



State of the College Address

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This is my third State of the College Address. In 2007, having been newly appointed and on the job for only a few months, I had to focus my attention on the history of Fenn College - who we are and where we needed to go. It was a time when morale was low, there were sudden changes in the administration of the College at several levels, enrollment was low, the College was facing a significant budget deficit, there were talks of merger, and several internal and external reviews of the College's operations were being conducted simultaneously. So, it was important to remind ourselves that this college had weathered such crises before throughout our 85 year history - having seen the Depression era, World War II, and its transformation into what has become the Cleveland State University. Yet, each time Fenn College has emerged stronger and more dedicated to our overarching mission, a mission of delivering a quality education to our students.

In my 2008 address, I recognized the efforts that the Fenn College team, our faculty, staff, students and supporters had put forth which resulted in the elevation of the College to a higher level. I described many new programs that we had instituted and provided an assessment of their progress.

This year, I would like to share with you some of the results of these efforts and talk a bit about the future. I am delighted to report to you that our Fenn Academy has continued to show success in reaching out to the region's high schools and working with teachers, students, counselors and parents to help prepare the next generation of engineers. We now have 34 member schools with 15 off-campus Fenn Academy offices in Northeast

Ohio in the cities of Euclid, Mentor, Parma, Cleveland, Independence, Shaker Heights, Cleveland Heights, Lakewood, Aurora, Kent and Stow. We also have 8 corporate members, the most recent of which is Goodyear Tire and Rubber Company.

This year, the Academy received a \$171,383 grant from the Ohio Board of Regents to establish a summer camp for high school students and has received scholarship and operating support from very caring member corporations.

Our new freshman enrollment over the past two years has increased by 75%, placing Fenn College as one of the fastest growing programs nationwide and on top of that has further increased this year. Through our Fenn Academy efforts, we are now attracting students from such areas as Aurora and Kent.

Additionally, we have just received a grant from the Ohio Board of Regents, entitled: Engineering Across the Pipeline in the amount of \$474,700. In partnership with Baldwin Wallace and Ursuline College we will provide a career pathway to students who already have shown an interest and ability in physics, biology, chemistry and mathematics at the undergraduate level to have early and convenient access into an engineering masters program and receive scholarships to continue their studies. Our partnership with Ursuline College will also allow us to attract more women into engineering.

But we did not stop our efforts at the recruitment front alone, we paid particular attention to student retention issues and responded with initiatives such as personal invitations to prospective students for visits, forming "Adopt-A-Freshman program", a program reliant on faculty and staff participation, restructuring of the first-year advising, adding a new graduate student advisor to the advising team, increasing the number of tutors and creating an early connection between freshmen and their respective departments' faculty. All of these efforts helped to enhance our retention rate as evidenced by our full time, first year cohort Enrolled in Fall 06 and Returned in Fall 07 rate which improved by 10%.

We also established new programs, such as a Certificate in Applied Biomedical Engineering, a four-year Engineering Technology as well as four accelerated BS/MS programs. Our latest efforts include a partnership with the colleges of Business and Science in developing a joint Science & Technology Entrepreneurship Certificate as well as a proposed M.S. in Biomedical Engineering which is presently under review by the Ohio Board of Regents. Besides new programs, we introduced new and exciting courses as well, such as Globalization and Engineering prepared and taught by Dr. Kuo to our graduate students as well as undergraduates from the Honors program.

Additionally, we completely restructured our co-op program to make it a truly educational experience for our students as opposed to just a job. Furthermore, recognizing that the College should be a welcoming, modern and comfortable place for our students, with the help of the university administration, we invested over \$1.5 million to repair and renovate our existing Fenn College space. Long needed projects such as roof repair, establishing an engineering co-op and activity center for our students, addition of smart boards, ceiling mounted projectors and TV monitors as well as cosmetic

upgrades, such as painting, flooring, new carpets and utility repairs have changed the look and improved the physical facilities of our college.

