


GBBN

SCREEN TIME

DESIGN ISSUES SERIES (DIS) 2019





DESIGN ISSUES SERIES (DIS)

GBBN's annual Design Issues Series (DIS) is a collaborative exhibition between all of GBBN's offices. Each year the goal of (DIS) is to step back, take notice, and represent a specific design issue in a new light while fostering lively and creative public discourse about it. By engaging our communities in the design process, (DIS) seeks to grow a culture of design.



CONCEPT

[Why Screen Time?](#) [Precedents](#) [Template](#) [Exhibit](#)

PROCESS

[Gathering](#) [Crowdsourcing](#) [Media Technology](#) [Fabrication](#)

EXHIBITS

[Assembly](#) [Louisville](#) [Pittsburgh](#) [Cincinnati](#)

TAKEAWAYS



CONCEPT



WHY SCREEN TIME?

This year's (DIS): Screen Time, is focused on screens and how we interact with them. Screens have become so woven into the fabric of the built environment that they seem less like objects within that environment than an integral part of it.

As designers, it's unavoidable to think about what that means.

There are at least two issues: How do screens mediate the environment of the average person who passes through a space? How might they shape that person's experience of space? On the other hand, what role do screens play in the production of the built environment (in the design process)? How do they distort or facilitate designers' understanding of space and scale?

We set out to construct an experiment that would enable our community to think through these and related questions.



PRECEDENTS

The Sandbox

Commissioned for the Glow Festival in Santa Monica, "The Sandbox" by Rafael Lozano Hemmer records people on the beach, projecting their presence in miniature into a sandbox, where others are recorded, interacting with their image and then projected back onto the beach.

Cincinnati Shakespeare, 1984 Advertisement

With projection technology anything can become a screen. Cincinnati Shakespeare Company illustrated this on their building for an advertisement of their play, 1984. Videos of giant rats were projected onto the windows of their second-floor rehearsal space.

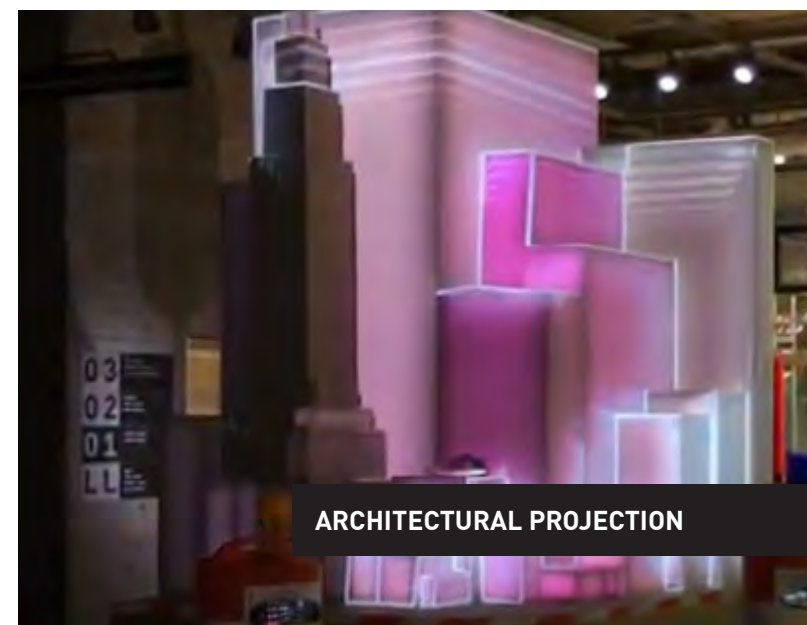
Architectural Projection Technology

We don't have to look outside of architecture for compelling examples of screens mediating our sense of place. Architects are increasing their use of VR and AR to imagine—and produce—space. At the same time, architects have used 3D projection technologies to turn models of buildings and streetscapes into screens—lighting up their surfaces and turning day into night to track the passage of time as well as using projection to try on different facades.

