

CAMIT Grant Program Report

Onur Yüce Gün, PhD, Design and Computation Group, Department of Architecture, MIT

Model of a Drawing Process: Watercolor-Calculating¹

The Project:

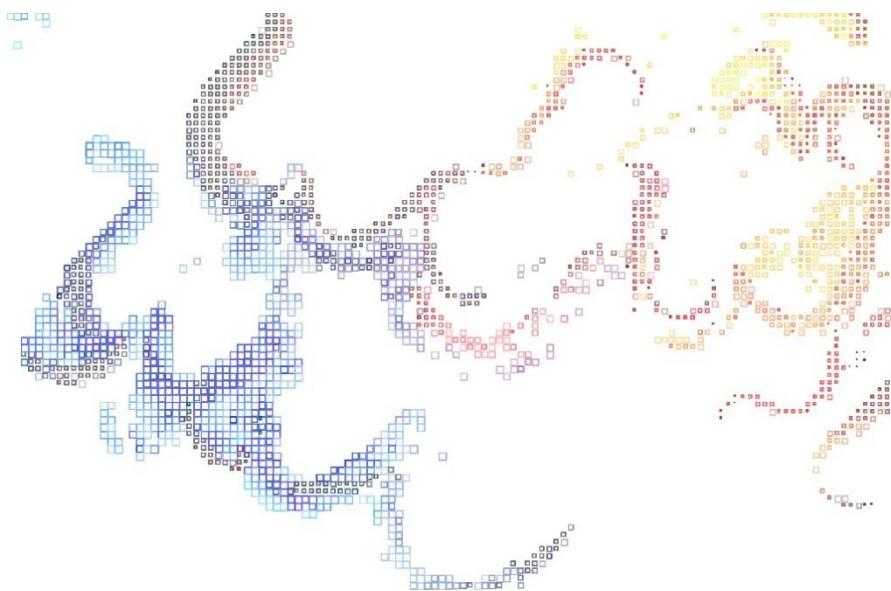
This project showcases the spatio-temporal model of a specially prepared painting's emergence process. The painting is prepared using a drawing system (the Broadened Drawing-Scape) that is developed at MIT's Design and Computation Group. The drawing apparatus helps combine computational image capturing and projection techniques with analog painting processes to implement a computationally broadened, open-ended hand-drawing and painting system. Shape Grammars are used both to generate (calculate and paint) and retrospectively analyze the painting.

The exhibited model reveals the turning points of the genesis of the painting. These moments are represented on transparent surfaces that are assembled in a sequential order. This way, the model becomes a spatio-temporal representation of the unique painting process, allowing the observer to experience the time-space of the watercolor painting. While one half of the model uses original images that are captured during the emergence of the painting, the other half uses computationally re-interpreted (filtered) versions to elucidate both the analog and the digital realms the drawing preexists.

¹ The title for the CAMIT Grant Application was "Spatial Models of Ephemeral Drawing Processes" –The project remained mostly the same while I updated the title.

The Exhibited Piece:

The exhibited piece is a physical model and it is a product of painting, computing, printing and digital fabrication processes. First, a watercolor painting is made by using a special drawing apparatus, while the turning points of the painting process are digitally captured. Then these momentary snapshots are both digitally enhanced and re-generated (through bitmap processing) by using the software platform Processing. While one side of the final model uses the enhanced images, the other side uses the filtered versions.

