

NTID

A College of Rochester Institute of Technology

FOCUS

FALL 1988



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N T I D

*educating
— deaf —
students*

1968-88



Friendship circle In celebration of National Deaf Awareness Week, September 25-October 1, RIT community members form a circle in honor of friendships among deaf and hearing people.

FOCUS

FALL 1988

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September 1988 marked the 20th anniversary of RIT's service to young deaf people through the National Technical Institute for the Deaf (NTID), as it was in the fall of 1968 when the first 70 deaf students were admitted to NTID.

Now, as we celebrate our 20th year, we are celebrating a growth that far surpasses what lawmakers ever expected could occur. The legislation for NTID and the guidelines that were drafted based on that legislation suggested that NTID should be an institution that would serve no more than 600 deaf students. However, we now serve more than 1,200 deaf students and more than 70 hearing students, who are training to be interpreters for deaf people or educational specialists to work with deaf students at the secondary level.

We're celebrating a tradition of excellence that has led to the creation of more than 2,400 alumni, 1 percent of whom hold master's degrees and 17 percent of whom hold baccalaureate degrees from other RIT colleges, while 42 percent hold associate degrees, and the remainder hold either certificates or diplomas.

The earnings of these alumni are some 41 percent higher than the earnings of deaf students who left NTID without any kind of certification. We also know that our typical alumni will pay back to the federal government everything that it has cost for them to go to school here within 10 to 13 years, and that they will pay close to 100 percent more taxes

than deaf people who have no collegiate certification of any kind.

We celebrate the fact that NTID is one of the world's most renowned centers for applied research regarding deaf people. All our research is geared toward enhancing the economic, social, and educational accommodation of deaf people, no matter where they live in the world.

RIT mainstreams the largest group of disabled people anywhere in the world, and we celebrate the tradition of excellence that has made us the epitome of educational mainstreaming. By virtue of this tradition we have been able to establish model support service programs in interpreting, notetaking, tutoring, and special academic advisement. In the process we also established in

1969 the first interpreter training program in the world and in the early 1970s, the first training program for notetakers and tutors. Also, we have become *the* international center for the aural rehabilitation of deaf adults.

We celebrate a high degree of respect from other organizations of and for deaf people. NTID took the lead in the establishment six years ago of an organization called the Council of Organizational Representatives. The executive directors of 10 different organizations of and for deaf people who make up this group continue to meet on a monthly basis, putting aside their differences to concentrate on those interests regarding deafness that they all have in common. This past year, three other organizations were added to the group.

NTID has taken the lead to bring the 1990 International Congress on Education of the Deaf to the United States. This conference will take place in Rochester, New York. NTID will be the primary host, but Gallaudet University has agreed to co-host that Congress.

NTID has taken the lead to re-establish what was put in place some 12 years ago—a Council of Directors, made up of the directors of the six postsecondary programs for the deaf that have significant federal support. These six institutions now are planning to put in place a Postsecondary Consortium that will impact all deaf people at postsecondary ages, inclusive of low-achieving deaf individuals.

We celebrate a high respect from Congress and from the executive branch of our federal government.

We also celebrate a fine respect from the recent Commission on Education of the Deaf. That commission consistently has applauded NTID for its responsiveness and its forthrightness. We always have done what we said we would do and we have never asked the federal government for more than we need, and the commission has recognized this.

Finally, we celebrate a wonderful sense of community, which, we hope, will continue for another 20 years and more.



Dr. William E. Castle



Celebrating Two Decades

Shipshape

by Ann Kanter

Like many of us, Anthony Battisti spends most of his workdays at a desk in his office. Unlike most of us, however, Battisti's work often involves exploring aircraft carrier decks, searching for unused space or space that can be converted to a different function. To do this, he inspects ships docked in naval shipyards on both coasts of the United States.

A 1980 College of Engineering graduate with a bachelor's degree in Mechanical Engineering Technology, Battisti at 31 is a naval architect with Naval Sea Systems Command (NAVSEA) in Arlington, Virginia, where he designs new ships and modernizes and overhauls existing ones. The decisions he makes can involve hundreds of thousands of dollars.

With responsibility for 14 of the more than 500 ships in the U.S. naval fleet, Battisti is kept busy making periodic ship checks at bases in Norfolk, Virginia, and Long Beach and San Diego, California. When a ship is being redesigned, he must assess each change to ensure that it does not detract from the integrity of the total design.

One of his biggest challenges arises when a new function or compartment is needed.

"Many ships have no extra room," he explains, "so when we add a new function, we have to cut back on another."

Battisti recalls the time he had to add an aviation corrosion control shop that required 150 square feet. Not only did he have to find the "nonexistent" space, but the shop, like many others on the carrier, had to be located near the hangar bay, to which aircraft are lowered by elevator from the flight deck.

After studying drawings of all the

compartments on each deck, Battisti determined that an electronic shop could be consolidated with another one performing a similar function, thus vacating its former space for the new shop. Although his proposal met with some initial opposition, eventually he convinced all concerned of its merits. This aspect of Battisti's job calls on his considerable interpersonal skills.

Battisti gets along "exceptionally well" with his peers, according to his



Keeping his head above water Anthony Battisti at work in his Arlington, Virginia, office.

supervisor, Edward Meere, head of the Aviation and Amphibious Ship Arrangement Branch.

"Tony is a no-nonsense hard worker who's a good example to everyone here," says Meere. "He accepts responsibility, is thorough in his follow-through, and has made excellent presentations on his projects."

Meere's appreciation is more than verbal; in a July performance evaluation, he rated Battisti's efforts as "highly satisfactory," which he interprets as "excellent." This rating, he explains, earned for Battisti a Department of the Navy Merit Pay Performance Award.

"My work is tough, but I enjoy the challenge," says Battisti. "It forces me to think and be creative."

Many of Battisti's negotiations are carried on over the telephone, which sometimes presents problems.

"I start off by telling people that I'm hearing impaired," he says. "I ask them to be patient, and if I don't understand something, I ask them to repeat it. But if that's not enough," he explains, "I meet with them in person. And if their location makes that impossible, I ask someone in my office to act as interpreter."

Taking the job at NAVSEA in October 1983 was a "coming home" for Battisti, who first worked there in 1978 on an RIT cooperative work assignment.

A third-year student at the time, Battisti worked as an engineering aide, designing submarine hulls and using a computer program to analyze their stability and control characteristics. The computer predicts the ship's performance under different sea conditions. This performance is determined largely by the ship's hull type, explains Battisti.

"A long, narrow ship, for example, is vulnerable to high waves," he says, "whereas an aircraft carrier is less affected by varying sea conditions."

After graduating from RIT, Battisti joined Boeing Commercial Airplane Company in Everett, Washington, as a senior engineer.

"Boeing's offer was too good to turn down," says Battisti, who worked there "for two wonderful years" until he was one of 2,000 employees laid off in the recession of 1982.

Before that happened, however, he met his future wife, Patience "Peppy" Chrisler, who, at the time, was studying psychology at the University of Washington and sign language interpreting at Seattle Central Community College. She was attending a church service when a mutual friend introduced her to Battisti.

Subsequently, they ran into each other at a number of places patronized largely by deaf people, including a bar, coffee-house, and post-baseball game party. Soon they began to date, and in September 1985, they were married in Peppy's hometown of St. Louis, Missouri, at a wedding facilitated by two sign language interpreters.

Although Battisti generally communicates with hearing people via speech and speechreading, when he and Peppy are alone, they use a combination of speech and sign language. Today, Peppy is a certified sign language interpreter, who, until the birth of their son, Ryan, in March, worked for Sign Language Associates, a Washington, D.C., organization offering interpreting services to clients that include government agencies, industries, courts of law, and schools.

Battisti takes an active role in Ryan's care, including responsibility for his nighttime feedings on weekends. His delight with his new son is evident.

"I talk to Ryan all the time," he says, "and he responds by smiling and making funny little noises."

Although Battisti and his wife are sure that Ryan is hearing, they use both speech and sign when communicating with him.

"Children learn hand movements before they learn speech," he explains. "And when they begin to speak, they're not always easy to understand. Teaching Ryan sign language now will help to ensure our good communication later."

Thinking ahead to Ryan's future, Battisti hopes that his son will be "a well-rounded, intellectual person with good leadership skills, and that he will have an exciting career."

If Battisti's dreams for his son come true, it seems that Ryan will be following in his father's footsteps.

For his first two years with NAVSEA, Battisti served as an Engineer-In-Training (EIT), familiarizing himself with the broad spectrum of responsibilities and the many people he deals with in what he describes as "a large, complex organization." Training involved "rotating through the codes"—getting two months work experience in each of the technical codes, or divisions, in his areas of interest, including Ship Arrangement Design, Weights, Preliminary Design, Structures, Survivability, Ship Specifications, and Combat Systems.

After one year of rotation, Battisti was assigned to six months each of field training at Mare Island Naval Shipyard in Vallejo, California, where he worked on submarine design; and at Puget Sound Naval Shipyard in Washington state, where he worked on design and construction problems of the *USS Belleau Wood*, an amphibious surface ship.

During the training period, Battisti, like other NAVSEA EITs, had the option of choosing the division in which he



In a class by itself The amphibious assault ship USS Tarawa is a class of ship with which Battisti is familiar.

wanted to work. Battisti chose the Ship Arrangement Design Division, where he works with aircraft carriers and amphibious ships.

"I chose this division because I enjoy the design-oriented work," he explains. "In addition, I like working on projects involving the whole ship."

Battisti's work requires coordination with other engineering departments and involves frequent travel to naval bases and shipyards.



"If it weren't for NTID showing the world what hearing-impaired people can do, I would not be where I am today."



A graduate of Tompkins-Cortland Community College in Dryden, New York, where he studied Mechanical Technology, Battisti, born deaf to hearing parents, previously had attended classes in hearing schools in his hometown of Ithaca, New York. He learned about NTID from his sister, Teresa, a 1974 graduate of RIT's College of Fine and Applied Arts, who now is wardrobe mistress with the National Theatre of the Deaf. Teresa told him about the fine engineering programs, excellent support services, and good social life.

As a student at NTID, Battisti was active in academic and social activities. A member of the Alexander Graham Bell Association for the Deaf and the Engineering Club, he remembers happy times skiing and the annual NTID Engineering/Computer Science Support Team Picnic on Lake Ontario. He still keeps in touch with friends he made during those years.

Battisti is remembered warmly by his former teachers. Associate Professor Dominic Bozzelli, of the Science/Engineering Support Department, recalls him as "a dedicated student with defined career goals, friendly and sociable."

"Other students were drawn to Tony," he says, "because he has a great sense of humanity and was always there when he was needed."

"Tony had to struggle with some of his courses," recalls Bozzelli, "but his determination and ability to interact with faculty members helped him through those difficult times."

Clearly, Battisti's skills, personal qualities, and drive have gotten him where he is, but he gives much of the credit to NTID.

"To get the quality education I did, I needed the support offered by NTID and RIT," he says.

Equally important to his success, he adds, have been NTID's achievements in educating managers in business, government, and industry—"telling them that hearing-impaired people have the potential to do a job like anyone else. If it weren't for NTID showing the world what hearing-impaired people can do," he says, "I would not be where I am today."



Following the Leader

192 (Exhausting) hours with Dr. William Castle

by Lynne Bohlman

If Dr. William Castle's wardrobe reflects different hues of the rainbow, his 20-year tenure at NTID has been akin to finding the pot of gold—for him and the Institution.

Castle's reputation for colorful dressing—his wardrobe includes both red and yellow tuxedos, purple and hot pink sportcoats, and bright white silk slacks—is rivaled only by his reputation as NTID's knowledgeable leader and strongest advocate.

Castle, director of NTID and vice president for Government Relations for RIT, clearly has dedicated himself heart and soul to the world's largest technological college for deaf students.

"He is *the* leader," says Janis Smith, project administrator in Castle's office. "He determines the direction we take and he has developed the innovative ideas that have taken us where we are.

"He is totally committed to NTID and to enabling all deaf people to reach their full potential."

Castle arrived at NTID April 1, 1968, as assistant to the vice president and director of the Division of Instructional Affairs. As the first dean of the Institute, from 1969-79, he helped establish internal stability. Working with students and faculty and staff members, he guided the development of curricula and tenure and promotion policies.

Today, as director, a position he has held since 1977—for two years he was both dean and director—Castle's focus is more external. He is NTID's primary liaison to government agencies, alumni, and other organizations of and for deaf people.

If Castle's influence on NTID has been



profound, his work also has had an immeasurable impact on him.

"NTID brought light to his life," says his wife, Dr. Diane Castle, telecommunications specialist and professor in the Division of Communication Programs. "NTID is the most important, the best thing, that ever happened to Bill Castle."

Castle finds that his challenging job has allowed him opportunities to use the multitude of talents he has developed throughout his career.

"I don't know of any other job that would give me that full vista for using my

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skills and interests," he says, "and also the constantly renewed opportunity to grow, personally and professionally."

Castle's educational and practical backgrounds in speech pathology and teaching have served the Institute well, particularly in its early years. His skills in debate and extemporaneous speaking, developed throughout high school and college, continue to serve NTID and RIT, where he has been a vice president since 1979, in working with federal, state, and local governments. In addition, his interest in and appreciation for the arts has led to the development of a creative side of this technical institution.

During any typical week, Castle addresses a variety of audiences and participates in an array of activities. During one such week this spring, he greeted a presidential candidate; participated in a variety of meetings; hosted a dinner and gala evening of the arts; testified before a U.S. House of Representatives subcommittee in Washington, D. C.; welcomed a national media figure to NTID; and celebrated NTID's 20th anniversary with alumni and faculty and staff members at a dinner and picnic.

"He thrives on what makes the rest of us tired," says his wife.



Technical talk Dr. William Castle and presidential candidate Michael Dukakis, both deeply interested in technology, chat after touring RIT's Center for Microelectronics and Computer Engineering in April.

Saturday, April 9
1:30 p.m.

Castle welcomes Democratic presidential candidate Michael Dukakis to RIT. As they shake hands, Dukakis asks Castle, "Who made your jacket for you?" Castle wears a purple jacket with pink and green flecks.

Castle chuckles at the question, introduces himself and three students—two deaf and one hearing—and tells the governor of Massachusetts a little about NTID.

Later, as Dukakis prepares to leave RIT's Center for Microelectronics and Computer Engineering, Castle follows behind him with fifth-year student Eric Gjerdingen, president of the NTID Student Congress. "Tell him how much you appreciate his coming," Castle instructs Gjerdingen, "and invite him to come back to visit NTID."

As the crowd gathers around the candidate, Castle nudges Gjerdingen to the front. "This man would like to say something to you," he tells Dukakis.



Listening to his constituents Castle discusses campus concerns with student leaders.

Students are number one with Castle, says Alice Beardsley, interpreter training specialist.

"He gives them his all," she says, "and he expects faculty and staff members to do the same so the students can be the best that they can be."

As much as a hearing person can understand deafness, Beardsley says, Castle does.

"I don't know anyone who knows deaf people like he does," she adds.

In March, when students at Gallaudet University protested the appointment of a hearing president, Beardsley says, there was no threat that NTID students might protest against Castle.

