The Expert's Opinion

INTERVIEWEE PROFILE
Mr. J. Gary Augustson is executive director of Computer and Information Systems at The Pennsylvania State University where he is responsible for all University telecommunications, administrative computing, central academic computing and library computing. Penn State is a multi-campus major research University serving more than 67,000 credit and 100,000 noncredit students at 22 campuses throughout Pennsylvania. In addition to his University activities, Mr. Augustson is president of the board of the Pennsylvania Research Economic Partnership Network, serves on the board of directors of the Consortium for Scientific Computing, and serves as the University's representative to the Pittsburgh Supercomputing Center and the Cornell National Supercomputing Facility. Prior to joining Penn State, Mr. Augustson was employed in several federal government positions, including the National Security Agency, Department of the Treasury and as Director of Technology at the U.S. Information Agency.

Q. Speaking broadly, what do you think is the role of information technology in an academic setting?
A. I see its importance running the gambit from supporting our administrative operations to being an indispensable part of our research and instructional activities.

Q. Do you find information technology to be an essential ingredient in the overall growth and success of the academic setting or is this technology just another support tool?
A. In my opinion, it is going to be one of the differentiating items of successful institutions of the next decade and certainly into the next century. Those who apply it well will be competitive and those who don’t may well drop by the wayside.

Q. Do you find information technology to be as important in academic settings as it is in the private and public sectors?
A. Yes, but it is harder to measure its value because we don’t have a bottom line. In private industry, if technology contributes to a bigger bottom line, further investment in technology will be made if it increases the bottom line more. Because our funding situation is different, our bottom line is harder to measure. Clearly we are building the leaders and visionaries of tomorrow and if we don’t use tomorrow’s technology, I don’t think we are going to prepare them for the world they will be living in.

Q. What do you find to be the strategic value of information technology in the management of academic settings?
A. Information technology permeates all aspects of the management of the academic setting, whether it is running the institution or deciding what services the institution should provide. In an effective cash flow management system, technology can help us maximize our cash flow situation. On the academic side, it is important in attracting faculty to develop top-level instructional and research programs. If we can show that we have an equipment base that provides the research environment with the tools to attract nationally known faculty, we will be more competitive and attractive to researchers and students alike.

Q. What do you find to be the major organizational problems facing effective management of information technology in an academic setting?
A. If you are going to plan for the future, you must not be afraid to organize for the future. Traditionally, the organizational approach allowed each unit to operate separately. The telecommunication technology was separate from computing technology, the administrative computing arm of the university was a separate entity from the academic computing arm. All of
these areas have such a great overlap that there has to be some commonality in leadership. Penn State has made substantial organizational changes over the last five to six years that have contributed to the institution’s success in applying technology. And I think you will find that many of the leading universities nationally have taken similar approaches. Everybody’s formula is a little different, but the general flavor and trend of recognizing the way the technologies are interrelated and focusing leadership through an executive level individual who reports to the office of the president and who has institutional-wide responsibility is a key success factor. When organizational structures require that “problems” between telecommunications and computing, or between administrative computing and academic computing, be resolved in the president’s office, this is very ineffective. Nothing, however, beats enlightened leadership! The critical success factor, I think, is to have a president or a CEO who understands that the effective application of technology is critical and then makes efforts to see it funded to the fullest extent possible and institute an appropriate organizational structure to deal with the leadership.

Q. What do you find to be some of the major obstacles or issues regarding the overall strategic planning for information technology in an academic setting?
A. Probably the hardest thing to achieve in the academic setting is effective communication within the institution because there is not a true hierarchical business structure where an order issued from the top will eventually get to every individual in the organization. Given 140 disciplines at Penn State, it is hard to feel comfortable that you have touched every researcher, every professor, and every discipline, and considered their input and needs. I also think that the severe funding limitations, particularly in Pennsylvania, make for some difficult choices at the executive level in determining how many dollars to allocate to technology activities, and once those are allocated, how to allocate those within the competing university-wide requirements.

Q. Do you think that in an academic setting such as Penn State, strategic planning for information technology can afford to be a separate process or should it be part of the overall strategic planning process of the university?
A. It needs to be linked. In higher education, achieving the mission of providing a top quality education is very challenging. When you have top quality research facilities and 140 disciplines that span everything from the fine arts to the very technical scientific fields, there is no one right solution to achieve this mission. Many years ago I remember reading about someone in a corporate setting saying that microcomputer brand X is the right brand for his company because, “I am the president and I have decreed it as such.” I thought about what a simple solution that would be. In an academic environment, that is simply the wrong solution. What is exactly the right workstation for our college of liberal arts students is precisely the wrong workstation for our engineering students. And as you consider software standards, the whole range of technology is very diverse. We can have many solutions in trying to achieve our academic mission. We let standards develop de facto rather than decree them.

On the other hand, there are certain areas where the user doesn’t care. For example, the user picks up the telephone and dials the phone number and all he or she wants to do is make sure the phone call gets through. So when we talk about standard applications in that area, we have more of a sense of responsibility to make sure we work with all the national standards.

As we move to the administrative side, running the business side of our university, we do have a direction, we do have a plan and one may decree a particular vendor’s equipment in the work environment. So we probably act more
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