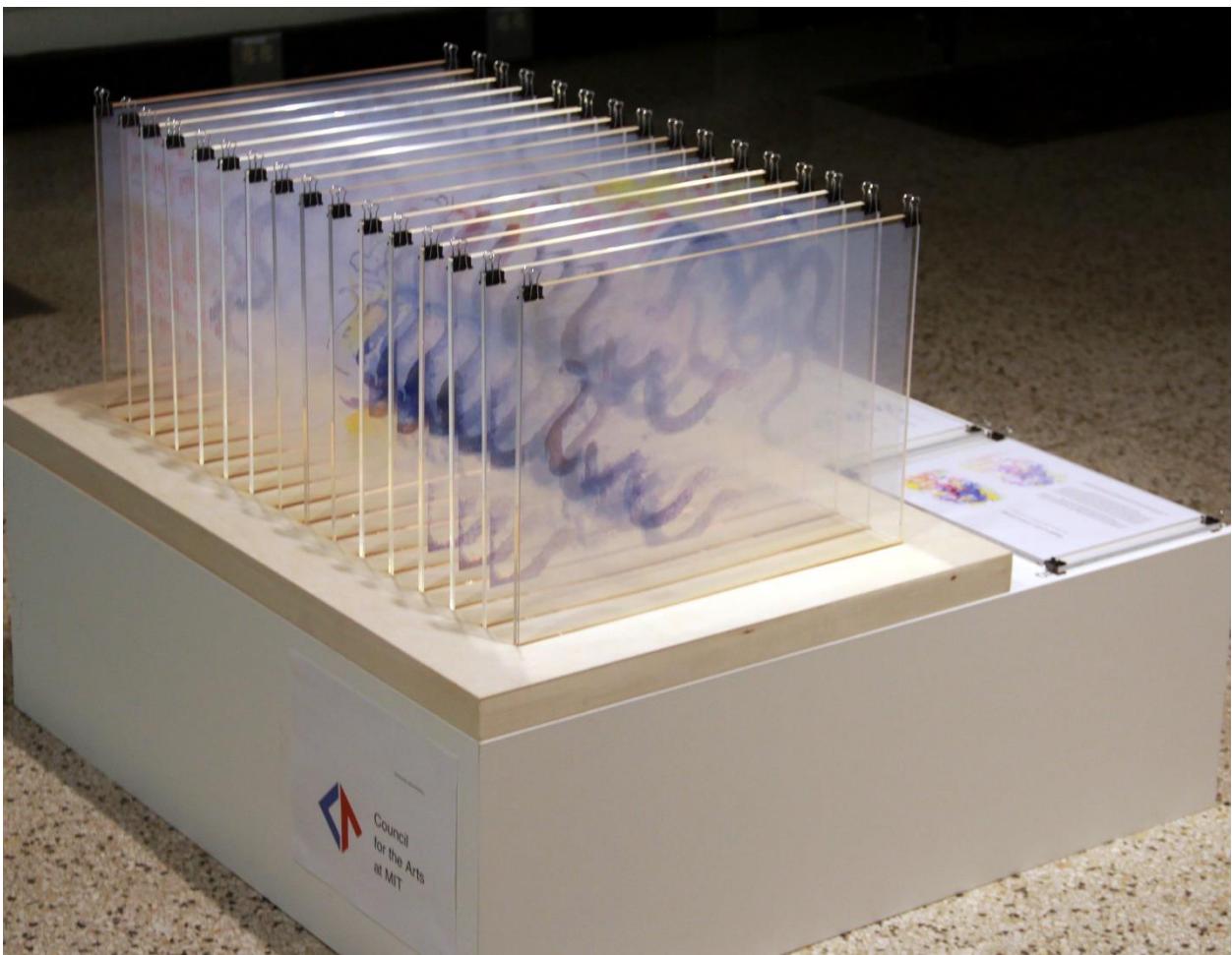
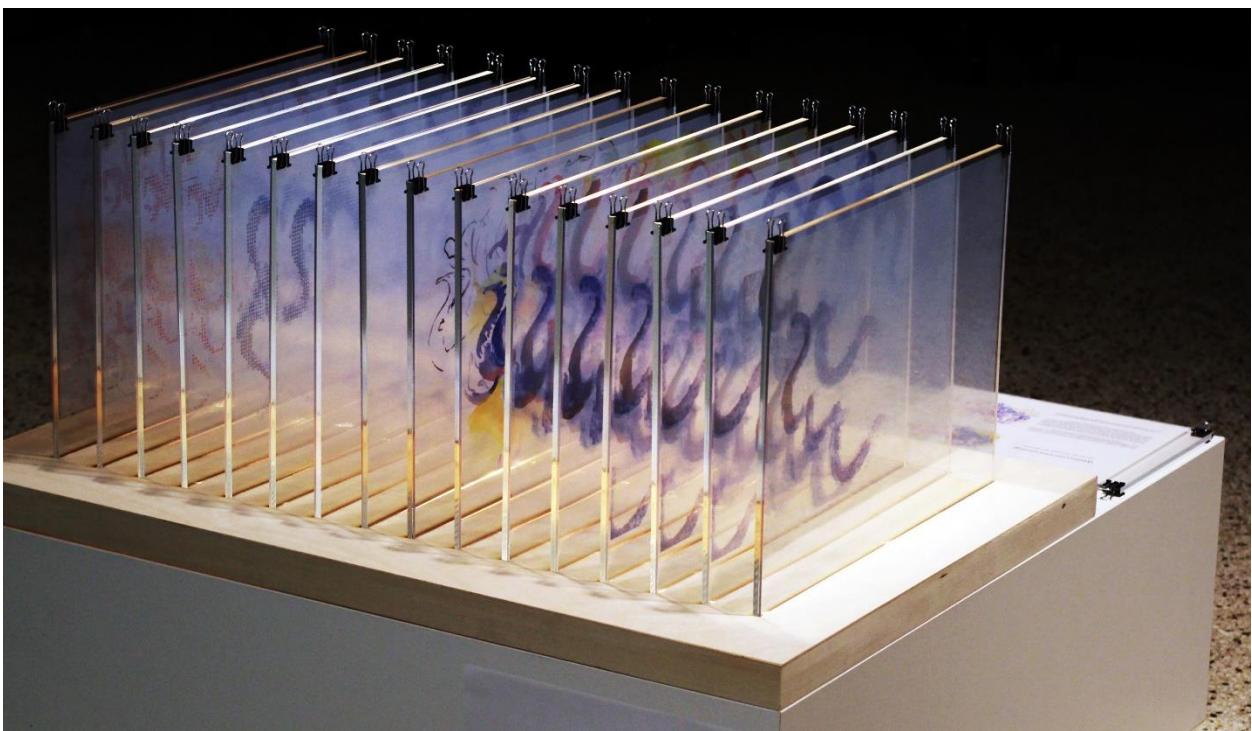


