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For Alumnus of the "Old School"

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Predictions—ought to serve but for winter talk by the fireside. 
Francis Bacon

How fine it would be if you, as an alumnus, could pick up this magazine and find out exactly what Tech would be like throughout the 1980s. You could make such ideal plans; returning for graduate work, or helping us finance a much-needed project. You would certainly like to know when Tech's first basketball victory in the ACC tournament will be so you could try to get tickets!

Of course we can't offer you any such accurate predictions except perhaps for the one fact that in 1985 Georgia Tech will be 100 years old. Otherwise our predictions at the start of the decade are certain to be a mixture of good and bad.

To illustrate this let us go back to the academic year of 1969-70 and with "20-20 hindsight" consider how well we might have been able to predict things at Georgia Tech in 1979-80. In 1969 we had a freshman class of 1,531, with 77 National Merit Scholars, selected from 3,865 applicants. We were very proud, and even complacent, about that large number of bright young people wanting to attend Georgia Tech. We also had approximately 75 black students (desegregation occurred in 1961) and 212 women. Would we have dared to predict that 10 years later we would have a freshman class of 1,849 selected out of more than 7,600 applicants? Or that we would have 398 National Merit Scholars, making us number one in the nation among public institutions in the number of scholars per thousand students? Would we have guessed that by 1979-80 we would enroll 690 black students, including 141 National Merit Scholars—more than any other university in the U.S. except Harvard/Radcliffe? Or that we would have
2,140 women, more than three times the enrollment at Agnes Scott College.

And what about dormitories? Plans were being completed in 1969-70 to build several new dormitories on the west side of campus which would bring our total capacity to its present level of 4,122, but the demand for rooms was not very great and we were able to shut down Brown Dormitory and await funds for major maintenance. We certainly could not have predicted that now we would be using every available bed, including Brown Dormitory, and that we would have as many as 1,500 students on the waiting list every autumn. Nor that we would even be asking the Board of Regents for funds from the legislature to add a new dormitory on the west side with more than 700 new beds, which we could easily fill.

While we would have underestimated in some areas, we would have had disappointments in others. After the vigorous building program during the 1960s we could feel confident that the next one on the list—a new building for the College of (Industrial) Management—would certainly be completed by early in the seventies. But the only major academic building project was an unpredicted one, namely a $2.8 million addition to the Architecture Building, built in response to the dramatic growth of enrollment in the School (now College) of Architecture.

There was a dream project which did reach reality, although on a much more restricted scale than hoped for. This was "SAC 70" a student athletic center for the seventies. There were plans and scale models for a $15 million structure. We did succeed in starting the project with a Regents' allocation of $2.5 million and a like amount from the Callaway Foundation in LaGrange, Ga. This $5 million has provided a handsome building.

Research and teaching go hand in hand, and the growth in well-financed research activity has increased even more rapidly than has the teaching of our increasing numbers of students. In 1969-70 we obtained about $8 million in outside grants and contracts, including both the academic units and the Engineering Experiment Station. By 1979-80 this had risen dramatically to an unexpected total of $46 million. Our Engineering Experiment Station, a unique organization on university campuses, has shown a most remarkable growth, but we have totally outgrown our on-campus facilities.

How could we have known that enrollment at Southern Tech, our Engineering Technology Division, would reach 2,800 and that Southern Tech would separate from Georgia Tech?

All this is to illustrate the perils of prediction. What we expect right now for Tech during the eighties may be off the mark. Yet the changes which occurred in the seventies were gradual and did not come about as total surprise. We did want and seek more highly qualified freshmen, more women, minority students, and more students living on campus (we didn't think the fad of the sixties to live in off-campus "pads" was a healthy one). We did want and seek more National Merit Scholars. Our only cause for surprise was in the extent of our success. We were equally surprised, yet disappointed, that we did not achieve the needed (and requested) academic construction. At the beginning of the seventies the leadership at Georgia Tech wanted change and progress to occur in certain directions and was working toward those changes as opportunities came along. So in talking about the 1980s it is reasonable to consider various things that we need and want, and then the uncertainty will only be a question of pace.

The future is purchased by the present.

Samuel Johnson

What then do we want or at least foresee as desirable?

One thing we can never do is to stay where we are. Change is inevitable, often through forces beyond our control. We might well have wanted to grow in the seventies, but if the students had not wanted to come to Georgia Tech we would not have grown. Most of our growth was in engineering, largely due to increasing numbers of women and minority students. The popularity of fields like engineering has always ebbed and flowed, and now its popularity is at one of its high marks. Thus it would be easy to see a continuing increase in enrollment, but we cannot afford to do this until we have more academic staff and facilities. In the meantime we are trying to hold down the freshman class to its present level of 1,800 or 1,900. This becomes harder to do as the number of applicants increases, particularly from within the State. We intend to stay with our policy of admitting every qualified Georgia freshman, which means qualified to survive in the competitive Georgia Tech academic environment.

We may grow slightly as we adjust the balance between graduate and undergraduate enrollments. Our increasing sponsored research funds help provide graduate student financial aid. Our increasingly qualified faculty gives us the capacity for more graduate students. We are very low in our proportion of graduate students compared to other front rank state universities in engineering such as Illinois, Michigan, and California. During the 1970s graduate enrollment declined nationally in engineering and science, but it is certain to come back, especially in engineering, since the undergraduate "pipeline" is now filling up.

Even as undergraduate enrollment levels off and graduate enrollment increases we should still not be larger than 12,000 to 14,000 students. It is notable that in 1966 a Georgia Tech study predicted we would reach 12,500 by 1985. For many years this prediction seemed like runaway imagination, but now it looks as though we will actually achieve it.

We have no need to increase indefi-
nently. Most of our programs have enough students for economical operation. Indeed some of the departments such as Electrical, Mechanical and Chemical Engineering are struggling to accommodate the large numbers they already have.

Certainly we are not going to add new curricula which are already available in the University System of Georgia where statewide enrollments are declining.

Even to accommodate our current enrollment we desperately need additional building space and will continue to seek it. At this writing, design is underway for a new complex to house the College of Management and the School of Industrial and Systems Engineering. Funding is available for the first of the three components of the ultimate complex, a $3 million increment. We must continue to seek the remaining $6 million to complete the project. Our School of ISyE has the largest undergraduate enrollment in the country of any similar department, and yet it is housed in the small and ancient Textile Building, constructed in 1900.

We need a new science building for the large science courses such as biology and chemistry. Freshman chemistry is still taught in the old Lyman Hall Building; every alumnus reading this article undoubtedly had his freshman chemistry laboratory in that old building. A new science building would also provide quarters for some of the new and rapidly-expanding areas such as atmospheric sciences.

We do need a new dormitory. We could discontinue our lease on the Luckie Street YMCA. Even if there should be a decline in dormitory demand we could close out the Techwood (McDaniel) dormitory, which is really off-campus and much in need of costly refitting.

We must continue with our present policy of reworking each old dormitory. We have been doing this without state money, as will probably be a continuing necessity. We have already done Perry, Hansen, Cloudman, and Glenn and are working on Brown in 1980.

We are faced with the new challenge and opportunity of recruiting top-quality faculty to match the increasing number and quality of our students. We have been succeeding very well, although slowed up by inadequate funding, a highly competitive market, and a scarcity of new young Ph.D.s, especially in engineering, due to a decrease in graduate enrollments nationwide. Industry snatches up many new Ph.D.s, and the engineering colleges are in strong competition for the remaining candidates. This will probably turn around in five years, but in the meantime we shall have to resist the temptation to lower our standards or perhaps even to overstaff. We will probably be held back in the addition of faculty because of inadequate state funding. If the economy is not strong, State revenues will be inadequate for the many needs of State Government, including the University System. Likewise the Board of Regents will have trouble for some years in taking care of the colleges where enrollment is declining and will not be able to deal adequately with Georgia Tech where enrollment is high.

