Why I Wrote MX

- Beamline control system software has tended to be environment specific and non-portable.
- Many are centered around a particular interface method, e.g., CAMAC or VME.
- EPICS seemed to be not that good a match to the needs of beamline control.
- EPICS did not provide a way for pseudomotors to have the same API as real motors.
- Users sometimes bring in their own equipment that they want to interface to the beamline.

MX Control System Goals

- Encapsulate the core functionality in libraries like *libMx*.

- Make client-server functionality available.

- Minimize *libMx*'s knowledge of the environment it is running in.

  - Minimize *libMx*'s need to know about detail of the user interface.

  - Localize *libMx*'s knowledge of device hardware to driver functions with a well defined interface.

- Minimize the effort required to implement new device drivers by putting as much functionality as possible in generic code.

- Be portable across operating systems.
  - Require only ANSI C.
  - Use TCP/IP sockets for interprocess communication.
- Interoperate with as many beamlines and sources as possible.
  - Be able to interoperate with pre-existing beamline control systems.
  - Try to be capable of interfacing to almost any data acquisition API that may appear.
  - Do not depend on the presence of software that may not be freely distributed like EPICS or Spec.
- Make the code freely available.

MX Web Site

http://www.imca.aps.anl.gov/~lavender/mx/