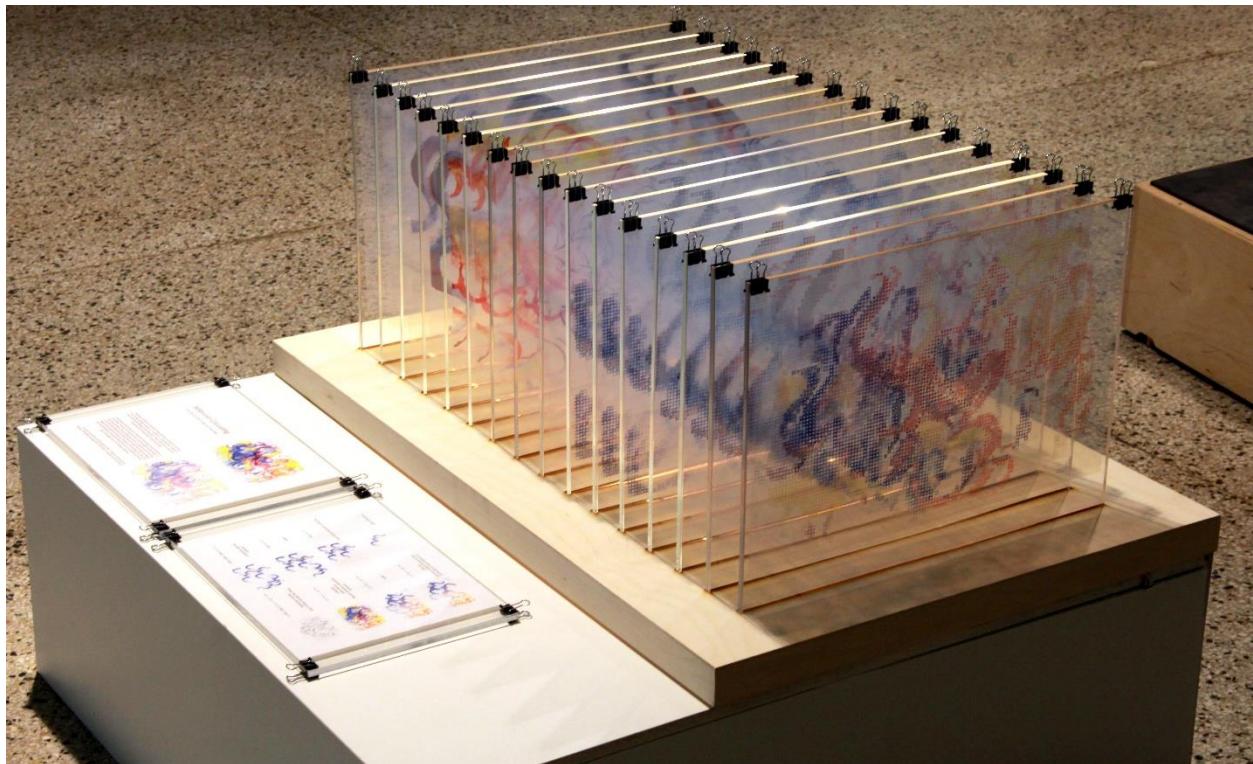
All images then are printed on special inkjet transparency films and then framed using cut-to-size plexiglass sheets. While one of the sheets is thinner to enhance transparency, the other one is thicker to ensure structural stability of the model.



