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by Barbara Apstein

Back in the early 1970's, only a few people knew about computers. For most of us, in those days, "menus" were found in restaurants, "hardware" referred to items like screw-drivers and wrenches, a "platform" was a place to stand and "default" meant failing to meet the payments on a loan. Yet a few inquisitive souls, most of them mathematicians, had already become fascinated by computers and were aware of their enormous potential. One of these was Professor Robert Sutherland of Bridgewater's Department of Mathematics and Computer Science.

In 1972, Professor Sutherland signed up to study BASIC and FORTRAN at a National Science Foundation-sponsored summer institute held at the University of Illinois. During the academic year that followed, 1973-74, he offered a course called Introduction to Programming in BASIC, thereby becoming the first Bridgewater faculty member to teach a credit course using the computer. Since computer science was in its infancy, Professor Sutherland had no course outlines, syllabi or textbooks to work with. Fortunately, he had the assistance of two faculty colleagues who had also become interested in computers: Professors Henry Daley of the Chemistry Department and Murray Abramson of Mathematics, both of whom had attended training sessions offered by the Digital Equipment Corporation.

The computer Professor Sutherland used to teach his course — the only one the College had for academic purposes at the time — was a Digital PDP-8/I machine. It was about the size of a large refrigerator and had 8,000 bytes of memory (by way of comparison, a modest 1997 desktop computer has 16 million bytes). It was also exasperatingly slow, printing 10 characters per second (compared with hundreds in today's machines). Programs were loaded by paper tape.

Problems arose. The paper tapes upon which the programs were encoded were coated with a thin layer of wax, which melted in very warm weather. Students who left the tapes in desk drawers occasionally returned to find their rolls of tape sitting in puddles of wax.

In preparing for the class, Professor Sutherland remembers spending many hours trying to anticipate the programming mistakes his students were likely to make. "I spent lots of time generating crazy mistakes," he recalls. "Then the first student who came in had a problem I had never seen before. So I gave up trying to figure out what might go wrong ahead of time."

Several of the students who enrolled in the Introduction to BASIC course went on to pursue careers involving computer science. Joseph Martin, for example, a 1970 graduate who was teaching mathematics at Taunton High School, returned to Bridgewater to pursue an M.A.T. in mathematics. Building on the foundation of Professor Sutherland's BASIC course, Joe enrolled in additional computer-related courses and workshops and, as a result, moved into a series of administrative positions involving increasing levels of responsibility within the Taunton School System: he was named Computer Specialist for grades K-12, then Director of Information Services, and in 1991 was appointed to his current post, Assistant Superintendent for Administration and Finance.

The Introduction to BASIC course attracted growing numbers of students, especially those majoring in the sciences, and eventually the College hired additional instructors who had formal training in computers.

Professor Sutherland drew on his experiences teaching computer programming to write a textbook, This is BASIC, as well as co-authoring a trade text, This is VIC-20 BASIC, both published by Macmillan in 1984. (The VIC-20, one of the earliest personal computers, made by Commodore, was the first personal computer to sell one million units). In 1988, having mastered a newer programming language, he co-authored Problem Solving with Pascal.

Professor Sutherland has been generous about sharing his expertise with other faculty members, both informally and in CART-sponsored training sessions. Under the auspices of CART, he has offered introductory workshops in Wordperfect, Authorware, and in WEB page design. These workshops are always conducted with a certain wit and style, as well as with enormous patience. At the same time, Professor Sutherland continues to develop his own expertise by taking multimedia courses in graphic design and WEB page design at UMASS-Lowell.

One of Professor Sutherland's current projects is to build a multimedia application for a GER course he teaches, Math 105: Selected Topics in Mathematics. During his recent sabbatical, he developed two new courses, Introduction to Multimedia, which should be of particular interest to students majoring in Education, Management Science and Art who wish to learn techniques of making presentations electronically, and The Internet and the WORLD WIDE WEB. Both courses will be offered in the Fall, 1997 semester.

The twenty years since Professor
Professor Sutherland at work on the Digital PDP-8/I, the first computer the College acquired for academic purposes, in the 1970's.