

ClusterFORTH in the Factory

by J. Waterman and A. Shackleford
FORTH, Inc.

clusterFORTH is finding an important niche in factory automation. In the last few years, we have developed a standard configuration using IBM PC-AT's or XT's as "masters" in a cluster of Z-80 based single board computers. These communicate using standard RS422 lines with other computers and with a variable number of standard analog and digital modules commonly used in control applications. Up to four IBM's have been configured in a single cluster, each of which supported up to 64 SBC's.

A full polyFORTH system is resident on each of the Z-80 boards. During development, the polyFORTH running on an IBM host provided disk and terminal services to the Z-80 systems. The clusterFORTH capability of "plugging" logically into another computer has made it extremely easy to develop control applications in this configuration.

This paper will describe the cluster environment and the techniques used to develop typical control applications.