We also embarked on non-academic cost cutting measures and instituted an open communication plan which includes open cabinet meetings and open houses for our stakeholders. These as well as extensive restructuring of the administration of the College and other similar measures resulted in faculty morale improvement as noted by our accreditation agency team in their recent visit.

I want to highlight the fact that our students enjoy small class sizes that allow them to participate freely and interact more often with their professors as opposed to remaining as passive recipients of information. While our recent phenomenal successes in freshman enrollment may change this particular statistic in the future, we are presently rated by the American Society for Engineering Education as one of the top 20 engineering colleges that award a minimum of 50 degrees per year, in the category of Lowest Ratio of Bachelor's Degrees to Faculty. We are in good company as some of the other colleges ranking in the same category are MIT, Cal Tech, Princeton, Stanford, University of Rochester, Northwestern University, Yale and George Washington University.

On the research and scholarly activities front, the College has received a pledge of \$1,000,000 endowment from Mrs. Betty Gordon for establishment of an Endowed Distinguished Professorship and Energy Research in the area of Alternative Energy. We also received \$1.1 million from the Department of Energy which supports Dr. Rashidi's Wind Energy research. Presently, efforts are underway by Dr. Rashidi's team to construct a Fenn College wind tower on the campus of CSU and discussions are ongoing to construct one at an off-campus site. We have also received additional funding from Parker Hannifin Corporation, in addition to their previous commitment of \$3 million dollars, to support our qualified students with scholarships.

Dr. Sridhar, Assistant Professor of Electrical and Computer Engineering, received the National Science Foundation's prestigious CAREER award. This nationally competitive award bestows \$450,000 upon Dr. Sridhar and Fenn College for the purpose of continued research and instruction. More recently, in addition to this NSF grant, the faculty of the Electrical and Computer Engineering department received three additional NSF grants and one ADA grant for a total of \$600,000.

While we are on the subject of the Electrical and Computer Engineering department, I should mention that one of their alumni, Dr. Hakimzadeh, was one of the recipients of the CSU's 2008 Distinguished Alumni Award. Dr. Hakimzadeh serves as the Chief of the Photovoltaic and Power Technologies Branch at NASA Glenn Research Center and has made significant contributions to the success of several NASA missions.

Faculty members in other departments have not been less active. In fact, faculty have shown impressive achievements in various areas including distinguished awards, international recognition and numerous publication of books, journal articles and other refereed manuscripts. Recently, two of our faculty members, Dr. Lin and Dr. Delatte,

became Fellows of their professional societies. We now have a total of 9 professional society Fellows which puts the College among a special group of engineering colleges with similar proportion of faculty as Fellows. Dr. Ibrahim received the Distinguished Visiting Fellowship Award from The Royal Academy of Engineering, U.K., which provided him full travel support to spend five weeks at the University of Oxford to collaborate with researchers on innovative cooling systems in Gas Turbines. Moreover, we have several faculty members who are editors of prestigious journals, the latest of which is Dr. Belovich who has been invited to be a member of the Editorial Board of the Journal of Biological Chemistry – a pre-eminent journal in that field.

We have seen a significant increase in the number of proposals that are funded. As an example, for the period of January 1, 2007 to August 31, 2007, 46% of all submitted proposals were funded vs. 23% funded for the same period in 2006 and this trend has continued to the present time. The College has received funding from the Department of Defense, Department of Transportation, Department of Energy, National Institute of Health, American Diabetes Association, NASA, National Science Foundation, Boeing, Parker Hannifin, Rockwell Automation, Air Force Research Lab, DARPA, University of Arizona, SAIC and Ohio Board of Regents among others. Over the past two years, Jan. 07 to present, the College has received approximately \$9,000,000 in grant awards.

