

# "The finer the musician, the smaller the details": NIMEcraft under the microscope

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with artwork by Sophie Skach

## Existing NIME and DMI design frameworks often overlook the fine details of instrument craft

*"Musical interface construction proceeds as more art than science, and possibly this is the only way that it can be done."*

– Cook, NIME 2001 [1]

NIME frameworks aim to support DMI designers to describe, compare and analyse DMIs. They also offer criteria and methodologies for evaluation.

## We introduce the term "NIMEcraft" to describe the micro scale differences between otherwise identical instruments

Research papers at NIME do not provide a full account of craft knowledge, which is often personal, subjective and inherently nonscientific.

The tacit knowledge of master craftspeople may not be fully communicable in writing at all. So how can we discuss and share it? Kettley [2] suggests the following principles of craft that are tacit in nature:

A NIME framework might identify a Stradivarius and a factory-made violin as identical in interaction modes, controls, mapping and pitch range. Yet for violin makers and players they can vary substantially in quality of experience.

Similarly, these subtle details constitute an important yet sometimes overlooked aspect of digital musical instruments.



## We interviewed violin luthiers about the tacit and explicit aspects of their craft, to learn how to better support NIMEcraft

The luthiers use frameworks and goals as foundations for their craft, which offer them safety from failure. However, they must acquire substantial tacit knowledge before they can realise a fine instrument.

Scientific forms of knowledge influenced them, but had little practical impact. Further, they evaluated quality through refined testing skills rather than player feedback.

*"There's no way to transmit this knowledge, to convey, to give, to communicate this knowledge. Even at my level when I've got a colleague that sees something on my work and tells me to look at something, if I can't see it they can't help me."* – Luthier of 25 years



## NIME frameworks need to account for and support the development of designers' tacit knowledge and experience

No infrastructure exists today which is focused on NIMEcraft dissemination; fine crafting details' subjectivity makes them currently unsuitable for inclusion in NIME papers, and NIME concerts exhibit only the final form of an instrument without reference to its design process. The community can learn from lutherie how to disseminate this knowledge in a self-sustaining manner.

NIME should consider creating DMI design tools with the same attitude with which it develops highly embodied DMIs for players, and consider how to include designer's evaluations of NIMEcraft.

[1] Cook. 2001. Principles for designing computer music controllers. Proc. NIME.

[2] Kettley. 2012. The foundations of craft: A suggested protocol for introducing craft to other disciplines. Craft Research 3, 33–51.



Full article including violin luthier interviews at [bit.ly/NIMEcraft](http://bit.ly/NIMEcraft)