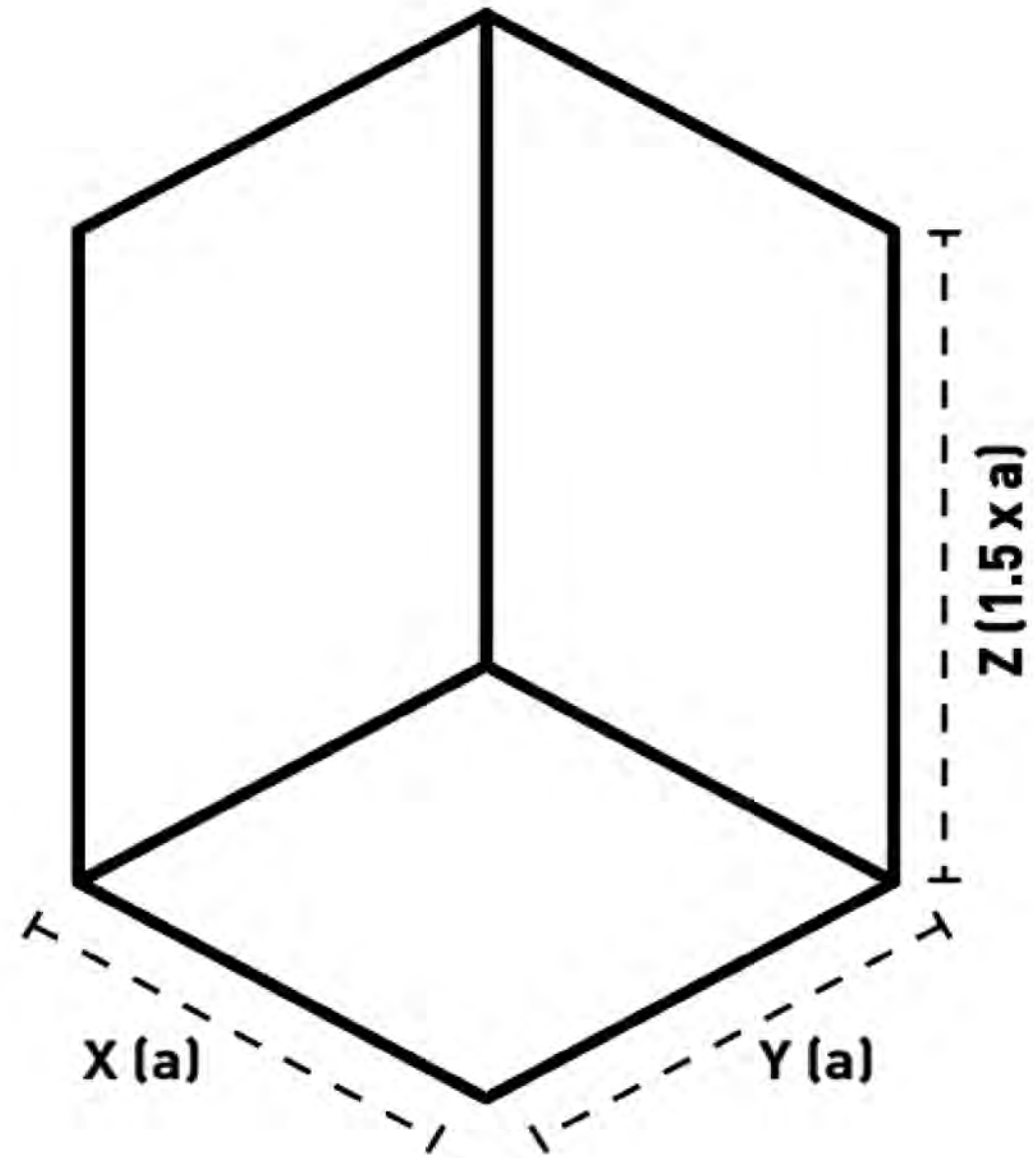
One thing our precedents made clear is that it's no longer easy to distinguish what is not a screen.



CINCINNATI SHAKESPEARE



ARCHITECTURAL PROJECTION



TEMPLATE

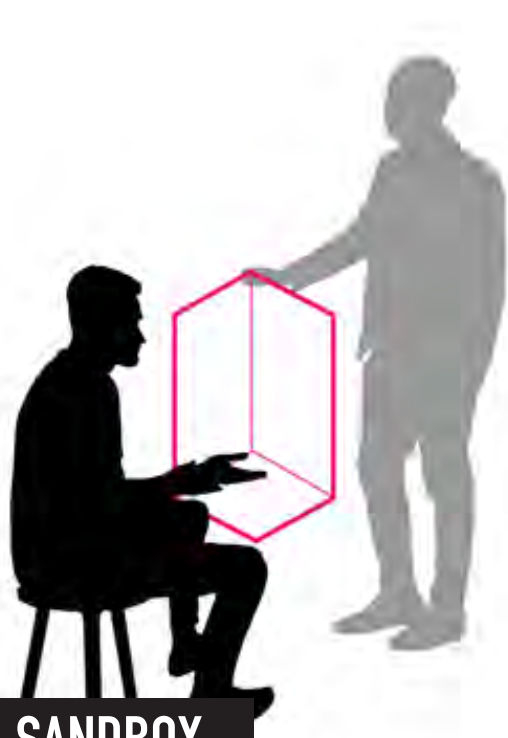
We set out to construct an experiment that would allow us to think through the architectural meaning and uses of the screen (though, we understood that the framework we developed would support a more open-ended exploration).

Our template, an axonometric frame, which looks like an abstract view into the corner of a room, would provide the basic unit of for our experiment.

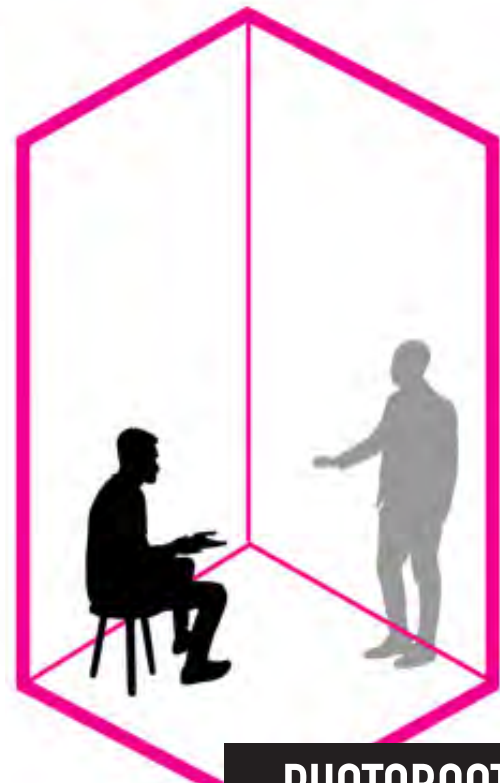
Designing the template, we took cues from @refworks's 2019 Instagram "A Call for Rooms."