Gjerdingen, a Criminal Justice student cross registered in RIT's College of Liberal Arts, agrees. "When the Gallaudet situation popped up," he says, "I don't think one person wanted a deaf

president here now. We love Dr. Castle. We want to keep him."

In support of Gallaudet students, he adds, "We thought about canceling or skipping class, but we said, 'We can't do that to Dr. Castle. He's good to us.'"

Gjerdingen, who has worked with Castle on NTID's Special Speaker Series and on deaf rights issues raised by students, appreciates the director's "open door" policy.

"When there are issues we'd like to discuss with him, we know he'll listen. He doesn't say 'no' without a reason, and he won't give an unreasonable answer.

"It seems that whenever there's a problem, he's always able to solve it," Gjerdingen says. "We've never had a con-

flict with him. He's doing a good job. He knows what he's doing."

Monday, April 11
9 a.m.

Castle, along with fellow RIT vice presidents, listens to a United Way presentation during the weekly administrative staff meeting. Castle has with him a blue folder labeled "administrative staff." All his information and correspondence are placed in color-coded folders—blue for meetings, red for materials that need to be seen right away, and green for those that need his signature.

Castle is restless as he listens to the hour-long presentation. He shifts frequently, but most often he sits with his elbows on the table and his cheek resting on his clasped hands.



Convincing Congress Castle represents NTID during a House of Representatives Appropriations Subcommittee hearing. He's flanked by Madeleine Will of the Department of Education and Wendell Thompson, his assistant.

Among the other vice presidents seated around the square table and dressed in dark suits and light shirts, Castle stands out in a cream-colored wool jacket, burgundy shirt, brown slacks, and orange and brown knit tie. Although he may be dressed differently, Castle and one other vice president share an important history—the directorship of NTID.

NTID's first and only other director, Dr. Robert Frisina, currently vice president and secretary of RIT, invited Castle to NTID after working with him for a year and a half on a joint committee of the Conference of Educational Administrators Serving the Deaf and the American Speech-Language-Hearing Association (ASHA). Castle was associate secretary for Research and Scientific Affairs at ASHA from 1965-68.

"He was knowledgeable, talented, and deeply interested in the cause we were promoting," Frisina says.

The early years of the Institute, he remembers, were exciting. A band of talented people worked hard and well together on behalf of deaf students.

The staff in the early days was similar enough to a family to relax together as

well. Each month, a member of the staff hosted a special event, be it a movie, party, or hockey game.

Castle always selected a ballet or theater performance, which was particularly pleasing to Robert Panara, RIT's first deaf professor and a fellow theater buff.

Panara and Castle share more than an interest in the performing arts. Both men believe in the importance of deaf leadership and deaf role models.

"Bill Castle," Panara says, "has the courage of a Napoleon, the flair and charm of a Liberace, and the common sense and diplomacy of a Winston Churchill."

And that kind of person, says Frisina, is just what NTID needed.

"We were involved in an experiment," he says, "to determine whether or not in a relatively short period of time we could take students with serious educational deficiencies and prepare them for the world of work. That experiment required people like Bill Castle to give it a fair try."

The experiment worked, in part, Castle believes, because NTID was established on the RIT campus. The strengths and diversity of RIT, he says, are NTID's strengths.

Over the past 20 years, he notes, the technological programs at RIT have proved viable for deaf students, with support services. Castle is appreciative that no deaf RIT students have had to be "farmed out" to other institutions in order to receive training.

"NTID remains a healthy, integral part of its host institution," he says, "despite the fact that RIT has higher standards than it did 20 years ago."

*Monday, April 11
2:30-5:30 p.m.*

Before a 4:30 p.m. meeting with student leaders, Castle has a steady stream of brief meetings in his office. Staff members sit on the sofa across from Castle to discuss Dukakis' visit, an upcoming lecture, a benefit hosted by the Alexander Graham Bell Association for the Deaf, a publication, a television interview Castle did the week before, enrollment for the coming year, the next meeting of NTID's National Advisory Group, and Castle's upcoming trip to Israel.

Though it took more than half of the years I have thus far spent, a great sense of relief from skepticism and cynicism occurred for me when I reasoned within myself that life is the only absolute and that the greatest component of feeling and the finest advocacy are that of love, not just for fellow human beings but for all parts of life that reflect beauty. Without these two prime thoughts and without life-given talents, integrity, and flexibility for working cooperatively with others, I would have no sense of success.

Dr. William Castle

Quoted in Who's Who in America



Dr. Castle, a valued friend of mine for many, many years, is one of the most capable administrators I have had the opportunity to know. Over the years of our close association I found he had the varied personal skills required of a superior leader. NTID, his friends, and the many organizations that he serves are fortunate to have been associated with Bill Castle.

Dr. Kenneth Johnson

*Former Executive Director,
American Speech-Language-Hearing
Association*



Bill Castle is a colleague and friend who opens the doors of opportunity for those who thought the doors were closed. He did it for our son Meir "Memi" Pluznik, who graduated in May 1988, by helping Memi to make his dreams a reality.

Dov Herbert and Nehama Pluznik

Parents of Meir Pluznik, a 1988 graduate



My work with Bill Castle has been in the area of Government Relations, the other "hat" that he wears for RIT. I have learned a great deal from Bill these last few years—most important, he has taught me always to keep a sense of humor and a sense of perspective. I truly have come to admire him as a person, as a leader, and as a professional who gains the respect and good will of everyone who has the opportunity to know him and to work with him.

Deborah Stendarci

*Director, Government and Community
Affairs, RIT*

The setting for these meetings reflects the personality and interests of its occupant. The walls of Castle's office are purple and beige, and a 13-by-13 Kerman rug covers most of the floor. This "tree of life" rug is decorated with trees, flowers, and birds, and contains many of Castle's favorite colors, including purple, blue, and green.

The art in the office is almost uniformly Oriental or made by RIT students and faculty members, and includes an Oriental screen, ceramics by a local artist who studied in Japan, four paintings by deaf artist Morris Broderston, furniture made by RIT students and faculty members, and a stained glass window hanging made by NTID Associate Professor Michael Krembel and commissioned by Castle after his trip to China.

A round wooden table serves as Castle's desk. On the table are neat stacks of paper; a photograph of his wife; and the book, A Woman of Egypt, written by Jehan Sadat, former first lady of Egypt and a recent visitor to NTID.

While his office reflects his dedication to art, Castle also is committed to people.

"He's so concerned about people and humanity," says Smith. "What more could you ask from an employer than to know he has your best interests at heart?"

An assistant professor of speech pathology and audiology at the University of Virginia (UVA) in Charlottesville from 1963-65, Castle still teaches people and still provides challenges that promote personal growth.

"He's made me learn that nothing is impossible," Smith says. "I've done things because of his leadership that I never thought I had the ability to do. He expects you to grow; he pulls you along with him.

"I've seen him do the impossible."

Castle's ability to pull off "the impossible" is part of what makes him an effective leader at NTID, and beyond.

"Bill is a preeminent thinker in the field of education of deaf people because he's a visionary," says Dr. Donna Dickman, executive director of the Alexander Graham Bell Association for the Deaf in Washington, D.C., and a student of Castle's when he taught at UVA. "He sees not just the present, but the future—and he sees it clearly.

"He has an uncanny ability to make dreams become reality," she adds, "because he believes. He believes in the power of life, the power of believing in yourself and others."

As former president and current president-elect of the Bell Association, Castle not only has helped that organization identify priorities for the future, but also has lobbied for cooperation between the deaf community and organizations serving deaf people in order to have a more effective voice and positive impact.

"Bill is a consensus builder," says Dickman. "He can take groups of people with viewpoints that seem divergent and help them identify concerns they share. He has for many, many years helped people pull together instead of apart."

Castle's success as a consensus builder and problem solver can be traced to his belief in eclecticism, a philosophy that has been instituted at NTID. Eclecticism represents options, Castle says, in methods of educating as well as means of communication.

"Many institutions in the world would like to kill those options," he says. "We don't believe in that. Life designs itself in such a diverse way that we ought to be able to find tolerance levels for all those diversities, as long as they provide good things."

This philosophy will aid Castle as he works to establish a national Postsecondary Consortium to facilitate career development needs of low-achieving deaf high school graduates. Planning for the consortium, which will be designed to serve a variety of audiences, including elementary and postsecondary programs, employers, parents of deaf people, vocational rehabilitation agencies, and deaf adults, was begun last year.

The Council of Directors for the consortium will be made up of the six leaders of the federally mandated regional postsecondary education programs, including NTID and Gallaudet.

"I was happy to take on the assignment," Castle says. "It seemed appropriate because NTID is the world's expert on employment for deaf people."

If NTID's influence extends beyond the United States, so does Castle's. He has traveled to Australia, Belgium, China, Denmark, Egypt, England, Germany, Hong Kong, Israel, Italy, Japan, New Zealand, South Africa, the Soviet Union, Sweden, Turkey, and Yugoslavia, spreading the word about technologies and deaf education at NTID.

Aljosa Redzepovic, general secretary of the Association of the Societies of the Hearing Impaired of Slovenja, Yugoslavia, finds Castle, because of his knowledge, warmth, openness, and dedication, the "perfect person to represent the United States, deafness, and NTID."



A peaceful refuge Castle doesn't often get to work quietly in his office.

"He doesn't talk about political systems. He doesn't talk about which is better, the U.S. way or another. He always talks about what is best for deafness and deaf people."

*Wednesday, April 13
5-11 p.m*

In the Switzer Gallery, Castle mingles with the nearly 300 guests who have come to celebrate NTID's Gala Evening of the Arts to benefit the NTID Creative Arts Scholarship Fund. The exhibit is NTID's first juried invitational show and represents the work of deaf RIT graduates.

Castle, in a bright yellow jacket that matches the decorative balloons and flowers perfectly, slowly makes his way from one end of the gallery to another, stopping briefly to kiss and greet almost everyone. He chats for a minute or two with each guest and then moves on to the next.

Following the presentation of awards, Castle and his guests retire to the Robert F. Panara Theatre to watch Sunshine Too, NTID's touring theater troupe, and a performance of a one-act play, Last Dance, a nostalgic look at the 1960s written by Dr. Bruce Halverson, acting chairperson of the Performing Arts Department.

After the performances, Castle bounds on stage and thanks his guests. He tells them: "Gallaudet is the world's only liberal arts university for deaf students. And NTID is the world's only national technical institute for the deaf—but see what we do with the arts!"

Halverson has worked with Castle to develop many of the performing arts programs at NTID. When ideas are developed, he says, their merit, how they will fit into the general program, and their benefit for deaf students are discussed with Castle.

"We wouldn't have any of this if he weren't supportive," says Halverson. "We wouldn't have a dance program, *Sunshine Too*, a music program, or a theater program of the scope we do without his support. He supports these programs because they're beneficial to our students."

Halverson and Castle, however, have more in common than a deep interest in the creative and performing arts. Both men are natives of South Dakota.

The youngest of nine children, Castle grew up in Watertown, then a town of about 9,000, during the Depression and World War II.

I am pleased to have this opportunity to reflect on the professional accomplishments of Bill Castle—an outstanding individual who has been instrumental in furthering the reputation of the National Technical Institute for the Deaf at Rochester Institute of Technology. Dr. Castle has served as a national and international leader in the provision of technical education programs for students who are deaf or hearing impaired. In addition to his many talents as an effective and innovative administrator, Dr. Castle has contributed a wealth of knowledge and scholarship in his chosen area of expertise. He has authored numerous publications and articles, and has given many presentations, both in this country and abroad, in the areas of communications technology, speech pathology and audiology, and the education of deaf and hearing-impaired individuals. NTID at RIT certainly has a strong leader at its helm—one who will continue to guide the Institute through the challenging years ahead.

*Madeleine Will
Assistant Secretary for Special Education
and Rehabilitative Services,
U.S. Department of Education*

Bill Castle has an exceptional intellect. Because of his busy schedule, he's required to absorb a great deal of statistical information in a very short period of time. He is a good study and he always does his homework! He can rattle off figures without referring to his notes when in front of congressional committees. This bodes well in my estimation and in the estimation of others. How well we appear to answer Congress members' questions may be indicative of how well the Institution is run. Since the time to testify is brief and most members have only a surface familiarity with NTID, Congress has to go on its gut feeling in a lot of cases, and its gut feeling is that we are a well-run institution.

*Wendell Thompson
Assistant to the Vice President/Director,
NTID*

Bill Castle has had a profound influence on the lives of deaf individuals in this country. His leadership, sensitivity to the needs of all people, sense of purpose, vision, and abiding concern for quality have contributed to making NTID a leader in deaf education.

*Dr. Jack Clarcq
Associate Vice President, RIT
Director, Technical Assistance Programs,
NTID*

During the past four years as dean of NTID, I've had the pleasure of observing Bill Castle work diligently with the people in Washington to defend and promote NTID and the greater institution. He is tireless in his efforts and is incredibly effective. I doubt that there is a better person in this nation at what Bill does. He is a real asset to this place.

*Dr. James DeCaro
Dean, NTID*



My "time" with Dr. William Castle goes back 20 long years to 1968, when I was in the first class at NTID and he was a young man on the staff. In those years and later years when I was an admissions counselor, I got to know Bill so well that I can easily dissect the "man and his personality" in a few words.

Bill always has time for others out of his 24-hour days, which he seems to stretch to 25 or 26 hours. He not only is concerned for the welfare of those at NTID, but also for deaf people in general. If I listed all the organizations serving deaf people he has belonged to, you'd need a 27-hour day to finish reading the long list.

To Bill, others always come first. To him, every student at NTID is his child.

And let me spill the beans about why Bill dresses the way he does. No, he is not color blind, but uses colorful clothes to draw his students' and staff members' attention to him so that he can talk to them.

Looking on those 20 years, we should be grateful for Bill's role at NTID—as staffer, professor, director, and especially as our "father" figure.

*Kevin Nolan, a 1971 graduate
Administrative Assistant to the President,
Clarke School for the Deaf*



Few of us are able to combine the degree of vision, skill, and dedication that Bill Castle applies to his work. His vision defines his role in bettering the lives of both deaf and hearing people. His capabilities provide him with the tools to affect change and his unwavering dedication brings his skills to bear on the issues and problems he encounters. Bill inspires those around him to seek a higher level of commitment through his example.

*Michael Catillaz
Senior Development Officer, RIT*

During his high school years, his interest and participation in music, drama, and especially debate helped Castle "develop the confidence to overcome growing up in a poor family," he says. "I learned to take care of myself."

Still, Castle was concerned about the feasibility of his going to college. He knew he wanted to be a teacher, but wasn't sure he could afford to go to college.

He remembers his sister, Sarah, telling him, "Don't worry, we'll find a way for you to go."

In 1951, he received his bachelor's degree from Northern State College, located in Aberdeen, South Dakota. After a year of teaching English and speech in Faulkton, South Dakota, he entered the U.S. Air Force, learned the Russian language, and served for 26 months as a communications specialist in England during the Korean War.

When he returned, he decided to pursue either Russian studies or speech pathology. He received the best financial aid package from the University of Iowa and graduated in 1958 with a master's degree in Speech Pathology.

"It's fortuitous," says the man who now defends a \$33 million annual appropriation before Congress, "that it was a fiscal consideration that made the decision."