On the other hand, Georgia Tech is poised on the threshold of rapidly-increasing private support. Tech alumni and friends have shown remarkable potential through the outstanding performance of our annual Roll Call. In 1969-70 we had 215 members of the Thousand Club, and now we have more than 500. We are adding staff to facilitate private support and will be gaining our first major experience in funding of capital projects. At this writing, the first real test is going on in the funding of our Intercollegiate Athletic Building. This project is especially appropriate for private funding since our entire intercollegiate athletic activity is self-supporting.

We can look forward to continued strong research funding institute-wide. As we have more new faculty dividing their time between teaching and research we will need more offices and laboratories for the same level of instructional activity. This is a desirable problem, however, since it means there will be more high-level technical activity for the benefit of students and faculty alike.

The Engineering Experiment Station is a special situation. Their growth has been so rapid in the later half of the seventies that it will take some time to digest it and, in particular, to find adequate housing—preferably on campus.

Overall the outlook for the eighties must be regarded as good. We will be different from other universities which will be faced with declining enrollment and finances. Our struggles will be to accommodate the large numbers of fine students.

When 1985 arrives and we look back over a whole century of Georgia Tech history, the first century will seem incredible in its accomplishments, and we will pause to ponder what lies ahead in our second century. It may be the only thing we can say with certainty is that Georgia Tech is, and will forever be, a dynamic, changing institution, one which will continue to progress as the years pass.

You can never plan the future by the past.
Edmund Burke
Academics Advance into the Eighties

Designs for the Decade

Together at Last

By Dean William Fash
College of Architecture

With a quick disclaimer of any capacity to predict the future, I would say nonetheless that the outlook for the College of Architecture in this decade looks quite good. People are the essence of a school, and we are blessed with excellent students and an outstanding faculty that is getting better. We have a 57,000 square-foot major building addition now being completed. Our Research Program, established in 1976, is growing rapidly and now stands as one of the country’s leading centers for research in architecture and planning. Enrollment demand continues to exceed our admissions capacity. Atlanta is one of the nation’s outstanding cities for architecture. Georgia Tech is genuinely one of the finest technological institutions in the world. All these factors and more, taken together, present a positive prospect for the near future, and we look forward to the eighties with optimism.

Some current accomplishments of our people which I’m proud to note are these: 1) Greg Walton, graduate student, was one of five winners in a major international professional design competition, sponsored by Les Halles region of Paris. (I know of no other instance in which a student has been so recognized, in competition with major international professional architects, 600 in all.) 2) Kent Knight, graduate student, received honorable mention in another such international competition, sponsored by Shinkenchiku of Japan. 3) Manuel Cadrecha, 1979 graduate, was one of five American finalists for the Rome Prize Fellowship, a most prestigious award for recent graduates in architecture. 4) Kemp Mooney, faculty, was one of 15 American architects invited to exhibit in Venice, Italy. 5) Craig Zimring, faculty, received a Progressive Architecture Citation for his research on the effects of the living environment on the mentally retarded.

Not everything is rosy, of course. Budget constraints, quality controls, faculty incentives, faculty development, support facilities, and equipment for teaching, are problems with which we grapple daily. We’re still in the Neanderthal Age, for example, with respect to computer facilities for architecture. We would like to begin new activities in the College but must have fiscal help to do so. The predominant problem in recent years has been insufficient and poor-quality space for instruction (One group of our students joked, without much humor, about getting to know the entire campus from being shifted each quarter for their design studio courses.) The major part of the problem is about to be resolved.

Occupancy of the new building, scheduled for Fall Quarter, will signal a vast change and improvement for the College. Our students will finally be all in one place. (In architecture, learning from one’s peers is just as important as learning from the faculty.)

For the first time, we will have a research lab, a computer lab, and an audio-visual lab. The architecture library will triple in size; there will finally be space for exhibitions, a vital part of architectural education; our graduate seminars will finally have rooms designed for such courses; and many of our faculty will be able to move out of oversized closets and temporary partition “offices” into an office space. The building has been designed to provide instructors with many “at-hand” examples of architectural realities.

An upper limit was placed on enrollment after enrollment in the College jumped from 561 to 872 from 1970-72; this restriction is expected to continue. Spring Quarter enrollment was 906, with 900 set as the nominal maximum which we can accommodate. We intend a period of “slow steady” growth in the “maximum condition” enrollment if resources will allow, and a modest shift to a greater proportion of graduate students in architecture, with little increase in total number.

The four programs in the College — Architecture (graduate and undergraduate), Building Construction, Industrial Design (both undergraduate only) and City Planning (graduate only) — are under continuing review and development. A faculty committee is preparing a proposal for initiation of doctoral-level study, and work is underway for establishment of an on-going program of interdisciplinary and continuing-education activities. We are strengthening our capabilities and expertise in Energy for Planning and Architecture and hope to develop greater strength in Architecture and Development, and in Interior Architecture. Our City Planning Program is undergoing curricular review, and a new director of that program will be announced shortly. We are studying the possibility of offering master’s degree work in Industrial Design and of re-working and re-orienting the Building Construction Program.

The decade of the eighties will see resolution of all these current issues. It will see moderate enrollment growth and expansion in breadth and depth of the College’s programs. Hopefully, it will see continued and heightened achievement of quality.
A New Name for an Old Friend

By Dean Charles Gearing
College of Management

The "College of Industrial Management" is now the "College of Management", a significant change to hail in the eighties. This new title more accurately describes our educational mission:

To offer broad management preparation, with a strong analytical emphasis, to highly qualified, technically oriented persons.

To most effectively carry out this mission in the decade ahead we are striving toward a number of specific goals. Our aspirations for excellence demand that standards as high as the best institutions in the country be employed in the selection and retention of faculty and in all our other activities.

Academic Programs

The graduate MSIM program was completely revised during this past year and now is a full two-year program with enough flexibility to allow significant work in a specialized concentration beyond the 45-hour "core." The concentrations, which currently are being finalized, include second-year studies in finance, marketing, accounting, management science, organizational behavior, and general management. The new MSIM curriculum provides the opportunity to develop meaningful internships or summer work programs for students between their first and second years of study.

The College's undergraduate offerings — Industrial Management, Economics, and Management Science — will all be subject to a thorough study during the 1980/81 academic year. One specific objective is to better serve the non-management majors on campus by providing several "management options," each consisting of a coherent package of management courses, perhaps as few as two or as many as would constitute a certificate program.

In both the undergraduate and master's programs we recognize the need for increased emphasis in two areas: effective communications skills and computer "literacy." Both of these will be essential in the increasingly sophisticated managerial world of the future.

The environmental balance essential for nurturing the analytical character of our professionally-oriented programs is best achieved through an active Ph.D. program. The quality of our undergraduate and master's programs are tied directly to the maintenance of a scholarly atmosphere associated with Ph.D. studies, and we have undertaken the enrollment goal of approximately thirty Ph.D. students.

Research Program

The principal objective of our research program is to make fundamental contributions to knowledge in the discipline of management, and faculty research competence will be a primary goal in faculty recruitment and development. To facilitate and encourage external funding of research, as well as to provide foci for important and timely research thrusts, we will aim to establish research centers at opportune times. The first of these presently is being established as a center for research in energy conservation and management. The set of activities under the center's auspices will extend beyond a research mission, however, to include educational programs, data and information gathering and dissemination, and other activities.

A similar mix of activities is anticipated in connection with the Advanced Technology Development Center which currently is being established under the direction of the office of Vice President for Research. We will be heavily involved in the programs of the ATDC from the beginning.

Management Development and Continuing Education

Programs to meet the educational needs of persons employed full-time will represent an increasing commitment of the College during this decade. Whether short courses for executives or newly-appointed managers, or credit-earning degree programs in the evening or telecast at mid-day, the variety of needs and possibilities are enormous. As we increase our offerings and develop our programs, we will devote particular attention to the basic need for management education which is felt by the successful engineer who is advancing in his career and acquiring more managerial responsibility.