DIGITAL QUILT



SANDBOX



PHOTOBOOTH

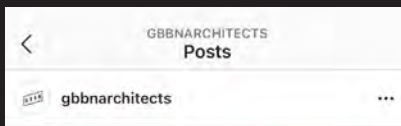
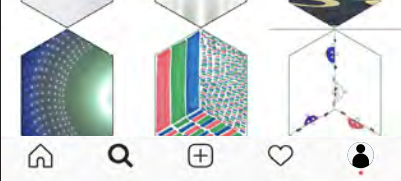
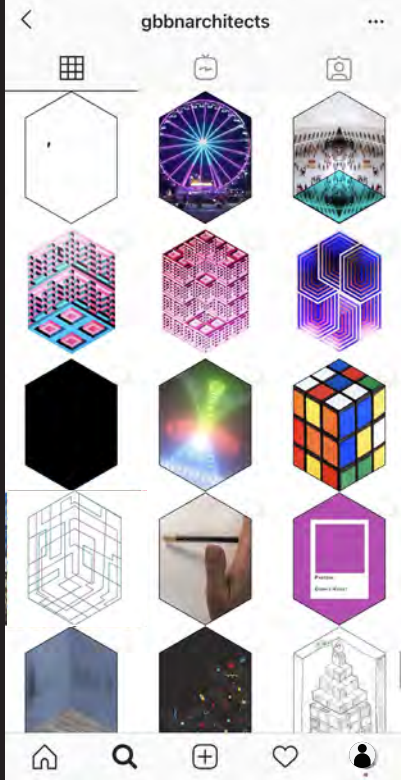
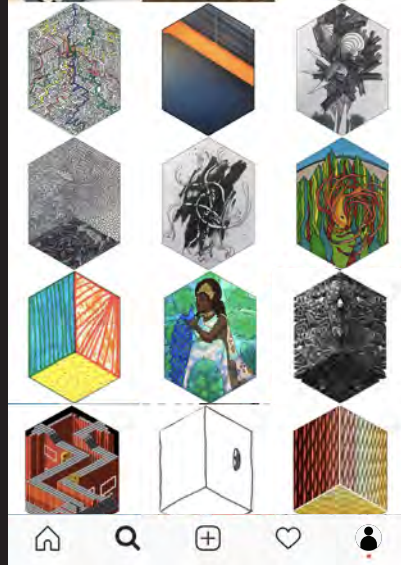
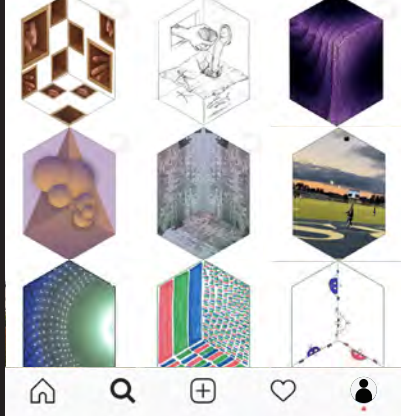
EXHIBIT

As the basic unit, the template could be projected into matching spaces at different scales. We wanted these to resemble the scale of architectural drawings, models, and the built environment.

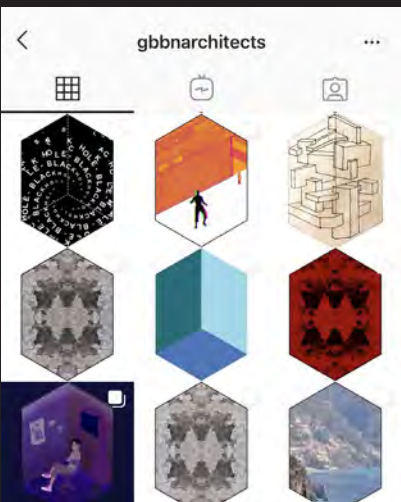
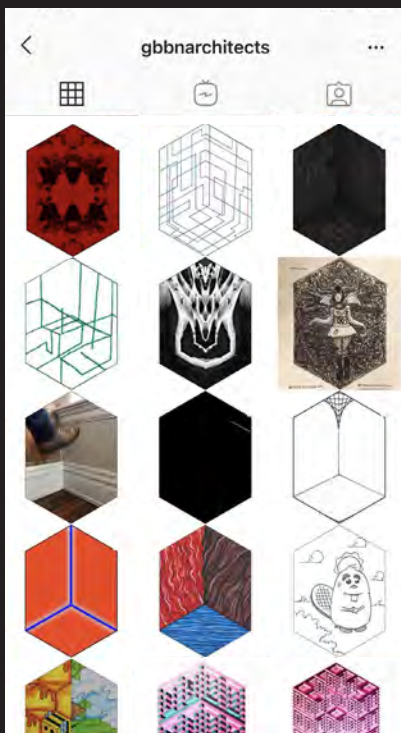
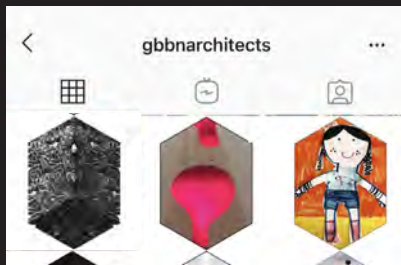
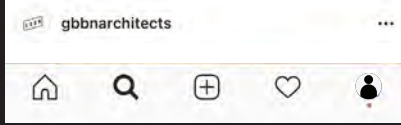
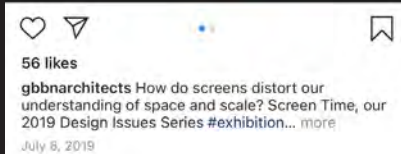
Through an iterative process, we were able to achieve an ideal “interconnectedness” of three different scales, the smallest of which was a tabletop sized model that allowed attendees to play with the projections regardless of scale.



PROCESSES



Call for submissions!

