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A Low-Cost, Portable, Parallel Computing Cluster DANIEL BULLOCK, CHRISTIAN POPPELIERS, CHARLES ALLEN, Angelo State University — Research in modern physical sciences has placed an increasing demand on computers for complex algorithms that push the limits of consumer personal computers. Parallel supercomputers are often required for large-scale algorithms, however the cost of these systems can be prohibitive. The purpose of this project is to construct a low-cost, portable, parallel computer system as an alternative to large-scale supercomputers, using Commercial Off The Shelf (COTS) components. These components can be networked together to allow processors to communicate with one another for faster computations. The overall design of this system is based on the development of "Little Fe" at Contra Costa College in San Pablo, California. Revisions to this design include improved design components, smaller physical size, easier transportation, less wiring, and a single AC power supply.

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