Our commitment to this constituency in the past has not been nearly as great as it warrants.

"We demand standards as high as the best institutions in the country."

External Relations and Resource Development

Programs of professional education require the involvement of practicing professionals to maintain their relevance and vitality. Direct participation by industrialists and businessmen on campus enrich the academic offerings, and their wisdom and perspective can appropriately influence the direction of the academic programs. We have recently established a Management Advisory Council to facilitate the development of relationships with the outside professional community. This activity is high priority.

In addition, the College's Executive Forum has been established in coordination with the Georgia Tech Corporate Associates Program to provide an on-going mechanism for encouraging corporations and others to participate financially in a "partnership" with the College for enhancing its quality. With the State providing the basic support, private income can be used to achieve a margin of excellence that benefits both the business community and the Institute (and the students most of all). Some specific ways to channel external support, in addition to the Executive Forum, are...
scholarships and graduate assistantships, grants for special projects, lectureships, faculty fellowships, chairs and professorships, and research contracts. Projected patterns of funding indicate that corporate support will become increasingly important.

The College’s “New Look”
A major factor which should significantly enhance our activities during the eighties is the improvement of what might be termed the College’s “environmental factors.” The name change to the “College of Management,” plus the new facilities which will be under construction soon, contribute to a “new look” which should strengthen the College's identity and image both on- and off-campus. This will reinforce the self-awareness of our faculty and staff as a quality institution and make us more effective in serving all our constituents and accomplishing the goals we have set for ourselves.

Diversity Keys
Future Education
By. Dean Henry Valk
College of Sciences and Liberal Studies

The College of the Sciences and Liberal Studies has a dual objective: to provide all Georgia Tech students with the opportunity for a basic education in the humanities, social sciences, sciences, and mathematics and to provide advanced undergraduate and graduate-level education in certain areas of science. Although this objective is not going to change in the years ahead the manner in which it is achieved must and will change to meet the challenges of our society. Students graduating in the eighties will spend a good portion of their lives in the twenty-first century. Some of the challenges facing that century’s citizens are already evident: for example, the need for efficient energy sources and the need to understand the effects of a burgeoning technology.

These problems are sufficiently complex that a traditional discipline-oriented education is unlikely to address them successfully. The trend toward multidisciplinary or group approaches in the design of instructional and research programs, which I believe will become more common in the coming decade, is already evident within the College. This is exemplified by the recently-approved atmospheric sciences graduate degree option in the School of Geophysical Sciences. In order to study such questions as the build up of pollutants in the atmosphere and their effects on the environment, one must bring together expertise from such diverse areas as meterology, atmospheric chemistry, geophysics and oceanography. It is not possible to study these types of atmospheric problems in isolation. This, in fact, was the motivation for developing the option within Geophysical Sciences rather than setting up a separate program.

This trend to multidisciplinary effort also characterizes two new degree programs which are expected to be underway in the near future. The first of these is an M.S. program in Technology and Science Policy developed within the Department (School as of September) of Social Sciences. It will bring together faculty from history, philosophy, political science, and sociology, as well as architecture and systems engineering, and provide scientifically-knowledgeable students with those analytical skills necessary for the proper formulation of policy decisions relating to science and technology.

"These problems are sufficiently complex that a traditional discipline-oriented education is unlikely to address them successfully."

The other program is that leading to a Ph.D. degree in biology. This is the logical consequence of the growing importance of the life sciences in our technological society and of the strength of our faculty in this area. Although under the aegis of the School of Biology, the program will draw strength from faculty throughout the
Bursting at the Seams

This story is based on an interview with Dr. William Sangster, dean of the College of Engineering.

For the 1980s the College of Engineering is going to continue to deal with too much of a good thing. While enrollments generally are falling in the University System of Georgia, the desire for an engineering degree from Georgia Tech has never been stronger. More than half of all Tech graduates are engineers.

And therein lies the College’s main problem. Virtually every engineering discipline at Tech is overcrowded, some much more than others. The only school with a potential enrollment decline is Nuclear Engineering, due largely to governmental policies and societal attitudes—both of which have a history of fickleness.

At the other end of the academic spectrum is mechanical engineering, a discipline at Tech is overcrowded, some much more than others. The only school with a potential enrollment decline is Nuclear Engineering, due largely to governmental policies and societal attitudes—both of which have a history of fickleness.

At the other end of the academic spectrum is mechanical engineering, which needs nearly twice as many faculty (according to a Board of Regents formula) to best handle the teaching load. Electrical Engineering, with more than 2,000 students, and Chemical Engineering are operating with 60 and 70 percent of the faculty they need.

“Right now some of our faculty are teaching classes with over 100 students in them which is not an efficient way to teach engineering,” Sangster says.

To add to the problem further, the Board of Regents has authorized no new positions for the coming academic year. That problem is institute-wide. The administration’s immediate solution, and. one that will likely continue throughout the eighties, is to limit enrollment to the institute in general. Applications were cut off in January, the earliest date ever, and fewer students were accepted. However, one side benefit to this is that the average engineering student will be smarter as more and more students apply for matriculation.

The flip side to the problem is that it is becoming more difficult for Tech, and other schools, to attract qualified engineering faculty. As an example, Sangster says a recent study showed there were 500 EE Ph.D.s last year and industry was able to lure most of the top 250. And Sangster says he believes that industry will always be able to lure the advanced engineering students we need.

“Across the country this year nearly 50 percent of engineering students were foreign-born,” Sangster says. “It worries a lot of us that one day the majority of our faculty will come from the non-citizen group. That doesn’t mean that a lot of them aren’t technically very capable and productive and many of them able to communicate reasonably well. But there are many in that group who do have difficulty with communication in English and a further crippling factor, as far as I’m concerned, is that they don’t have much experience with the American economic or industrial system. Those kinds of people aren’t very valuable in the classroom for a school like Georgia Tech where we expect our students always to be tied very closely to the practice of engineering.”
Growth in facilities for the eighties will probably be negligible, except for the new Industrial and Systems Engineering Complex. However, extensive renovation is planned for nearly every school.

New degree programs are not in the cards either. The college attempts to take care of whatever extra demand there might be through the multi-disciplinary programs—energy engineering, urban engineering, etc. With that approach existing faculty and facilities are utilized to enable a student to concentrate in a special area while studying for a degree in one of the major schools. But the number of multi-disciplinary programs could expand, depending on what types of specialists the schools are able to hire.

Within a few years Georgia Tech may not be the only engineering institute in Georgia. Sangster says he suspects that Southern Tech, Georgia Tech's engineering technology division which was recently awarded its independence by the Board of Regents, will also become an engineering school. But what effect that would have on Georgia Tech is a mystery.

Despite the problems, engineering at Georgia Tech is strong and should stay strong. A major recession could take its toll on enrollment as could major changes in governmental policy such as federal funding of research programs or state funding for salaries and facilities. But governmental policies and the economy can also have the opposite affect.

"As far as our undergraduate program goes I take my hat off to no one," Sangster says. "And we're getting better and better because we get better students and faculty all the time. But when it comes to the graduate level we still have quite a ways to go. We're not an MIT and I hope we never are one because they serve a very special purpose and they do it extremely well, but I don't think there's room for a lot of MITs. I'd like our program to be like Stanford's because they've combined a good undergraduate program with a strong research program and a strong graduate program. Those latter two types of programs we've gotten into very recently. And the excellent job market for bachelor's degrees has made it difficult to get graduate students.

"So while we would like to make grandiose plans and predictions the truth is we have to work hard just to deal with the problems we have."

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"It worries a lot of us that one day the majority of our faculty will come from the non-citizen group."

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Georgia Tech has grown significantly in the past 15 years, but there has been almost no major construction since the early 1970s. However, the eighties have great potential for reversing that recent trend and if you wait until 1990 to return to the campus you might not recognize it. While Tech won't go much beyond its current 302 acres, it could add substantially to its 120 buildings.