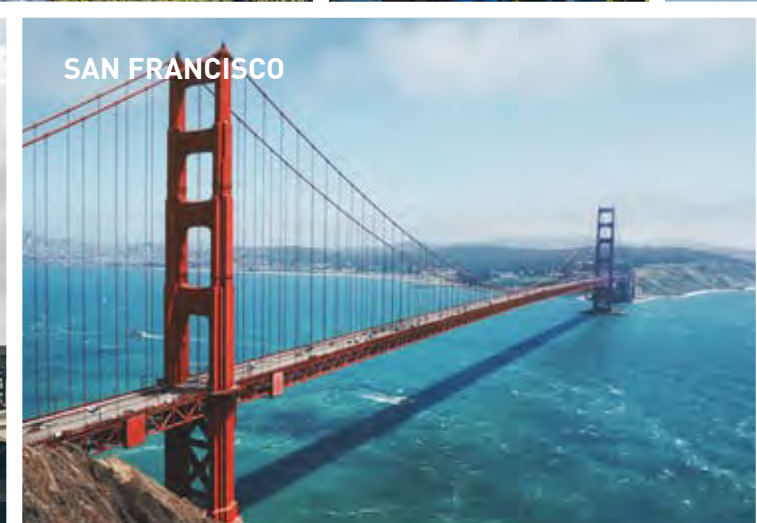
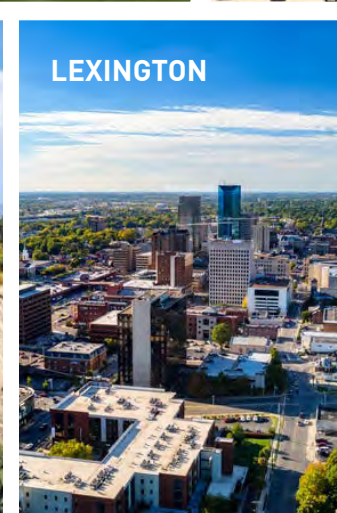
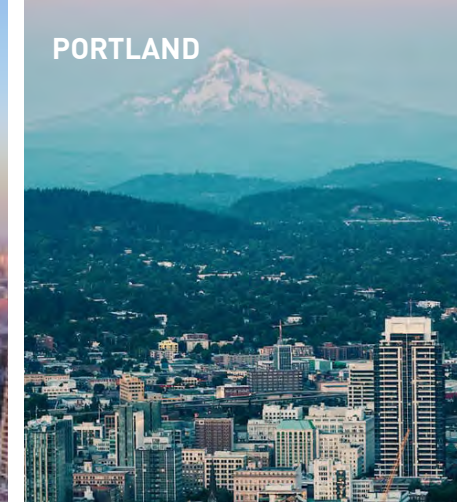


GATHERING

To kick off our 3D projection installation, we shared the template through our social media channels and invited people to fill it in however they would like. We also asked people directly: working with faculty and students at design colleges; tapping friends and artists in the design community; and facilitating design sessions during the different GBBN markets meetings.

The variety of submissions sent to us was astounding. We accepted submissions by email and Instagram as well as physical submissions hand drawn on our templated postcards.

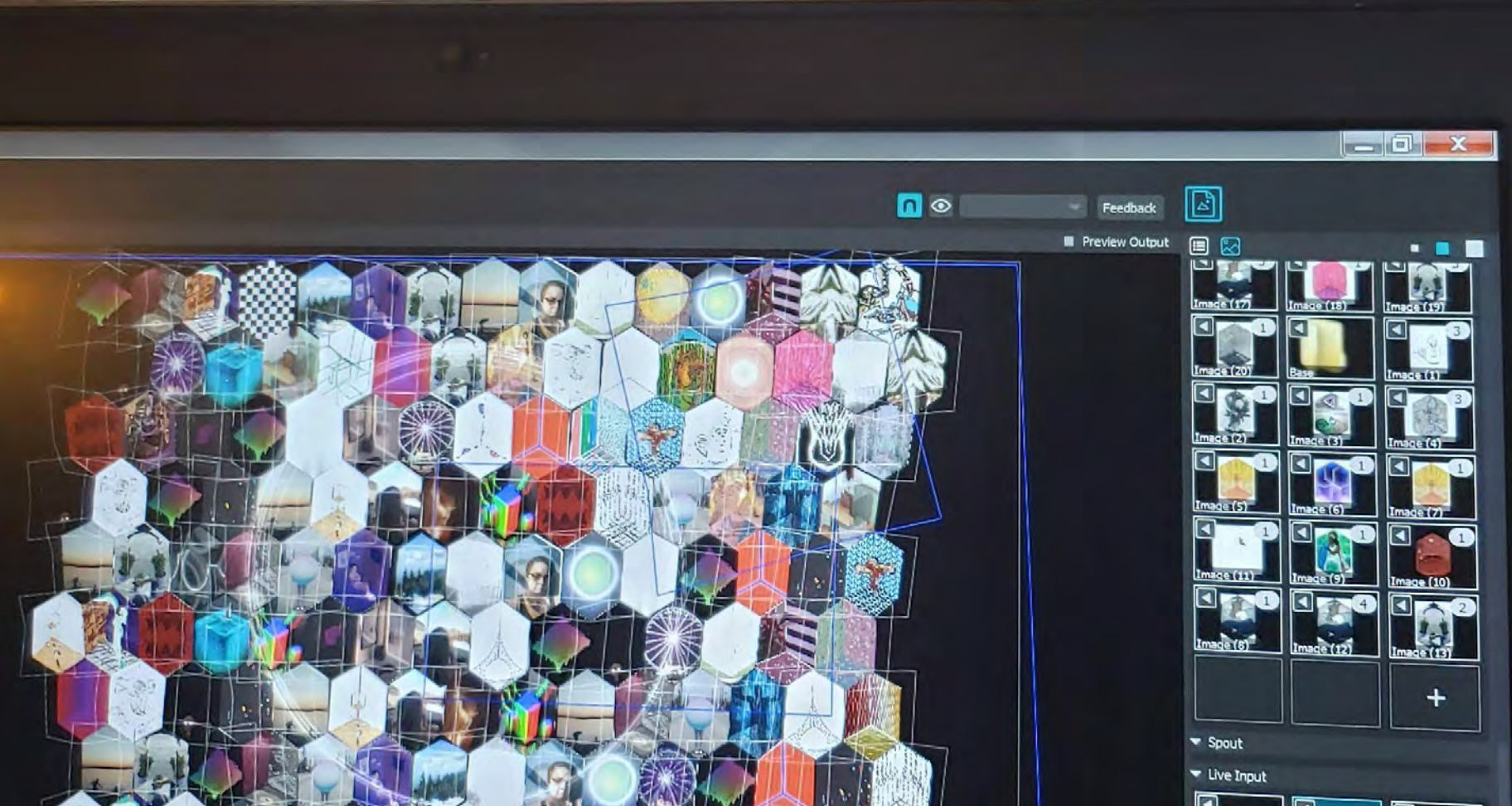
Once submissions started rolling in, we shared them on the GBBN Instagram feed to build awareness of the exhibit and to solicit more submissions.



