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A National Dialogue:

The Secretary of Education's Commission on the Future of Higher Education

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Introduction

I want to thank, the Commission, Secretary Spellings, and the Secretary's staff for allowing Cisco to share our perspective as you make recommendations aimed at maintaining the competitive edge of America's Higher Education System in this dynamic global economy.

The Higher Education Research Institute at UCLA recently reported a 60 percent decline in computer science undergraduate enrollment between 2000 and 2004. Meanwhile, the U.S. Bureau of Labor Statistics predicts that IT-related jobs will grow 45 to 68 percent between 2002 and 2012.

Cisco Systems believes it has a stake in higher education and wants to support an education system that excites young people about technology. Cisco wants to foster an education system that works in "partnership" – across grades and with employers. To shore up an education system that ensures we have the high-skilled people who can support our industry into the future.

During my time today, I will provide you with a brief overview of our company, describe a global education initiative we launched nine years ago, and outline the lessons learned that should be considered as you move forward with your charge.

Company Overview

Founded in 1984 by a small group of computer scientists from Stanford University, the company today maintains a special place in its heart for higher education, and education in general.

In those early years, the multi-protocol router was known to the few who had a specialized knowledge of the backroom network operations of IT centers. Today, networks are an essential part of business, education, government and home communications, and Cisco Internet Protocol, or IP-based networking solutions are the foundation of these networks. Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction, and strengthen competitive advantage. The Cisco name has become synonymous with the Internet, as well as with the productivity improvements that Internet business solutions provide. At Cisco, our vision is to change the way people work, live, play and learn.

Since the company's inception, Cisco engineers have been leaders in the development of IP-based networking technologies. This tradition of IP innovation continues with industry-leading products in the core areas of routing and switching, as well as advanced technologies in areas such as: IP telephony, network security, wireless connectivity, optical, and even networking in the home with our Linksys brand, and more recently Scientific Atlanta. Today, with more than 34,000 employees worldwide, Cisco remains committed to creating networks that are smarter, thanks to built-in intelligent network services; faster, in their ability to perform at ever-increasing speeds; and more durable, with a generational approach to an evolutionary infrastructure.

Cisco Networking Academy Program

As the Internet made its way into our everyday lives, schools turned to Cisco for assistance with designing and building networks. Despite good intentions, it became clear that schools needed to build the internal capacity to support these new networks. Cisco, aimed at providing a solution to this challenge, launched the Cisco Networking Academy Program, a comprehensive e-learning program that provides students with Internet technology skills. The Networking Academy delivers web-based content, online assessment, student performance tracking, hands-on labs, instructor training and support, and preparation for industry standard certifications.

Launched in October 1997 with 64 educational institutions in seven states, the Networking Academy has spread to more than 150 countries. Since its inception, more than 1.6 million students have enrolled at more than 10,000

Academies located in high schools, technical schools, colleges, universities, and community-based organizations.

Initially our Fundamentals of Networking course was created to prepare students for the associate-level certification, CCNA. Given the demand, we next launched the “Advanced Networking” course, which is aligned with the network professional-level certification, CCNP. Eventually, we expanded our program to include courses on the basics of hardware and software which are aligned to CompTIA’s A+ certification and a course on Infrastructure Essentials. This is sponsored by Panduit, one of our business partners, and the course is aligned with their new certification.

When the Academy Program was first designed, we created a three-tiered system to grow and support participating schools. Educational institutions are given the designation of Networking Academy at the level of training that they will be providing in the program. There are currently three possible tiers of training. Industry experts at Cisco train the Instructor Trainers at the Cisco Academy Training Centers, and the training center instructors train Regional Academy instructors, and the Regional Academy instructors train the Local Academy instructors, who then educate students. Using this three-tier training model helps to provide instructors the training they need in close proximity to where they are located. Educational institutions may play a role at one or more of these training levels.

The impact of the Cisco Networking Academy field structure has established essential relationships between educational institutions, which have led to effective articulation models, cooperative activities that engage students in their learning, a seamless transition from secondary to postsecondary education, and clear career pathways into the information technology industry.

The Internet has the power to change the way people learn, work, and play, and the Cisco Networking Academy Program is in the forefront of this transformation.

Lessons Learned

Unprecedented partnerships are the ultimate goal. Our business model is based upon a concept we refer to as our ecosystem ... a network of partnerships with companies that serve as our channel for product and service. We depend on these partners for 95 percent of our revenue. They

allow us to reach into markets we could never take advantage of alone. When the Academy program was launched, we never imagined that we would foster the development of unprecedented partnerships between high schools, community colleges, four-year colleges, as well as community-based organizations. Our tiered model opened the door to many new relationships. Many of our training centers and Regional Academies reach out to their school partners to provide technical support, establish formal articulation agreements, engage in recruitment, and even to host joint events such as career fairs and technical competitions. Students can see direct connections between institutions and the workplace. These relationships go beyond the paper-thin articulation agreements often alluded to when referring to partnerships.

The program's industry-standardized curriculum provides a lot of value. Our course content is standardized and the assessments are taken online, which offers a direct bridge across secondary and postsecondary. More importantly, this shared curriculum creates a system with various entry and exit points, offering accommodations and flexibility for incumbent and dislocated workers. As we added courses – both introductory and advanced – we continued to build the pipeline along career pathways.

Certifications establish credibility and accountability. Each of our courses is aligned to industry certification. These portable certifications are designed to maintain quality within our industry. However, in a multiple-level education system, these certifications also validate a student's knowledge and skill set. Students can move from course to course, from institution to institution, efficiently progressing and without duplication.

Clear pathways help encourage postsecondary education. Nine years ago, there were many students who would finish their CCNA certifications in high school and attain jobs in the industry. As the industry has matured, the skill requirements have been raised, and today, most jobs require some level of postsecondary education. It has become more important than ever that institutions ensure that students understand the sequence of learning necessary for careers in our industry. The best way to do this is to formalize the connections between courses and institutions through dual enrollment, credit granting, and accelerating learning.

Conclusion

When I began my presentation, I asked why a company like Cisco would be speaking at this meeting. I said then we had an important stake in education and an investment in our industry's future workforce. The future is hard to predict. At Cisco, we often refer to working in dog years. The technology, and therefore, the respective skills and knowledge, change faster and faster. One thing is certain: partnerships between industry and higher education will be the critical success factor.

Thanks very much for your time and attention.