Although Tech is a state-supported institution some of the most exciting prospective building projects will depend on money from the private sector—the most immediate being the new Intercollegiate Athletic Center (see the section on athletics). Of course, any academic construction will depend on the generosity of the Legislature and Board of Regents. What follows is a brief summary of the building projects that hold the most promise of being completed in this decade, although money has not been committed to most of them.

• The College of Architecture wing is nearly finished and classes will be conducted in it full-time this Fall Quarter.
• A pedestrian walkway, 30 feet wide, running between the Price Gilbert Library and the Student Center is scheduled to be built this summer. It will be lighted and have benches.
• Construction of Phase I of the College of Management—Industrial and Systems Engineering Complex (the Management administrative offices) is slated to begin in September. Officials hope the remainder will be finished before 1985. The complex will be located between the Student Center and the Student Athletic Complex.

Inside Expansion Should Dominate

• A west campus dormitory, complete with dining hall, could be built by 1983. The plans call for several floors of four-room suites with private kitchen and bath. That way the dorms could be coed on the same floor, or married students could live there. No money has been allocated yet.
• An Advanced Technology Development Center, to help nurture new technological businesses, may be built in the Home Park area in 1982.
• The Old Ceramic Engineering Building is being renovated to house the Naval ROTC since the Naval Armory will be demolished this summer to make room for the Intercollegiate Athletic Center. Ironically, this year is the NROTC's 50th anniversary at Tech.
• A new campus safety building is scheduled for 1981 behind the old one near Hemphill Road on Ferst Drive.
• A science center is being planned for land adjacent to the Boggs Chemistry Building. The entire center (with Boggs) would be shared by Chemistry, Biology, and Geophysical Sciences. It is hoped construction could begin about 1985.
• A privately-funded major renovation of the south stands at Grant Field is being considered. The stands would extend over the track as the north stands do now and a small retail mall, to hold as many as 20 shops, would be built underneath. Many businesses that have tried to lease space in the Student Center would be prime candidates.
• A Student Center addition may also be in the works for late in the decade. It would have a major auditorium and room for student organizations.

• Yellow Jacket Plaza could be built in the area between the Student Center and the Textile Engineering Building. It would likely include a 14-tier water sculpture, (not a fountain), a large bell tower, and an amphitheater to hold 1,500 people.

• There are many renovation projects scheduled for the older buildings. For example, the French Building will be entirely gutted once the ISyE complex is complete. Also, Vice President for Planning Dr. Clyde Robbins hopes to have the campus barrier-free for the handicapped by 1990. That will include the installation of many elevators.

• There are also many major landscaping projects. Cherry Street may become largely a pedestrian walkway as there are plans to eliminate all parking on the street and widen the sidewalks.

Help Wanted: Any Tech Grad

Jobs for most Georgia Tech graduates are as plentiful as pine trees in Georgia. The hard part is finding one that meets all the requirements.

It would be difficult for the job situation to get much better in the eighties. Statistics of those who report back to the Placement Center show that bachelor's degree holders in electrical and ceramic engineering are averaging seven job offers, mechanical and industrial engineers average six, and chemical and aerospace engineers average almost five. Starting salaries of more than $20,000 are common. While the opportunities for architects, management, and science majors (two to four offers each on the average) aren't quite as numerous, statistics for 1978-79 show that 96 percent of all graduates have their plans finalized before graduation. According to Placement Office officials, the percentage should be just as high this year.

So, there is probably more chance for the job market to go down dramatically than up. But even if the job market does decline it'll still be better for Tech students than most liberal arts majors.

"Sure we could hit a downturn in the eighties because the market is a relative thing," says Director of Corporate Relations and Placement Mike Donahue. "We might get to the point that EEs are only getting two offers each, but I'd still consider that pretty good. Even in a recession Tech will do well because with many companies Tech is considered a prime school. In bad times a company might cut its recruiting from 130 schools down to 50, but more than likely Tech would be in the 50."

Tech graduates of the late sixties remember the downturn that hit the last part of that decade when there were significant cuts in defense spending, particularly in the aerospace industry. Donahue says that even similar circumstances in the eighties would not be as shattering as they were then.

"Employers are saying they learned a lesson from the 1965-72 years," Donahue says. "They shut off the pipelines and five years later when they needed middle managers they weren't there."

According to Donahue the field with the potential for the fastest growth in the eighties is the computer industry, which means a bonanza for students in the School of Information and Computer Sciences in particular.

However, if the job market for bachelor's degrees remains as good for a long time, it could be bad news for Tech. Right now there is not much incentive to go to graduate school, which means there are fewer Ph.D.s. Fewer doctorates mean fewer potential faculty — and fewer faculty could mean enrollment declines.

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Research Should Lead Growth in the Eighties

Investments Yield Top Dividends

There are a multitude of good colleges and universities that can provide a student with a basic education in whatever field he or she chooses. But more often than not, what turns a good institution into a great one, especially in these days of great technological challenges, is the establishment of a top research program.

While Georgia Tech has always been a good school (although many alumni will argue that Tech is already great) and highly respected, Tech will likely emerge as one of the new great institutions of the eighties due to a research program that is growing enormously. One main reason Tech is not as generally well-known as Stanford or Cal Tech is simply because Tech got into the research game rather recently. Tech President J.M. Pettit, who arrived on campus in 1971, is generally given the credit for emphasizing a program that put Tech “on the research map.”

Research in both the Engineering Experiment Station and the academic units is flourishing and Acting Vice President for Research Albert Sheppard says, “The best days are ahead.” In the past 10 years sponsored research contracts and grants have risen more than 400 percent. Since 1969 EES contracts and grants have soared from $4 million to $26 million and academic research has jumped from $3 million to $13 million. Total grants, etc. for fiscal year 1979-80 are expected to near $47 million. Almost all the expansion in EES has occurred since 1975. EES Director Dr. Donald Grace predicts that total research expenditures could approach 100 million (in today's dollars) by 1990. Sheppard sees research leveling off at $75-80 million for the entire institute. If either man is close to correct the expansion will be significant.

“If we got to that size,” Grace says, “we would have to reassess and see how big it is appropriate for us to be. We don't want to be the tail wagging the dog.”

Generally speaking, about half of all research at Tech is in electronics, and it will probably continue that way. Also, the Department of Defense is the single largest sponsor at roughly 50 percent.

“I look for continued growth and diversification,” Sheppard says. “About the only thing that could curtail us is a significant tightening of the budget in state government. For example, if a ceiling was placed on salaries we would be hurt very severely because we could not compete with industry or other schools. That has happened to some schools and they have been essentially paralyzed.” However, Sheppard says, he sees no concern for worry.

So in what areas is all this expansion likely to occur? Both Grace and Sheppard mention computer studies, since society continues to automate itself. One of the hottest areas in the School of Information and Computer Science is “distributed processing” or helping business and others to take their several small computers and make them work as one large unit. Another project is trying to make computers simple enough for almost anyone to operate.
The collective topic "energy" is a dynamic field and nearly every school is involved in energy research in some form, all the way from passive solar architecture to fusion physics to energy management.

"We are also leading the way in getting wood accepted as an alternative fuel system," Sheppard says. "It's conceivable, if we aren't already, that we will soon be saving the state as much money through wood fuel systems as the taxpayers are putting back into Tech."

To list all the research areas where expansion will likely occur would take several pages. A few notable areas are radar applications, communications and chemistry in EES and digital processing, recombinant DNA and fluid dynamics on the academic side.

There are also several ways research could expand if only qualified people can be found.

"At our current growth we will need to double our staff every three years."

"There's no doubt that we could have a large program in ocean thermal energy, photovoltaics, and robotics, but there just aren't any people out there," Sheppard says. "And that's a reflection on how hard it is to find a school with a doctoral program in one of those critical areas."