CROWDSOURCING

Using Instagram and direct outreach to crowdsource submissions allowed us to involve the larger public in the process at an early stage while expanding the geographic reach of DIS. Submissions came from North and South America, Europe, and Asia.

The process of crowdsourcing allowed the community beyond GBBN to shape the exhibit. For instance, though we had framed the template as an architectural view, only some of our participants responded to it that way. Others flattened the template's depth, used video to reverse its assumed gravity, or even ventured outside the set boundaries in provocative ways. Submissions varied from hand-drawn illustrations to Claymation movies, videos to computer-generated animations.



MEDIA TECHNOLOGY

Technology played a crucial role enabling as many people to participate in Screen Time as possible, but we had to consider how to make it as accessible as possible. There were tradeoffs. The task of organizing and prepping incoming submissions for display could have been easier if we had opted to send the template out as a Rhino or Grasshopper model, but that would create a barrier to participation, because not everyone has or knows how to use those softwares.

In the end, the solution involved embracing a range of high and low tech media options. We not only shared the template as an image—on Instagram and by email—that could be captured and manipulated digitally, but we also printed flyers and postcards that people could draw on and send back to us.

This required a bit more work on the backend: Some submissions had to be converted to digital formats, others had to be trimmed to ensure that they fit the template. After a bit of trial and error, we set a template up in Adobe After Effects that allowed us to quickly drag and drop all the submissions in, ensuring that they were all properly-sized.



HOW IT WORKED

IonTank. We teamed up with IonTank, a design studio specializing in large-scale, interactive art installations. They helped on the technological side, identifying the best soft- and hardware to use. They also lent us projectors and helped us think through how to create the installation with advice on the placement of projectors, what type of trusses to use, etc.

Projection Technology. The computer program we decided to use was MadMapper. It allows you to take each submission, compile it into a set of projected images, and map it onto any surface.

We initially intended to run the exhibit on several Mac Mini desktop computers. Ultimately, we used multiple computers and projectors simultaneously from different angles to produce the exhibit.



DIGITAL QUILT

Forming a 15 ft. x 10 ft. wall, the digital quilt was constructed out of 15 interlocking acrylic panels—each roughly 3 ft. x 3 ft., featuring nine identical cells to match our template. The panels were designed in Rhino and Onshape then thermoformed around a negative form-work mold in the workshops of FirstBuild (1B) in Louisville, Kentucky.

The mold itself was CNC milled from a glued-together stack of $\frac{3}{4}$ " MDF (Medium Density Fiberboard).

The lightweight, plastic panels were hung on a frame of 2x4s, on which we had placed specially-designed, plastic hangers that would allow us to zip tie the panels to the frame. Though designed to disappear, the hangers themselves were an elegant design solution. A 3D-printed plastic piece, it evolved to not only fit the panel to the frame, but it featured perfectly aligned holes that enabled the whole wall to be rapidly assembled with concealed zip ties.

After assembling and disassembling our 600-piece DIS 2018 Parallax Pavilion numerous times, we wanted to make sure this exhibit was easy to install.



SANDBOX

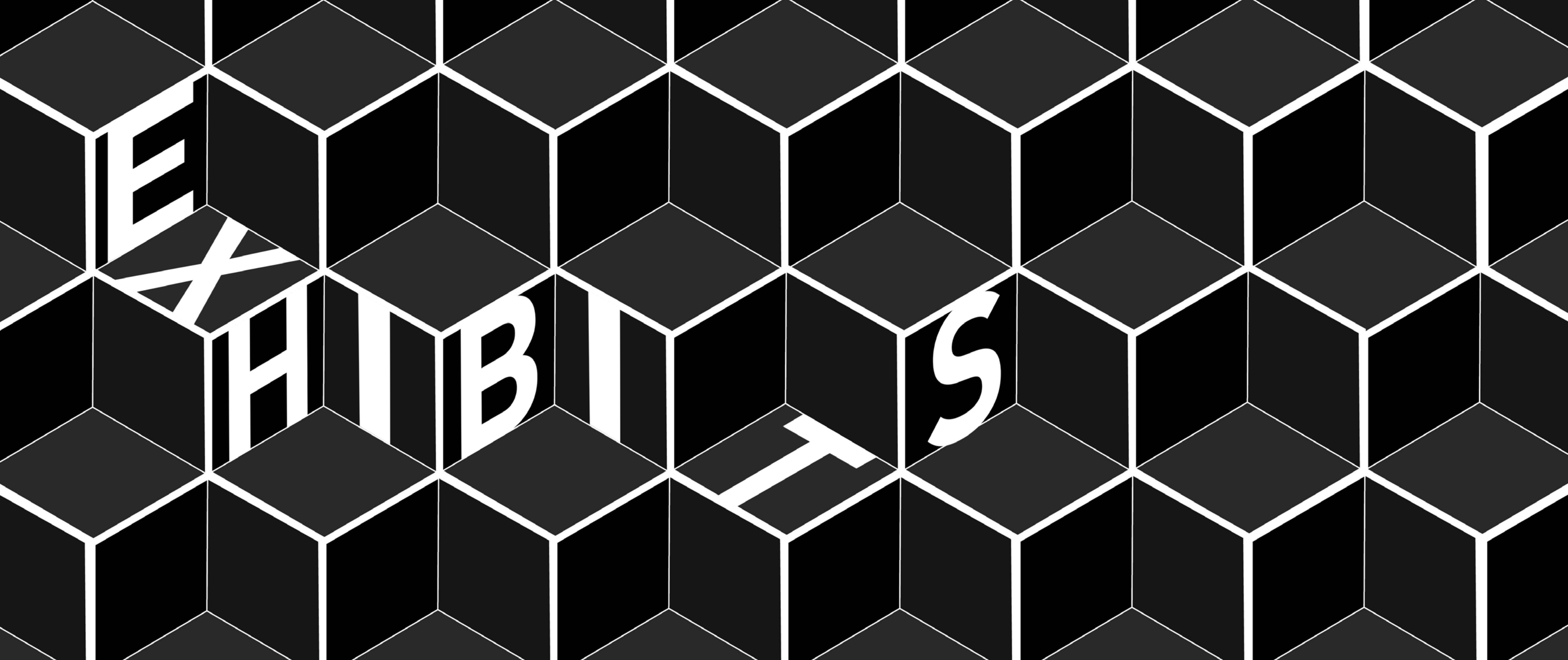
We reused the mold from our thermoformed panel to create our interactive tabletop, the sandbox. Sanded and painted with dry erase paint, we attached some hairpin legs, and it was almost ready to go.

