Epics2Tine

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Some History …

- Initial Release: 1.0
  - ICALEPCS 2001, PCaPAC 2002
  - Read-only
  - EPICS iocs were VxWorks only (hard ioc)
- 2nd Release: 2.0
  - PCaPAC 2005
  - Read/Write
  - Other Platforms (**soft ioc**)
  - Alarm re-issue
- 3rd Release: 3.0.1
  - Integration of native EPICS Alarms
  - Based on EPICS 3.14.7.2 and TINE 3.31.

Advantages of Soft ioc

- More flexible structure of main DESY EPICS subsystem
  - (We are using particular softIOC process for MKK, PowerStation, North, South, etc.)
- Easier to manage this process
  - standard UNIX ps screen
  - crone table
  - Etc.

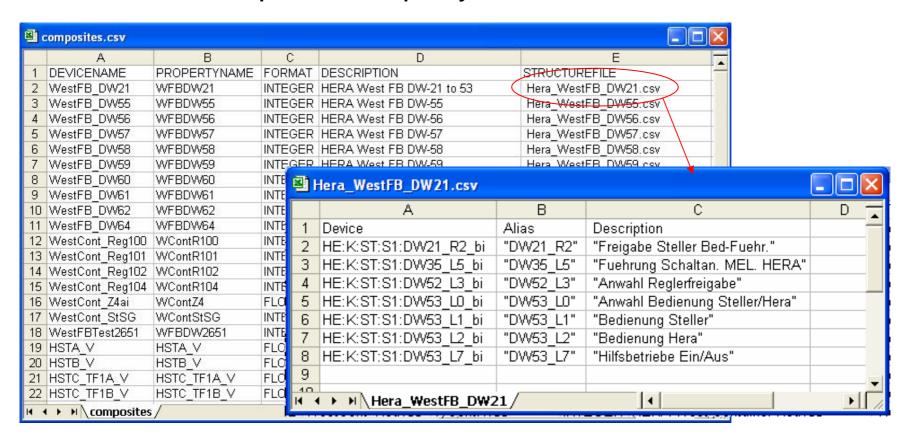# Epics2Tine : How it works (1)

- is a process/task which is started on the EPICS ioc after EPICS is running.
- scans the EPICS database for the io records
  - "AB:CD:xyz" becomes device "AB:CD" with property "xyz", etc.
- READs reconstruct the record name, append ".VAL" and call dbget() (NOT caget()!).
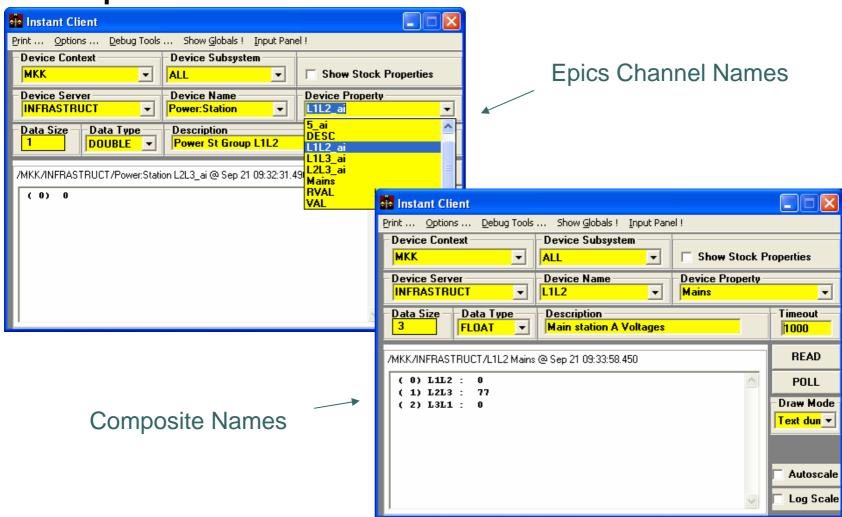- WRITES do the same and call dbput().

Epics2Tine : How it works (2)

- EPICS "fields" are mapped into TINE property meta information
- EPICS ALARMS are mapped to TINE alarms (EPICS 3.14 or higher)
- Allow "Composite Properties and Devices".
  - Map and/or group EPICS records into a (semi-) atomic group call as a multi-channel array
- Get all of the benefits of TINE : multicast, payload size, local histories, multi-channel arrays, hierarchical naming scheme, naming services
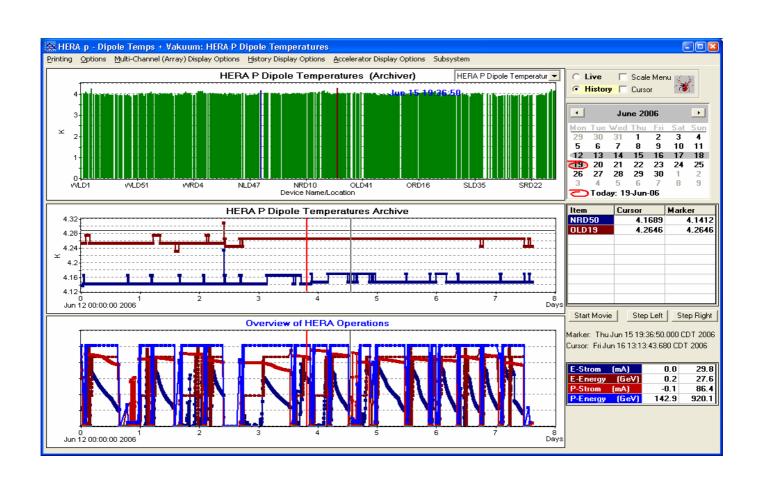
How Composites Work

- Configuration file (composite.csv)
  - Composite Property, Device + structure:

Composites
(a practical example)

Epics Channel Names

Composite Names

EPICS to TINE @ HERA

Getting Epics2Tine

- http://www-mks2.desy.de
- http://tine.desy.de