Finding the physical facilities to house the predicted expansion is a significant problem for the entire Tech community, especially EES.

"Right now we are having to pay $810,000 a year in lease money for buildings off-campus," Grace says. Tech has a huge facility at the Lockheed-Georgia Company in Marietta.

"At our current growth we will need to double our staff every three years (EES now employs 1,100) and we will need to have 50,000 square feet of additional space every year."

Not only is space a problem but EES, like most of Tech, is understaffed and has trouble finding the "right people." The Station is trying to alleviate the problem partially with part-time graduate students.

Virtually all the future growth will be in applied research. Grace and Sheppard say their basic research budgets have not changed at all, but they are being used to work on medical and biological problems, which has since led him to collaborate extensively with scientists in other disciplines and listen more closely to the knowledge they have to offer. This "group effort" approach is paying off not only for the Station but hopefully for the rest of us. Zalkow and others believe it is the coming trend in research and should become more prevalent in the eighties.

Dr. Leon Zalkow is a new breed of researcher. He decided a long time ago that in order for him to accomplish his objectives in chemistry he was going to have to stop thinking only like a chemist. What was important to him was to use his talents to work on medical and biological problems, which has since led him to collaborate extensively with scientists in other disciplines and listen more closely to the knowledge they have to offer. This "group effort" approach is paying off not only for him and his associates but hopefully for the rest of us. Zalkow and others believe it is the coming trend in research and should become more prevalent in the eighties.

Zalkow has been a natural products chemist for more than 20 years, since he earned his doctorate at Tech in 1956. Simply explained, Zalkow takes plants, and more recently insects, and tries to isolate compounds in them that have some promise for solving medical and biological problems. Currently his "teams" are tackling cancer and glaucoma and, on the side, they may have found a better way to keep termites from destroying your house.

"The reason we use plants is that a plant makes a broader diversity of compounds that might be useful than most any chemist could make," Zalkow says. "We start at the source in nature because plants and insects need to make chemicals to survive."

The first place Zalkow looks for leads is not in chemistry but in the legends of folk medicine. Even though a large percentage of the beliefs prove unfounded, a plant with a long history of usefulness is a good place to begin. From there it is a matter of diligence and luck and sometimes just a lot of reading.

All of those elements played a part in Zalkow's current project with modifying a compound in crotolaria spectabilis that shows promise as an anti-tumor agent. That genus can be found in the form of a large, common, yellow-flowered weed in South Georgia.

While working at the Ben Gurion University of the Negev in Israel from 1970-72 he met a woman who had been studying the diseases of primitive peoples...
in the Middle East, who are large users of plants for just about everything. She reported that there was a problem with toxicity from the use of certain plants that was passed on to infants through mother's milk. Those plants were known to contain pyrrolizidine alkaloids which occur in a large number of plants in the U.S. It turned out that livestock in the U.S. had a similar problem with toxicity. In his studies he found that some of the American plants had been screened by the National Cancer Institute as containing anti-tumor agents. As a chemist he wondered if he could do anything to cut out the toxicity. Through further research he found a recent report from The People's Republic of China that singled out one particular plant that showed good anti-tumor activity, and its active compound was plentiful in the seeds of the crotalaria plant from South Georgia.

"Now we [he and Dr. Les Gelbaum] use that compound as the starting compound and I guess we've made 20 modifications to it," Zalkow says. "They all get screened to see how the changes affect the lifespan of rats with tumors."

If one modification proves especially effective the next step would be further studies to determine any side effects and what might be done to eliminate them.

One of Zalkow's most promising projects deals with the use of marijuana for the treatment (not cure) of glaucoma, an eye disorder characterized by extreme eye pressure that eventually causes its victims to go blind. Zalkow, Tech colleague Dr. Howard Deutsch, and Dr. Keith Green of the Medical College of Georgia have developed a tea already proven more effective for relief of interocular eye pressure (in tests with rabbits) with fewer side effects than every other product available on the market. But Zalkow and company have no idea what is causing the drop in pressure. However, they do know it's not the THC, which causes the marijuana smoker to get high.

"If we're lucky in a year we'll be able to do clinical tests," Zalkow says. "We hope this will break easier than some other projects because all the drugs on the market have such serious side effects." Eventually he hopes the "tea" will be marketed in the form of eye drops.

One sad note is that when their discovery first broke in the media Zalkow got several calls from desperate glaucoma patients. Obviously, Zalkow cannot treat them.

Another project has Zalkow teaming with Tech Research Scientist Dr. Maureen Gordon, Dr. Ralph Howard of the United States Department of Agriculture, and Dr. Murray Blum of the University of Georgia on a way to render termites harmless without poison. Howard and Blum are entemologists.

The project began simply as a way to determine how termites communicate. Termites are both blind and deaf, but they have a strict caste system where each individual has a specific job. They also live in colonies of anywhere from 200,000 to one million.

It happens that "soldier termites", which make up about two percent of each colony, can't eat wood but the remaining workers can. Another characteristic of the soldier is that he has an extremely large head, so the entemologists examined a termite head and discovered that the unusual head had a small hole in it that contained a chemical that was missing in the workers. They immediately suspected a warfare chemical, but that was disproven when there was no trace of the chemical on dead ants after a battle.

A subsequent experiment showed that when a group of workers was isolated roughly two percent turned into soldiers.

"What the preliminary tests are showing is that when the workers feed the soldiers through regurgitation some of the chemical rubs off on them," Zalkow says. "When the chemical (sesquiterpenes) gets on the workers it appears that it keeps them from turning into soldiers. If we can control the conversion of workers to soldiers we can stop all the damage they can do in a house. The problem is how to keep the chemical from doing its job, which shouldn't be too difficult since we know its structure."

Zalkow believes that chemistry is not the end-all to solving problems, and he will continue to listen to and utilize the experience and expertise of others. Without the lead of the woman in Israel he would likely not have ended up working with crotolaria. He needed the skills of entemologists to cut off the heads of literally thousands of termites (to yield only a few milligrams of the key chemical) and perform the follow-up experiments. He also needed the skills of medical people to inject the rabbits with the marijuana tea and analyze the results. And, of course, they needed him for his chemical know-how. It seems like the ideal arrangement.
Waves of the Future

One major problem with organ transplants has been that the recipient has had to wait for someone to die and then undergo surgery in a hurry. There has been no way to preserve an organ indefinitely without damaging it.

Jim Toler, an electrical engineer and director of the Biomedical Research Group of the Engineering Experiment Station, believes the microwave oven may offer the solution. Organs are frozen cryogenically, and a microwave oven is used to thaw them out. That's an oversimplified explanation, but it's basically the way it works. Toler and colleague Cliff Burdette envision a nationwide network of organ banks, perhaps beginning this decade.

"The ability to freeze organs cryogenically has been with us for a long time," Toler says. "But the ability to have a viable organ after thawing has been a problem. When we thaw by conventional techniques, that is, putting an organ in a warm-water bath, the temperature of the outside of the organ is that of the bath while the inside of the organ is minus 80 degrees centigrade. As the thawing moves inside, at the interface between the thawed tissue and the frozen tissue there is a constant thaw, refreeze process and small ice crystals are formed that destroy the cells of the tissue. The organ may look perfectly in tact, but it will not perform its biological function."

If you own a microwave oven you know that food cooks on the inside at least as fast as it cooks on the outside. There lies the solution. The crystal-forming process is eliminated. Microwaves will also allow an organ to be thawed in about two minutes rather than 35 minutes. And, he says, there is no evidence that the low microwave doses that are used are harmful to the tissue.

Toler has used his highly-sophisticated electromagnetic (microwave) equipment only on dog kidneys, which closely resemble human kidneys. He says so far the organs seem to emerge undamaged but that the ultimate proof will be when one of the kidneys is replanted into its canine donor. He hopes that will happen within a year under the auspices of Dr. Armand Karow at the Medical College of Georgia. Once the process works with a kidney Toler believes it will just be a matter of time (basically gaining an understanding of the electrical characteristics of other organs) before other organs can be frozen, thawed, and transplanted successfully.