Nick Germann, the manager of the fabrication lab at University of Cincinnati's DAAP, helped create an apparatus to mount the camera over the table so things drawn on it could be projected back onto the digital quilt.



PHOTOBOOTH

We initially hoped to set up the photobooth in existing corners of our exhibit spaces (illustrating the architectural quality of the template). But different conditions in these spaces forced us to improvise the “corner” by stretching an elastic sheet over a set of speed rails; another time we turned doorway to the exhibit into a stage for surprised passersby to perform upon.



E

X

H

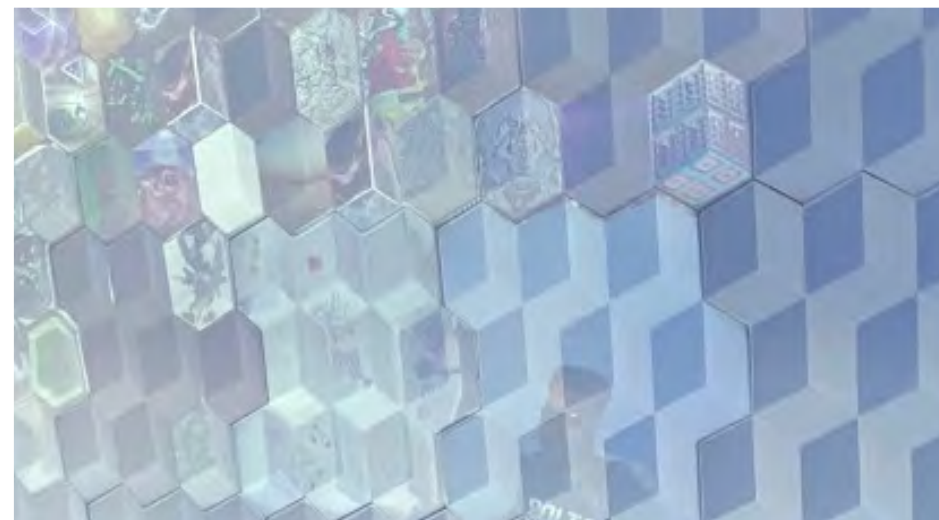
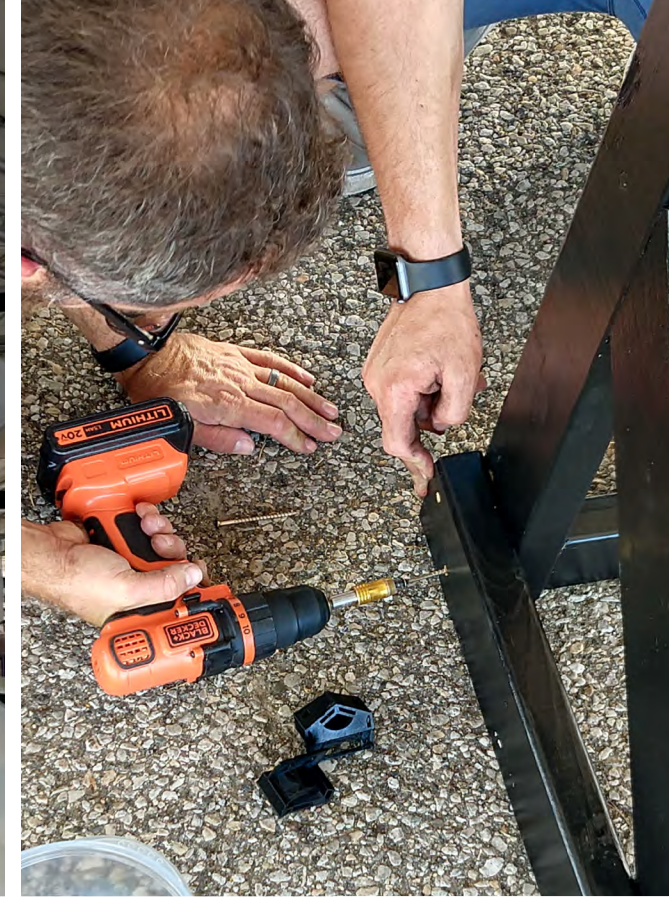
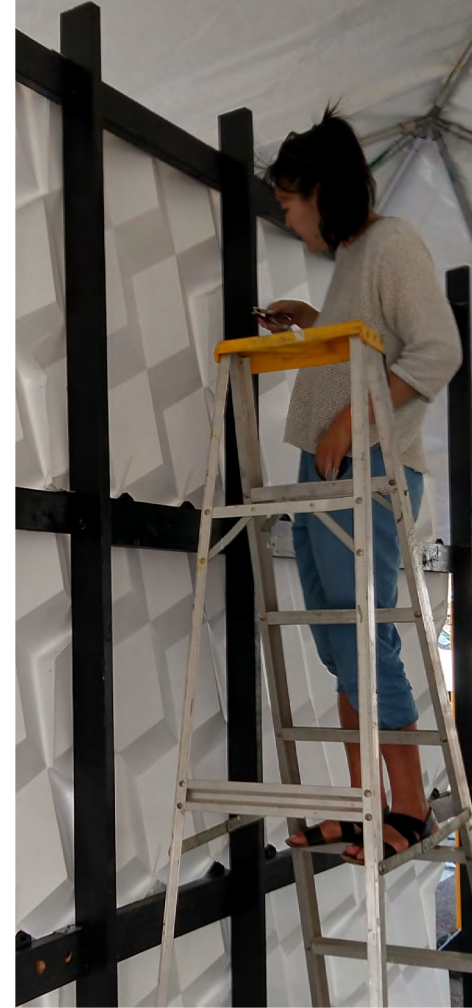
I

