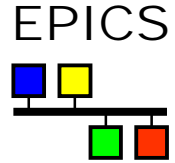# *EPICS BASE Release 3.14.0beta1*
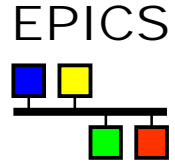# *EPICS Meeting at ICALEPCS01*

December 2001

Marty Kraimer

Epics Base Release 3.14.0beta1

◆ Main Goal for 3.14 – Port iocCore

- ◆ vxWorks – 5.4 (Tornado 2) required
- ◆ RTEMS – Open Source Real Time Operating System
- ◆ Solaris – Solaris 6 and Solaris 8 tested
- ◆ Linux – Redhat 6.1, 6.2, 7.0 tested
- ◆ Win32 – NT
- ◆ Marty Kraimer, Jeff Hill, Janet Anderson, Eric Norum primary developers.

◆ Hardware Support

- ◆ vxWorks support unbundled
- ◆ Some for RTEMS
- ◆ Requires major changes for Unix, Linux, win32

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- ◆ Not Supported
  - ◆ HPUX
    - ◆ Versions before 11 do not properly support pthreads
    - ◆ Support will require version 11
    - ◆ BESSY (Ralph Lange) is working on the port
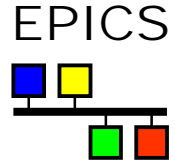 - ◆ Main Porting Problem is multithreading
    - ◆ Good support for pthreads OR
    - ◆ Threads support for implementing epicsThread, epicsMutex, and epicsEvent
  - ◆ Multithreading now required
    - ◆ iocCore is intrinsically multithreaded
    - ◆ CA is also multithreaded but transparent to existing applications.
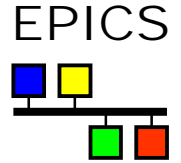
Epics Base Release 3.14.0beta1

◆ Supporting many platforms will be a challenge

  ◆ Each platform has many versions

  ◆ Many versions of G++

  ◆ C++ is particular challenge

    ◆ Most implementations still don't fully support standard

    ◆ Standard C++ library implementations still immature.

◆ Status

  ◆ First beta release is now available. Ready for test stands, commissioning, etc. Operational systems should still wait.

  ◆ I have tested vxWorks Test stand with many VME I/O modules

  ◆ Encourage users to try Win32, Solaris, Linux.

  ◆ Killer APPS: Sequencer and LAN Gpib
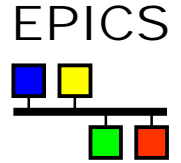
Epics Base Release 3.14.0beta1

◆ Sequencer

  ◆ Eric Norum & Marty Kraimer started with latest SLAC version

  ◆ Has been tested on all supported alpha2 platforms

  ◆ SLAC is still responsible for Sequencer

◆ HP2050 LAN Gpib

  ◆ Eric Norum & Marty Kraimer started with latest BESSY release.

  ◆ Has been tested on all but winNT.

  ◆ Support for NI1014 only on vxWorks

  ◆ Bitbus and bitbus gpib supported on vxWorks

  ◆ BESSY is still responsible for GPIB.

Epics Base Release 3.14.0beta1

◆ Additional Features for 3.14

   ◆ Large Arrays – available in beta1

      ◆ St.cmd command: rsrvConfig(bufsize,maxbufs)

      ◆ Transparent to existing clients but must be relinked

      ◆ Purpose is ease of use not performance

   ◆ Multipriority CA servers – available in beta1

      ◆ Client must request, i.e. not transparent to existing clients.

      ◆ Provides incremential improvement for performance degradatation

   ◆ No other new features for 3.14