In another somewhat related project, Toler is developing electromagnetic hardware that he believes can ultimately diagnose and treat cancerous tissue, based on his knowledge of the electrical properties of tissue and the age-old notion that heat can kill tissue.

In the 1800s people tried to induce fevers to kill tissue. There were even attempts to raise body heat by having a patient breathe hot gas or by taking blood out, heating it, and putting it back into the patient's body. But when microwave ovens came into the picture, researchers got the idea to use electromagnetic radiation to induce the heat.

"If we expose cancerous tissue and normal tissue to the same amount of radiation the diseased tissue will heat a little hotter than the normal tissue would," Toler says. "In most cases the diseased tissue has developed in an abnormal way such that it has less of a blood-supply system. Consequently, it is much more difficult for diseased tissue to dissipate the heat by means of blood flow. Normal body temperature is 37 degrees (centigrade) and we know that if we radiate any tissue to 43 degrees, that temperature is lethal to it. That is not a huge variation in temperature. What we hope to do is radiate the tumorous tissue up to 43 degrees while the normal tissue gets up to approximately 40 degrees."

Through the development of small specialized antennae about the size of a pencil, Toler and his colleagues hope to concentrate the electromagnetic waves into the cancerous tissue from alternating sides, thereby preventing the normal tissue from overheating. Also, detection of cancerous tissue might become possible by monitoring subtle changes in temperature from small amounts of administered radiation.

There are still obstacles before the techniques will be used widely. One is the development of a thermometer that won't be affected directly by electromagnetic radiation, although Toler says quite proudly that Joe Seals, an associate in the lab, has developed a completely unique thermometer that is by far the best available.

Also, each organ has distinct electrical properties, which means that each will tolerate different levels of radiation, and those levels have yet to be determined.

Oddly enough temperature detection is not as critical in the organ-thawing process because when an organ switches over from frozen to thawed there is an exaggerated shift in electrical properties of the organ, which can be detected by the hardware that administers the radiation.

"We don't envision this (cancer procedure) as replacing any of the medical techniques used today," Toler says. "We do see this as being as widely accepted as current techniques and used in conjunction with them, hopefully within the next few years."

(Editor's note: The fact that the research projects of Dr. Leon Zaikow and Jim Toler were chosen from among the hundreds of research projects at Tech is not meant to imply that they are the only worthy or exciting ones. It was an extremely difficult choice.)
When you ask Homer Rice's associates to describe him the adjectives you hear are organized, perfectionist, methodical, dedicated, and patient. But the bottom line on Homer Rice is that he is a leader and he is effective in nearly any kind of leadership position. He can work in the long term or make snap judgments like a field general. As Georgia Tech's new athletic director he has undertaken one of those long-term challenges. And it would be hard to find a more qualified man to lead Tech into the eighties.

Rice admits that the key to virtually everything he has accomplished, which is substantial, is organization — a cornerstone to any successful enterprise. Everybody who works for him for a length of time knows exactly what is expected and what his or her role is in the overall scheme.

Attitude is another word that crops up constantly when Rice talks about his work. As a successful author Rice's latest book is \textit{Leadership for Leaders: (The Attitude Technique Philosophy)}. 

"I believe in a positive attitude," Rice says. "When you have a difficult problem and you are pessimistic about it, it just makes the problem that much more difficult."

Of course, many people say those things because they sound good. But, as a former football coach Rice knows just how big a factor attitude can be. One or two key players with lackadaisical attitudes can make the difference between a championship and a mediocre season. And like a former coach he leaves the impression that if you work for him and your attitude isn't right you won't be around too long, as if he considers you to be the quarterback he is depending on.

"With Doug (former athletic director Weaver) many times you didn't know whether he was serious or not but with Homer there's never any doubt," says one athletic association employee who admits to liking both men.

When talking about coaching greats most people don't mention Homer Rice in the same sentence with Bear Bryant or Vince Lombardi. But some of his accomplishments have been nothing short of sensational.

In 11 years as a high school coach at three different schools in Tennessee and Kentucky, Rice's record was 101-9-7 and at one stretch his teams won 50 consecutive games. In 1961 he was named high school's "Winningest Football Coach in America."

Rice was also head offensive coach at the University of Kentucky (1962-65) and the University of Oklahoma (1966). At UK his team finished first in total offense in the Southeastern Conference and at OU his team set a Big 8 passing percentage record. In his first head coaching job at the University of Cincinnati (1967-68) he had the top passing team in the nation with quarterback Greg Cook. As head coach at
Rice University (no family relation) he had the NCAA total offense and passing leader in quarterback Tommy Kramer, now with the Minnesota Vikings. He served as head coach for the Cincinnati Bengals in 1978-79 but was only moderately successful.

Now those days are behind him. "Thirty years of coaching is long enough."

Rice's credentials as athletic director are also impeccable. From 1969-75 he was AD at the University of North Carolina at Chapel Hill. Three of those years the Tarheels won the prestigious Carmichael Cup for the best all around athletic program in the Atlantic Coast Conference. The cup is based on points. Each varsity team is awarded a certain number of points for where it finishes the season in the standings. The school with the highest total wins.

Born the son of a methodist minister in Bellview, Ky., Rice was a stellar athlete at Highland High School in Ft. Thomas, Ky., despite his lack of size. There he lettered in basketball, football, track, and baseball. Although he was a Little All-American quarterback at Centre College in Danville, Ky., he spent two years in the Brooklyn Dodgers organization as a catcher.

"Ever since the first grade I had always wanted to be a football coach, and my coaches were always the people I looked up to," Rice says. "But for a while I went into the life insurance business as a salesman and it was there I had my first encounter with the leadership techniques I use today. I went through a training program and in a short time I had sold $1 million worth of life insurance. At that point I had to make a decision because the insurance business was very lucrative. Later I went into an in-depth study of leadership techniques and read everything I could find. I must have studied several hundred books."

"... my football coaches were always the people I looked up to."

The result of his studies was a book he wrote, Leadership in Athletics, the only book to date on the subject.

Along the way, Rice has lectured at more than 300 football clinics and has held leadership seminars all over the country. Rice was named a "Kentucky Colonel", among his many honors. A deeply religious and community-minded man, Rice is in the running for the highest total wins.

Q. What exactly does an athletic director do?
A. I always describe a director of athletics as similar to the president of a middle-class business. We're probably close to a $3 million budget so that's a fairly middle-class business. But the director must be the leader, he must set the policies, see that they are carried out.

Q. You come in here with a reputation for making high quality athletic programs. What are the necessary ingredients for a successful athletic program?
A. I think with an athletic program you have to start at the very beginning and say, 'what is the purpose of an athletic program?' We're an educational institution, and we must have a purpose or this thing can get out of kilter, and it will not be what I think we want it to be. I think our purpose is to develop young men and women academically, athletically, and have some guidance toward their future careers. Now, in the past I've been able to develop a follow-up survey. This is questions we send out to find out what our people are, what they are doing, what affect the program had on their lives, and where they are going, so we know what kind of job we are doing. I think this is the yardstick for measurement of our success. Another thing about an athletic program is it provides service to a lot of people—students, the student-athlete, of course, the faculty, staff and alumni and the general public including the city of Atlanta and the surrounding areas and the media. Then we want to set, in time, objectives, goals that we want to reach. I think all this starts with support, in this case from our President, from our Athletic Board, and all interested parties, and I believe we have that support. Then we have to have the leadership to make this all happen. I've said many times before that hiring Bill Curry [new football coach] was a stroke of genius. He's one of the top men I know and he's our football coach. Football is one of the keys to our program because that's where most of the money is derived. Basketball can be very successful here, and I want all our sports to be successful—and by successful I mean competitive. We need quality people in our programs. I'm talking about the coaches, the people who are going to be in the management phases of it. And then, of course, it takes money.