B

I

T

S



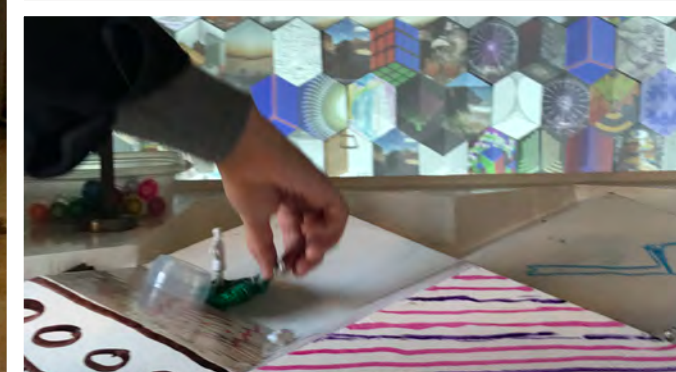
LOUISVILLE, KY

MAKER FAIRE

Louisville Maker Faire was a beta test for the exhibit. It was the first time the full exhibit was assembled, and there were a lot of unknowns. The most challenging condition, bright rays of sunshine, washed out the images, but gave the team hope for future exhibits that would all take place indoors.

Fortunately, the community of makers that the event draws understood it as a work in progress and were receptive.





PITTSBURGH, PA

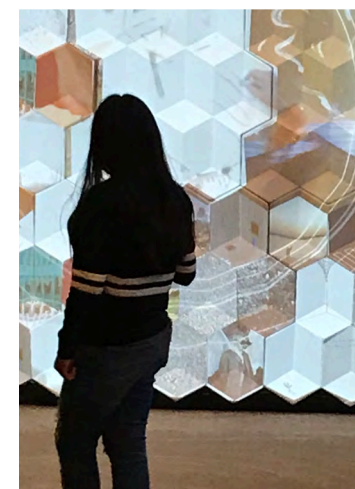
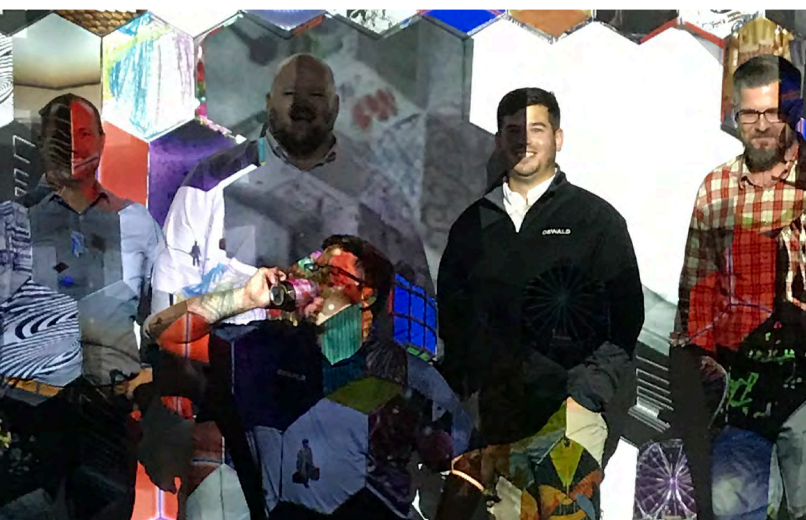
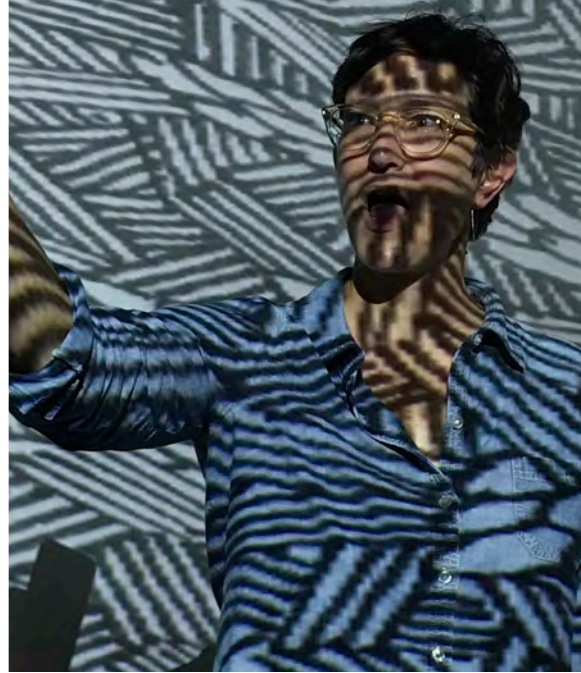
UNBLURRED GALLERY CRAWL

Many of the kinks were ironed out in time for the exhibition's opening at the Unblurred Gallery Crawl in Pittsburgh.

