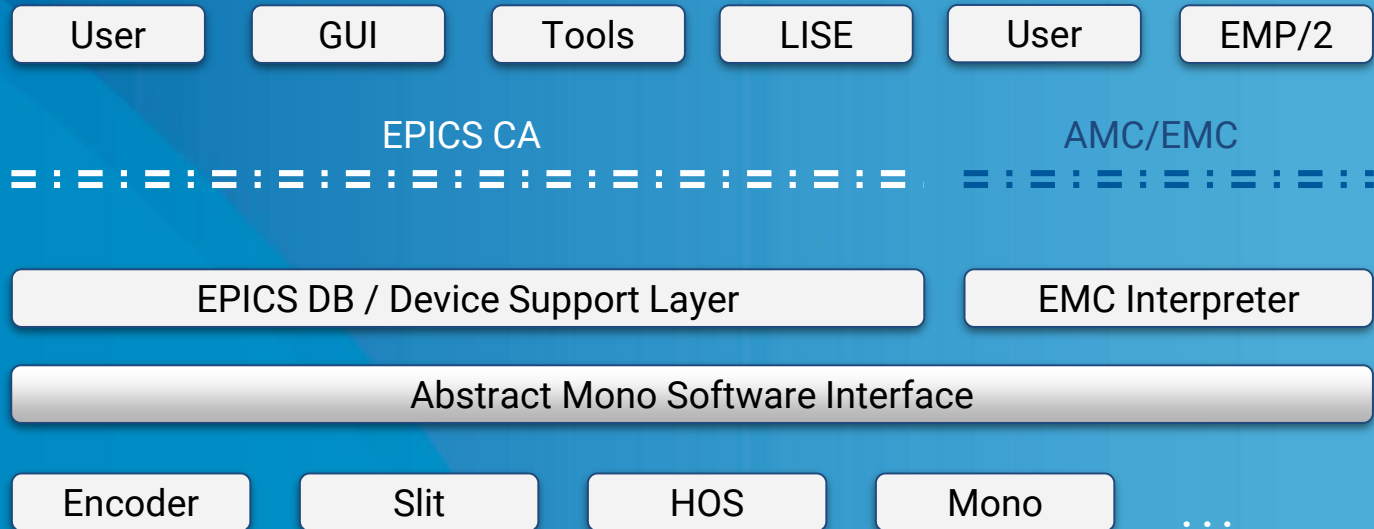
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Motion Control Hardware



13.05.2019

Motion Control Software



Obsolescence Management – Issues & Solutions

EPICS 3.14 Branch

- Update to EPICS 7
- Involves OS: Upgrade to Linux / RTEMS / VxWorks V6.8
- Involves Hardware: CPU Boards / IPC

Old OMS Motion Controllers

- Fast upgrade: MAXv (OMS) / Geobricks
- Full stack: Omron, Beckhoff TwinCAT, Newport, Galil, Aerotech, OMS, ...

Heidenhain Encoders RON905

- Incremental Encoders
- Absolute Encoders -> More hardware involved
- Interface to motion controller

Old DT motion controllers

- Power Brick or comparable full stack motion controllers

VME Crates / CPU Boards

- CAN Bus > Other field bus with Ethercat and IPC?
- Serial Connection, Involves AMC > EMP/2 and others
- Analog/Digital IO has to be replaced

GUI

- EPICS: Python, C++ or Java

Choosing the Motion Control Concept

- Long term availability and support
 - Continuously deliver small high quality upgrades
 - Hardware decisions as late as possible
 - Compact industrial design
- Lean Software development with agile work cycles



**THANK YOU FOR YOUR
ATTENTION!**