The economics of intercollegiate athletics today is a very difficult thing. Any business is difficult today, and inflation makes our job much tougher. But it must be understood by our friends and alumni that to have a program it's going to require giving. We have to increase our contributions, and our gate receipts will have to be increased by an area of promotions I'll be very strong in. We must market our program to develop this, and it is going to require a great effort. Another segment of this is our facilities. Any successful program puts its profits back into its business in many ways, its people, its facilities. This is something I think has been lacking here that we really need to be on top of. That's why the new athletic center here will be so important because...
without that we really have no chance at all, to be honest with you. It doesn’t mean that a building makes a program work but all the things I’ve mentioned with the facilities does make it work. Then, of course, talent is going to be the deciding factor. That’s in recruitment of people that we must bring in to perform on our teams. From there on it’s organization and making a very vibrant effort to make it happen. And I believe it can all come together in time.

Q. Tech seems to have a reputation for stinginess in the Atlanta media in terms of spending money in the athletic program. Has Tech indicated its willingness to make additional expenditures in athletics if you think they are necessary?
A. Well, let me answer it this way. I can’t talk about the past because I wasn’t here and I have no knowledge of it except that I was a consultant here at one time and did have an opportunity to look into the program and make recommendations. But I definitely would like to see certain things with our program. I’d like to be competitive in the Atlantic Coast Conference. Overall it might be the best conference in the country as far as the things I think Tech believes in and I believe in and that’s strong academic programs, strong athletic programs, and having concern for the student-athlete. Now, we are self-supporting. Our income comes from gate receipts and contributions, those two main things. So to be competitive that means I must look for ways to increase our income, because Tech, at the moment, is fulfilling what it can with the present funding. So again I get back to the business part of it. If we want to be better we have to have more funds and, of course, the leadership to make it happen.

Q. You mentioned marketing and promotion. A lot of people in Atlanta remember when there were no professional sports, and Tech was the big show in town. How will you be trying to respond to the way Atlanta has apparently changed over the years, and how will Tech athletics compete with professional sports?
A. Well we need to advertise, we need to have special days and put people in the stadium. We need to put them in there initially in games we won’t sell out. In doing this we will stimulate interest. At North Carolina we did this and it came to the point that we didn’t need to do it anymore. That’s a good situation to be in. We’ll need to pull every string. And I think the big thing here is that we can’t be concerned about failing. Everything’s not going to work but if you have a fear of failing then you are going to hold back and not be flexible enough to make these things work, and you are not going to make it at all. Although Atlanta has become a pro town in one degree there are a lot more people here now and there are people moving in here all the time. We just need to reach the people here who are interested in college athletics. We need to emphasize alumni and friends because if you just emphasize alumni you are not going to have enough. There are other outside people who want to join a university and be part of it and I think Tech has that support since we are the only major college football in town. We have a product to sell. You know, I’ve been at all levels and I think college athletics is much more exciting, stimulating, and interesting. We also need to sell the ACC. We are the only major college in Atlanta with complete major sports. The Southeastern Conference is not represented in Atlanta. We need to overemphasize the ACC.

Q. Will those marketing techniques come into play in the basketball program?
A. Yes they will. You can do all kinds of things to promote a basketball team. You can have banner day and have all sorts of prizes for the best banners. You can have big super market days, kids days, safety patrol. It’s just the little things you do to create interest. I think a big thing in Atlanta would be the Welcome Wagon. You go immediately to people just moving into Atlanta and ask them to consider supporting Georgia Tech.

Q. How soon would you expect the marketing to begin, this summer?
A. Yes, we are already late for the coming year, but we’ll start in it this summer because I am going to hire a new person to be director of promotions. [Since this interview Rice hired Craig Stewart, formerly of UNC, for the position, Ed.] I’m going to organize the entire group in the area of promotions.

Q. It seems like the whole thing would kind of snowball in that once the interest was created more and more people would see the interest and more and more people would be showing up to games. But it also seems like creating that interest would be the difficult thing. Would you agree?
A. We can get it started, and we can stimulate the interest. But the thing I must do— I hate to use the word caution—is create an understanding that we are not interested in instant success. Everyone, I think, is going to wait for something big to happen but it’s not going to be that way at all. It’s going to be a step by step climb up the ladder to successful program. It’ll be very solid and sound, and it will be here from now on if it’s structured right. We can’t expect things to happen overnight.

Q. Do you have goals of your own for as far ahead as the next decade, or even five years from now?
A. Yes I do and I keep those to myself at this point. In setting goals you can scatter your forces if you start saying you want to do this or that. The thing has to be well-planned and well laid-out.

Q. How do schools with a top academic reputation go about recruiting for a top program?
A. What is required is that you have to do more national recruiting. It’s going to take a great effort on the part of our coaches to spend the time in these other areas and find the people who qualify, academically and otherwise. I think the ACC has been successful because of the Northeast. I think they’ve been able to find more who qualify for their programs because of the high population.

Q. As a matter of comparison, when you were at North Carolina could their top athletes have gotten into Tech?
A. Oh yes. North Carolina has a strong academic program and you have the same situation here as you do there. The only thing I might say along those lines is that in our limitations we may not have all the degrees and majors that North Carolina would have. I think that would be the difference, and that would have some effect on our recruiting.

Q. What steps are being taken to promote Tech out in the field other than the metropolitan area?
A. Bill Curry is doing an exceptional job with his coaches. They are going into every high school in Georgia and gaining a real respect for the high school coaches and them for Bill Curry. I think this is where you start your recruiting effort. We need to do a better job of getting our sports information in those areas. Of course, we want to recruit our state very hard, but as I said we are going to have to do more national recruiting.

Q. Getting to the minor sports, what do you see down the road for them?
A. First of all, I refer to them as non-revenue sports because they produce no revenue.

Q. Why couldn’t they produce revenue?
A. Well, I’ve been in this a long time and I’ve never seen a non-revenue sport produce the kind of income needed to offset the cost of the program, no matter what you did. The cost that goes into marketing something is quite expensive, and you could spend a awful lot of money and get very little return on it. A non-revenue sport can be successful if we can create an interest in it where we’ll have more money for scholarships available and more money to recruit with. That’s where it all is, providing your facilities are halfway decent. But it means that we are going
The Physical Future of Athletics

The demolition of the Naval ROTC Armory, which was scheduled to begin this month, marks the beginning of a new era in the ongoing story of Georgia Tech athletics. Third Street and Techwood Drive will be the home of the future Intercollegiate Athletic Center. The importance of that center on athletics in the eighties can't be overstated.

"It will be, by far, the best facility of its kind in the Southeast," says Vice President for Planning Dr. Clyde Robbins. "We visited Clemson, South Carolina and Tennessee, and we are incorporating the best features of each one. It won't be as big as Tennessee's, but for its function it will be much better."

An athlete could virtually live in the center. The only thing missing is a bed. Included is everything from the normal locker rooms to a meditation chapel.

The definitive plan for the center has been approved by the Athletic Board. It will provide office space for all intercollegiate sports for both men and women, except basketball. Enough flexibility has been built in to allow for expansion of the sports program.

The original plan provided space only for football and had only three floors. There are now four floors, and offices of the athletic director, business manager, and sports information will all be included.

The bottom floor, which is below street level, will have all the varsity locker space for players and coaches, a steam bath and sauna, taping and treatment rooms, storage rooms, a laundry, a conference room for officials, and a huge nautilus weight room with approximately 15 pieces of equipment. The free weight area will remain under the North Stands of Grant Field.

The second floor (main level) will have a large lobby, ticket sales, a V.I.P. Lounge for recruiting, promotion offices, sports information offices, administrative offices, and several large conference rooms with movie projection capability. It will also have food storage.

The third floor will have room for the football coaching staff, the T-club, and a kitchen and dining room.