Fiscal considerations also led Castle to return to teaching for two years before enrolling in the doctoral program in Speech Pathology at Stanford University. He received the doctorate in 1963.

There, in postdoctoral research, Castle first was introduced to hearing-impaired people. It also was at Stanford that he was introduced to his wife and developed a personal tradition.

Special occasions for the Castles call for Korbel Naturel, a California champagne used at their 1963 wedding. The champagne tradition is enhanced because it is a symbol of their relationship.

After they were married, a friend told Diane Castle, "You'll see, the bubbles will go out of your champagne."

"For us," Diane Castle says, "the bubbles haven't gone out yet."

*Thursday, April 14
10 a.m.*

In the Texas-sized Rayburn Building in Washington, D.C., the chairman of the House of Representatives Appropriations Subcommittee yields the questioning to Rep. Silvio Conte. Conte dons a pair of sunglasses and asks Castle of

his hot pink jacket: "Is that jacket lit up with batteries?"

Castle laughs at the question, but answers others about NTID's budget request of \$34.5 million for fiscal year 1989 more seriously. As he testifies, it's clear that his years of extemporaneous speaking have paid off. He testifies as if he were holding a conversation—there are no pauses, no "ums," no hesitation in his speech. He reels off facts and figures about NTID's budget, staff, enrollment, and costs with barely a glance at the single sheet before him.

Representing NTID and RIT to the federal government is a job that falls primarily to Castle, and one that requires constant attention. Castle visits Washington once a week on average, constantly educating senators, representatives, and their staffs about NTID, RIT, and deafness.

It wasn't always like this, though. Before 1981, NTID budgets generally received an automatic approval. With the Reagan administration, however, obtaining the desired level of funding required more time, attention, work, and contacts.

Castle serves as the bridge between NTID and Congress, says Conte, a 1985 visitor to NTID and representative for the district in Massachusetts that includes the Clarke School for the Deaf.

"I get a kick out of his manner of dress," Conte says, "but it has nothing to do with the ability he has to convince Congress how important NTID is to deaf students."

Castle's dedication and caring, says the representative, are directly related to his success in convincing those who have never seen NTID to support the Institution.

"We frequently see quite a few people from the district," says Rep. Louise Slaughter, who represents the 30th District of New York, where RIT is located. "I'd say we hear as much from William Castle as anyone."

"The college is lucky to have someone whose life is so obviously wrapped up in the success of its students," she adds.

Castle relishes Washington politics and interaction with a variety of people. Certainly, NTID and RIT generally have been successful in their requests from the government.

That success, Castle feels, is based on the productivity and achievements of NTID in meeting its goals, the Institute's history of not asking for more than it really needs, and Castle's policy of aggressively thanking those involved even when the original goal is not met.



"Happy Birthday to Us" With Dean James DeCaro, Castle signs/sings in celebration of NTID's 20th anniversary.

Friday, April 15
6:30-11 p.m.

Again, Castle mingles with a crowd, this time a group of alumni gathered for a dinner in celebration of NTID's 20th year. He greets the alumni from all classes, and when each of them invariably asks, "Do you remember me?" he replies, "Of course, I do," and speaks that person's name.

Dressed in a yellow shirt and orange jacket, Castle makes his way through the crowd, reminiscing with graduates about the first class, the bulge in admissions related to the rubella epidemic, and changes on campus.

"Dr. Castle is confident that deaf people can do whatever they want," says David Nelson, a 1985 RIT Computer Science graduate, "and he takes the time to let that be known to as many people as he can.

"I'm glad Dr. Castle is here," he adds. "I often wonder, if it were not for him, where NTID would be."

While Castle is proud of the accomplishments of the past 20 years, he has his eyes firmly on the next 20.

As the world's largest technological college for deaf students, NTID will need to keep up with technology, Castle says, and provide all students with some sophistication concerning computers.

As NTID's influence expands beyond Rochester and the nation, deaf people in

other countries also will benefit from NTID's programs.

"During the next 20 years," Castle says, "NTID will have a greater international impact. We're right on the horizon. We're ready to cross over that horizon and make a difference not only in our own country, but in others as well."

Saturday, April 16
noon-3 p.m.

At a picnic for alumni and faculty and staff members and their families, Castle applauds with others as Gerald Isobe, a 1976 RIT Accounting graduate, accepts the Distinguished Alumnus Award. Isobe speaks on a theme that is familiar to Castle, who is dressed comfortably today in grey corduroy slacks and a maroon Norwegian fishing shirt.

"Through the love and support of my family, teachers, and this great school, I learned that even impossible dreams can come true," Isobe tells the crowd. "Thank you, NTID, for giving me the chance to realize my impossible dream, receive a coveted education, and work with and supervise hearing people."

The next presentation is to Castle. In appreciation of his 20 years of service, he receives a silver sculpture created by Leonard Urso, assistant professor in RIT's College of Fine and Applied Arts.

"I can only tell you these have been the best 20 years of my life," says Castle, before leading the gathering in a sing/sign version of "Happy Birthday to Us."

I knew when Bill interviewed me eight years ago that I would enjoy working with this bright, interesting, and dedicated individual who had such an innate ability to deal with the public; what I did not know was that every workday would be serendipitous. His enthusiasm for what NTID was doing for deaf students, his vision for what could be done, and his dedication to them was obvious. I knew that if I came to work for him that I would benefit from his sensitivity to the needs of the NTID family and that I, too, would be allowed to dream, to take risks, to enjoy my work to the fullest; that he would delegate, and have confidence in my ability to execute ideas, projects, and develop relationships. I have never been disappointed.

Marcia Dugan

Director, Division of Public Affairs, NTID



I have been associated with Dr. William E. Castle since the time I had an interview with him more than 18 years ago. I have found him to be an approachable, flexible, supportive, and caring individual. One of the most memorable events I had with Bill was when he was president of the Alexander Graham Bell Association for the Deaf and I was concurrently president of the National Association of the Deaf. We both recognized a critical need to create better cooperation and harmony among all national organizations serving deaf people. This led to the establishment of the Council of Organizational Representatives (COR) to address the legislative and public policy issues as they relate to the needs of deaf and hard-of-hearing people. Today, COR is a strong and viable coalition of more than 13 national organizations.

I have observed Bill in action in a variety of meetings with students, faculty and staff members, parents, professionals who work with deaf and hard-of-hearing people, community leaders, and public officials. He always has the capacity to respect differing philosophies, views, and attitudes as portrayed by a multitude of individuals and organizations, and work effectively with them to achieve common goals.

Dr. Alan Hurwitz

Associate Dean/Director,
Educational Support Services
Programs, NTID

members of RIT's School for American Craftsmen, intended as a gift 10 years ago.

Sadat moved to the United States in 1985, and now makes her home in Virginia, occasionally traveling to Cairo. In addition to public speaking engagements, she teaches courses on Middle Eastern women at the University of Maryland.

"She's a perfect example of what a woman can do," says Brandeis Sculthorpe, a third-year Social Work student. "She has done a lot of fighting—just as I would fight for my rights as a deaf woman."

Sculthorpe was one of approximately 35 guests who attended a special luncheon in Sadat's honor before her presentation.

To the delight of her audience, Sadat began her address by signing "I am from Egypt," which she had learned at lunch.

"Right away the students felt endeared to her because of this," says Sculthorpe.

Though Sadat speaks of peace, she knows violence intimately. On the sixth of October, 1981, she watched as religious fundamentalists assassinated Anwar el-Sadat, her husband of 32 years, who then was president of Egypt.

"It is something I will never forget," she says, "because it happened right in front of me. But I don't live in the past, I live for today and tomorrow."

Jehan and Anwar Sadat met and fell in love in 1948, while she was a teenager on summer vacation in the town of Suez. Her mother, an Englishwoman, initially was opposed to their marriage, noting their 15-year age difference and Sadat's divorce from his first wife. But her father, an Egyptian, was more sympathetic, perhaps remembering how he struggled to marry a foreigner in the face of opposition from his father. Eventually, both parents consented, and the couple married May 29, 1949.

As president of Egypt, Sadat was the central figure in the peace process that ended the long history of hostility between Egypt and Israel. On March 26, 1979, he traveled to the White House to sign the Camp David Accords with then Israeli Prime Minister Menachem Begin and U.S. President Jimmy Carter.

However, peace with Israel brought war with Egypt's surrounding Arab neighbors.

The Egyptian president was viewed as a traitor by Arabs throughout the Middle East, who believed peace was impossible as long as Israel occupied what they considered to be Palestinian land. As religious opposition grew to a



Woman of Egypt

by Susan Cergol

She is a woman with a message, and that message is peace.

"What is the aim of war? What is the result at the end? Nothing except destruction, deterioration, and loss of lives. With all that is going on, I still believe in peace; I still have hope; I'm still optimistic for the future."

These were the words of Jehan Sadat, former first lady of Egypt, as she spoke to students at NTID March 22. Accompanied by her youngest daughter, also named Jehan but affectionately called "Nana," Sadat visited as part of NTID's Special Speaker Series.

Her visit had particular significance for NTID Director William Castle, whose desire to meet Sadat during a trip to Egypt in 1978 had gone unfulfilled. Finally, Castle was able to present her with a glass vase, made by two faculty

fevered pitch throughout the Arab world. Egypt itself became divided. This hatred ultimately took the life of Anwar Sadat.

But Jehan Sadat does not lay claim to international attention by virtue of her late husband's accomplishments. Her own desire to improve the lives of Egyptian people was a constant impetus in her role as first lady, and as such she was the force behind many social welfare projects.

"All my life I would be ruled by the love I felt for my husband, for my children, and for my country, completely and without reservation," she writes in her book, *A Woman of Egypt*, published last year. "If Anwar could influence the people as president, I hoped as his wife that I could as well."

After Egypt's 1967 war with Israel, Sadat worked in hospitals tending the wounded, which fueled her commitment to improving the lives of disabled people.

"Out of the horrors of war I tried to forge an instrument of optimism," she told students, and so, in 1972, she created a rehabilitation center for disabled people, called *Madinat el-Wafa' wal Amal*, "The City of Faith and Hope."

The center was designed to offer rehabilitation training to Egyptian soldiers disabled in wars. "I did not want Egypt to be like so many other countries, welcoming their soldiers home as heroes from battle and then forgetting about them," she writes.

Sadat received international recognition and support for this project. Donations poured in from England, France, Italy, and the United States, as well as from within Egypt itself. Soon, she was able to expand the original concept to incorporate services for all disabled people, including special housing, offices, a hospital, and a school for disabled children. A factory was set up to manufacture artificial limbs for amputees, and Sadat was pleased to tell her NTID audience that the man who heads this factory is deaf.

Perhaps Sadat's most remarkable contribution to Egypt was the role she played in reshaping her country's attitudes and laws concerning women.

Egyptian women have a history of social activism, she told students, dating to 1919 when a courageous woman named Huda Sha'arawi led demonstrations calling for the country's independence from British rule.

"I soon realized, however, that the movement was beginning to lag," says

Sadat. "It needed to be galvanized; it needed someone to pull the women together and work for the common good. I decided to play that role because, as the president's wife, I was in a position to help."

To emphasize the importance of education for women, Sadat enrolled in Cairo University at the age of 41. Although she loved her chosen subject, Arabic Literature, her primary goal was to serve as a role model to other women. She graduated in 1978, then stayed on at the university to earn her master's degree in 1980, and a doctorate in 1986.

"I was willing to do whatever was necessary to encourage other women to educate themselves," she writes. So strong was her conviction that she agreed to have the three-hour oral exam for her master's degree carried live on Egyptian television.

Although Egyptian women had been guaranteed the right to vote by the 1952 constitution, few had taken advantage of it.

Sadat encouraged women to take a more active role in public life. In 1974, she became the first woman to win a seat on the People's Council, which oversaw the 301 villages of the rural province of Munufiyya.

From 1977 to 1979, Sadat devoted herself to reforming Egypt's Personal Status Laws. Implemented in 1929, these laws legislated an inferior social position for women, particularly in the areas of marriage and divorce.

While it was easy for a man to divorce his wife—he merely had to repeat "I divorce you" three times in the presence of two witnesses—a woman had to petition the court for a divorce from her

husband. Such a divorce was granted only if she could prove he was impotent, unable to support her, insane, terminally ill with a contagious disease, or dangerously abusive. Regardless of the circumstances, a woman was bound by law to obey her husband while the court decided her fate.

"Jehan's Laws," as the proposed reforms came to be known, granted women a more equitable status. Although they were in complete agreement with the laws set down in the Quran, the holy book of Islam, these proposed changes angered many religious fundamentalists in the country. Nevertheless, the Egyptian Parliament adopted the reforms in 1979.

While Sadat talks proudly about the gains she helped achieve for Egyptian women, she is quick to add that she always worked according to the principles of her religion.

"I sought equality without violation of any of the Islamic laws or traditions," she told students. "I find that Islamic traditions are a way of life and thought entirely sympathetic to my own views, and entirely satisfying to most women's aspirations."

Sadat's mission is to carry on the message of peace that her late husband began. In his honor, she hopes to establish a memorial museum, "so that generations to come will know there was someone named Anwar Sadat who paid his life to make peace."

"I am a woman for peace. My husband lost his life for it, but still I am hopeful that one day there will be peace on this earth."



VIP tour Julie Cammeron, coordinator of NTID's Special Speaker Series, and Ella Ford of the Public Affairs Office, escort Jehan Sadat and her daughter, "Nana," on a tour of NTID.

CALCULATING KEGLER



Bowler balances budgets

by Jean Ingham

The years 1966-67 were a time of struggle for Cynthia Davidson Rohlin.

She had managed to earn her associate degree in Accounting from RIT, but was so exhausted by the effort to understand what was happening in the classroom that she was ready to give up any further schooling. For 14 years, Rohlin, who was born deaf, had pushed herself to get through school, and she was burned out.

To finance her education, Rohlin worked three part-time jobs. She remembers going from class, to work, then home to study until 2 or 3 a.m. She'd grab a few hours sleep and start all over again. Then, just as she was ready to give up her dream of obtaining a bachelor's degree, NTID was established.

"They asked me to stay," she says, "but I was tired."

She agreed, however, to try the newly established program for one year. If it didn't work—if she felt she couldn't handle the load—she would leave.

Before receiving NTID support, Rohlin's grade point average was 2.0—a "C" grade. But, with the help of notetakers and interpreters, she soon began to earn "A's." It wasn't clear sailing, but it was much easier than her first two years had been.

An excellent speechreader, Rohlin was able to keep pace with the teacher when she didn't have to concentrate on taking notes. Also, with financial help available through NTID, she didn't have to work three jobs, so she was more rested.

For three years after receiving her bachelor's degree in Accounting in 1970, Rohlin worked at various bookkeeping jobs. In 1974, she was hired by Xerox Corporation as an accountant, but was laid off in 1977. Then she became accounting supervisor for National Ambulance Service in Rochester, New York.

In 1978, Rohlin passed the first half of her Certified Public Accountant exam. In a local newspaper article written about her achievement, Stephen J. Paris, then vice president of finance at National Ambulance Service, said, "When I hired Cynthia I was looking at her track record in school and her past job experience—not her hearing."

