



May 9, 2004

Quick, After Him: Pac-Man Went Thataway

By WARREN ST. JOHN

One recent sunny morning, in the student center overlooking Washington Square Park, four New York University graduate students wearing brightly colored sheets and sneakers and carrying cellphones gathered for a mission.

Somewhere out there on the streets of Greenwich Village, a fellow student was running around in a yellow Pac-Man suit. His four pursuers, code-named Inky, Blinky, Pinky and Clyde, aimed to track him down and snuff him out — the sooner, the better.

"Our strategy is a dragnet to block all the roads Pac-Man might go down," said Michael Olson, a k a Clyde the ghost. "You take that street," he said to Pinky, as he pointed to a map of the Village. "And I'll take this one."

So began a test run for a game of Pac-Manhattan, a real-world version of the 1980's video game played on the streets of New York and the latest example of a so-called "big game": a contest that uses wireless devices like cellphones and global positioning beacons to track players as they move through the urban grid, turning cities into vast game boards. Big games, with some players online and others pounding the pavement, have been staged in the last year in Minneapolis, Las Vegas and London.

Frank Lantz, who teaches a class on the subject in N.Y.U.'s Interactive Telecommunications Program and whose students designed Pac-Manhattan, said the games are a somewhat whimsical response to the convergence of digital and physical space. Because millions of people conduct important aspects of their lives, including shopping, banking and communicating, online, Professor Lantz said, "online spaces are becoming a new form of public space." At the same time, he said, wireless technologies like cellphones, global positioning systems and personal digital assistants have added a virtual component to the physical world. Big games, he said, take place in the overlap between the two. For players, the allure of big games is based on a less theoretical premise: bigger games equal more fun.

"A lot of video games are trying to put you in an environment," said Dennis Crowley, 27, a student in Mr. Lantz's class. "But when you're playing Pac-Manhattan, you are in that environment. You're sweating and running around, and you know what it's like to actually be in the game."

In the last year, a London-based group called Blast Theory has run two big games — Can You See Me Now? and Uncle Roy All Around You — that allowed hundreds of online players to communicate with runners on the ground who were charged with making their way through the city in search of clues. The group plans to bring Uncle Roy to the United States later this year.

On grade-school campuses in England, a consortium of technologists has been running a game called Savannah, in which teams of students simulate the lives of lions — complete with virtual hunting, scouting for water and forming and dissolving prides — by communicating with one another over cellphones and computers, the way

lions communicate by roaring.

And perhaps inevitably, corporations are getting in on the act. In two weeks, Intel, the computer-chip maker, plans to begin testing a competition tentatively called Digital Street Game in Manhattan, in which players claim parts of the city grid by performing outrageous stunts in those areas, then broadcasting them online to voters who rate them. The team that gets the most votes wins control of the segment of the city. Michele Chang, an Intel designer who created the game, said that she hoped it would eventually include hundreds of players, and that Intel wanted to use the game to better understand how city dwellers use its Wi-Fi networks, which give Internet access to users of laptops and hand-held computers.

Steve Benford, a professor at the Mixed Reality Laboratory of the University of Nottingham in England, who has worked on Savannah and Uncle Roy, said the games thrilled players because unlike regular computer video games, they incorporated physical activity and social interaction, not unlike some reality television programs. The games, he said, also encourage people to push the bounds of accepted behavior. In Uncle Roy, players on the ground might be directed by online players to look, say, in the saddle bag of a random bicycle or to get in a stranger's car, all without knowing if the clue is genuine or a hoax.

"There's a real sense of being in a real conspiratorial experience," Mr. Benford said.

In Pac-Manhattan, players on the streets report their positions via cellphone to team leaders in the Kimmel student center. Those positions, which are constantly updated, are plotted on a computer screen like the Pac-Man screen of old, and the result is a sort of slow-motion version of the original. Teams in the student center direct the players outside, helping them navigate their way through the streets and avoid danger. The result is a wild, Keystone Kops-style scramble.

In the recent test run at N.Y.U., Megan Phalines, a second-year graduate student in the big-game class, was on the phone in the student center with her teammate, Mr. Crowley, who was playing the role of Pac-Man. In the classic video version of the game, Pac-Man accumulates points by gobbling dots in his path. Mr. Crowley's task was to sprint up and down the streets of Greenwich Village, and as he covered ground he was awarded dots, and points, on the computer display at the Kimmel Center.

And just as in the video version of the game, he had to avoid ghosts bent on capturing him.

"You've got a ghost on Fifth Avenue and Washington Square Park North!" Ms. Phalines shouted into the phone, after seeing their positions on her computer screen. Mr. Crowley changed direction, reporting his positions as he headed east, toward a virtual power pellet, which would allow him to turn on the ghosts and gobble them.

Mr. Lantz, on the ghost team, was sitting across the table when the computer showed that Mr. Crowley had made it safely to the power pellet.

"Pac-Man is hot! Pac-Man is hot!" he screamed into his phone. "The ghosts should spread out. We have ghost clumping."

Looking through the Kimmel Center's windows, it was possible to see Pac-Man sprinting west on Waverly Place in pursuit of fleeing ghosts, as befuddled pedestrians looked on.

Mr. Lantz said he and his students were particularly interested in the way the game and the city interact. Pac-Man is free, for example, to try to shed ghosts by running through traffic. And there's nothing to prevent the

ghosts, say, from asking passers-by, "Excuse me, have you seen Pac-Man?" The result is a kind of tableau of digital convergence with the physical world, in which humans are game pieces that are monitored and guided over digital networks.

The goal of the preliminary run was to tweak the game to make it more competitive, with an eye toward providing a template for others outside the class to design their own versions of the game. In the trial, the ghosts' team couldn't see Pac-Man on their computer screens, but Pac-Man could see the ghosts.

The goal, Mr. Lantz said, was to give an edge to Pac-Man and to "pit the wily individual against the moronic masses," which the class figures is an even match. The students had hoped to use global positioning systems to track players through the streets, but resorted to cellphones when they found that satellite signals necessary for the positioning systems were affected by tall buildings.

Pac-Man continued gobbling dots and sprinting back and forth across the Village, but things turned grim about an hour into the game, when he headed south and took a right on Waverly Place.

"We've spotted Pac-Man," Mr. Lantz shouted. "Don't clump. Let's close in."

Anyone who has ever played the video game would understand the panic that set in next on the Pac-Man team, as the ghosts closed off all escape routes and herded Pac-Man into an area directly north of the park on Fifth Avenue. But in contrast to the video game, there was no joystick to thrash in frustration. Ms. Phalines could only watch helplessly from the window as Pac-Man went through his last desperate throes. Moments later the ghost team was high-fiving:

"We got him! We got him!"