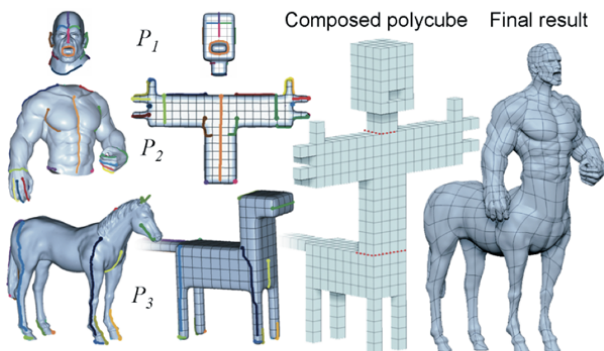


# Interactive applications for sketch-based editable polycube-map

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In this paper we propose a sketch-based editable polycube mapping method that, given a general mesh and a simple polycube that coarsely resembles the shape of the object, plus sketched features indicating relevant correspondences between the two, provides a uniform, regular and user-controllable quads-only mesh that can be used as a basis structure for subdivision. Large scale models with complex geometry and topology can be processed efficiently with simple, intuitive operations. We show that the simple, intuitive nature of the polycube map is a substantial advantage from the point of view of the interface by

demonstrating a series of applications, including kit-basing, shape morphing, painting over the parameterization domain, and GPU-friendly tessellated subdivision displacement, where the user is also able to control the number of patches in the base mesh by the construction of the base polycube.