Rohlin's deafness was not diagnosed until she was 6 years old, but it wasn't because her parents didn't realize that something was wrong.

"They took me to an audiologist when I was 3 because I wasn't responding to people's speech," Rohlin says. "But no one could find anything wrong. I could

see when a light in the machine went on and every time it did, I'd nod my head."

Because hearing tests showed no loss, doctors diagnosed her as emotionally disturbed, and she was placed in a special Rochester school program.

When Rohlin was 6 years old, her teachers insisted she be given another hearing test. This time the machine was covered, and Rohlin says, "Of course, I couldn't hear a sound."

Totally deaf in one ear, Rohlin has only slight hearing in her "good ear." There is no clear reason for the deafness. It may have been caused by medication her mother took during pregnancy or it may be because her father had malaria during World War II. Her brother also is deaf.

She was given hearing aids and wore them against her will.

"No sign language was permitted in our home," she says.

Rohlin then was placed in a class for hearing-impaired students and provided with a speech therapist twice a week at home. She credits this extraordinarily patient man with the excellent speech she possesses today. By seventh grade, she had progressed sufficiently to be placed in a mainstream school.

Mainstreaming in the 1960s meant going to school with hearing students, but without interpreters, tutors, or notetakers. At first, Rohlin's grades were so poor that teachers urged her parents to withdraw her from the school and put her into the Rochester School for the Deaf.

"But my parents were adamant," says Rohlin. "They said if the teachers gave me a chance, I'd succeed. And I did, by sitting close to the front of the classroom and studying hard."

By the time she graduated from Greece Arcadia High School, Rohlin had earned National Honor Society status.

She also was named Outstanding Woman Accountant by the American Society of Women Accountants and Outstanding Business Student by Greece Arcadia High School. She scored high enough on her math aptitude tests to win two college scholarships—one a scholarship incentive award and another from the American Society of Women Accountants.

In 1979, Rohlin received NTID's Distinguished Alumnus Award. This award is presented annually to an alumnus who has made a noted professional contribution to his or her career field.

Now, 18 years after graduating from RIT, Rohlin lives with her husband and two children in a split-level home in



Balancing the books Cynthia Rohlin and Steven Neusatz, manager of Nick's Dry Cleaners, discuss accounts.

Gates, New York. The living room mantel is lined with bowling trophies.

An avid bowler, Rohlin met her husband, Walt, on a chartered airplane filled with deaf bowlers bound for a tournament in Milwaukee, Wisconsin.

She explains that the flight originated in Syracuse, New York, Walt's hometown, but also stopped for passengers in Rochester. The stewardess enlisted Rohlin's help to ask passengers what they wanted to drink. Rohlin signed to passengers and then voiced the beverage choices to the stewardess.

"I don't remember meeting Walt then," she says, "but he remembers me."

They met at other tournaments and their friendship blossomed into love. They married in 1979. Although they both are deaf, their children, Shawn, 7, and Tracey, 4, are hearing. Her husband lost his hearing at 3 months of age when he had mastoiditis, a severe ear infection—incurable 40 years ago, but now treatable with antibiotics.

The couple still bowls, but on separate teams so that one of them can watch the children. They also keep tabs on bowling friends by traveling to tournaments throughout the country.

Today, Rohlin works as an accountant for four different clients—usually one day a week at each business. Most of her work—accounts payable, accounts receivable, general ledgers, and payroll—is done on computers, which is easier than doing it manually as she was taught.

Steven Neusatz, manager of Nick's Dry Cleaners, is one of her clients. He says his father hired Rohlin on the advice of a friend for whom she had worked.

"Cindy is a personable young woman," he says. "She is wonderfully efficient, doing all our bookkeeping work in about five hours a couple of times a week. I doubt if I could ever find anyone else who could do as much in that amount of time."

But Rohlin dreams of the day when she can go back to school. She wants to get her master's degree in Education through the Joint Educational Specialist Program co-sponsored by RIT and the University of Rochester so that she can teach deaf students.

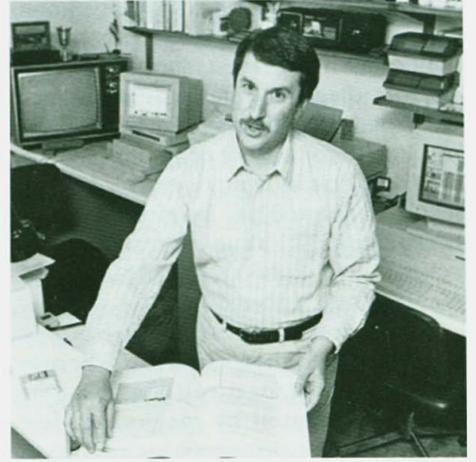
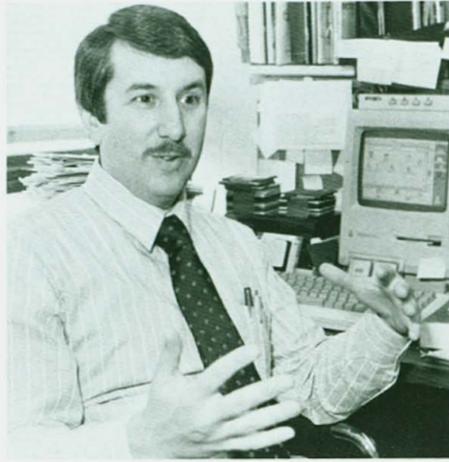
"I don't really know if I could handle it," Rohlin says. "I still shudder at the thought of going back to school, but I want to teach. I want deaf students to understand that accounting is not beyond their comprehension."



desktop
publishing
expert authors
handbook that is

USER FRIENDLY

by Ann Kanter



Whether you're a novice or an old pro in the world of desktop publishing and typesetting, chances are that any question you ask will be answered in Michael Kleper's *The Illustrated Handbook of Desktop Publishing and Typesetting*.

To those not fully versed in the world of personal computers and printing, the tome's title could be as awesome as its hefty five pounds and 770 pages. Even to the uninitiated, however, the book is "user friendly."

Liberalized, it is written in a conversational style free of all but the most necessary jargon. Downplaying any thrill at being a published author, Kleper, a professor in the Department of Printing Production Technology since 1969, explains that this is not his first book—he has written five others.

The *Handbook*, published last year, has garnered rave reviews from critics for various computer publications, who describe it as "the... definitive book on the subject," "the most comprehensive and weighty collection of facts on DTP [desktop publishing] I've ever seen," "invaluable," "a tour de force," "a bible on the subject," and on and on.

Kleper has earned his authoritative position in the exploding field of personal computers not only through familiarity with its hardware and software, but also through knowledge acquired in his work as a consultant to various manufacturers, for whom he often writes and tests functional specifications before the equipment hits the market.

While the bits and bytes of personal computers were introduced in the early 1970s, DTP is a more recent development. DTP, or electronic document production (EDP), as Kleper prefers to call it, began with the introduction of Microcosmos' *MacPublisher* program in 1984, and then made its real impact with the arrival of Aldus' *PageMaker* in 1985.

Straddling the fields of personal computers and printing, EDP is the latest development in the latter, which Kleper took up as a hobby at the age of 8. During his junior high school days, he made and sold tickets, stationery, and advertisements, and used the income to expand his collection of typefaces and other printing accessories. By the time he was in college, his basement was crammed with printing equipment, including a repro camera, which he built, and a darkroom.

Today, Kleper, his wife, Gwen, and children, Jodi, 14, and Scott, 10, share their home with 10 computers, two laser printers, a scanner, a digitizer, a CD-Rom player, and five modems to transmit data and download programs.

Kleper uses this equipment for a variety of purposes, such as his work as editor of *The Personal Composition Report: The Newsletter for Users of Desktop Publishing, Typesetting, and Word & Information Processing*; his co-ownership, with his wife, of a home business; and "to stay current with developments in the field."

A native of Hamden, Connecticut, Kleper chose RIT for his college education because, "For graphic arts, there is no finer place."

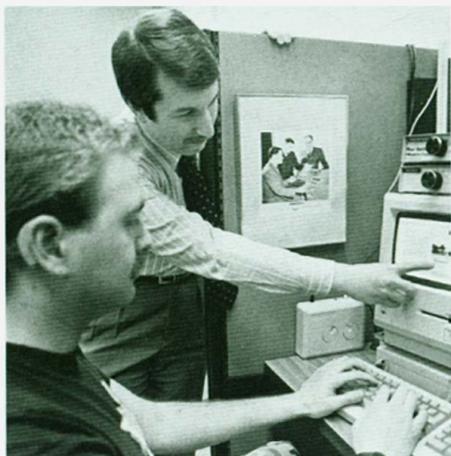
Immediately after receiving his bachelor of science degree in Graphic Arts from the School of Printing in 1969, he took his first job as an instructor at the then one-year-old NTID. By 1972, he had earned his master of science degree in Graphic Arts Education, also from RIT.

When Kleper arrived at NTID, he knew nothing about deafness, and admits that he had some preconceived notions.

"I thought deafness just meant not hearing," he says. "I wasn't aware of the severity of the language problem, and when difficulties arose, they challenged my ingenuity. I tried to solve them by relating classroom concepts to things that students already knew."

"From the beginning, he was more than just an instructor," recalls Vernon Davis, career development counselor in the Department of Science and Engineering Careers and a member of NTID's original faculty. "He set up the curriculum, helped design the printing lab, and ordered the equipment. Everything he did was outstanding."

These days, Kleper teaches his students traditional printing along with EDP.



Living with computer technology: Opposite left, Michael Kleper discusses the impact of personal computers on desktop publishing; opposite right, he leafs through his latest book; and above, he introduces a student to desktop publishing.

"The printing industry is in a transitional period," he explains. "We still teach hand skills, such as manual paste-up and pen drawing, but this year, all printing students are required to study desktop publishing, which achieves the same goals electronically."

A soft-spoken man, Kleper is respected by students and peers alike for his expertise. Anne Fenwick, a graphic artist with R.C. Brayshaw and Company, Inc. in Warner, New Hampshire, and holder of an associate degree in Applied Art from NTID, says, "Mike Kleper's mind is like an encyclopedia."

Charles Bancroft, production manager of *Deaf Rochesterians' Newsmagazine* and a 1985 graduate with a diploma in Printing Production Technology, sought Kleper's advice when Bancroft and Publisher/Editor-in-Chief Matthew Moore were starting their desktop publishing venture.

"I asked Mike if we should buy 'Brand X,'" says Bancroft, "and he told us about the Macintosh computer and Apple Laserwriter, which he considered best for our purpose. Although he knew it wouldn't be on the market for a while, he advised us to wait, and I'm glad we did."

Paul Tomiyasu, a 1987 Printing Production Technology graduate, says, "One reason Mike Kleper is such an outstanding teacher is because he understands deaf students and has great patience with the difficulties that many of us have in communicating."

As testament to the trust that Kleper engenders, Tomiyasu phoned him via TDD from his home in Hawaii for help with the Kodak Keeps System, which he uses in his job as duplicating equipment operator/supervisor with the U.S. Army Western Command in Honolulu.

Besides working as a full-time faculty member and a consultant to industry, Kleper also acts as a consultant for NTID programs, ensuring that curricula and equipment are up-to-date and graduates marketable. As an outgrowth of these activities, he was asked by Dr. Thomas Raco, assistant dean/director of the School of Visual Communication Careers (SVCC), to chair the SVCC-EDP Development Team, which is charged with investigating the latest technologies in desktop publishing and ascertaining future directions for the school.

Last year, under Kleper's leadership, the EDP Development Team created a one-time-only Special Topics course for students from SVCC's departments of Applied Art, Photo/Media Technologies, and Printing Production Technology. Designed to integrate all three technical departments, the course was created to find ways of cross utilizing the school's resources. A major byproduct of the course was a four-page newsletter, *Laserworx*, produced by the combined talents of the students.

Because planning for the future is vital for educators in this mushrooming field, SVCC faculty members have been examining the school's future relative to emerging technologies. To ensure that NTID's curriculum is current, Kleper devised a five-page list of job skills as part of a 40-page feasibility study. The consensus showed that 78 percent of the skills identified currently are taught at NTID.

Commenting on this, Raco says: "Mike has emerged as a leader at NTID, and has contributed to the examination of where the Institute should position itself as an

academic institution. As educators of future employees, we must continue to develop cooperative relations with industry. Mike succeeds in getting donations and convincing industrial leaders that the Institute is teaching the skills they need."

One measure of Kleper's success can be seen in the more than one-quarter of a million dollars worth of equipment donations from industry for which he is responsible. Raco has accompanied him on visits to industrial leaders and says, "Mike's credibility as a nationally acknowledged authority serves NTID well. His reputation can get him through the front door at many industries. And once he's inside, they listen to what he says."

Kleper recalls the time in 1984 when he was invited by Frank Romano, a leading editor and publisher of *Typeworld*, a trade publication, to address 600 members of the National Composition Association (NCA), one of the few trade associations in the typesetting field.

As keynote speaker, Kleper prepared 16 typewritten pages and two trays of accompanying slides. Two days before the presentation, Romano called and told him to limit the speech to 30 minutes, which meant reducing the speech and number of slides by half.

Frantic and incredulous, Kleper sought sympathy from his wife, who commiserated, saying, "What kind of friend would do such a thing?"

Despite his pique, Kleper made the necessary cuts. When his time came to speak, he was astonished to find himself the subject of a *This is Your Life*-type presentation, in which his wife and in-laws had collaborated. Following the event, he received the Distinguished Service Award to the Typing Industry, given to only eight people in the 25-year history of the organization.

Award winners are selected by the NCA's Executive Committee on the basis of such criteria as contribution to education, industrial involvement, dedication, and length of service.

Romano seems to enjoy the recollection of the event as much as Kleper, whom he describes as "a Renaissance man."

"He teaches, writes, experiments with technology, and handles production," he says. "He uses most of the PCs [personal computers] and is ahead of everyone else. He reads everything, and when he finds something new, he tracks it down."



A Platinum Anniversary: NTID turns 20

In the beginning, there was only a dream. Deaf people wanted the same opportunities as their hearing peers to contribute to society.

While educational programs in technological fields were becoming increasingly available to hearing students in the 1960s, there were none specifically designed for their deaf counterparts. Without such skills, employment opportunities for deaf people became scarce, and those who were employed found themselves in unskilled or semi-skilled jobs.

Then, in 1965, Congress enacted the National Technical Institute for the Deaf Act, mandating the establishment of a facility for postsecondary technical training and education for deaf people.

"This institution," proclaimed President Lyndon Baines Johnson as he signed the bill into law June 8, 1965, "will help to meet the needs of hundreds of deaf young people, both students and adults, who want to be and can be trained in various technical occupations and placed in very useful careers."

A National Advisory Board was formed to oversee the establishment of the National Technical Institute for the Deaf (NTID). In 1966, after careful review of 15 applications from colleges and universities throughout the nation, the board selected Rochester Institute of Technology (RIT) as the sponsoring institution for the newly created NTID. The first group of 70 deaf students arrived on the RIT campus to begin their studies in September 1968.

Twenty years later, NTID is the world's largest technological college for deaf students. Together with 13,000 of their hearing peers, more than 1,100 deaf students from all 50 states, the District of Columbia, and several U.S. territories study and reside on the RIT campus. The National Advisory Board now is

called the National Advisory Group, and advises NTID's director in formulating and carrying out policies governing the operation and direction of NTID.

