Frank J. Lee is a big thinker. An Associate Professor of Game Design at Drexel University, Lee takes the video games that most people play for amusement and imagines ways that they can be repurposed to help patients recover from serious injury or illness or to teach math to children. But Lee is also a bit of a showman who knows that video games can be used to unite large numbers of people.

That’s partly why the amiable academic recently transformed the skyline of downtown Philadelphia into a colossal arcade, allowing people from all across the city to enjoy a giant game of Tetris® on the facade of the Cira Centre, a sleek, 29-story office building visible from vantage points throughout the city.

“The image that I’ve always had is that I’m kind of the P.T. Barnum drawing in the crowd,” Lee said. “But I wanted to draw in Philadelphia and Philadelphians, and, for those couple of hours, essentially create what I call an aesthetic of a shared moment.”

This game of skyscraper Tetris, as Lee sometimes refers to it, took place on April 5 during Philly Tech Week, an annual event celebrating computers, video games, and all things geeky. To pull it off, the professor and a team of colleagues from Drexel University programmed existing LED lights on the Cira Centre’s north and south facades to create what amounted to an 119,600-square-foot video monitor.

A few thousand people turned out for the event, including Henk Rogers, co-founder of The Tetris Company. In a happy coincidence, Tetris just happened to be celebrating its 30th anniversary, and Rogers wanted to be there.

This fun feat has already been certified as the “Largest Architectural Videogame Display” by Guinness World Records. In fact, Lee shattered his own record. Roughly one year prior, in April of 2013, he rigged the same building’s north face to play a massive game of Pong.

Lee, who co-founded Drexel’s Game Design Program and is Director of its Entrepreneurial Game Studio, takes these accomplishments in stride. When discussing the world record, he is characteristically modest. “My purpose wasn’t just to create an event or a stunt,” he said. “My purpose was artistic. Essentially for me this is an art installation.”

If that sounds odd, it helps to understand that Lee is acutely aware of the ways in which technology has improved modern life, as well as the ways that newfangled gizmos sometimes disrupt it. In particular, he points to cell phones. Everyone, he noted, is familiar with the sight of pedestrians paying more attention to their phones than to passersby, or has been among a group of friends who ignore one another to check emails. That’s the context in which he envisioned the Pong and Tetris games.

“I wanted it to be an event, a slice of time that brings people together in a unique way, because modern life, I think, is, for the most part, unfortunately, things that separate us from each other, especially with the rise of cell phones,” he said.

In a sense, it was a lifetime’s worth of experience that led Lee to this point. The 40-something professor, who grew up gaming, fondly recalled getting an Atari 2600, the first major video game platform and the one that enabled people to play Pong at home. A bit later, Game Boy arrived, and along with it came Tetris, the popular puzzle-game that beguiled legions of people, including Lee, into spending hours and hours trying to take various configurations of geometric figures and fit them into a wall.

In the late 1980s and the early 1990s, Lee said, Tetris was ubiquitous: “Everyone was playing Tetris. I think there were reports where the Japanese government was trying to ban people from playing Tetris. There was a 20 percent drop in productivity across the nation, because people were playing Tetris. So it was a huge, huge game.”

Lee has logged plenty of hours playing Tetris himself, so it’s no surprise that he still refers to it. In fact, the inspiration for this project came to him in 2008, when he glanced over at the Cira Centre’s LED-lit facade while driving home.

“I was driving as the lights were going down and they had the standard light show, twinkling lights, basically, changing colors,” he said. “But as I was looking at those lights back in 2008, at least in my mind’s eye, I saw Tetris shapes, essentially, forming and rotating and falling. It wasn’t there in the building, but that’s what I saw in my mind and that led to a long, a very long journey to essentially make the game using those lights.”

The Cira Centre, which is owned by the Brandywine Realty Trust, typically uses those LED lights to display images like the logo of Philadelphia’s baseball team, the Phillies. Lee recognized that reconfiguring them to play a basic video game like Pong or Tetris was a relatively simple engineering problem.

The five years that elapsed between Lee’s original vision and bringing that idea to fruition were largely spent trying to persuade the building’s owners to let a professor...
from a nearby university take control of their building for an evening.

“How would you feel if you’re a CEO of a multi-billion dollar company and someone just comes up to you and says, ‘Can I hack your building?’” he said with a chuckle. “It took some time to convince them.”

Fortunately, the owners recognized that Lee’s game of Pong would attract positive publicity, both to the Cira Centre and to the Philadelphia region.

Once Lee got the go-ahead, setting up the game took slightly less than three months, until April 19, 2013, when a few hundred avid gamers gathered on the steps of the Philadelphia Museum of Art as Lee flipped the switch on a giant game of Pong.

Pong was an excellent first choice. For many, it was their original exposure to video games, and it remains a benchmark against which later developments have been measured. Pong’s relatively simple graphics and gameplay also allowed Lee to test, in real-time, whether this would work.

It turned out to be a fabulous success. Videos of the April 2013 event show people laughing and smiling while players maneuvered super-sized paddles to swat a gigantic Pong ball back and forth across the Cira Centre’s facade.

Having demonstrated what could be done, Lee was ready to return to his original vision: watching Tetris shapes fall from the top of the Cira Centre as people played against one another in a real two-person competition.

For Lee, it was more than a personal goal. As a professor of game design, he considers Tetris particularly interesting. “Unlike Pong, which essentially also has historical importance, Tetris is still being played,” Lee said. “It’s still available on your mobile phones, it’s coming out for the new consoles, and so on. So there’s a longevity to Tetris.”

The secret to the game’s enduring appeal is its design, which Lee described as straightforward yet capable of endless variety. “There’s a beauty in the game design,” Lee said. “It’s a very simple game using, essentially, very simple configurations of the four blocks to create this infinite variety of gameplay.”

Another reason for the classic video game’s enduring popularity is the ease with which it allows newbies to begin playing. “I mean, if I gave you Tetris with no instructions whatsoever, and you’d never played Tetris, you’d figure it out,” Lee said. “You don’t really need a lot of instruction for Tetris, but it’s a game that you can always play.”

The roughly 2,500 people who joined Lee last spring to play Tetris on the Cira Centre would certainly agree.

To learn more about Frank Lee and his work, visit the website of the Entrepreneurial Game Studio at Drexel University: http://egs.excite.drexel.edu/.