There wasn't enough room for the full photobooth, but the reassembly and remapping of the exhibit in our Pittsburgh office went smoothly. The gallery crawl, personal outreach, and social media engagement (especially among those who submitted images) drove attendance.

From kids playing with markers and silly putty in the Sandbox to designers and artists who came to see their submissions projected, the experience highlighted the fundamental joy that people find in the creative process.





CINCINNATI, OH

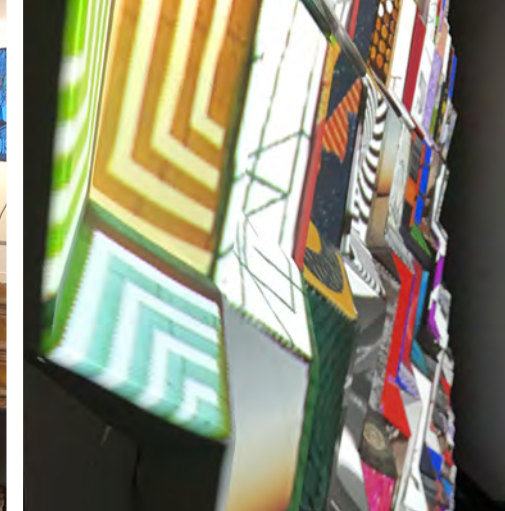
BLINK
exhibits at
GBBN &
AIA Cincinnati

Hosted in the construction zone that was once our lobby, Screen Time's Cincinnati premier faced a fair amount of uncertainty. Fortunately, the wide-open floor plan was ideal for setting up the full exhibit (full scale photobooth and all), and access to our contractor's cherry picker eased the assembly of the truss system.

On the whole, the physical assembly went very quickly. However, remapping the digital quilt the day of the event in a room that no longer had blinds, was made difficult by the sun. Fortunately, there was enough sporadic cloud cover to enable us to pull it together.

Timed to coincide with BLINK, a light festival that would bring over a million people into downtown over three days, the event drew a crowd.

Additional exposure came through a satellite exhibit that we assembled in the store front of AIA Cincinnati. Located across from the heart of BLINK's festivities in Washington Park, we spliced together pieces of the digital quilt and footage of the previous openings to give people a preview of the full exhibit.



LOUISVILLE, KY

JA INSPIRE & 21C LOUISVILLE

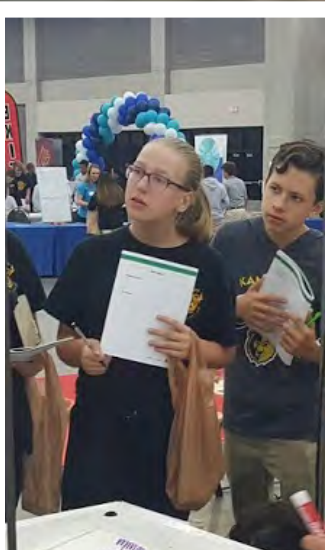
On returning to Louisville, Screen Time had two final engagements.

The exhibition had a brief stint at JAInspire, a career fair, where it helped expose 12,000 area middle schoolers to the possibilities of a career in architecture.

Finally, we installed the digital quilt and sandbox in the video lounge of 21c Louisville. After showing for about a week, the exhibit was capped off by a lively panel discussion involving practicing screen artists, Christopher Ottinger and Valerie Fuchs along with our own Ted Madden. The event was moderated by 21c Louisville Museum Manager Karen Gillenwater, whose thoughtful questions prompted everyone to consider their own engagement with screens in a new light.

"This collaboration and mutual support makes me happy...Thanks to you and all at GBBN for putting together the concept and the installation, as well as the panel. I enjoyed the conversation during the panel and thought we touched on many important topics...I loved that students were there and participated and one of my favorite parts of the evening was after the panel when I saw students, artists, and architects mixing, meeting, and connecting!"

Karen Gillenwater
21c Louisville, Museum Manager





TAKE
AWAYS
S



Everything is a screen.

Anything can become a screen: a wall, the floor, the side of a building. We are seeing it in our projects too. Phase 2 of University of Pittsburgh's Hillman Library involves a giant, interactive digital display. Our newly renovated Cincinnati office lobby has a 16 ft. x 9 ft. screen.

They're a part of our lives, and we're going to see a lot more screens throughout our projects. Screen Time gives us the confidence to try new things with screens and projection.

2.

The medium is the message.

The exhibit design, template, and call for submissions provided a framework for experimentation, but people did very different things within that framework. Submitting animations, renderings, hand-drawn images, collage, videos, gifs, and Claymation, Screen Time often was as much about experimenting in different media as it was about scale or screens.



DIS by the Numbers:

With 160+ Instagram posts, DIS: Screen Time had a robust social media presence.

DIS on Instagram

- 82,025 Impressions
- 2,666 Likes
- 4,011 Views
- 450 Additional Followers (a 50% increase!)

DIS in real life

19,000+ people were exposed to DIS in person between exhibits in Louisville, Pittsburgh, and Cincinnati.

The exhibit traveled approximately 800 miles.



Sonny would have been nothing without Cher; without Clark, Lewis would have been lost; and without IonTank's support and advice, DIS: Screen Time would have been much less successful.

We also benefited from a productive partnerships with

FirstBuild and 21c Louisville. AIA Cincinnati supported the project with an Impact Grant. We also received support in the form of sponsorships from Phipps Reprographics, Inc., Couch Brewery, and Grainworks Brewing Company.

And, of course, none of it would have been possible without the participation of all those, near and far, who shared their submissions.



ENHANCE & EMPOWER