A milestone such as a 20th anniversary cannot go unsung. This year, NTID paused to look at its historic past and to gaze toward the future at the many challenges that lie ahead.

Here are some of the ways in which the Institute celebrated...

Convocation

When Dr. Robert Frisina, vice president and secretary of RIT, assumed his post as the first director of NTID in 1967, the experiment he and NTID's other pioneers faced was, "Can we develop an educational program that will produce young men and women who will be competitive in the open marketplace?"

This year, "A Convocation in Celebration of Twenty Years of Learning and Teaching" attempted to measure the success of that experiment through a series of presentations and informal discussions on the past, present, and future state of the Institute.

The celebration, held February 22 and 23 under the direction of Dean James DeCaro, took several forms. Selected faculty members were invited to write papers that focused on the challenges facing educators of deaf students, to be presented in three plenary sessions. In addition, groups of faculty and staff members offered informal presentations on a variety of topics related to teaching and learning at NTID. Finally, core groups provided an open forum for all faculty and staff members to discuss and evaluate the presentations.

In the first plenary session, Professors Emeriti Dr. Loy Golladay, Edward Scouten, and Robert Panara directed their remarks to faculty and staff mem-



A new era begins President Lyndon Baines Johnson signs the National Technical Institute for the Deaf Act into law June 8, 1965.

by Susan Cergol

bers of the year 2018 as they celebrate NTID's 50th anniversary.

"The old gray mare ain't what she used to be, and I think NTID isn't like it used to be a long, 20 years ago," mused Golladay. "The winds of change are blowing."

He suggested that by the year 2018 deafness may be eliminated through medical advancements, such as cochlear implants, chromosomal manipulation, and the early intervention made possible by amniocentesis. Or, perhaps there will be more hearing-impaired people because of the effects of noise pollution in an increasingly mechanized society.

Whatever changes the future brings, Golladay suggested, "NTID should continue to strive for improving its teaching methods and communication technology."

Scouten predicted that NTID will expand its leadership role in educating deaf students to include "the entire field, from early childhood education through the secondary level," stressing the importance of English education for prelingually deaf students.

Panara put the educational process into a technological perspective. He described NTID's "high-tech" classroom of the future, which will feature a multimedia, visual approach to teaching.

"But," he asked, "will the teacher function like a TV analyst who reports the facts, or will that teacher have full control of the learning process?"

While technology promises great advancements, Panara stressed the

importance of teachers in the year 2018 having good sign language communication skills.

"Your goals should be not only to feel at home with [deaf people's] language, with their culture, and with their heritage, but also to become one with them."

The theme of communicating with future colleagues was taken one step further, as DeCaro announced that these three letters, as well as writings by other faculty and staff members, would be compiled into a "pedagogical time capsule."

According to Dr. Christine Licata, assistant dean/director of NTID's School of Business Careers and editor of the time capsule project, its purpose is to "provide faculty and staff members with the opportunity to reflect on the teaching and learning process and to communicate with faculty and staff members of the year 2018."

Approximately 50 pieces are represented in a volume being published by students in the Printing Production Technology and Applied Art programs. Included are letters, poems, photographs, and drawings, all based on the personal experiences of faculty and staff members and all focusing on the teaching and learning process.

On the second day of the convocation, a plenary session offered a retrospective of the past 20 years, first from the students' perspective, then the teachers'.

"Twenty Years of Student Learning and Development" explored some of

the factors that affect the learning process. It was presented by Dr. Barbara McKee, chairperson of Educational Research and Development; Jean-Guy Naud, chairperson of Photo/Media Technologies; Dr. Kathleen Crandall, English specialist in the English Department; and Dr. Jeffrey Porter, assistant dean/director of General Education Programs.

"Many of the ideas that gained prominence during the last two decades," McKee told her audience, "are a result of the recognition and acceptance of a very basic concept: Students bring different strengths and different weaknesses to the learning situation, and different students learn best under different conditions."

Naud gave a brief overview of the reasons RIT was chosen to host the newly legislated National Technical Institute for the Deaf, noting its "rich history in vocational and technical education" and its "large cooperative education program."



A glimpse at the past Above, Robert Panara teaches one of the first NTID classes at the original downtown campus in the late 1960s; right, Dr. Robert Frisina, NTID's first director, signs during an early meeting of the National Advisory Group; and top right, Lady Bird Johnson and Frisina in 1974 dedicate the newly constructed Lyndon Baines Johnson Building.



Communication skills and the acquisition of language were the focus of Crandall's comments. "As students began to attend NTID," she said, "a primary concern was whether young deaf adults could, in fact, further develop their communication skills."

She drew the conclusion that "language is acquired through communication, and learners must use a language to learn it."

Porter noted that the educational process should address all aspects of student development: academic; intellectual; ethical; cultural; and social, including both personal identity and interpersonal skills.

These needs have not changed over the last 20 years, he believes, but the Institute's responses to them *have*. For example, faculty and staff members continue to seek ways of developing a more complete understanding and appreciation of deafness, and many deaf students are finding strategies for meaningful integration within the total RIT population.

Dr. Joan Stone, associate professor in the Department of Physics and Technical Mathematics, presented the teachers' point of view with "Twenty Years of Teaching and Learning." Prepared with Mary Lou Basile, associate professor in the Business Occupations Department; Frederic Hamil, chairperson of Applied Science/Allied Health; Jack Slutzky, professor in the Visual Communication Support Department; and Rose Marie Toscano, assistant professor in the Liberal Arts Support Department, this presentation outlined the changes NTID has gone through in response to technological advances, needs of a growing student population, and its own evolving sophistication as an educational system.

"NTID began 20 years ago as a brave and radical social experiment," said Stone. She reiterated that the challenge was to find ways of teaching deaf students that would "prepare them for employment in technological fields at the same level as their hearing peers."

"Our charge is to change the status quo for deaf youngsters in the United States," she concluded. "There is something radical about that, and it perhaps requires radical methods of education to achieve it."

"Over the past 20 years, our methods gradually have shifted to be more consistent with our purpose. Our task is to prepare students to work and, through that work, to change the world. That is independence, and we should ask no

less for our students or for ourselves."

The final plenary session featured "Prospects for Miguel: The Story of NTID in 2008." Written by Dr. Kenneth Nash, research assistant in the Office of Postsecondary Career Studies and Institutional Research, this paper looks at the changing demographics of the U.S. population over the next 20 to 30 years.

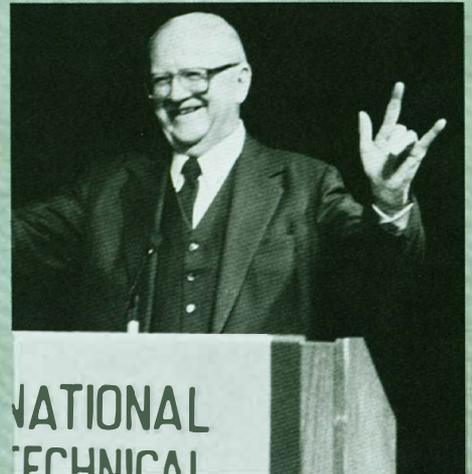
"What do we know about the educational, social, and economic circumstances of this emerging population," asks Nash, "and what are the implications for NTID?"

Minority groups will become the majority, Nash suggests, as black and Hispanic populations grow at a faster rate than the white population. Given statistics that show an increasing number of people living in poverty, he predicts, "There will be a few people well educated and well off, and there will be a larger number of individuals who are poorly educated and living in poverty."

Twenty years from now, in 2008, proportionately more students seeking entry to college will have lower achievement levels than students today. Accord-

ing to Nash, the challenge is, "Will they qualify for postsecondary education? And when they enter our classrooms, how will we educate them?"

Since the overall population will be growing older as people in the "baby boom" generation approach old age, Nash predicts that an increasing amount of the country's financial resources will be committed to that segment of society. NTID will need to improve—and prove—



Celebrations and Convocations Clockwise from top left, Dr. Barbara McKee makes a point about the different ways in which students learn; Dr. Loy Golladay at the first plenary session of the Convocation; ABC news anchor Peter Jennings signs autographs after his address; guests enjoy fine art and refreshments at the Gala Evening of the Arts; a scene from Last Dance, an original play written in honor of the 20th anniversary celebration; and Distinguished Alumnus Award winner Gerald Isobe at the Homecoming picnic.

its effectiveness in educating deaf students in order to compete for those resources.

Also on the second day of the celebration, groups of faculty and staff members presented two sets of workshops that provided a forum for information sharing and discussion. These 10 concurrent sessions examined the teaching process from the pre-college student to the graduate, exploring the many stages in between.



Perhaps the most thought-provoking component of the convocation was the core group concept, designed to encourage active participation in a small group setting. Participants met several times throughout the day to consider their individual contributions to the Institute in the context of past successes, challenges they will face, and predictions for the future.

"I learned from those who have been here longer than I," says Melinda Hopper, Student Life cross-cultural educator, who facilitated one of these groups. She welcomed the opportunity to share her feelings, thoughts, frustrations, and successes with colleagues.

"We felt safe to explore our differences in these small groups," agrees Robb Adams, career development counselor in the School of Science and Engineering Careers. "We realized that although NTID isn't perfect, our efforts are worthwhile—the struggle is worth it."

All the core group responses were compiled and presented in a final, large group gathering. In general, participants agreed that NTID has come a long way toward reaching its goal of providing quality education to deaf students. But as always, there is more to do.



In closing, DeCaro named the three qualities that he believes will make NTID successful in the future.

"When our contributions to teaching and learning are assessed in the year 2018," he said, "the words of Virgil should ring true: 'Experto credite'—'Trust one who has proved it.'"

"NTID should be trusted because it has contributed in significant ways to improving the circumstances of deaf people; because of excellence, integrity, and credibility."

Homecoming

Alumni came home this year to a special celebration honoring the Institute's 20th anniversary. Homecoming Weekend and 20th anniversary celebration, held April 13-17 as part of RIT's Alumni Weekend, featured a reception and juried alumni art show, an original theater production, a presentation by ABC news anchor Peter Jennings, a banquet, a picnic, and the annual Distinguished Alumnus Award presentation.

The Gala Evening of the Arts celebrated the work of deaf artists highlighted in the *20th Anniversary Alumni Art Exhibit*. The juried exhibit, on display in the Switzer Gallery throughout the month of April, featured work by alumni of NTID's School of Visual Communication Careers and RIT's Colleges of Fine and Applied Arts and Graphic Arts and Photography.

A highlight of the gala, to benefit the NTID Creative Arts Scholarship Fund, was the awards presentation ceremony. Steven DeShetler, a 1978 graduate of RIT's Graphic Design program, received the Elaine P. Wilson 20th Anniversary Award of Excellence for his series of promotional pieces created for General Motors.

In addition, awards of merit were presented to five artists working in a variety of media: The Arnold and Frances Daulton Award to Chuck Baird; The Robert and Joanne Gianniny Award to Ned Behnke; The Leland and Darol Nance Award to Wendy Maruyama; The Edward and Mildred Cruickshank Award to Patricia Mullins; and The Milton and Ray Ohringer Award to Ron Trumble.

Following the awards ceremony, guests enjoyed a theater presentation featuring *Sunshine Too*, NTID's performing arts ensemble; and *Last Dance*, an original play written in honor of the 20th anniversary by Dr. Bruce Halverson, acting chairperson of the Performing Arts Department.

ABC news anchor Peter Jennings had a homecoming of his own as he returned to NTID for a third time April 15.

"I always feel I'm coming back to family," Jennings told students.

His interest in the deaf community stems from his affiliation with ABC, which was the first television network to use closed captions with its newscasts. He joked that now CBS also offers closed-captioned news "with that other fellow," but is genuinely pleased that world news has become more accessible to deaf people.

Jennings' presentation, sponsored by NTID's Special Speaker Series, focused on "A Matter of Influence."

He discussed the changing role played by the United States in world politics, the growing influence of Islam throughout the Middle East, the potential for "nuclear blackmail" by terrorists from nations with nuclear weapons, and the influence that illegal drugs exert on the minds of young people everywhere.

Jennings particularly was impressed with last spring's "revolution at Gallaudet" and its influence on the hearing community.

"The impact," he said, "was fantastic."

In honor of the special anniversary celebration, the traditional homecoming brunch was replaced with an evening reception and banquet April 15. More than 100 alumni and their families were reunited with old friends at this benefit for the NTID Alumni Scholarship Fund.

The Rev. Lawrence Mothersell, professor in General Education Instruction, was on hand to offer the invocation. This was followed by a slide presentation of past NTID activities and events, along with remarks by DeCaro.

The NTID Alumni Chapter of Rochester sponsored the reception and dinner.

On Saturday, April 16, NTID alumni, faculty and staff members, and their families were treated to a homecoming picnic in the courtyard and first floor street of the Lyndon Baines Johnson Building.

While guests munched on hot dogs, salads, and other picnic fare, they enjoyed musical entertainment by the NTID Timestompers and performances by *Sunshine Too*.

After all had the opportunity to mingle with old friends, DeCaro presented the Distinguished Alumnus Award to Gerald Isobe, a 1976 graduate of RIT's College of Business.

Isobe, a supervisory operating accountant with the U.S. Air Force in Hawaii, was honored for outstanding achievement in his field as well as for continued efforts to support and improve the lives of deaf people.

Special Presentation

A special tribute was made to Professor Emeritus Panara May 19 in honor of his outstanding contributions to the Institute.

"We declare at this moment," announced NTID Director William Castle, "that the NTID Theatre will be known as the Robert F. Panara Theatre."

Visitors to the theatre now are greeted with plaques that read, "Teacher, author, actor, poet ... Robert F. Panara was RIT's first deaf faculty member; founder and first chairman of NTID's Department of English; and founder and first director of NTID's Experimental Educational Theatre Program."

"Professor Panara's two decades of service to NTID at RIT, and his firm belief in the talent and potential of young deaf people, will always be remembered by those with whom he has shared his wisdom and vision."

Panara was pleasantly surprised by this announcement. "It is the highlight of my professional career," he says, "knowing that there is a place named after me in which I enjoyed so many pleasurable experiences working with students and colleagues."



Thank you A surprised Panara offers thanks while his wife, Shirley, reads the plaque dedicating the newly named Robert F. Panara Theatre in his honor.

Also on May 19, the National Advisory Group honored Castle's dedication and commitment by presenting him with a special commemorative certificate. Castle, one of NTID's founding pioneers, celebrates his own 20-year tenure with NTID this year.

"I am deeply touched," replied Castle, adding humorously, "Who would have thought, when I was hired 20 years ago on April 1, that I would indeed turn out to be an April Fool?"

"The 20 years I have spent here at NTID have been the most gratifying in my life," he continued on a more serious note. "Not only has my experience here been an important part of my professional expression, but it has given me the opportunity to develop a wonderful friendship with all of you who sit in this audience, and all who have come before you as students, faculty and staff members, and members of the National Advisory Group."

"It all adds up to be the most important activity of my life—and I want to continue it."

Twenty years ago, there was only a dream. Because of educational opportunities provided by NTID that dream has become a reality.

