A Development Environment for String Hyperinstruments
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A hardware and software platform for developing a new generation of sophisticated, real-time 'Hyperinstrument' systems is presented. Special focus is directed at non-MIDI, "continuous" instruments, and the work is illustrated by a discussion of a system built around the violoncello and an approach to integrating and correlating several data sources of varying degrees of reliability. The platform is based on the Apple Macintosh IIci, with peripheral devices such as Digidesign Audiomedia DSP cards, EXOS hand sensors, General Instruments MacAIOOS data acquisition cards, serial (MIDI) communication, and specially built hardware. The programming environment is embedded in Macintosh Common Lisp Object System. It includes a non-soring scheduler, support for the Macintosh MIDI Manager, and a number of CLOS objects for various kinds of external interface, parsing, analysis, graphics, and real-time control of musical processes.