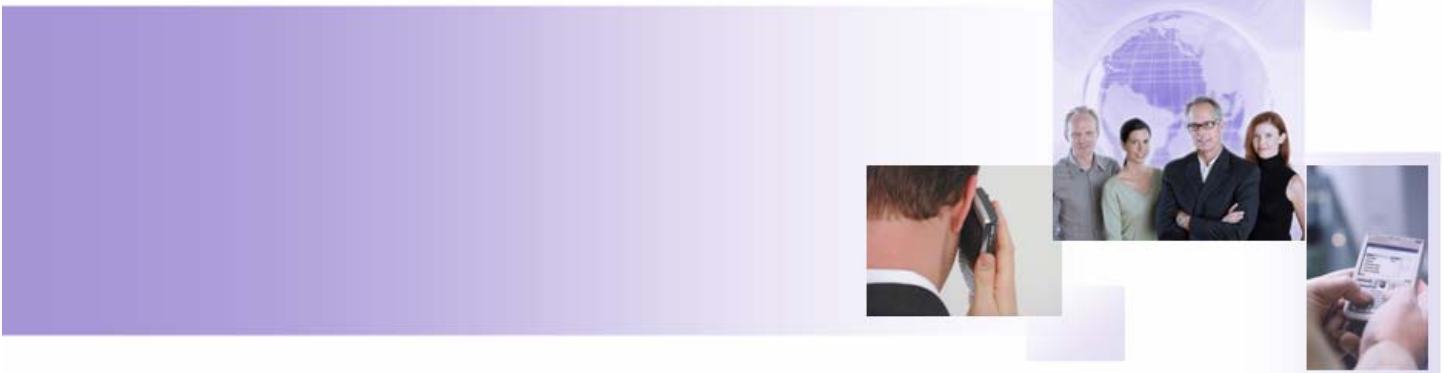


Cisco and Nokia Win with Bryant University



Bryant University Closes the Gap between Internet and Mobility Solution

Bryant University believes that technology is key to a successful campus experience and wanted to provide students, faculty, and administration with increased mobility, reduced cell phone costs, enhanced security and increased productivity. Bryant worked with Cisco, Nokia, and T-Mobile to test pilot a dual-mode phone that would leverage the university’s Cisco IP network and VoIP capability. Participants used their dual-mode smart phones while on campus as extensions of their desk phones and switched to cell phone coverage when off campus. The successful test pilot confirmed that productivity could be increased by 35% and costs could be reduced by US\$265K annually.

Executive Summary:

Challenges	<ul style="list-style-type: none"> • Enable increased mobility and enhanced security for student population • Increase productivity for administration and faculty • Reduce cell phone costs and extend coverage on and off campus
Solutions	<ul style="list-style-type: none"> • Cisco Unified Communications and VoIP capability • Nokia E61i dual mode smart phone • T-Mobile carrier service
Results	<ul style="list-style-type: none"> • Productivity increased by 35%; costs reduced by US\$265K • Free coverage on campus; cell coverage off campus • Enhanced security with emergency notification feature

Bryant proves that technology is key to a successful campus experience

Each September, over 3,200 full and part time students from around the world gather on Bryant University’s 420 acre campus in Smithfield, Rhode Island to begin a new school year. Bryant is committed to ensuring that students have the tools they need to enhance their learning experience and provide an equal footing for all students to prepare for entry into the rapidly evolving business world. To honor this commitment, for the past six years Bryant has given each student a laptop loaded with software that enables access to all university network and information resources.

With a belief that technology is key to a successful student experience, four years ago, Bryant upgraded its LAN to enable campus-wide IP telephony, voice, video, and data applications. Then in 2006, Bryant deployed an IP Interoperability and Collaboration System (IPICS) to improve campus operations and increase security by enabling direct radio communications between Bryant's public safety, campus management, and residence-life departments.

Enabling mobility at every turn

Bryant continues to look for ways to leverage its Unified Communications (UC) infrastructure and projected that UC would be key to the ability to provide efficient mobility for their students, the next trend in higher education technology.

With the proliferation of nomadic high-speed Internet access and over 98 percent of college students using mobile phones and other network-capable devices, mobility has become second nature to this generation. However, with parents and cash-conserving students looking for ways to economize, cell phones are used sparingly and students often wait until rates go down in the evenings, rendering the cell phones less useful as educational resources.

Bryant wanted to change that. "We had already installed VoIP phones in every dorm room so students could make free local voice calls but they were stationary," says Art Gloster, CIO, Bryant University. "The students liked the phone service in their rooms but still had to carry their cell phones, laptops, and PDAs with them everywhere else."

Bryant began looking into integrating dual-mode phones into the campus LAN to provide free, unlimited access to voice and data applications while on campus and automatically switch to cell service when they went off-campus.

"The service would be made available to students, faculty, and administration," Gloster says. "They would have their campus phone and cell phone all in one device, minutes while on campus would be free, and they would have cost-effective access to voice and data applications wherever they were."

"Cisco and Nokia have been great partners for us. Nokia came forward with an attractive, full-featured handset design and provided the software that enabled it to effectively plug into the Cisco Call Manager to give us full access to the features we wanted to make available from our Cisco IP network."