"Many, many things have developed over the last 20 years that weren't in place before," says Castle. "Deaf people are profiting considerably from that."

Panara, a member of the original National Advisory Board that drafted the guidelines for the establishment of NTID, agrees. "Deaf students now have a choice of career opportunities, which is just what the National Technical Institute for the Deaf Act was intended to do."

He points to the greater awareness hearing people now have of deafness, thanks to the integration of deaf and hearing students on the RIT campus. Because of this integration, NTID was challenged to create support services such as interpreters, notetakers, tutors, and captioned films and television programs.

"All this," says Panara, "never would have happened if NTID had not been created."



Move over Dr. Jack Clarcq has a special message for the Institute's Space Committee.

Remember When...

The year was 1968, and the newly created National Technical Institute for the Deaf was on the brink of an experiment that was to have far-reaching effects on the educational horizons of deaf people.

As the first group of 70 deaf students prepared themselves for study at RIT, Dr. Robert Frisina, NTID's first director, pulled together the faculty and staff members who would make the experiment work.

"We absolutely had to have people who could work cooperatively on behalf of this new institution and the students it was intended to serve," says Frisina, now vice president and secretary of RIT.

He found 35 such people, and the wheels of history were set in motion.

This year, as the Institute celebrates two decades of educating deaf students, four of these early pioneers reflect on their own special memories.



"I have had several memorable moments in my 20-year experience at RIT," says Dr. Jack Clarcq, associate vice president and director of Technical Assistance Programs.

"The most poignant memories relate to my connections with graduates. I have had the opportunity to share in their successes and frustrations, meet their families, and visit them in their work settings. I always walk away with the sense that we have made a difference in their lives. I see deaf young adults who entered RIT as highly motivated, inquisitive, and bright individuals blossom into mature, responsible, and thoughtful adults.

"This, to me, is what we are all about, and to have played a small part in this history, in their history, is an important part of my life."



Jean-Guy Naud, chairperson of Photo/Media Technologies, remembers a humorous event from his and Clarcq's past.

Before the Lyndon Baines Johnson Building was constructed in 1974, NTID faculty and staff members continuously were forced to move from one building to another in search of more office space.

"I have a slide of Jack Clarcq driving a big, yellow Ryder truck on one of those occasions," says Naud, "with a caption directed to the Institute's Space Committee.

"I'm saving that slide for the time when Jack retires and needs a memento of those early years."

Naud also recalls his introduction to sign language idioms.

"I gave a photographic assignment to my class," he says, "to do an exposure series, photographing the same subject at various camera settings. It was important that the assignment be done in sunlight.

"I signed 'Make sure that the sun is out.' The sign I used for 'out' is the opposite of 'in.'"

When the exercise was completed, Naud discovered that "all the students did the assignment on a cloudy day, because the sun was 'out'—'turned off!'"



"One thing I remember when I first started at NTID," says Alice Beardsley, interpreter training specialist in Support Service Education, "was constantly being interrupted by students while I interpreted a lecture to ask if I was deaf. After about six weeks I decided to let them know about my past and why I signed so much like a deaf person."

Born hearing, Beardsley became deaf at

the age of 5. Many years later, as an adult, she regained her hearing as the result of an ear operation. In 1975, however, a second ear operation left her deaf once again.

Beardsley also remembers a special honor paid to her in 1975.

"I had interpreted for students at their annual NTID banquet since 1970," she says. "At their banquet in 1975, they decided to name the Professional Interpreter Award and the Student Interpreter Award after me. They became known as the Alice Beardsley Interpreter Awards.

"It was the greatest honor I ever received."



NTID played an important role in the personal life of Dale Rockwell, associate professor in the Department of Applied Science/Allied Health.

"When I joined NTID in September 1968," he says, "my office was a little cubicle in the College of Engineering.

"The following January, I met a young, energetic woman named Rosalie Viener whose cubicle was just three doors down from mine. I discovered that she was hearing impaired too, so we began to spend time together.

"After a few coffees and lunches, Rosalie and I embarked on our first formal date on February 14, 1969. We had dinner, then went to a movie—during which she fell asleep!

"Several coffees and a few months later, we got married—on June 14, 1969. On August 14 of that same year, I celebrated my 32nd birthday. For obvious reasons, "14" became our lucky number.

"We have the honor of being the first deaf faculty members to meet at NTID, and then marry."





mainstream team strategy: SUPPORT

by Lynne Bohlman

Part of Andrew Brenneman's bachelor's degree in Business Management belongs, he says, to the NTID Business/Computer Science Support Department.

Brenneman, a 1988 College of Business graduate who was born deaf, probably could have managed to graduate from RIT without the support of advisors, interpreters, notetakers, and tutors, he says, but only if he had given up everything else—and even then, he's sure he would have received a much lower grade point average than the 3.46 he did earn.

Brenneman was one of more than 250 NTID students cross registered in another of RIT's nine colleges last spring. That's about 20 percent of the NTID student population and 2 percent of RIT's.

"That's the largest number *and* percentage of deaf students fully matriculated in another college of RIT in the history of NTID," says NTID Dean James DeCaro.

"Through the creativity, persistence, and energy of support faculty and interpreting staff members," he says, "we've seen that number and percentage increase at the same time that expectations and competition have gone up. RIT continues to upgrade its requirements, and SAT [Scholastic Aptitude Test] scores of hearing students are considerably higher than they were 20 years ago."

Cross-registered students aren't the only ones from NTID to enroll in RIT courses. Almost 700 deaf students take some of their required courses at other RIT colleges. Thus, the percentage of deaf students taking at least one course in another RIT college leaps to 79 percent of the NTID population and 7.5 percent of RIT's.

When NTID students enroll in RIT courses, support services in the form of interpreters, notetakers, tutors, and advisors are available to them. These services are provided through and coordinated by the Department of Interpreting Services and the four academic support departments: Business/Computer Science; Science/Engineering; Visual Communication; and Liberal Arts, which includes Social Work/Criminal Justice and General Education Instruction.

NTID's goal, says DeCaro, always has been to see its students achieve their fullest potential, and if that potential means earning a baccalaureate degree, then support services are available to aid them in doing so.

"NTID was established in a hearing environment so that deaf students could work with hearing students and enjoy the same opportunities that they do," says Dr. Rosemary Saur, chairperson of Science/Engineering Support.

"NTID provides a whole series of options from self-contained technical programs to complete mainstreaming," she says. "The goal is to provide as many options as possible."

Mainstreaming has existed at RIT since the establishment of NTID in 1968, long before the 1975 passage of Public Law 94-142, which makes the concept of "least restrictive environment" a goal for providing education to disabled children.

Despite years of practice at mainstream education, RIT still is working to perfect it.

"We've been here for 20 years and we still find ourselves changing to meet the needs of our students," says Mark Rosica, Visual Communication Support chairperson, adding, "I also think we're the best thing going."

Part of what makes mainstreaming at RIT "the best thing going" is the realization that it is a team effort, that all members must be responsible for their roles, and that it requires a lot of hard work.

"If all the players are willing to do their part, we can accomplish anything," says Richard Orlando, chairperson of Business/Computer Science Support.

The star "players" are, of course, the students, many of whom take preparatory classes at NTID before enrolling in other RIT colleges. Although research conducted by NTID's Office of Post-secondary Career Studies and Institutional Research reveals that cross-registered students—those fully matriculated in other RIT programs—have higher graduation and lower attrition rates than do those who take only NTID courses, their academic performance demonstrates the same range of levels, from those who struggle to keep up to those who win prizes for outstanding performances.

Often, a lot of pressure exists for students to be mainstreamed, Saur says, but the decision to go mainstream or not needs to be made on an individual basis, and students need to evaluate their strengths and weaknesses honestly and accurately.

"Some students have unrealistic expectations," says Michael Kane, who earned his bachelor's degree in Accounting in May. "They think it will be easy, but it's a real challenge.

"Deaf students have to do more work than hearing students—they have to get notes from notetakers, schedule appointments to see tutors, and study longer," says Kane, who selected RIT over another college because of the availability of support services.

Since deaf students have an extra responsibility as support service consumers, Rosica says, generally they have "a passion for what they're doing; they have a common need to excel."

Brenneman certainly does. "I thrive on competition and challenge," he says. "To succeed in the mainstream, you have to have a fire inside of you—a burning desire."

Another important player in a successful mainstreaming situation is the instructor.

"The teacher who handles the integrated class well," says Saur, "is a good teacher generally, one who pays attention to all students, draws them into discussions, and knows them all.

"It's less a matter of being able to teach deaf students than it is of being a good teacher, period."

Thomas Upson, professor of mathematics in RIT's College of Science, feels that his role as teacher, leader, and facilitator of learning is no different in an integrated classroom.

"Deafness is an issue," he says, "in the sense that I'm aware of it, but it's not a problem; it's not a constraint on what I do."

Indeed, says Upson, who has taught college mathematics for 25 years, having deaf students in his class in many ways has made him a better teacher.

"As the years progress," he says, "you fall into patterns of teaching. Having deaf students made me question my teaching techniques.

"In integrated classrooms, teachers tend to be more conscious of pedagogical issues."

Upson now incorporates more visual clues, reminds students that no question is "dumb," uses more detail in his explanations, and makes sure examples he uses are relevant—techniques that benefit all students.

"When I say something important," he adds, "I place myself in line of vision with the interpreter."

Interpreters are the most visible sym-

bol of support services and, says Liza Orr, director of Interpreting Services, they are the bridge not only between two different languages, but two different cultures as well.

Whether they interpret for a class that has one deaf student or eight, these "cross-cultural mediators" facilitate communication between teacher and students.

While interpreters provide a necessary communication link, research has found that they ironically may contribute to a sense of separateness among deaf students. In order to see the interpreter clearly, students must sit together in the front of the classroom.

In addition, *Academic and Social Mainstreaming: Deaf Students' Perspectives on Their College Experiences*, a qualitative study done by Drs. Susan Foster and Paula Brown, both research associates, finds that the unavoidable time lag between the teacher's message and the time the student receives it through the interpreter often prohibits students from participating in class discussions. Deaf students sometimes hesitate to ask questions because they fear the class already has moved on to another topic, making their question appear "dumb."

Despite these inherent imperfections in the process, says Orr, interpreters are "beginning to understand and act in ways that demonstrate that interpreting is more than the passing back and forth of signs or symbols."



Teamwork Opposite page, Andrew Brenneman and notetaker Kelly Schojan pay attention in class; right, Dean Santos, staff chairperson in Social Work Support, in background, sits in on a class taught by Marshall Smith, associate professor.

Often, interpreters and deaf consumers must work together as guides to effective communication for hearing people, she says. And often, deaf people are so new to the process themselves that the responsibility lies completely with the interpreter.

"We come from a mechanistic model where the interpreter is detached," Orr notes. "Now, we understand that interpreters need to relate more with consumers."

"When appropriate, we see interpreters as part of an educational team that includes teachers, notetakers, and tutors."

Some students, like Kane, believe interpreting is the most vital of the support services. He finds interpreters necessary in order to participate in class. Others, like Brenneman, place more value on other services, such as notetaking.

Notetakers provide equal access to classroom information in written form and free deaf students from having to keep their own notes.

"Without notetakers," says Jimmie Wilson, coordinator of Tutor/Notetaker Training, "one student described the classroom experience as 'visual whiplash.' He had to turn his head from the teacher to the interpreter to the board to his notes."

The 250 full-time RIT students who serve as notetakers do more than provide notes, however.

"Notetakers are real advocates—they're a link between the general hearing population and NTID," Wilson says. "They learn to think of students as individuals, and not as one stereotyped group."

While a small number of notetakers also serve as tutors in some support departments, most tutoring is done by faculty members well versed in their discipline. Most often done on an individual basis, some tutoring takes place in small group sessions.

Thomas Callaghan, visiting instructor in Science/Engineering Support, tutors students in math and engineering and manages notetakers in the department.

As a tutor and advisor, a large part of Callaghan's goal is to work himself out of a job. Underlying everything the department does, he says, is the goal of making students less dependent on support services. While students always may need the basic services, such as interpreting and notetaking, support departments aim to make students independent.

"We encourage students to develop survival skills so that they can succeed in tough engineering programs as well as in the outside world," Callaghan says.

Rather than serve as a go-between for students, support department faculty members encourage them to develop the self-confidence to be assertive.

"The student needs to learn to approach teachers," says Saur, "to ask questions, and to say diplomatically, 'You talked to the blackboard for most of the hour today. I would appreciate it if you would face the class.'"

"We try to instill in students the awareness that if they have a problem with an instructor, it's their responsibility to try to work it out. We try not to get in the middle."

In working with students, Callaghan, who also is deaf, shares his experience as a student at the University of Massachusetts, Amherst, where there were no support services. He received his bachelor's degree in Civil Engineering in 1972 because he educated himself, borrowed classmates' notes, and had his mother transcribe lectures from a tape recorder he used in some courses.

Now, working part time on his bachelor's degree in Mechanical Engineering, Callaghan says, "It's a blessing to be at RIT, because with the basic support services I can keep up with the class. I know what's happening."

In 1987 at RIT, many other students used those basic services as well: 57,114

interpreting hours were logged; 35,592 notetaking hours; and 13,556 for tutoring.

In addition, during the past year, support departments have worked together with NTID's dean and RIT's provost to facilitate the registration process for deaf students—the first recommendation of the Task Force to Optimize Support Services to be implemented. Now, early registration for designated courses is an automatic request for interpreting and notetaking services.

But support departments do much more than coordinate those basic services, and even more than counseling and advising.

Serving as a home base for students, support departments are a place of refuge, a place where students can find the help they need and people who understand them and deafness.

Support department faculty members also serve as instructors in RIT courses, some of them open only to deaf students. Liberal Arts Support faculty members teach all-deaf sections of RIT's required writing course as well as two preparatory NTID courses in which students first can improve writing skills.

Dean Santos, staff chairperson in Social Work Support, shadow teaches a course with an RIT faculty member. Santos observes the class and if he notices that

deaf students are not following the discussion, he intervenes and recaptures what has been said in a way that may be easier for them to understand.

The Social Work Support Team is unique in that it works more closely with RIT faculty members than do other departments. While other support departments work to sensitize RIT faculty members to deafness, usually on an informal basis, Social Work Support faculty members are considered an integral part of the larger department, and participate in weekly staff meetings and curriculum development.

"We can effectively sensitize faculty members to the needs of deaf students," Santos says, "because we do have a close working relationship."

"Every week in department meetings, support staff members raise issues about the needs of deaf students."

For other support departments, the relationship with RIT faculty members can be more tenuous. It often is a thin line between orientating faculty members to working with deaf students and infringing on their academic freedom and right to direct their classroom as they see fit.

Students and support staff members generally agree, however, that one of the most common problems of mainstream-

ing at RIT is the lack of enough understanding of and sensitivity to deafness on the part of faculty members.

"Professors need to be more sensitive to our needs," says Brenneman. "They shouldn't be afraid to talk to us. They'd be surprised to find out how much we're like them."

Not only is there a sense that faculty members should be more sensitive to deaf students, but also more open with and available to them.

