

NEW INTERACTIVE SPACES



FEEDTANK'S JONAH WARREN TALKS ABOUT CREATING ENGAGING, INTERACTIVE SPECTACLES THAT THRILL AUDIENCES—AND CLIENTS. BY DAVID WOMACK

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Jonah Warren and Steven Sanborn of New York-based **FeedTank** build public interactive experiences that encourage people to act creatively: They've designed digital dance floors, **new musical instruments**, and **digital graffiti tools**. In the process, they've also created new platforms for brands to reach out to a young, media-savvy audience that's increasingly resistant to traditional advertising.

Take their **Dance Floor Moves** project, for instance. Step into it and blocks of light scatter and then snap back into place in response to your moves as you boogie to the beat. This project has been installed in a hotel lobby, a clothing boutique, and a Toyota-sponsored gallery. For FeedTank, working with brands is a way to gain exposure for their work and fund future experiments. For companies, associating their brands with innovative projects generates a positive buzz that stays with their audience far longer than a 15-second TV spot.

FeedTank also creates original projects that bring brands to life. Working with motion-graphics firm **Trollbäck+Company**, FeedTank created an interactive video installation for Ask.com that was projected onto the 40-foot screen at the new **The IAC Building** in Manhattan. The projection dynamically pulls data from the Ask.com site and presents it in three dimensions, giving viewers an exciting new perspective on the information.

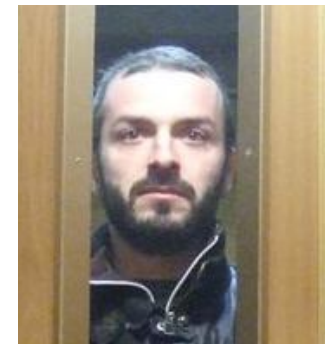
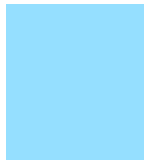
Many of FeedTank's projects take input from one medium, transform it digitally, and output it as another medium. A gesture becomes a pattern. A shape becomes a sound. The key is that this transformation occurs instantaneously. In order to make the illusion work, the designers create elaborate combinations of hardware, software, and original code, sometimes integrating video cameras and Adobe® Flash® animation. Only a few years out of school, Warren and Sanborn have built a successful business by doing what they love, proving the new truism: Make it cool and business will follow.



In Dance Floor Moves, blocks of light scatter the millisecond anyone moves.



[Watch a demo.](#)



Jonah Warren, FeedTank co-founder.



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How did FeedTank start?

FeedTank started about three years ago with a thesis project of mine called Unencumbered Full Body Interaction in Video Games. I had a gallery show to exhibit the project, but needed another interactive piece for the space. I invited a friend, Steven Sanborn, to collaborate. This led to another collaboration, Dance Floor Moves. We wanted to make a project so simple and obvious that people walking by on the street could instantly understand it and engage with it. So we projected a bunch of colored squares down onto the sidewalk. When you move through the squares they disperse and fly around and then they snap back into place behind you. We projected it onto the sidewalk every night for a week and got an incredible response. People loved it. We posted some videos of the project online and they got passed along and people started contacting us. That's how FeedTank was born.

Do all your projects involve physical interactions?

We're always trying to get away from the monitor and mouse and experimenting with new forms of interaction. We want to get people up on their feet and moving around. This means that our projects have to be simple and intuitive enough so you can walk up and start playing, but then you have to jump around and really play to make it fun. I feel like we ask a lot of our users in terms of participation, but not in terms of learning rules.

One thing that's interesting about your projects is that you tend to steer away from offline metaphors.

Right, there are a whole bunch of computer games based on offline scenarios—there's a snowboarding game where you're leaning left and right, and a basketball game that tries to mimic dribbling. But I think those games are ultimately disappointing. Snowboarding isn't just about leaning left or right. I think simpler games that don't try to replicate another experience are more successful because the user doesn't come with expectations. They learn the system on the fly. "There's an abstract block, I can kick it and it moves." I think there's more potential in exploring interactive space on its own terms.

How did you get interested in games?

I got into games because I was really interested in experimenting with interaction. I felt that gaming was the best space to play in. With games, you're not tied to any constraints or existing design vocabularies—like the need to use menus or tabs, for example. Games can be more about the exploration of interactive space.

One of your most recent projects was for the largest high-definition video wall in the world—the 11-foot-high, 120-foot-long screen in the IAC building, which was designed by Frank Gehry. Tell me about that project.

This project was a little different because instead of designing new interactions, we were concentrating on how to display data. We worked primarily with Trollbäck+Company, who were hired to create the content. Trollbäck specializes in motion graphics and they wanted some pieces that use live data feeds—that's where we came in. We worked with Trollbäck to come up with ideas, which was a great collaboration. Each of the three pieces we created relates to an aspect of IAC's business.

For example, we created a module for ASK.com that animates their dynamic news feeds. Huge headlines that span 40 feet zoom towards you and seem to fly off the screen. It's very dramatic.

How did you make this work?

We created a graphics library in C++ and pulled in the data from the Ask.com website. Based on the data that came in, we would draw it in a special font, turn that letterform into a 3D object—this allows us to really play with the data. For example, we can turn it or animate it and scale it.

