



Contributed by Jim Douglas

Technology on the Hill

It's hard to keep pace with technology. Yesterday we had "dumb" cell phones, projectors, desktop computers and floppy disks. Today we have "smart" classrooms, the "Cloud," Wi-Fi, video-conferencing, ebooks, and a multitude of mobile devices. Throughout its long history Nichols has embraced technology. Here's a brief history of some of the technology that has enhanced learning and living on the Hill through the years.

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Nineteenth-century students at Nichols Academy had access to educational technology in the form of chalkboards, globes, and various paraphernalia to further their studies in science and other areas. An ad for the Academy in 1899, for example, noted that "Two new laboratories, chemical and physical, have been opened during the last few months, and many hundreds of dollars expended in furnishing them with complete equipments."

As a holder of more than a dozen patents for items as diverse as clocks, thread winding, firearms, boots, sprinklers, looms, paper and casting projectiles, the Academy's "second founder," Hezekiah Conant, was a strong promoter of science and technology. L. K. Braniff of *The Webster Times* noted that in 1881 Conant's summer home in Dudley was among the first on the Hill to have a telephone, and when he built a new boarding house, Roger Conant Hall, in 1885,

and telegraphy were offered by the Academy.

The observatory building also housed and utilized a remarkable clock designed and patented by



Conant. Among its other functions, this two-pendulum standing clock, when wired to a chronograph and transit instrument (housed in a small wooden structure close to the observatory – the large granite block on which it was placed is still there), could, boasted an 1899 Academy ad, provide the time "as accurately as at Washington or Cambridge [Observatory]." There's no way to know at this point if it served as a "regulator" clock, but it is fun to speculate whether Conant "sold time" to

establishments in nearby Webster, something a number of prominent observatories did to help the railroads and others keep accurate time for their schedules.

By 1897 electric lights had appeared on Dudley Hill but it would take some time to reach Academy buildings. Clarence H. Knight, a member of the Academy basketball team in 1898 and 1899, recalled playing basketball games in the Academy's gymnasium by the light of kerosene lanterns. A little over 100 years later the first-ever outdoor evening game under lights would be held on Sept. 20, 2005 (field hockey, Nichols vs. MIT; we lost). By 1911, carriage houses on the Hill were being converted into garages for automobiles.



In the 1950s, typewriters, mechanical adding machines, mimeograph machines, and bulky projectors were standard educational tools on the Hill. Students could watch black and white television on small screens in the residence halls (whereas today, students stream movies on oversized monitors and play games online in their rooms).

Students were also broadcasting (albeit a limited distance) from a radio station on the top floor of Academy Hall. The control room had a 50-watt transmitter, two three-speed turntables, a two-speed tape recorder, record recorder, two dynamic microphones, a Cardyne microphone, Slim Trim microphone, floor stands, boom, and two monitors. Telephone lines connected the studio in Academy to a transmitter in the gym. In 1975 a new transmitter was installed atop Academy Hall, boosting the broadcast radius from a few miles to about 15 miles. In 2005 a newly equipped station

moved to Alumni Memorial Hall and again in 2013 to the new Fels Student Center.

The first administrative computer on the Hill was an IBM 1130, which cost over \$75,000. Installed in 1968 for students, classes, and the general processing of college records, it was located in the basement of Conant Hall. Ken Burrill '69 recalled it had "a single disk about the size of a large pizza that stored 2.5 MB. Its main input device was IBM [punch] cards. The main output device was an IBM Selectric Printer built into the console. In the classroom across from the computer room was a key punch machine and, I think, a card sorter." This was replaced with a new EDUCOMP system in 1977 for under \$130,000. The old system allowed only one user at a time; the new one was originally configured to handle six concurrently.



The 1970s pocket calculator revolution did not go unnoticed on campus. A March 12, 1974, article in *The Bison* reported on the new Texas Instrument SR-10 that sold for \$99.95, and noted that new ones would soon be available for only \$19.95! The author also noted that more and more calculators were being seen around campus.

A century after Hezekiah Conant installed one of the first telephones on the Hill, built his observatory, and designed his astronomical clock, the computer revolution was being fully embraced on campus. In 1985, the Mary and James Davis Business Information Center was created. Located on the first floor of the library building and dedicated primarily as an aid to classroom instruction, this \$563,000 facility included a computer lab with 24 networked microcomputers for students and teachers and a Digital Equipment Corporation PDP-11/44 minicomputer for administrative operations.

In 1987 the college's "PC Plan" went into effect. One of the first of its kind in the country, the plan



required each student to have a personal computer (IBM PC Convertibles with disk drives for 3 1/2 inch disks). And in 1991, Davis Hall was completed. State of the art at its time, it was equipped with the latest in high-tech and audio/visual equipment, and each of its ten classrooms contained student computer stations hooked into the campus electronic network.

A *Bison* newspaper article from 1996, announced "The Internet Arrives at Nichols." Students were informed that, with software from the Computer Lab, they could "hook up your phone-line to your modem to surf the Internet." The college's first website was created by students in Professor Mauri Pelto's computer classroom that same year. Today, students learn about the college, register and pay for classes, and have 24/7 online

access to their courses via a learning management system that includes such features as course syllabi posting, discussion forums, assignment dropboxes, and online quizzes.

Just as computers and the internet transformed college classrooms and administrative functions, they also brought dramatic change to the academic library. In 1998, the college's library began to provide desktop computers to users. It started subscribing to online databases, quickly making the thick, small-print paper indexes like *The Readers' Guide to Periodical Literature* and its cousins a thing of the past. The card catalog, with its three cards per book – subject, title, author – also quickly became obsolete. And information that had been preserved not only on the printed page but also stored on



microfilm and microfiche gave way to the digital. Today, of the more than 125,000 books available to Nichols students, four out of five are available as e-texts via the online catalog. And if the library does not have the full text of an article, a request can be made electronically, filled, and sent to the requestor in an email attachment. Group study rooms with 40-inch monitors and screen sharing capabilities are in high demand. Now available campus-wide, the library was one of the first buildings on campus to have Wi-Fi. Today students can send papers to a library printer with their mobile devices. Books are not the only thing that can be borrowed; laptops, tablets, and adaptors are all available for loan at the Circulation Desk.

One hundred years ago students were happy to have steam radiators in their boarding house. Today, they can spend time with their friends and watch sports on a 100-by-160-inch projection screen in the Fels Student Center. A specially designed classroom provides video conferencing capabilities (cameras facing faculty and students, ceiling-mounted micro-

phones and speakers), 23 student workstations with dual 22-inch monitors, and a podium providing connectivity for a laptop, iPad, iPod, and two 55-inch LED monitors all through the podium's touch screen controls. And, oh yes, a 35-foot scrolling stock ticker. In the recently opened academic building students have a state-of-the-art audiovisual production suite that includes a green screen and the latest recording and editing equipment, the better to help them create multimedia projects. And the building has an array of energy-saving features, from sensors that better control heating and lighting in individual rooms to green building materials.

The Hill is certainly a different place than it was two hundred years ago. Students from the early Academy days or even 50 years ago would undoubtedly marvel at the changes. But for all the changes in technology one thing remains the same. It is still a place for learning and living. May it ever be so.

