

VRScroll: A Shape-Changing Device for Precise Sketching in Virtual Reality

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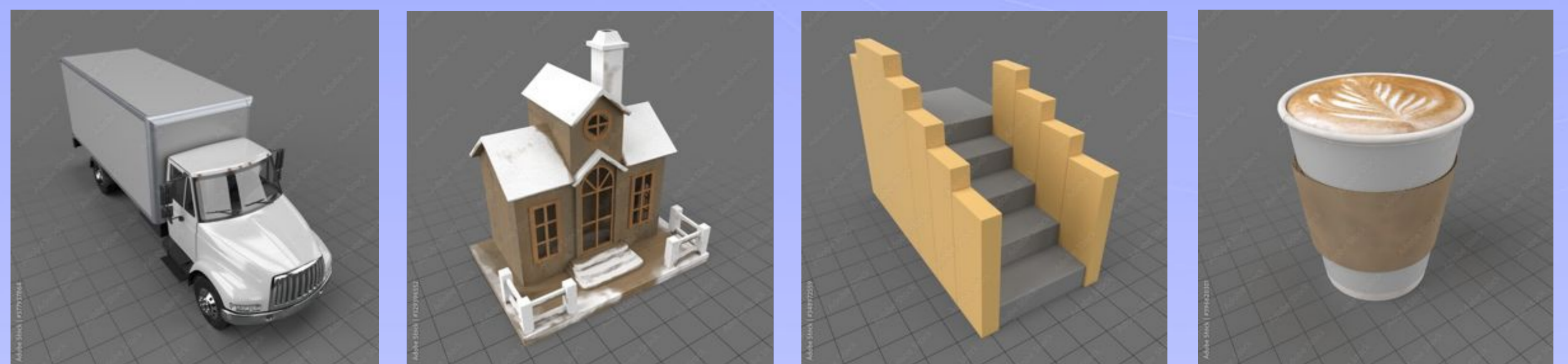


