



Figure 1: Paintings created using the CATS system by Ticha Sethapakdi (top), Constance Ye (middle left), Rain Du (middle right), and Ming Lu (bottom). See [1] for more results.

Painting with CATS: Camera-Aided Texture Synthesis

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ABSTRACT

We present CATS, a digital painting system that synthesizes textures from live video in real-time, short-cutting the typical brush- and texture- gathering workflow. Through the use of boundary-aware texture synthesis, CATS produces strokes that are non-repeating and blend smoothly with each other. This allows CATS to produce paintings that would be difficult to create with traditional art supplies or existing software. We evaluated the effectiveness of CATS by asking artists to integrate the tool into their creative practice for two weeks; their paintings and feedback demonstrate that CATS is an expressive tool which can be used to create richly textured paintings.

KEYWORDS

art; creativity support; digital painting

REFERENCES

- [1] Ticha Sethapakdi and James McCann. 2019. Painting with CATS: Camera-Aided Texture Synthesis. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '19)*. ACM, 8.5. <https://doi.org/10.1145/3290605.3300287>

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