Once assembled together, it becomes possible to experience the calculated watercolor painting in its time-space.

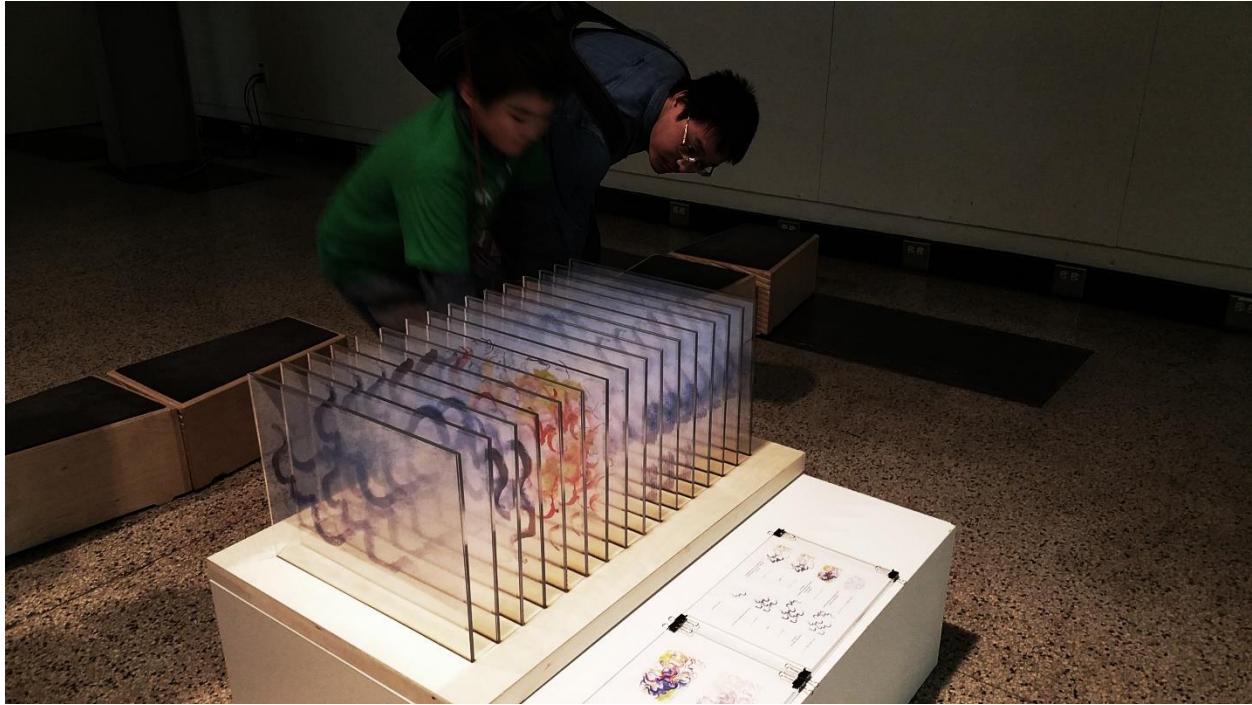






The Event:

This model was exhibited during the **2016 MIT Open House**, in the Department of Architecture, in Long Lounge. Visitors and prospective students showed interest both into the model and making of it. I was there to talk to people upon their request, to explain the details of the project.



The Future:

This study is a part of my PhD Dissertation (2016), "A Place for Computing Visual Meaning: The Broadened Drawing-Scape,"

and it will be included in the dissertation book which will be submitted in May 2016.

The model is intact and ready for exhibition and can potentially be shown in other events.