Window-Shaping

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- Computer Technology

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- 3D Modeling
- Algorithm
- Augmented Reality
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Augmented reality and mixed reality play a vital role in bridging the gap between the physical and digital worlds for the creative expression of ideas. However, most of the existing approaches for digital design focus on modeling from scratch rather than allowing novice users to draw inspiration from existing physical artifacts.

Researchers at Purdue University have developed a technology that focuses on creating a mixed reality environment for quick 3D shape design where users can repurpose the physical environment as a reference, context, and source of inspiration. This technology presents a new interaction metaphor wherein a new virtual 3D object is created as an extension of its physical context without the need for reconstructing the 3D model of the physical scene. This technology allows users to create and visualize 3D shapes directly on the surface of any object with the desired dimensions and locations. Mapping the background texture of the users' sketch inputs, allows users to repurpose existing textures in new creations.

Advantages:
-Quick design ideation
-Allows users to create and design using existing objects
-Leverages both multi-touch inputs and midair gestures for modeling

Potential Applications:
-Creative design applications
-Mixed reality
-Industrial design

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Intellectual Property:

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