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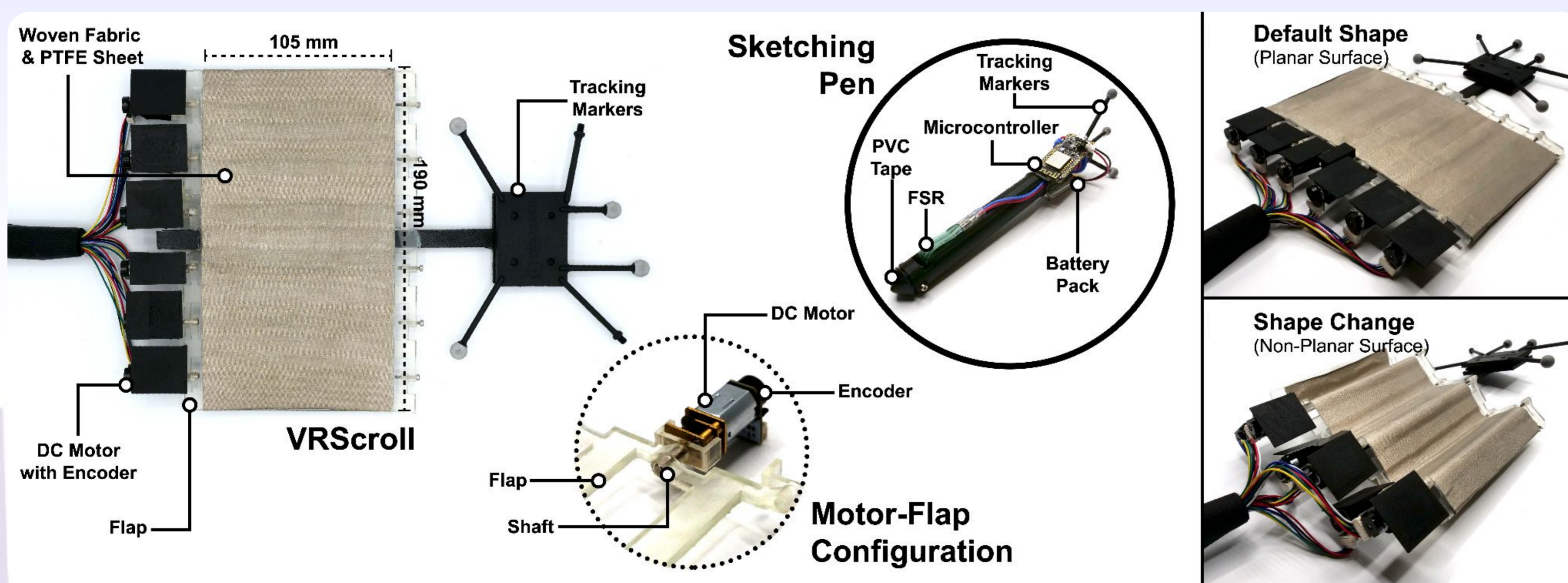
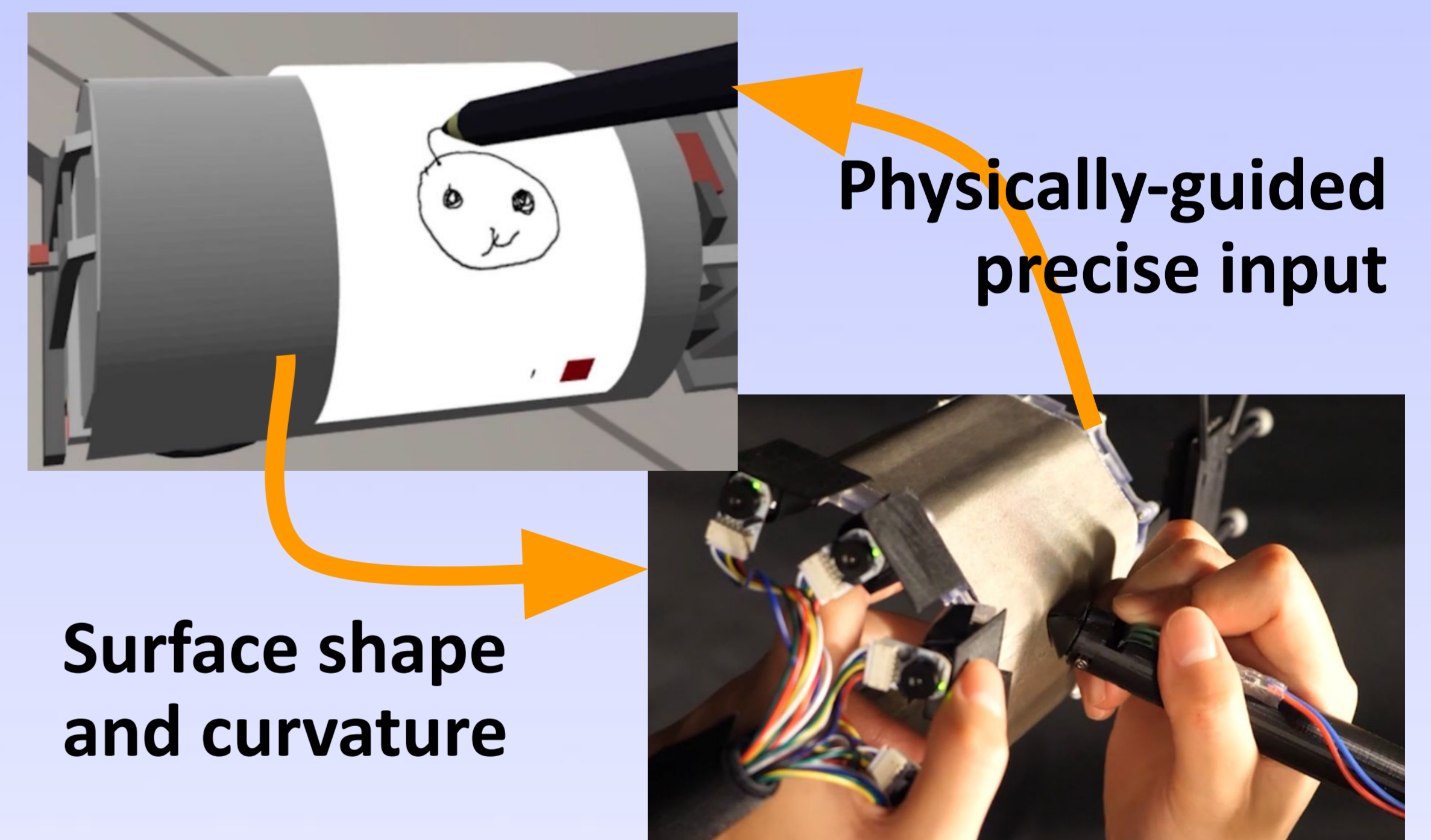
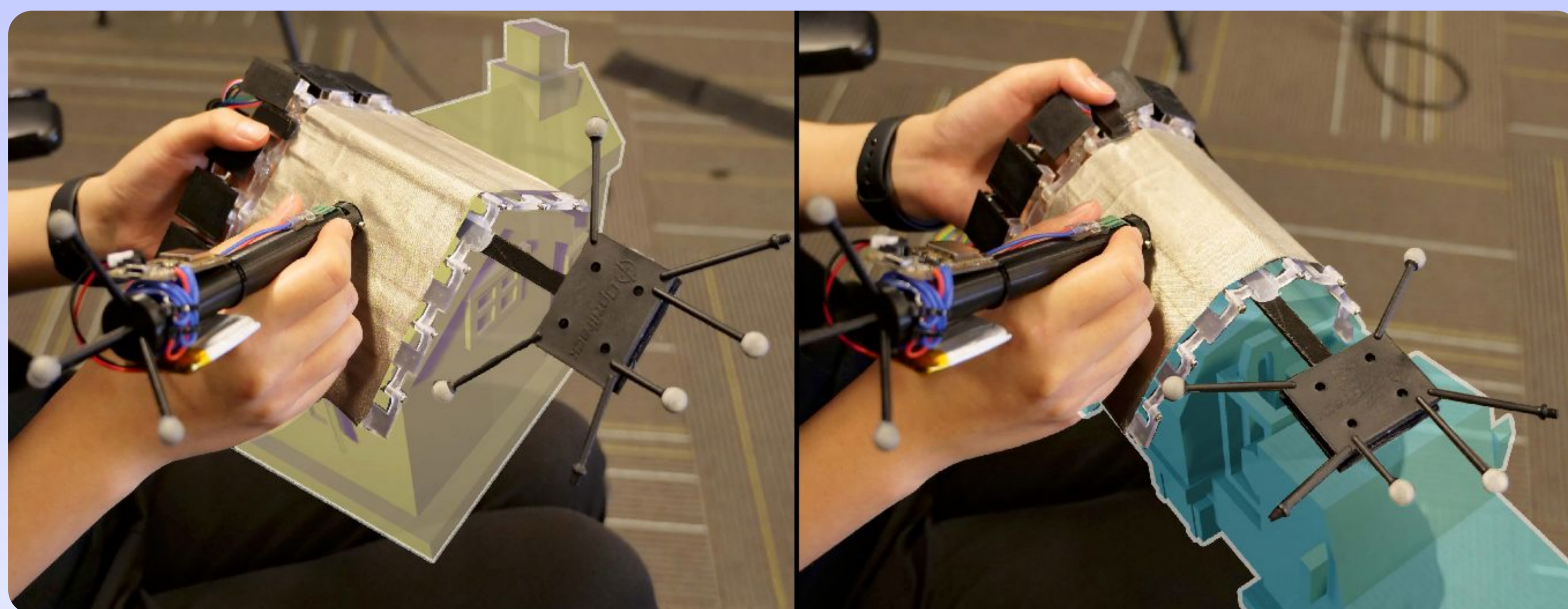


Physical surfaces can significantly improve sketching in VR, by allowing users to feel the surface and providing physical guidance.

What if the user wants to sketch on object surfaces that are angled, folded, or curved?



VRScroll changes its shape to mimic different virtual object surfaces for users to precisely sketch on.



VRScroll Implementation

Using 7 motor-controlled flaps, VRScroll can physically render various shapes, such as plates, zigzags, arches, and cylinders.

The force-sensitive pen allows natural drawing on the VRScroll surface.

By providing users with **passive haptic feedback** and **constrained movement**, VRScroll can facilitate **precise sketching** on **various** virtual surfaces.