Prodigious Student looks to the Future of Wi-Fi
By Krista Sterling

A t the age of 14, Simon Lok, GSAS’04, secured his first paid internship at the NASA’s Goddard Space Institute. There, in the paleo-climatology department, he wrote graphic computer programs and commanded line interfaces to help his various computer programs work together. A whiz kid who taught himself computer programming in elementary school by frequenting the local Walden Books store, Lok has continued his overclocking ways into adulthood.

Now 26, Lok is defending his dissertation this fall while also running Lok Technology, a company he started in 1999 after being frustrated with the unreliable data networking products he used in his IT jobs. Lok’s first innovations were in secure email and storage. Last year, he invented the AIRlok, which has become Lok Technology’s breakout product.

The idea for the AIRlok was jumpstarted when one of his clients was going to spend $76,000 on a pair of Cisco routers. Lok went home and in less than a week built two boxes for $7,000. “That’s when I knew it would be easy to develop my own product,” Lok told Forbes magazine in a recent interview.

Forbes recognized Lok as its first ‘maverick’ entrepreneur in its Nov. 1 issue.

His AIRlok device targets wireless Internet service providers (WISPs) as well as enterprises and large carriers. AIRlok runs a network, checks passwords, signs up new users, routes traffic and protects the network from viruses and hackers.

Network provisioning traditionally requires managers to purchase several components, including bandwidth manager, firewall, router, authentication server, content cache, portal appliance and management tools, from several different vendors. If these items were purchased separately, Lok estimates they would cost as much as $125,500. In turn, each component has its own microprocessor and software, which requires WISPs to manage several different systems—systems that have difficulty “communicating” with each other because they speak different languages, and consequently are often in need of maintenance.

Lok Technology sells its single AIRlok, $25, which does the work of the seven devices above and handles 5,000 users, for $19,650. According to Lok, this system decreases maintenance costs and improves security. “Defending five beachheads is harder than defending one,” he explains. The company has sold more than 70 boxes this year, which sells for $19,650, each with at least one employee, recently acquired its first major North American distributor.

Lok, 26, founded Square, where many independent filmmakers want to distribute their films among themselves, to the public and on the World Wide Web. “If you think of a movie, it’s a public domain. Everyone is free to download a copy and copy it.”

The idea for the AIRlok was inspired by a conversation with Dean Takamura of the Open Society Institute, a New York-based foundation that initiated a range of education, media and public health programs aimed at promoting open societies. One goal of the initiative is to raise awareness of the societal barriers that hamper political expression and economic stability. Those barriers—language, racism, sexism, poverty, class distinctions and other—are the same obstacles social workers face in their day-to-day work.

“Most programmers don’t understand quantum physics and how transistors switch.”—Simon Lok

“Moving Walls” isn’t the only art to grace the walls of the School of Social Work’s new building, which opened in August. Hallways throughout the 11-story building are adorned with a rich collection of photos, collages and paintings. Jeannette Takamura, dean of the School of Social Work, says, “The art pieces are intended to generate questions about the people depicted and about who we are, as individuals and as a profession, in relation to them. The pieces were also selected to compel the viewer to think about how we might more effectively communicate about a variety of social concerns.”

Betty’s story and that of the young Ethiopians underscore those concerns. Takamura adds that all of the works through their subject matter suggest the breadth and the depth of the social work profession, not just in the United States but also around the world. They give additional dimension to what students are learning in the field and in their classes.

Overcoming the barriers to social change, or at least being able to see through them, is an important first step for social workers. “A few of the art pieces,” says Takamura, “are whimsical and remind us of the importance of humor and joy in the lives of all people, irrespective of age, gender or socioeconomic status. She notes that social workers must “look for every possible way to forward discourse.”

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Collections and Exhibitions

‘Moving Walls’ Intimate Portrait of Barriers to Social Change
By Sheri M. Whiteley

She’s beautiful. But that’s not the first thing that grabs you. It’s her gaze. Like a modern-day Mia Mora Lisa, Betty stares out from the photograph and makes you wonder what she sees that inspires such peace and serenity, such fortitude. Betty’s portrait is part of the Beyond Grand Street, Brooklyn, New York documentary in the exhibit "Moving Walls," currently on view at the School of Social Work.

Photographed by Regina Monfort, Beyond Grand Street is paired with another documentary, "Mona Lisa, I Could See Your Face, If I Could See Your Face, I Would Not Need Food. By Eric Gottesman. The two exhibits underscore the challenges—both heart-stirring and gut-wrenching—that social work faces in the field. When you see the other photos in the exhibit and the story they tell, you understand Betty’s gaze a little more—but also a little less.

With the Beyond Grand Street documentary, photographer Monfort tells the story of a group of Hispanic teenagers who deal with typical teenage angst as well as more adult struggles such as parenthood. Monfort’s background as a photographer in the studio of fashion and portrait icons Richard Avedon and Irving Penn is present in this work. The intimate portraits show the realities of the kids’ neighborhood without resorting to stereotypical images of violence and poverty although those elements are certainly present in the lives of Betty and her friends.

Monfort uses poignant moments of laughter, anger and sorrow to portray the lives of her subjects.

The same level of intimacy is seen in the If I Could See Your Face documentary, the title of which is taken from an Ethiopian proverb: “Gottessman’s photos evoke a certain voyeuristic feeling that is followed quickly by guilt. Viewers watch as young Ethiopians reveal their faces at Columbia. Lok would spend his time in the bookstore reading programming books. By the age of seven, he had taught himself BASIC language and by 10 was writing his own programs for games.

"It helped learning computing at that time, when you were forced to learn about computers the hard way," says Lok. "That experience shaped my academic and business career."

But he is not all techie. Lok attended Manhattan’s Hunter College High School, a magnet school for the arts. He is trained as a concert pianist and has participated in small theatre productions.

He began college at Cooper Union for the Advancement of Science and Art at age 16, and by 20, held a B.S. and an M.S. in electrical engineering. In all, he has three master’s degrees—one in electrical engineering, two in computer science—and is completing his Ph.D. in graphics and user interfaces at Columbia University.

"Some of his technical engineering demystified computers for Lok. ‘Most programmers don’t understand quantum physics and how transistors switch,’ he says. ‘I’ve seen computers from the physics side to the business side, so it is pretty difficult to scare me. These experiences give me my boldness and bravery.’"

Reflecting on his hero, Seymour Cray, who invented and revolutionized high-performance computers, Lok says, ‘The accomplishments he made are staggering. Cray put the world in a place the world never imagined it would be in. I would love it if one day I could do the same thing.’"