Adapting existing mapping tools for supporting force-feedback musical instruments

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Conceiving support tools for designers of Force-Feedback-enabled musical instruments is difficult, considering that designers of such systems may have dramatically different goals, tools, and knowledge. Fortunately, decades of research and development has already focused on creating tools and approaches for designers of audio-only interactive musical instruments. This talk will focus on the feasibility of adopting and extend existing mapping concepts, techniques and tools from the DMI/NIME literature to address force-feedback and other tactile/haptic modalities. Which techniques and representations (both UI and protocol) need to be modified? Which are useful unchanged? And which need to be completely rethought? A design space merging knowledge from DMI mapping literature and the unique requirements of force-feedback systems will be used to investigate.