

## **Leveling the Playing Field**

by Alexander Gelfand

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DRESSED IN DO-RAGS, baseball caps, and jeans that are either too loose or too tight, the young men and women piling into the 169th St. subway stop in Jamaica, Queens, could be urban youth in any big city.

Look a little closer, however, and you'll notice some toting unusual accessories: late-model wireless IBM laptops. From their perspective, the computers are standard issue; what's really unusual is that they can't raise a Wi-Fi signal. For these kids, all of whom attend the Queens campus of St. John's University, the subway is one of the few remaining places where they can't go online.

In 2003, St. John's embarked on a plan to establish comprehensive Wi-Fi coverage across all five of its campuses in New York City and Italy. The private Roman Catholic institution had already overhauled its routers and firewalls as part of a gigabit Ethernet upgrade in the summer of 2002. But the task of implementing a Wi-Fi network was by no means trivial, especially given the complex spatial arrangements- and sheer acreage-involved.

While St. John's Manhattan campus is basically a 10-story office building, and its graduate facility in Rome a compact set of buildings and athletic fields, its remaining locations in Queens, Oakdale, and Staten Island are traditional rolling-lawn campuses. The Jamaica campus alone covers nearly 105 acres.

To address the challenges, the University opted for a phased implementation beginning in September 2003, initially emphasizing coverage of public spaces such as libraries and cafeterias. By January 2004, all academic buildings were completely covered. According to Joseph Tufano, executive director of technology for St. John's, by March 2005, students were able to acquire a signal in any classroom and in almost all outdoor spaces, with the exception of a few garages and athletic fields.

After sending out a request for proposals and evaluating multiple bids with the help of BearingPoint, a business consulting, systems integration, and managed services firm, the university settled on an 802.11b solution provided by Contemporary Computer Services (CCSI), the same Cisco VAR that had handled the earlier gigabit Ethernet upgrade. Dr. James Benson, CIO and dean of the University libraries, gives CCSI much of the credit for a smooth and successful roll-out. "We have a lot of capable people," says Benson, "but we didn't have every kind of expertise required for this project." CCSI ultimately helped St. John's install over 500 Aironet Access Points running off the latest version of Cisco's Wireless LAN Solution Engine.

## **The Academic Computing Initiative**

IMPRESSIVE AS IT may be, however, the Wi-Fi implementation was only part of a larger academic computing initiative (ACI) that also included an academic Web portal and a mandatory laptop program. Since the fall of 2003, every incoming

freshman has received an IBM R-series ThinkPad packing a Centrino chip. Some 3,100 students were issued ThinkPads in the first year alone, along with 400 faculty who opted to trade their desktops for portables. Thanks to the combined features of the ACI, many students can now register for classes, check their grades, and pay their bills anywhere and anytime.

According to Benson, however, university administrators didn't immediately cotton to the ACI. "The University had considered this kind of thing in the past and rejected it," he says, largely due to concerns over the potential for laptop theft-especially on public transportation. St. John's is predominantly a commuter school; out of approximately 20,000 students, only about 2,800 live on campus.

Proponents of the plan argued that laptop safety had improved in recent years as laptops had become common commodities and were therefore at lower risk of being stolen. They also contended that students could be taught to protect themselves against theft. Toward that end, an antitheft program called "Operation Laptop" was bundled into the initiative. According to Jody Fisher, director of media relations for St. John's, every student laptop is etched with a unique ID number that is recorded both by the NYPD and by the University's own public safety office. "In the event of a theft or loss, only the person attached to that unique ID number can pick up a recovered laptop," Fisher explained. In addition, NYPD officers come to campus "to instruct students on laptop safety (don't leave it unattended, that kind of thing)." The program appears to be working: Thefts are rare, and the recovery rate for lost or stolen machines is high. Fisher notes that one laptop was recovered as far afield as Ohio.

As was the case with the Wi-Fi solution, the laptop component of the ACI was handled through a competitive bidding process. The University ultimately went with IBM because of the company's prior experience with mandatory laptop programs at Seton Hall and Wake Forest universities. In addition, administrators were impressed with the ThinkPad R-series' long battery life, along with its ability to sense wired or wireless connections and to switch between them without rebooting-all important factors because of the commuter issue. "We wanted a machine that students could use at Starbucks and McDonald's," says Benson.

### **Cost Factors**

OVERALL, the ACI was meant to provide uniform accessibility on a common platform, to "level the playing field," as St. John's officials say, by creating an environment where computing would become second nature to all students, regardless of their economic circumstances. The economic aspect was especially important for St. John's. The University was founded in 1870 by the Vincentian Community, a Catholic order that ministers to the poor and marginalized. As an institution, the university is committed to educating the underserved.

As a result, St. John's sought to implement the ACI without unduly burdening students financially. Initial startup costs for the Wi-Fi network and laptop distribution program came in at approximately \$7 million. But according to Fisher, incoming freshmen paid only \$600 more than returning students in 2003, with the University itself picking up the rest of the tab. In 2004, tuition went up by 7.5 percent for both new and returning students. "We made a conscious decision to make it part of tuition so it would be covered by financial aid,"

says Tufano. That coverage is a crucial economic factor at St. John's, where 80 percent of students already receive some form of assistance. "A laptop is simply out of the question as an out-of-pocket expense for most of them," says Fisher.

Ongoing costs, such as software and insurance, have proven to be "very reasonable," says Tufano. And thanks to strenuous cost containment, some staff retrenchment, and the elimination of a few computer labs, St. John's has been able to manage the program at less than 2 percent budget growth per year. The ACI appears to be an even better value when one considers that faculty may eventually substitute virtual classroom hours for real ones. "As teaching is transformed, the number of classroom teaching contract hours will decline, and the need for building space will also decline," predicts Benson. Over time, that could lead to tens of millions of dollars in savings, although, as Tufano admits, "that's not going to happen in a year."

### **Supporting the Program**

GETTING THE ACI rolling required more than just installing wireless routers and handing out ThinkPads. St. John's also had to expand its technical support and training programs. The University qualified its own technical staff to act as IBM repair technicians and assigned support personnel to each academic building. It also created what Tufano calls the "laptop shop," a full-service support system that handles everything from accidental damage to theft. The University plans to incorporate an IT orientation component into Discover NY, a core course that all students must take within their first two semesters. And faculty receive stipends for completing the University's Portable Professor workshops (\$250 for the first two and an additional \$250 for a third), where they learn to do everything from using e-mail to posting syllabi online.

Tufano believes that the greatest challenges involved in implementing the ACI weren't technical but organizational. And, as he is quick to point out, the initiative itself was always about more than just hotspots and laptops. "It's not a technology project," he says. "It's a University project. We didn't lead with the technology. We led with the question, 'How can we serve our students and faculty?'"