—Art Gloster, CIO, Bryant University

Cisco and Nokia Unified Communications Solution

Bryant began working with Nokia, a manufacturer of dual-mode phones; T-Mobile, a cellular carrier; and Cisco, provider of Bryant's IP communications network, to develop a pilot to test the concept and gather feedback before rolling it out university-wide.

The Mobile Business Solution from Cisco and Nokia extends Cisco Unified IP phone capabilities to Nokia E-series smart phones over Cisco Unified Wireless Networks to offer a seamless mobile experience both on campus and on public cellular networks.

"People, particularly students, faculty, and college administration, want to be untethered from land-line phones to facilitate their already mobile lives," says Dr. Tracey Wilen-Daugenti, higher education practice lead, Cisco IBSG. "With devices getting smarter and easier to use, the technology is of great interest to higher education institutions globally. Yesterday we moved from PC to laptop. Today, we're moving from laptop to mobile devices."

The pilot kicked off in April 2008 with 54 Nokia E61i dual-mode phones distributed to key university staff. Almost all participants spent more than half of their day on campus, and about a third were mobile while on

campus. Phone usage ranged from 300 to 1,000 minutes per month.

“The E61i dual mode phone is very user friendly and the wide, high-resolution display, full QWERTY keyboard, and fast connections provide a perfect tool to enable true mobility for college students, as well as administration and faculty,” says Maureen Stillman, software specialist, Services and Software, Nokia.

Participants were able to access campus email, browse the web, use VoIP phone calling, email, and calendaring features with the vast majority reporting satisfied or very satisfied in a survey conducted after the pilot. Participants also felt that the transition to the new phone was easy and the voice quality of the dual-mode phone was the same or better than their previous carrier.

The dual-mode phones look and operate like a smart phone, offering advanced 3G capabilities beyond a typical mobile phone, including functionality that enables users to download files from their PCs. For example, if students are on their way to class and find that they have forgotten to bring a homework assignment, they can log into their laptops from the dual-mode phone, download the document, and then print it. This service is offered by Nokia at their ovi.com website.

“When you look at productivity gains, the dual-mode phone enables people to take their offices with them. That was a key point for us because users can immediately respond to incoming messages, whether voice, email, or text, and whether it’s from their office or cell phone, from wherever they are.”

— Penny Pietraszka, assistant director, Network Operations, Bryant

Full mobility, reduced cost, increased productivity

The IP-enabled smart phone offers unlimited on-campus voice, text and instant messaging, and Internet access speeds that rival wireline, enabling significant advantages for students, university administration, and faculty.

Students can use the dual-mode phone to take notes, record lectures, create spreadsheets and presentations, track class schedules, use course-management systems, visit social networking sites, broadcast short blog posts through Twitter, and use instant messaging.

Free or inexpensive VoIP calling will lower costs incurred because students are using fewer cell phone minutes. Parents will also appreciate the security feature, which enables Bryant’s campus security personnel to capture the student’s four-digit VoIP exchange number to provide mass notification in the event of an emergency.

University administration personnel can take advantage of a mobile office, responding to emails and voice mails from home before driving into work. Participants in the pilot study indicated that this has saved hours each week. With their mobile office, personnel can leave home later, avoid rush hour traffic tie-ups, and go straight to their first meeting rather than stopping at the office first to pick up messages. A mobile office provides the flexibility of working anytime and from anywhere.

Faculty professors can conduct polls or quizzes, collecting student responses on the dual-mode phone. A program on the professor’s phone will assess and analyze the results of the poll and broadcast a summary of student responses to the lecture hall’s digital projector, or send the results back to the students’ phones. Professors can also send course materials directly to students’ phones during a lecture.

“Cisco and Nokia have been great partners for us,” says Gloster. “Nokia came forward with an attractive, full-featured handset design and provided the software that enabled it to effectively plug into the Cisco Call Manager to give us full access to the features we wanted to make available from our Cisco IP network.”

Primary advantages of the dual-mode phone include:

- **Increased Productivity:** The dual-mode phone acts as a wireless extension of the desk phone, decreasing the amount of time spent in the office answering calls, emails, and text messages by as much as 35 percent.

- **Enhanced mobility:** The dual-mode phones are supported by Bryant's wireless network, which can maintain up to 16,500 connections throughout the campus. Off-campus cellular coverage is provided by T-Mobile.
- **Cost savings for Bryant:** VoIP has enabled Bryant to save \$126,000 per year in personnel costs and, combined with a Cisco IP communications solution, the network is expected to generate \$265,000 in annual savings.
- **Emergency response:** As virtual extensions of their desk or dorm room phones, students, staff and faculty can easily be notified in case of an emergency regardless of where they are on campus.
- **Availability:** The battery enables up to nine hours of talk-time and up to 400 hours of standby. On campus, WLAN is the preferred access network but in areas where it is not available, cellular coverage takes over. This dual mode solution provides high availability voice coverage at the lowest cost.

Mobility is the latest application for campuses that have deployed over existing IP-enabled, Unified Communications (UC) networks. With Nokia's dual-mode smart phone and Cisco's UC infrastructure, campuses are achieving significant benefits that are reducing cost, increasing productivity, and enabling the mobile Internet.

"The Nokia and Cisco mobility solution has created true business transformation here at Bryant," says Gloster. "It has created more options for students, faculty, and administration who are trying to blend work life and personal life that fits right into the same niche as dual-mode phones."

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