

Worldwide Collaborative Efforts in Plasma Control Software Development*

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The Plasma Control System (PCS) originally developed by General Atomics for use on the DIII-D tokamak has been successfully installed and used for the NSTX experiment in Princeton, the MAST experiment in Culham UK, the EAST experiment in China, and the Pegasus experiment at the University of Wisconsin. In addition to these sites, a version of the PCS is currently being developed for use by the KSTAR tokamak in Korea. A well-defined and robust PCS software infrastructure has been developed to provide the common foundation for implementing the real-time data acquisition and feedback control codes. The PCS infrastructure provides a flexible framework which has allowed the PCS to be easily adapted to fulfill the unique needs of each site. The software has also demonstrated great flexibility by allowing use of various computing, data acquisition and real-time networking hardware. A description of the current PCS software architecture will be given along with experiences in developing and supporting the various PCS installations throughout the world.

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