In addition to grant funding, our Visiting Scholar Program has attracted scientists domestically and from around the world. We have placed scholars at Fenn College from Carnegie Mellon University as well as major universities in India, Korea, China and Brazil. Moreover, recently Dr. Gatica and Dr. Gorla received prestigious Fulbright awards and continued their research work in Argentina and Nepal respectively. Our international connections have further expanded through recruitment efforts that we have begun in order to respond to a drop in international graduate student enrollment which is experienced not only by us, but by the University as a whole due to various economic factors and international competition in attracting very talented students. In that regard we are working to establish new partnerships with universities in Turkey, Argentina and India in addition to partnerships that we have already established in Singapore and Poland.

Regionally, we have expanded and added to our existing partnerships with local industry as well as institutions such as Akron General Hospital and Cleveland Engineering Society.

One of our faculty members, Dr. Gao, has been working with a former student and Fenn College graduate on a spin-off company, ADRC Technologies. The project has received \$1,000,000 from Early Stage Partners, a venture capital firm to license a patent-pending control technology. Crain's Cleveland Business, The Plain Dealer and Industrial Week have all published articles on this endeavor.

And talking about our alumni, the Engineering Chapter of the CSU Alumni Association has hosted toy modification workshops to benefit local children with disabilities. But our engagement with the community and the world beyond does not end there. Our student

chapter of the Engineers without Borders (EWB) has received a grant from the National Chapter of EWB to help with the costs of its upcoming trip to Belize. They will provide technical assistance to the village of August Pine Ridge and will be travelling to Belize at the end of April.

To recognize the outstanding efforts put forth by our dedicated colleagues during the last two years, we established recognition awards for faculty and staff. The outstanding research, service and teaching awards recognize the work of our faculty members and the Kaizen and Outstanding Staff Award reward our dedicated staff. We also established and awarded our most prestigious recognition, the Fenn Distinguished Research Professor Award. Dr. Gorla was the first recipient of this award.

As is evident, the Fenn College family has much to be proud of. These recent accomplishments that I have cited are the results of the hard work of many of our faculty, staff and students. But, let us not become complacent for we still have much work and significant challenges ahead of us if we are to claim our rightful place in the national higher education scene. We must become more agile and respond quickly to the changing regional and national needs. Our smaller size and the ability to partner with our local institutions and corporations are to our advantage. But, we are not immune to the economic downturn that our region, the nation, and the world are experiencing. The entire university is facing budget cuts for the next fiscal year. Preliminary discussions with the university administration indicate that Engineering's share of cuts will be approximately 4.8% of our college's permanent operating budget. This will be difficult and painful for all of us and we will all, in one way or another, experience its effects. To be sure, it will slow the momentum that we have generated. But, if it is any consolation, my conversations with other Ohio engineering deans and colleagues around the nation reveal that we are all experiencing similar cuts. More than ever before, it is up to us to show our resilience and rely on our hard work and positive spirit to pull through this predicament.

Now, looking into the future, I am very excited about our newly drafted strategic plan. After some preliminary preparation last summer, we started this process with a two-day college retreat back in August of 2008 which involved, not only our faculty and staff, but all of our important stakeholders, namely; our students, industry representatives and employers and the University administration. Through the ensuing eight months, we formed affinity groups that met regularly and we held meetings with our various stakeholders in addition to the faculty and staff at large. We have now finished this process with an exciting plan for the next five years. Among others, the plan calls for Enhancing the Curriculum, Enhancing Research Productivity and Identifying Research Focus Areas, Increasing Support for Students and Establishing New Relations with Industry.

Over two years ago, shortly after my appointment as Interim Dean, in an e-mail to faculty on January 10, 2007, I outlined some new procedures and initiatives and we took actions to immediately implement them. Among those initiatives, I proposed the establishment of Fenn Research Institute. I described that the Institute will be "...the

