

## USING TINE IN HERA CONTROL

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Beginning with the 1998 run period, the PC-dominated control system for HERA is largely in place. Most elements of the machine are controlled via the TINE (Three-fold Integrated Network Environment) [1] data exchange protocol. TINE offers a multi-platform, multi-protocol, multi-architecture control system. It features distributed, object-based, plug-and-play, front-end devices and middle layer servers which communicate directly with console (and office) computers. Although the consoles in the HERA control room all run WINDOWS NT, the HERA front end computers and servers run a wide variety of operating systems and are not always PCs. TINE has been invaluable in integrating the HERA front ends into a working system. Furthermore, it offers a transparent way to progressively upgrade existing hardware (as opposed to replacing everything at once). We describe below some of the finer points and details concerning TINE as a control system.

[1] P.Duval, "TINE: An Integrated Control System for HERA", PCaPAC'99 Proceedings.