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CONVERSATION WITH THE SEVENTH PRESIDENT

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ROBERT A. ALTENKIRCH AMBLES THROUGH THE HALLS OF NJIT AT A LEISURELY PACE, MEETING NEW COLLEAGUES AND GREETING STUDENTS AND STAFF. WITH AN UNASSUMING AIR, HE HAS QUIETLY TAKEN THE HELM OF NJIT AS ITS SEVENTH PRESIDENT. WHO IS THIS SOFT SPOKEN, AFFABLE MAN IN THE STRIPED REP TIE, AND WHAT ARE HIS PLANS FOR THE UNIVERSITY?

Altenkirch is a mechanical engineer who rides a motorcycle and shares his home not only with his wife but also with three large dogs and three cats.

Born and raised in Missouri, he was educated at Purdue University in Indiana where he received a bachelor's degree and a doctorate in mechanical engineering; and at the University of California at Berkeley where he earned a master's degree. He has spent his professional career in teaching and administration at the University of Kentucky, Mississippi State University (MSU) and Washington State University.

Altenkirch brings to NJIT a wide background in university research, teaching and administration with extensive experience in program development, fund-raising and federal relations. During his tenure as MSU vice president for research, science and engineering, expenditures as reported to The National Science Foundation (NSF) increased 75 percent from 1997 to 2001. In addition to the research program, his responsibilities encompassed congressional relations, intellectual property management and economic development. While dean of engineering at MSU, he led the effort to secure NSF funding for the establishment of the MSU NSF Engineering Research Center for Computational Field Simulation. The center was instrumental in assisting the State of Mississippi attract a one-billion-dollar Nissan manufacturing plant now under construction.

In short, it's no wonder Altenkirch was selected by the thirteen-member presidential search committee. With his background and experience, he's ideal for NJIT.

But history is just one part of this story. Everyone wants to know where he plans to take the university and his vision for its future. To answer these questions, we caught up with President Robert A. Altenkirch for an exclusive *NJIT Magazine* interview.

INTERVIEW

Weinstein: What attracted you to NJIT?

Altenkirch: I think two things: NJIT's technological focus and its location.

The focus is attractive because it offers a clear direction and matches my own background and experience. The location offers a large population base and that's important. The larger the population base, the more people working in technology and the more ideas you're going to generate. You can't have three hundred thousand square feet of incubator space, as NJIT does, at a university sitting in a rural area. There are also so many labs around here, in the pharmaceutical industry, in electronics, even in transportation. Statistically, with those ingredients, you have a good chance of developing new technology.

Weinstein: Will you miss anything about Mississippi?

Altenkirch: One thing that's nice about Mississippi is that you have a lot of open space; you have a lot of land and everything is kind of spread out. But you know, there is a down side to that: you've got to go a long way to get somewhere.

Weinstein: How do you see NJIT as an agent of change for Newark?

Altenkirch: Interacting with the public schools, developing a pipeline enticing a diverse mix of students to pursue technologically oriented education and assisting them in succeeding is a major element of what the institute can do for Newark.

Another element is NJIT's impact on the local economy. We impact the local economy through employment at the university and business development — through the incubators, local

recruitment and the funding that comes in to support research and the commercialization of research results through copyrights and patents.

The architecture school provides another way in which NJIT impacts the city. Students and faculty might be involved in various projects, assisting neighborhoods in developing plans to create funding streams that would ultimately pay for architects to improve the built environment. I've been involved in some of that in Jackson, Mississippi, through the architectural school there, as well as something called the Small Town Center that was akin to an extension operation. That program basically helped rural communities develop plans to preserve historic structures.

Weinstein: What about the State of New Jersey?

Altenkirch: Well, I think for the state the elements are not substantially different. Perhaps the economic impact and development activities tend to stand out more. Providing a technologically educated workforce for the state is a pipeline to maintain and recruit industry. Industry will not come to a place without workers.

I think a technological university can also generate intellectual property that can be commercialized through start-up companies. Start-up companies help recruit existing companies and that, in turn, creates a rich environment that constantly generates new products. But you have to focus the effort so that you get a kind of clustering around particular industries. That was the general concept behind Silicon Valley and Research Triangle Park in North Carolina. What you don't want to do is have one type of every kind of business.

Weinstein: Do you envision bringing massive research centers to NJIT the way you did at Mississippi State?

Altenkirch: Yes, the reputation of an institution oftentimes is built on its research program and its faculty and their national stature.