result of an administrative restructuring which will establish an organized structure to help the faculty with proposal writing, identifying research opportunities, scheduling technician time, ... contacts with industry and showcasing of faculty expertise to various funding agencies.” Last year, during my State of the College Address, I said: “As the area’s engineering educators, we must work closely with our colleagues in local industry to learn about their specific needs and challenges that they face. We must interface frequently with fellow engineers working in research centers, engineering professional organizations and entrepreneurship centers and business incubators to create a Cleveland center of gravity, be it virtual or a physical place, for all engineering related activities in this region - bringing researchers, educators, engineering practitioners, entrepreneurs, students and business men and women together to create an atmosphere conducive to innovation and critical thinking.” Not long after that, we started our strategic planning process and I awaited the outcome of that process to see if my proposed initiative was in-line with the view of our stakeholders. In fact, I am delighted to report that during the August 2008 retreat, the faculty, staff and other stakeholders agreed and identified such an organization as a strategic need in order to bring us to a closer partnership with industry. They formed an Affinity Group and followed this idea in the ensuing seven months and incorporated it in our strategic plan. Tonight, I am announcing the formation of Fenn Research and Development Institute with the goal of establishing much closer R&D relationships with our region’s industry. The Institute will have four major units, namely: Interdisciplinary Research Projects, Co-op and Service Learning, Intellectual Property & Technology Transfer and Industry Outreach. I will ask our friends and supporters in the local industry to assist and support us with the development of the Institute - much like the successful model of Fenn Academy that we implemented.

To ensure that we maintain a modern engineering curriculum, I will ask all department chairmen to take the lead in their individual departments and work with the appropriate faculty committees to realize our strategic goals of enhancing the effectiveness of the engineering curriculum in all departments with initiatives to better connect theory to practice and to establish an Engineering Service Project curriculum that links the regional community needs with the benefits of engineering service learning.

As the Dean, my aspiration is to direct the College towards national recognition and establish an environment that would be welcoming, engaging, and a developmentally rich place for our students to learn and for our faculty to be involved in promising fields. A college with an intellectual core built on key areas of focus, in line with our university mission. And for the community, a presence demonstrated through visible service and positive economic impact resulting in regional growth and employment.

Finally, allow me to expand a bit on this last point, that is, the role of the universities on the regional growth and employment. I believe that at all times, but particularly during tough economic times, public universities have a special obligation to respond to the needs of the region they serve. I pointed out in my last year’s address that “we must prioritize the needs of the region and the role that we [as a university] can play, to address those needs.” Creating new degrees in response to market needs, providing professional development support to faculty to upgrade their skills, eliminating barriers that hinder the

development of closer partnerships with the local institutions would make a regional university a vibrant and thriving institution open to a dialog with its constituencies.

As Cleveland's only comprehensive public university, we cannot isolate ourselves from the city's K through 12 schools, professional organizations that need assistance, the increasing young population who are hardest hit by the recession and cannot afford to pay for higher education, employers who need well-trained professionals and laid off workers who need retraining. Therefore, tonight I announce that Fenn College will support our city by strengthening our present partnerships with the city's schools through our Fenn Academy – schools such as, MC2 STEM, Design Lab Early College at John Adams High School, Success Tech and John Hay high school. We will more actively support the Cleveland Engineering Society and through Fenn Academy will work with the city's schools to make the eligible young men and women who might be interested in engineering aware of various scholarships and learning opportunities that will be available to them. Through Service Learning, our students will work with the community organizations to provide technical assistance. Fenn Research and Development Institute will work with the local industry to expand our co-op program, develop joint interdisciplinary research proposals, facilitate Intellectual Property and Technology Transfer matters and develop new partnerships with prospective industry partners. We will also start new partnerships with non-profit organizations such as Team NEO and will work more closely with our partners such as Nortech, SMART and Cleveland Scholarships Program.

The state of our college has improved substantially and while challenges remain, given the present state of the economy, we can work to convert those challenges into opportunities. But, the way I see it, our success is not independent of the success of this great city and this great state. It is then incumbent upon all of us, the scientific community, the cultural community, the business community, to work together and support each other, at any possible level, to once again make this region and this state an economic powerhouse with educational and job opportunities for all Ohioans. Thank you all and my sincere congratulations to this evening's recipients of the Steel Ring.