I really like the project because it plays with ideas of scale. We'd worked with companies incorporating their visual assets—logos and such—but this was the first time that we created an original project based on some aspect of the client's business—in this case, Ask.com and the idea of information.



A video wall for the IAC building in New York City pulls live data from ASK.com and projects it as 40-foot-wide headlines.

“WE ASK A LOT OF OUR USERS IN TERMS OF PARTICIPATION, BUT NOT IN TERMS OF LEARNING RULES.”



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It seems like a lot of your work begins as self-initiated projects. You have this great idea and you build it and then a company comes along who wants to use it to promote their product.

That's about it. We make money to work on new ideas.

How do these projects help build the brand of your clients?

Well, no one is paying attention to the 30-second advertisement any more, so companies need to find new ways to reach out to audiences, especially young audiences. Rather than pushing their product directly, many companies are choosing to create a positive experience for customers so that they will have something they can talk about with their friends. That's where we come in. We create an environment in which the product can be experienced in a positive way.

How do you know if a project is going to be successful?

Well, if I'm interested in it and want to spend a lot of time playing around with it then that's a good sign. But that's just the beginning. There are other things we look for. For example, if a project is in a public space it's often important that more than one person be able to interact with it at a time. One of the reasons that our interactive dance floor works so well is that it can be experienced by groups of people. You jump around and interact with the other people using it. It kind of breaks the ice. It's ironic—the dance floor is probably our simplest project, but we get the most business from it. Some of our other projects that we've really worked hard on have not been as commercially successful—at least not yet.

Talk a little bit more about how you test your work.

You can have a hypothesis about how people are going to interact with a system but until people start using it you really have no idea as to how it's going to turn out. Play testing is such a crucial part of the process. You make a little bit, test it with users, and then go back and make a little more. I like figuring out new ideas and getting them to the place where other people can enjoy them. Seeing the unexpected things that people do with the things you make is my favorite part of the process.

For example, the interactive floor uses an algorithm for detecting movement that compares images. If there's enough difference between images it considers that movement and it moves the blocks. A family wandered in and they started walking very slowly across the floor. Now, if you move slowly enough then the change doesn't get

detected so the blocks don't move. It's difficult and it takes real patience, but they were able to cross the floor without triggering any of the blocks. And they thought that was the real goal of the game. We hadn't even considered this—so it was really exciting. That's the kind of thing that can happen when you create an open system.

What do you think you'll be doing in 10 years?

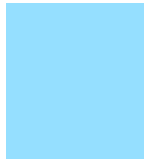
I don't know really. I try to focus more on the creative process rather than a future goal I'd like to achieve. I really love putting these projects together and I try to focus on my work. I think the future will take care of itself. ■

David Womack writes and consults on digital technology. He is the co-author of *Becoming a Digital Designer* and the editor of *Adobe ThinkTank*, an online journal about trends and issues in the field.

“COMPANIES NEED TO FIND NEW WAYS TO REACH OUT TO AUDIENCES, ESPECIALLY YOUNG AUDIENCES.”



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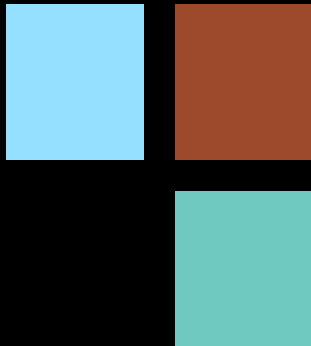
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HOW IT'S DONE



Export video and FLV files from Adobe® Premiere® Pro.

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DANCING BETWEEN VIDEO AND FLASH

Dance Floor Moves is one of FeedTank's most basic projects—and yet it's the one that brings in the most business. From a boutique hotel lobby in Sweden to a Toyota-sponsored gallery in Los Angeles, this interactive installation brings smiles to the faces of everyone who hits the dance floor—and street-cred coolness to the brands who decide to play with it.

HERE'S HOW IT WORKS:

1. A dance floor space is chosen and illuminated with a blacklight. This provides a source of light without ruining the ambiance. "You can also use an infrared light," says Warren. "But black lights look cooler."
2. CCTV cameras capture footage from the dance floor. CCTV security video cameras are hung above the floor space and positioned carefully to capture footage only from the designated dance floor area. CCTV cameras have several advantages over regular video cameras or webcams: They work better in low lighting, have good image quality, and—best of all—they're much cheaper. The fact that the footage is in black-and-white doesn't matter, because this is just the input device, not for display.
3. The live video footage is fed to computer. Warren uses VidCap freeware to capture footage.
4. Video frames are compared and movement is detected. Using the Bitmap Data Action Script, Adobe Flash can access a video frame's pixel values and compare it to the pixel values of the next frame. If the difference is above a specified threshold, it's categorized as movement.
5. Every movement triggers an Adobe Flash animation. Blocks of light scatter and then snap back into place in response to the movement.
6. A projector hung above the dance floor redirects the animation downward. The other option is to have the projector on a shelf and use an angled mirror to redirect the animation downward.

Out on the dance floor, blocks of light scatter the millisecond anyone moves. And that's key to the experience. Even a slight delay would break the connection between what people are doing and what they're seeing—especially when the dance floor is crowded and blocks are flying everywhere.

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