The fourth floor will include the meditation chapel (likely with stained glass), with room for the Fellowship of Christian Athletes to meet, and offices for other intercollegiate activities. An additional 4,000 square feet will not be finished to allow for expansion of the sports program.

According to Robbins, the building, designed by Robert and Company, will be poured concrete and be designed for the least amount of maintenance possible. It will have a sculptured appearance to enhance the campus and not be just another square building.

As of June, contributions totaled about $4 million of the necessary $4.86 million needed. The largest donation, from the Callaway Foundation, the same people responsible for the Student Athletic Complex, was for $1.8 million on the condition that the same amount or more be raised from other sources. Also, as of June more than 140 people, companies, or estates had contributed.

There are several projects being discussed around Tech, other than the new Intercollegiate Athletic Center, which could greatly improve the athletic program for the ticket holder.

There has been some concern expressed by Robbins and others about the stands in Grant Field, and the associated facilities, such as bathrooms. It is his opinion those facilities are some of the reason attendance has slacked off. He wants to enter a long-term project to install seats in Grant Field, not just bleachers, and improve the bathrooms, which he calls "an abomination."

A project, that is about "95 percent certain," according to Robbins, is that seats will slowly begin to replace bleachers in the Alexander Memorial Coliseum. That would be part of a contract signed with Davison's Tennis Classic. It turns out the coliseum is the best place in Atlanta for indoor tennis, and the Davison's people will redo about 600 seats a year for their tennis fans.

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No decision has been made about the fate of the current Athletic Association Building on Third Street. It could be used for academic purposes, or it could house various women's sports and other athletic clubs. In any event there will probably be a major renovation of the visiting team locker rooms. The current football quarters under the East Stands will probably be used as storage area.
Association Attunes to the Eighties

Alumni Association Seeks More Input

According to Alumni Association Executive Director Bob Rice the key to the Alumni Association's success lies in the lines of communication between the alumni and the association. And, according to Rice, that's not just including the right material in Tech Topics and the Alumni Magazine.

"Alumni have to keep us informed about what they are doing and where they are living because if they don't there's almost no way we can keep in touch," Rice says.

"Many of our new alumni move four or five times in the first two years after graduation, and that makes it extremely difficult to know where they are if they don't tell us. We want to be able to keep them aware of the problems Tech faces in the eighties and we want to make them feel involved with the institute."

Overall, the outlook for the Georgia Tech National Alumni Association in the eighties looks extremely good, according to Rice. Rice says the addition of Head Football Coach Bill Curry and Athletic Director Homer Rice has caused an increase in participation.

"We had 50 clubs in the association at the beginning of the year, but by the end of the year I think we'll have about 65," Rice says. "There are clubs forming in places we never had them before, and many of our old clubs that became inactive are becoming active again." Rice adds that this phenomenon did not happen when new coaches and directors were hired in the past.

The association is also expanding internationally, with a new chartered club in Australia, to add to those already established in Panama and Puerto Rico.

Rice predicts that by 1985 alumni and friends will be contributing approximately $2 million to Georgia Tech in unrestricted gifts. He says it is also likely the base of support, which is slightly more than 40 percent, would be maintained to keep Tech one of the outstanding leaders among public institutions in the country in the percentage of alumni that contribute annually.
One of the more perplexing problems in the 1980s for the Georgia Tech National Alumni Association is how to get more women and minorities involved.

Richard Bell, the Association’s new president, wants to tackle the problem.

“So far we’ve failed to get them (women and minorities) involved in any substantial way and it’s the most frustrating thing,” Bell says. “And I really don’t know the reason for it. My guess is that most women really haven’t worked themselves into prominent positions. Locating the women is another problem still. We’ve run a computer search. It seems as though women aren’t reporting back, or they are following the old pattern by getting married, taking their husband’s name, and then supporting his college. All that makes them really difficult to find.

“One of my fervent hopes was to break the line this year and have a woman on the Board of Trustees. Frankly, I was expecting a good bit of controversy about it since a lot of our people are rather conservative. But right now I don’t think we’ll be able to do it. But if we can’t break the barrier I hope to really encourage their participation in various committees and clubs.”

Finding minority graduates is probably more difficult than locating women, according to Bell. In either case, Bell doesn’t want a woman or minority to sit on the board as merely a token.

Another area the energetic Bell would like to see the Georgia Tech National Alumni Association deal with is getting “more friends of Tech,” involved in the institute. He said the base of support in giving has shrunk slightly, partly due to the growing number of minority and women graduates who have not been inclined to participate. However, even though the percentage of graduates giving has declined, total dollars contributed has gone way up over the last few years.

Two other areas of concern to Bell are the Alumni Placement Center and furthering the growth of the International Clubs of the Alumni Association.

“One of my fervent hopes was to break the line this year and have a woman on the Board.”

“If not the best we certainly have one of the best Placement Services in the country, and I think we should make that known to our alumni,” Bell says. “We are understaffed in that area, and we need to increase the budget and we need to follow up better on referrals.”

Bell says the Georgia Tech National Alumni Association is an outdated name, since there are extensive clubs in Panama and other areas. The name, he says, will probably change simply to the Georgia Tech Alumni Association, although International Alumni Association is a possibility.

The man who will lead the Georgia Tech National Alumni Association into the eighties is a 1961 alumnus of the College of Industrial Management.

Bell grew up in Bremen, Ga., a small town compared to Atlanta. However, the small-town boy immediately took a liking to the big-city life and decided he wanted to stay. His wife, the former Gail Howard, is a Georgia State University alumna, who he met as a sophomore while she was still in high school.

Bell was active in campus publications, “always on the business end,” and sold ads for the Technique and the Rambler. He was a member of Beta Theta Pi fraternity, and he still has a good number of friends left over from those fraternity days.

“A good many of us (Beta Theta Pis) have been officers in the Alumni Association,” Bell says. “Dave McKenney ’60, and Don Chapman, ’61 were among them.”

After leaving Tech, Bell served in the Navy and lived in Taiwan, among other places.

Bell is currently a partner of Bell, Cowart and Jackson, an Atlanta real estate firm.
The L.W. “Chip” Robert Jr. Alumni/Faculty House was dedicated Nov. 17. The R. Park Newton ’35 Room (top photo) greets you at the ground floor entrance to the Alumni Association offices. To your left as you enter is the R.A. Siegel ’36 Suite (center photo), and to your right is the Fuller E. Callaway Jr. ’26 Suite (bottom photo) where Director of Annual Giving Dell Sikes conducts his business.

New Chancellor is No Stranger to Tech

The appointment of Vice President for Academic Affairs Dr. Vernon Crawford to the position of chancellor of the University System of Georgia could be one of the most significant events of the 1980s for Georgia Tech.

For the first time there will be a man in the top educational post in Georgia with a complete understanding of the unique problems Tech faces in the eighties. While enrollments are declining generally in the university system, Tech’s is being pushed to the limit.

Crawford served in various positions at Tech for 31 years.

“Of course it’s a great loss to Georgia Tech to have him leave after 31 years,” said Tech President J.M. Pettit. “But perhaps it’s even more important to us to have a good chancellor. In the long run that will be very important. He is a person of high ability, and that ability will be used even more fully in the position of chancellor. I am looking forward to working with him in this different relationship.”
Atlanta businessman Dan McKeever received the first Alumni Distinguished Service Award of the eighties at Georgia Tech's June commencement exercises. McKeever, chairman of the board of J.E. Hanger Inc., one of the nation's largest manufacturers of orthotic and prosthetic equipment, was a 1932 graduate in electrical engineering in the cooperative plan. He was a member of the ODK, ANAK and Phi Kappa Phi honor societies. McKeever's devotion to Tech is underscored by his service as chairman of the Executive Board of the Joint Tech-Georgia Development Fund, president of the National Alumni Association, and member of the Board of Trustees of the Georgia Tech Athletic Association and the Georgia Tech Foundation Inc.