EpicsOra and I/O hardware

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**EpicsOra**

Tool for building EPICS databases

- Oracle 9i database
- Oracle Web Forms UI
- Plans to link with hardware data
Project
Prototype
Prototype Records
Instantiated Records
.db file for IOC
Link with hardware: EPICS fields

- e.g. INP
- Device-specific formatted string, e.g. 
  @CAN1:N36[4] ‘L=6553’
- Parameters in string are device attributes, node, channel, limits…etc
Goals

- Keep device data separate from EpicsOra database (can change devices with minimal changes to EpicsOra)
- Link EPICS PV to hardware device data
- Link hardware device to its EPICS PVs
- Link with assets database, other device data
- Pull EPICS address string parameters and values from device data
- Automatically generate formatted address string
**IO_NAME**

- Unique name associated with hardware channel
- Used by EpicsOra as a link to device data
- Can change device used by EPICS PV by moving the IO_NAME to another channel
Hardware device schema

- One device to many channels
- HW_PARAMS has list of device and channel parameter names + values
- Link to EpicsOra via HW_CHANNEL IO_NAME
- Link to assets db via HW_DEVICE. KRY_ID
EpicsOra device schema

- DEVSUPPORT_FORMAT has format string
- IO_DEVSUPPORT links to hardware channel with IO_NAME; triggers assemble EPICS address strings with param values
- Param names and values from HW_PARAMS table
Putting them together

Device data

Rules

EpicsOra

EPICS Address String
Integrating Intelligent Devices

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Further work…

- Add sensor data and scaling parameters and functions to the device schema
- Add generic device class definitions to the device schema
- MS Excel used for device data; may use Excel VB macros as interface to Oracle
- Stored procedures, Oracle Forms code for managing the schemas
- Import flat EPICS .db files into EpicsOra