"A good mainstreaming experience for students," says Santos, "depends on a good mainstreaming experience for faculty members and an openness at the administration level—it has to work throughout the system. Attitude is the most important and hardest aspect to change—that's why mainstreaming is a constant struggle."

Support departments are working to improve this situation. This fall, Visual Communication Support hosted an orientation program for all interested faculty members in the Colleges of Fine and Applied Arts and Graphic Arts and Photography. The orientation was based, in part, on a program that NTID's National Center on Employment of the Deaf uses to sensitize employers to deafness.



Supporting students inside the classroom and out. Left and top, Visiting Instructor Thomas Callaghan advises a student; center, Michael Kane participates in a business class; and bottom, Mary Ann Begland, associate professor in Fine and Applied Arts, critiques student Whitney Chesser's work with the aid of an interpreter.

The Liberal Arts Support Department is working to make more sign language courses available. While most agree that knowledge of American Sign Language (ASL) could not be fairly required of RIT faculty members, if more ASL courses were available, more instructors might be interested in taking them to develop direct communication with deaf students.

A wider availability of sign language courses also might alleviate another problem associated with mainstreaming at RIT. While academic mainstreaming generally has been successful, social integration has been less so, in part because it cannot be administered.

Socially, mainstreamed students generally prefer to interact with other deaf students, Foster and Brown's research demonstrates, because they can do so with ease, share group identification, and have no fear of rejection.

While acknowledging that other deaf students experience a sense of isolation, Whitney Chesser, a fourth-year student in the College of Fine and Applied Arts, says she has not.

"I'm willing to try to communicate with everyone," she says, "so I don't feel isolated.

"I'd like to see people get together and understand that there are many ways to overcome communication barriers—through sign language and writing."

Often there is a misconception among hearing people, says Saur, that deaf people are responsible for initiating communication and overcoming any barriers.

"When hearing people realize that communication is as much their responsibility as it is deaf people's," Saur says, "we'll have come a long way toward improving the situation."

The Department of Liberal Arts is working to improve the condition of

"A good mainstreaming experience for students depends on a good mainstreaming experience for faculty members and an openness at the administration level—it has to work throughout the system. Attitude is the most important and hardest aspect to change—that's why mainstreaming is a constant struggle."

social integration at RIT, says Dr. Adele Friedman, support department chairperson. Liberal Arts has worked to foster interaction in both directions through its General Education Learning Center programs and by encouraging a campuswide interest in cultural, political, and social programs and activities. The department also has sponsored activities supporting deaf language and culture, such as the National Deaf Poetry Conference held at RIT last year.

Although, in many cases, comfortable interaction between hearing and deaf people has not yet been attained, and other problems remain to be solved, mainstreaming at RIT has been successful in terms of student achievement. It is likely that the support services available

and the ways in which they are offered will not change much in the future; what does need to change, it is agreed, is the degree of acceptance and sensitivity that now exists.

"We know," says Saur, "that there's a lot missing for students, but mainstreaming is a step-by-step process, and changes will need to be made thoughtfully and carefully. We've still got a long way to go."

Yet, without the availability of support services, so much that has been accomplished at RIT would be impossible.

"Without support," says Friedman, "students are set up to fail."

But with those services, students' dreams can become their realities—so says Brenneman, who performed one of his cooperative work experiences with a Wall Street firm.

"Working on Wall Street," he says, "was the fulfillment of an American dream.

"It's very competitive and difficult to get a job, especially if you're a student. How many hearing-impaired people end up working on Wall Street?"

Thanks to RIT and the support services offered by NTID, at least one.



The end result Top, Santos and a student discuss a project; bottom, Brenneman smiles as he's recognized during NTID's Academic Awards Ceremony.



basic

TRAINING

by Vincent Dollard

High technology brings drafting back to basics

Computerized drafting has sparked developments in engineering technologies that are staggering in their speed and proportion.

To faculty members in NTID's School of Science and Engineering Careers, such an environment produces a succinct philosophy—basics. Providing basic skills applicable to a variety of systems and softwares is what drives curriculum decisions within NTID's Construction, Electromechanical, and Industrial Drafting Technologies departments.

The emphasis on basic skill development has been the cornerstone of NTID's engineering programs for the past 20 years.

Dr. Edward Maruggi, professor in the Industrial Drafting Technology Department, has seen NTID's engineering programs grow from 70 students and several manual drafting tables during the early 1970s to its present state of approximately 350 students and a highly sophisticated Intergraph computer-assisted drafting (CAD) system, donated through a special arrangement with Intergraph Corporation.

Maruggi, who began teaching at the Institute in 1971, notes that NTID's Engineering Technologies programs first offered only diplomas, and began offering associate in applied science (A.A.S.) degrees in 1975. Recently, an associate in occupational studies degree was developed.

Prior to the introduction of the "computer age," Maruggi notes that NTID's Engineering Technologies programs did not require extensive new equipment since emphasis was on manual drafting skills, and drafting tables don't need to be replaced on a regular basis.

Since 1982, however, when NTID acquired its first CAD system from Bausch & Lomb, faculty members have stressed "transfer skills" in their basic skill instruction.

"Adaptability is built into our curriculum," says Hugh Anderson, chairperson of NTID's Construction Technologies Department. "We require a broad area of skill development with the expectation that our graduates will



continues specialized on-the-job training."

In addition to a solid background in applicable technical skills, NTID's commitment to providing job training goes beyond specific courses related to one's field of endeavor.

"Our technical curriculum relates to the workplace and to society," says Dr. James DeCaro, dean of NTID. "The curriculum is broadened so graduates are ready to be contributing members of society. For instance, we utilize technical writing courses as a vehicle for teaching language skills."

DeCaro notes that at the base of all education lies the need to impart problem-solving and decision-making skills as well as reading and writing skills.

This philosophy has proven itself, since NTID's associate degree programs in Engineering Technologies recently received accreditation and high praise from the Accreditation Board for Engineering and Technology (ABET).

"We actively sought ABET accreditation," says Marie Raman, assistant dean/director of NTID's School of Science and Engineering Careers. "We first received it in 1981 under Dr. Maruggi's direction. This round of accreditation began in 1985; we were visited by the committee in November 1986; and the final report was released in June 1987."

Raman points out that since the ABET requirements change periodically, and the state-of-the-art in industry changes at the touch of a button, NTID faculty members always have had to remain flexible in modifying curriculum.

Faculty members are not alone, however, when curriculum changes become necessary. NTID Program Advisory Groups, comprised of engineers and drafting supervisors from a variety of organizations, help faculty members stay current with the ebb and flow of constant change.

In addition to advising on matters of equipment, the advisory groups provide information regarding how best to make NTID graduates employable.

Each of the Engineering Technologies departments has a Program Advisory Group, which meets twice a year. A constant refrain that has been repeated throughout the years since CAD hit the scene is one of praise for graduates who have a solid background in basic drafting and computer skills.

"When we first set up the advisory group and sat down with NTID faculty members," says Maurice Brown, a long-time participant in NTID's Industrial



"Three-D" design Patrick Wallin, left, and Jeffery Wheeler, both third-year students in Industrial Drafting, work through an assignment on NTID's Intergraph Interact CAD system.

Drafting Program Advisory Group and senior designer for Milton Roy, an instrument manufacturing company in Rochester, New York, "we looked at the computer age and what to teach these kids. Since keyboarding skills are so important, we told faculty members to include typing in the curriculum."

NTID's drafting curriculum has evolved considerably since the inclusion of keyboarding skills in 1982. Soon after receiving the CAD system from Bausch & Lomb, NTID purchased three more Bausch & Lomb workstations and an additional plotter, which is an output device that produces hard copy from what is stored in the computer.

While it was evident that NTID would never forsake the drafting tables for a totally computer-oriented curriculum, it also was clear that the race for technical competency was in full swing.

In 1986, NTID invested in an Intergraph CAD system, which included 11 *Interpro 32* workstations that feature high resolution color monitors. The department recently added nine Compaq *Deskpro 386* personal computer (PC) workstations that provide an opportunity for PC-based design, which is becoming more and more prevalent as PCs evolve into more powerful machines.

Introducing this equipment into the Engineering Technologies curriculum presents a special set of problems and challenges to NTID faculty members.

Since much of the equipment is state of the art, many faculty members had not previously worked with either the hardware or software.

"Over the years, we've taken a couple of approaches to faculty development in relation to CAD training," says Ronald

Till, associate professor in NTID's Industrial Drafting Technologies Department.

When the Bausch & Lomb system came in, Till became the lead instructor in the department. He took formal training courses at Bausch & Lomb offices in Rochester and, in turn, provided instruction to the rest of the faculty members.

With the introduction of the Intergraph system, the learning process for faculty members had to be slightly adapted. Because of the sophistication of the system, training is specified depending on application of the machines.

Till and Gail Gabriel, software specialist in NTID's Systems Development and Operations Department, traveled to Huntsville, Alabama, where the Intergraph home offices are located, for training on and general knowledge of the system. An Intergraph instructor then visited NTID to train 12 faculty members on usage of the hardware with general software packages.

Following that instruction, those 12 faculty members traveled to Huntsville for more intensive training in their specific areas of expertise.

While every college provides training for technical faculty members in order to remain current with the latest developments in computer hardware and software, Raman points out that staying "at the cutting edge" means a substantial amount of outside work.

"It's a lot to demand of faculty members," she says. "They participate in a variety of professional organizations from which they gather ideas and information regarding trends and advances in drafting technology. It's essential that we encourage that activity," says Raman.



One on one Hugh Anderson, associate professor in NTID's Construction Technologies Department, discusses computerized drafting with John Brown, a third-year student in Industrial Drafting and student assistant in the CAD Lab.

Julius Chiavaroli, associate professor in Construction Technologies and CAD manager, has a fairly simple formula for staying current with CAD software developments.

"To be able to teach it, you have to know it," he says. "To know it, one needs to use it."

Chiavaroli says that after the initial formal training, faculty members had to spend time on the machines to familiarize themselves with the complexity of the system. He estimates that in order for someone to stay current, it takes "several hours a week to sit down at a terminal and draw on the machines."

In addition to the responsibility of learning how to use the equipment, faculty members are faced with the question of how best to present information about these machines to students.

"I can't say enough about our instructional developers," says Till in reference to NTID's support team for faculty members. "CAD is a complex system and the instructional developers continue to work with our technical faculty members on methods of putting this information into a format that is accessible to our students."

Instructional developers work with faculty members to provide students with an appropriate progression of information that is graphically represented in order to remain academically challenging yet commensurate with students' skills.

"We feel strongly," says Till, "that the bottom line for us is delivery of instruction. We need to look at how best to get there because our job is to put our students into a position where they can compete in the marketplace."

Recent changes in that marketplace

different software, which is why transfer skills are so important.

An integral philosophy behind curriculum development in the Engineering Technologies departments is the computer's relationship to the profession: The computer is a tool that, with a solid knowledge of one's chosen field, can be used to great advantage.

"One important point we make in all our engineering courses," says Chiavaroli, "is that, unlike some colleges where students are trained in computer graphics, we offer technical degrees in architectural, industrial, or civil engineering. We stress that the computer is a tool to be utilized."

As a result, students begin their drafting courses at an "old-fashioned" manual drafting table. While many students come from high school with keyboarding skills as well as some CAD skills, only 20 percent of their drafting time is spent on CAD in their first year. The majority of their drafting is done manually in order to provide an understanding of the design and drafting process inherent in the particular engineering discipline.

Feedback from Program Advisory Groups reinforces that philosophy, since engineering firms are finding college graduates who may have an encyclopedic knowledge of computers, but don't have a fundamental grasp of the basics of drafting pertinent to their engineering discipline.

"We have been told that our students have a shorter learning curve," says Till. "They generally have a solid foundation of computer and technical skills. If a graduate can combine those two properties, then he or she has got a dynamite package for an employer."

Ernie Roosevelt, manager of Radar Systems Department Drafting for General Electric in Syracuse, New York, and a member of NTID's Program Advisory Group for Industrial Drafting, provides a straightforward response to questions regarding future curriculum developments.

"Make sure your graduates know the basics," says Roosevelt. "CAD is here to stay and it will continue to proliferate in industry, but make sure you don't become so enchanted with the computer that you don't teach these kids how to draft manually."

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Regardless of how advanced a system NTID might buy to train its students, says Till, chances are that when they graduate and move into industry, they will find a different CAD system with

campfires & KEYBOARDS

by Susan Cergol

Despite an outstanding record, Allen Conner considers himself "just a normal guy."

"Normal" for Conner, a second-year student, includes being the first Boy Scout in 24 years from the Rochester School for the Deaf (RSD) to achieve the rank of Eagle Scout, graduating from RSD as 1987 class valedictorian, and earning a place on NTID's dean's list.

Conner is pursuing a three-year associate in applied science degree in Data Processing, and plans to become a computer operator "in a company with a large computer center."

His interest in computers can be traced to RSD, where he learned word processing, data base applications, telecommunications, and computer programming on an Apple computer. As more companies utilize computers for business, Conner realizes, there will be an increasing demand for qualified computer operators, and he wants to be one of them.

As he works his way through the NTID curriculum, Conner leaves behind a memorable impression.

"I have so many students each quarter," says Karen Cummings, visiting instructor in the Data Processing Department, "but I do remember Allen—he's one of those students who stands out. He's very serious about achieving his goals."

Another of Conner's teachers echoes this sentiment. "Allen was highly motivated, active in class, and interested in the subject matter," says Charles McLaughlin, assistant professor in Data Processing. "He was a joy to have in the classroom."



Local history in the making: Allen Conner was the first Boy Scout in 24 years from the Rochester School for the Deaf to achieve the rank of Eagle Scout.

David Cox, scoutmaster of RSD's all-deaf Boy Scout troop, believes that Conner's current success can be attributed, in part, to his experience with scouting.

"Scouting ties in nicely with academics and life skills," says Cox, who worked with Conner for six years. "It helps students accept responsibility."

Conner agrees. "Scouting gave me the chance to do things on my own, to face difficulties and work through them."

Conner joined RSD's Troop 29 when he was 12, primarily for companionship with other deaf boys. Although the group participated in many scouting activities, Conner doesn't hide his enthusiasm for one in particular.

"Camping," he says emphatically, "was my favorite part of the whole scouting experience."

The troop members frequently made camping trips to the Adirondacks. In addition, they attended several Regional Camporces for the Deaf in Maryland and Wisconsin, where they met deaf Boy Scouts from all over the country.

That was a significant experience for Conner. "I had never seen another deaf Boy Scout troop until 1985," he says.

In December 1986, while a senior at RSD, Conner made local scouting history by advancing to Eagle Scout, the seventh and highest rank in Boy Scouts.

This is no small accomplishment. According to Michael Miller, special scouting executive of the Boy Scouts Otetiana Council, only 2 percent of all scouts nationwide advance to this rank.

To do so, a scout must earn merit badges in the areas of camping, citizenship, communication, emergency pre-

paredness, personal fitness, and personal management, plus several other optional categories. Conner went beyond the call of duty, earning five more badges than the required 21.

In addition, a scout must serve as a youth leader within his troop by planning, coordinating, and carrying out a community service project. In Conner's case, this involved a total of 100 hours of painting classrooms on the RSD campus with several other scouts in his troop.