If you want to generate a robust research program, my experience is that you've got to develop large-scale activities to solve very complicated problems. It used to be that individuals would get a grant and carry out research projects and then publish their results. But the problems that society metes out today and the ones funding agencies are willing to pay for are much more complex – they're more interdisciplinary.

ALTENKIRCH AT A GLANCE

BORN	May 13, 1948 St. Louis, Missouri
EDUCATION	B.S.M.E. Purdue University 1970 M.S. University of California, Berkeley 1971 Ph.D. Purdue University 1975
RESEARCH SPECIALIZATION	Combustion and Heat Transfer
PROFESSIONAL EMPLOYMENT	1998-2002: Vice President for Research and Professor of Mechanical Engineering, Mississippi State University 1995-1998: Professor of Mechanical and Materials Engineering and Dean of the College of Engineering and Architecture, Washington State University 1988-1995: Professor of Mechanical Engineering and Dean of the College of Engineering, Mississippi State University 1975-1988: Professor of Mechanical Engineering, Chairman of Mechanical Engineering, Associate Professor of Mechanical Engineering and Assistant Professor of Mechanical Engineering, University of Kentucky

Academic programs are configured for the purpose of awarding degrees; we need to configure a research program that's set up for the purpose of solving today's problems. That requires generating blocks of funding to support center-type activities.

That's the sort of thing in which I've been involved. I was involved in setting up an NSF-funded engineering research center. At that time it was the only one in the Southeast. It ran a successful eleven-year cycle and is now a stand-alone research unit without NSF funding.

Weinstein: So the NSF funding was seed money?

Altenkirch: Yes, seed money to get things moving until the center could sustain itself. This is the path that allows an institution to grow nationally. The strategy is straightforward; the trick is finding the right tactics to make it successful.

Weinstein: NJIT has a long-standing commitment to teaching, but you are very focused on research. What is your view on the connection between research and teaching?

Altenkirch: This question has been around for ages. It's really a philosophical debate. The research and teaching games are linked. The teaching and learning part is a transfer of knowledge. But knowledge changes, so if you're not involved at a university level in developing the knowledge, then sooner or later what you're trying to transfer is not going to be up-to-date.

What you've got to realize, though, is that the common currency in the academic community is research productivity. So if you want to enhance your career, your salary and your stature, it's based on what your research productivity has been. People can argue whether that's good or bad, but in a practical sense, it's just a fact.

Weinstein: There's a lot of building going on here at NJIT. What do you think about it?

We'll grow the research program in a focused way, emphasizing large-scale, interdisciplinary efforts, building on strength, or the opportunity to grow strength....

Altenkirch: I think the building going on here is quite healthy. As the institution's complexion changes, new buildings like residence halls are needed. It's a process of change and moving forward that's appropriate. And buildings like the administration building and the student center — that's updating the physical plant. You don't want to be stuck letting things go for a long period of time. You just won't be competitive. Science Park is strong. The incubator program is strong. They make NJIT very attractive.

Weinstein: What are your goals for NJIT?

Altenkirch: I have six goals that I just wrote up. First, I want us to start with the strategic plan

developed for the Middle States [Accreditation Association] visit, and move toward developing a crisp, focused plan with measurable goals and allocate resources consistent with our goals.

I want to make sure that the educational programs are sound, continue to serve a diverse student population as they do now so well, and are coupled with our research programs at both the undergraduate and graduate level. That will ensure we move up in the rankings and that the recognition we get is built on solid footing. How high are we going to move in the rankings? I don't know at this point, but we will, and that will be a measurable goal.

We'll grow the research program in a focused way, emphasizing large-scale, interdisciplinary efforts, building on strength, or the opportunity to grow strength, taking into account local, state and regional needs that will allow partnerships to be developed that will impact the economy. Research capacity is important; the larger the effort, the greater the chance of commercializing results, being a player in industrial partnerships and impacting the economy.

We'll grow the endowment to levels comparable to peers and competitors to enhance the institute and financial support for students.

We also need to figure out how to develop a sense of community that will bring alumni and friends back, keep them engaged and ensure NJIT is a fun place to be. At some of the institutions where I have worked, the key has been football and at some it's been basketball. It doesn't have to be athletics but there has to be something.

I hope to expand the intellectual property commercialization effort to make it something in which the faculty want to be involved and to enhance relationships with Science Park incubator tenants. That will impact the local and regional economy and develop a revenue stream for the institute.

Weinstein: That sounds like a pretty good start.

Altenkirch: I think that's a pretty good start. We're in a pretty good position already. I want to say that President Fenster, Saul, has done a marvelous job of positioning the institution. His hard work and vision over the years, a vision I share for NJIT, is nothing short of what a successor could hope for. ■