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**Virtual electric guitars and associated audio effects in faust and C++**

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Advances in computing technology, both in hardware and software, are enabling new levels of performance in real-time for virtual musical instruments based on acoustic principles. This paper is concerned with software implementation technology for such instruments, written in high-level languages that compile down to efficient low-level implementations on a wide variety of platforms. Specific results will be presented for the case of virtual electric guitars and associated digital audio effects expressed in the Faust and C++ languages, and compiled to become plugins for VST, Pure Data, and other real-time performance environments. This work builds upon a previous paper at the Linux Audio Conference (LAC-2008), and laboratory module written for the RealSimple project at CCRMA (<http://ccrma.stanford.edu/realsimple/>).