"It was an honor for me to make Eagle Scout," says Conner. "It was hard work, but I did it because I wanted my parents to be proud of me."

Conner was showered with both local and national attention for this achievement. He received a citation from President Reagan and was recognized by local, state, and national dignitaries at several receptions held in his honor.

"Allen's hard work and perseverance have encouraged younger scouts to follow his lead," says Scoutmaster Cox. Because of his inspiration, several others from Conner's former troop plan to complete their Eagle Scout requirements.

"I enjoyed being a role model for the younger kids," says Conner. "Now that I'm gone, it's good to see others taking on that responsibility."

Conner grew up in rural Williamson, New York, about 25 miles northeast of Rochester. The youngest of four children, he is the only son of hearing parents, who always encouraged him to be independent.

"We're very proud of him," says his mother, Carolyn.

"He went through a spell of 'poor Allen is deaf' when he was 8 years old," she says. That summer, however, his attitude changed dramatically after spending two weeks at the Rotary Sunshine Camp for children with disabilities in Rush, New York.

"One of the first things Allen saw when he arrived at camp was a physically handicapped, retarded boy turning cartwheels," she says. "It made him appreciate his good body and mind."

Now, Conner focuses on his abilities, devoting most of his time to his studies.

"I like being able to continue my education, to learn more in depth," he says of his college experience. "I also like facing the real world, the adult world, on my own."

While he enjoys his classes at RIT, one change he would like to see on campus is increased social interaction among deaf and hearing students.

"The icebreaker hasn't occurred yet between deaf and hearing people that would bring them together in social situations," he says. "There seems to be a coldness between the two because of the communication problem."

Aside from his busy study schedule, Conner likes to play computer games and basketball. He also enjoys reading, particularly sports magazines.

"My parents used to call me a 'sports nut' because I watched sports on TV all the time when I was in high school. They got pretty tired of that," he recalls with a chuckle.

Conner's interests are varied, but his greatest asset seems to be an inquisitive mind. Recently, in his communication course in the Speech-Language Department, he suggested an unusual topic for class discussion—nuclear fusion.

"I learned about nuclear fusion and how it differs from nuclear fission during my senior year at RSD," explains Conner.

What does that have to do with his chosen field of computers and data processing?

"Nothing," he replies. "I want knowledge, that's all."

But Conner points to the deaf rights protests at Gallaudet University this past spring as a sign of change. He was encouraged by the students' persistence in opposing what they felt were offensive actions and remarks made against deaf people, and feels the incident had a positive outcome.

"In the future," he says, "I hope more and more hearing people will accept deaf people, and that there will be a better integration into one rather than two separate cultures."



Computer whiz Conner works in the computer lab.

FOCUS On...

Elizabeth O'Brien

by Jean Ingham

*Some men see things as they are and say, "Why?"
I dream of things that never were and say, "Why not?"*

Like John F. Kennedy, Elizabeth "Liz" O'Brien, associate professor in Technical and Integrative Communication Studies, is a dreamer. She, too, dreams "of things that never were" and says, "Why not?"

O'Brien dreams of a time when deaf people will be accepted as equals to hearing people.

O'Brien's dreams are slowly, but surely, coming true. She has seen the invention of telecommunication devices for the deaf (TDDs)—"How marvelous this would have been for my parents 40 years ago"—and captioning—"It's so important to keeping deaf people informed of world events."

She has witnessed the computer age and its integration into deaf education—and she has been a part of it.

James Stangarone, associate professor in Technical and Integrative Communication Studies, has worked at NTID with O'Brien for 20 years. "Liz has strong convictions," he says. "When she makes a commitment, she follows through—and she is committed to deaf education."

O'Brien's interest in deaf education began nearly 30 years ago when she taught a political science class as part of her high school's Career Day celebration. After class, her teacher strongly advised her to make teaching her career.

"She said I had the capability and communication skills necessary," recalls O'Brien. "In fact, she further suggested that I consider the possibility of teaching deaf students."

As O'Brien mulled this over, it began to make sense. Raised by deaf parents,

she felt if she taught deaf students, she could help them be accepted in the hearing world.

To start on her journey, O'Brien attended Marylhurst College in Portland, Oregon. From there, she entered Gallaudet College in Washington, D.C. She cites three reasons for her choice: it was one of the few colleges that offered a master's degree in Special Education (Deafness) in 1962; it was her parents' alma mater; and it would place her close to John F. Kennedy—"Well, at least in the same city."

Kennedy had captivated O'Brien when she worked on his 1960 campaign as president of the Young Democrats at Marylhurst. His interest in and caring for disabled people fueled her ambitions.

Another person who added to the fire of her commitment was Dr. Robert Frisina, vice president and secretary of RIT. He was O'Brien's audiology professor at Gallaudet, yet little did she know that he would be instrumental in providing the perfect vehicle for her energies.

In 1967, Frisina was named director of an experiment in educating deaf students on the campus of a hearing college—the National Technical Institute for the Deaf at Rochester Institute of Technology.

While visiting her parents in Rochester, New York, before starting a new teaching assignment at the California School for the Deaf at Riverside, O'Brien met Frisina again. He was the guest speaker at the 1967 commencement ceremonies at the Rochester School for the Deaf, where her father taught.

She remembers her father mentioning that Frisina had been named director of NTID, but she didn't pay much attention. She was too engrossed in the excitement of the challenges her new job held.

However, when Frisina called and asked her to interpret for a meeting of NTID's National Advisory Group, O'Brien obliged. She also interpreted the next day when the group toured the new RIT campus. She enjoyed the experience and found herself caught up in the exciting new direction that deaf education was taking.

"For the first time," O'Brien says, "deaf students would be educated to do more than make shoes or work printing presses. They were going to be exposed to technical experiences formerly reserved for hearing students only."

Later that year, at Christmas, when O'Brien again visited her parents, Frisina called to ask her to interview for a position at NTID. But, he says, "At the



time, Riverside was one of the newest and most highly regarded schools for deaf people. I wasn't sure if I'd be able to lure Liz away."

O'Brien remembers being "flattered and amazed" when he offered her a job. "My first inclination was to refuse," she says. "I'm not a technical person. I don't have any technical training." But she considered the offer because Frisina explained that he wanted her to help organize the support systems necessary for deaf students to learn on a hearing campus.

Well-intentioned colleagues advised her not even to consider the move. They told her it was too risky—such an experiment had no guarantee of success.

But after thinking it over, O'Brien decided to take the risk. She felt it was an opportunity of a lifetime—a chance to get in on the ground floor of a major new approach to deaf education.

She moved to Rochester and began her work at NTID June 15, 1968.

Her initial role involved development of interpreting, notetaking, and tutoring services for NTID students enrolled in RIT's College of Liberal Arts. This new venture in support services initiated at NTID, she says, has been emulated by mainstream programs at all educational levels across the nation.

Later, through the Career Outreach and Admissions Department, O'Brien worked to establish a nationwide recruitment system to inform students, parents, and professionals who work with deaf people about NTID. Through her activities in this program, O'Brien met parents of deaf students around the country—many of whom she still considers good friends.

Many times, O'Brien says, a deaf child is the parents' first contact with deafness, and they don't know how to handle it. Through education, she notes, they find that it's extremely important for the entire family, parents in particular, to support the deaf child.

Currently, O'Brien is co-developer of the Parent Section of NTID's Educational Development Outreach Project, which helps parents facilitate the career development of their deaf children.

She feels so strongly about this parental awareness that she is writing her doctoral dissertation on training programs designed to assist parents with the career development of their deaf adolescents.

"There is a real need for much more parental involvement," says O'Brien. "It is critical to begin career development in the 0- to 8-years-old span. My work



Two decades of dedication Elizabeth O'Brien never tires of being in the classroom.

has convinced me beyond a shadow of a doubt that this is the critical area we need to focus on."

Although she focuses on parent education in her current role, O'Brien still is an active instructor. In her classes, she constantly reminds students that they must prepare for work in a hearing world. The topics she discusses relate to students' chosen fields of endeavor.

In one class of Industrial Drafting Technology students, O'Brien assigned technical writing homework that included a business letter ordering parts for a machine, a memo regarding a staff meeting, and instructions for using a blueprint-making machine.

After the homework was handed back, O'Brien looked each letter and memo over carefully, offering suggestions for improvement. Then she and the class went to a drafting lab, and she used each set of instructions to make a blueprint. Because, by her own admission, she is not a technical person, the instructions needed to be detailed. "I had no trouble making the prints," O'Brien says proudly.

This entry into the technical aspects of learning is one of the reasons O'Brien has never regretted her decision to accept Frisina's offer. She appreciates the many opportunities she has had for professional development that included presenting papers at many important conferences relating to deaf education in the United States. She also received an invitation to present at the 10th World Congress of the World Federation of the Deaf held in Helsinki, Finland, in July 1987.

Of course, O'Brien says, "I do take a

vacation at the end of a school year. I need a short respite." She travels to Hilton Head, South Carolina, for a week or two of golf. She insists she's by no means a championship player, but, she says, "It's a sport I'll be able to participate in even when I'm 70 or 80 years old."

Traveling also rates high on her pleasure list and O'Brien visits her brothers—John, who lives in Switzerland and manages translation activities for a Swiss pharmaceutical company, and Bill, a career Air Force officer living in Miami—every chance she gets.

Someday, it is inevitable that O'Brien will retire from NTID, but this doesn't mean her enthusiasm for deaf education will come to a screeching halt.

"Never in a million years," O'Brien says emphatically. "I grew up with deafness—it's an integral part of my life."



Theatre Renamed in Honor of Panara

The NTID Theatre was officially named "The Robert F. Panara Theatre" during NTID's annual National Advisory Group Outstanding Service Award presentation May 19. Panara, professor emeritus, was unaware of the honor until Dr. William Castle, vice president for Government Relations at RIT and director of NTID, called him and his wife, Shirley, to the stage and presented him with a plaque commemorating the renaming of the theatre. The plaque highlights Panara's contributions to education:

Teacher, author, actor, poet... Robert F. Panara was RIT's first deaf faculty member; founder and first chairman of NTID's Department of English; and founder and first director of NTID's Experimental Educational Theatre Program. Professor Panara's two decades of service to NTID at RIT will always be remembered by those with whom he has shared his wisdom and vision.

You've Got a Friend

Dr. Diane Castle, professor and telecommunications specialist in the Division of Communication Programs, received the "Special Friend of Hearing Impaired People Award" at the Third International Self Help for Hard of Hearing People, Inc. (SHHH) Convention held in Rochester, New York, June 24-27.

The award is presented to a person who has worked diligently over a long period of time to improve the lives and circumstances of hearing-impaired people.

In addition to the award, Castle also held a special book-signing session to highlight the publication of her new book, *Telephone Strategies: A Technical and Practical Guide for Hard-of-Hearing People*, published by SHHH.



Excellent recognition The first four students to benefit from Citicorp/Citibank's \$60,000 donation to establish an endowed scholarship fund for NTID's School of Business Careers were recognized September 26 for academic excellence. Standing before the plaque commemorating the students' achievement and scholarship award are from left: R. Max Gould, division executive of Citibank and member of NTID's National Advisory Group; students Carolyn Betz, Mitchell Bilker, Kathleen Szczepanek, and Michael Skjeveland; and Elizabeth Howland, vice president of corporate contributions, Citicorp.

RIT Student Crowned Miss Deaf America

Brandeis Ann Sculthorpe, 20 and a third-year student in the Social Work program at RIT, has been crowned Miss Deaf America. The 1988 Miss Deaf America Pageant was part of the National Association of the Deaf's 38th Biennial Convention, held July 5-9 in Charleston, South Carolina.

"I couldn't believe it," says Sculthorpe, of Wheaton, Illinois. "It's great to be able to serve as a role model for the deaf community, especially for deaf children."

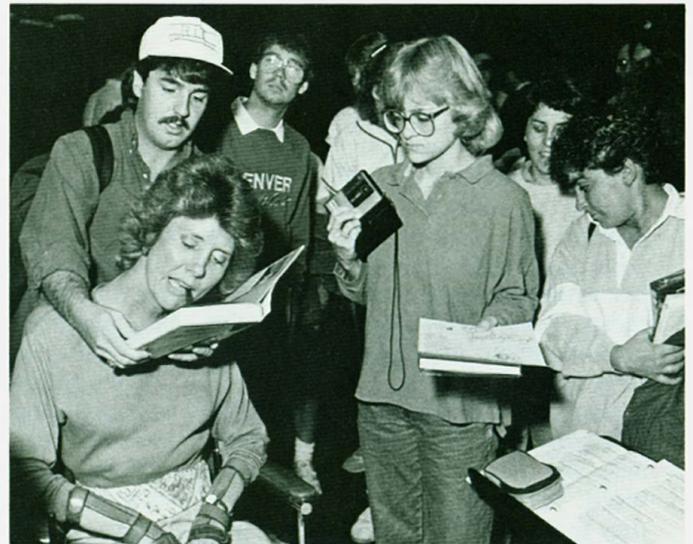
Sculthorpe says that during her two-year reign, she will work to establish sign language as a foreign language in high schools throughout the country.

Nearly 2,000 people attended the pageant, which featured 34 contestants.

Castle Named President-Elect of the Bell Association

Dr. William Castle, vice president for Government Relations at RIT and director of NTID, has been named president-elect (1988-1990) of the Alexander Graham Bell Association for the Deaf, an international non-profit organization based in Washington, D.C. Castle will assume the presidency in July 1990 during the 100th anniversary celebration of the Association's founding by Alexander Graham Bell.

Castle served as president-elect and president of the Association from 1980-1984. He also serves on the Bell Association's Foundation Board.



Making molebills out of mountains Joni Eareckson Tada inspired students, gave away Christmas cards, and autographed books during her September 15 visit to NTID. Internationally known as an artist, author, and communicator, Tada broke her neck in a 1967 diving accident and was left paralyzed from the neck down. Her appearance was sponsored by NTID's Special Speaker Series, in cooperation with the Greater Rochester Billy Graham Crusade.



Dear Friends of NTID,

In the 20 years that RIT has been a leader in the field of deaf education, deaf students have earned more than 2,400 technical and professional degrees. The grand experiment begun in 1966 has become one of this nation's most visible programs.

Through NTID's programs and the 200 plus programs offered through RIT's other eight colleges, we have successfully provided deaf students with a technological postsecondary education that is the key to satisfying careers.

And for 20 years, RIT has provided this education on a campus designed primarily for hearing students. This environment affords deaf students a variety of educational options, from participating solely in classes with other deaf students to taking some courses in other RIT colleges to completely enrolling in another RIT college. With support services, these students participate in classes with hearing students.

However, deaf students are not the only ones to experience growth and opportunity as a result of NTID's establishment as a college of RIT. The communicative and cultural differences that exist on campus have made hearing students and the larger institution more accepting and supportive of those differences—an attitude that extends beyond deafness. RIT is proof that providing education for disabled students does not detract from the education of mainstream students; indeed, it enhances that education. Happy anniversary, NTID!

A handwritten signature in black ink, which appears to read "M. R. Rose". The signature is fluid and cursive, with a long horizontal stroke at the end.

*M. Richard Rose
President*



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Peek into Dr. William Castle's colorful world, p.5.



Photography by Chris Quillen