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NOTE: The full data are available at www.pace.edu/PSII

**Dot.Com Comeback
NEW INFORMATION TECHNOLOGY MEASURE
CREATED BY PACE UNIVERSITY AND SKILLPROOF, INC
TO ASSIST STUDENTS CHOOSING CAREERS, JOB SEEKERS,
HUMAN RESOURCES DEPARTMENTS GAUGING FUTURE SKILL NEEDS**

First data from Manhattan and Westchester County, NY prove upsurge in IT openings

Myth that computing jobs are all moving offshore still lingers

WHITE PLAINS, NY, November 20, 2006 – A new quarterly index of major companies' demand for information technology (IT) specialists was unveiled today by Pace University and SkillPROOF Inc., a high-tech vendor of employment data.

The new tool is intended to help students target their career training, jobseekers target their searches, and human resources officers gauge emerging needs for skills and anticipate areas where high demand will raise salaries, according to Susan Merritt, Ph.D., dean of Pace's Seidenberg School of Computer Science and Information Systems, which oversaw development of the index. She said the "Pace SkillPROOF Information Technology Index," or PSII, also should help educators and policymakers spot emerging needs for professional training.

The first data, for the third quarter of this year, showed IT job demand up significantly from the second quarter and from a year ago, as reflected in major companies' postings for IT jobs in Manhattan and Westchester County, NY.

"The idea that computing jobs are rushing offshore is a myth, and this provides objective proof," said Merritt.

Improved accuracy. The PSII is more accurate than other measures of job demand because it is based on actual job postings at major firms. In addition, statistical weightings keep a surge in any single category from having a disproportionate and hence misleading influence on the index's overall snapshot of the market.

The index gauges both overall demand for IT workers and demand in eleven subcategories used by the US Department of Labor. The data are reported separately for Manhattan and Westchester. Henceforth they will be updated and posted on the Pace University Website (www.pace.edu/PSII) on the second Tuesday of each business quarter.

The postings for Manhattan and Westchester come from a sample of Fortune 500 employers which have proven to post reliable job opening information. Firms in the sample include IBM, Google, TimeWarner, Citigroup, General Electric, McGraw-Hill and ADP.

60% jump in Manhattan. The PSII numbers for Manhattan for the third quarter of 2006 showed an increase of better than 60 percent over the same quarter a year ago. Comparing the whole of calendar 2005 with the previous year, the PSII was also up 60 percent.

In a more recent period, the Manhattan PSII was 26 percent higher in the third quarter than in the second.

Manhattan PSII	Third Quarter 2006	Second Quarter 2006	Third Quarter 2005
Index	166	140	106

Manhattan gains were greatest in the categories of Software Engineers, Computer Programmers and IT Managers. Categories with smaller increases were Software System Engineers, Network Administrators and Network Systems and Data Analysts (Appendix I).

Westchester IT jobs up 43%. For Westchester, the PSII was 43 percent higher in the third quarter than in the third quarter a year ago, although 27 percent lower than the second quarter.

Westchester PSII	Third Quarter 2006	Second Quarter 2006	Third Quarter 2005
Index	104	131	61

Westchester gains also were concentrated in the categories of Programmers, Software Engineers, and by a lesser percentage, IT Managers.

A separate index of how widely changes are spread across the eleven job categories -- the "diffusion" index -- showed that in Manhattan, the number of categories with increases over the same quarter a year earlier was up significantly -- by 73 percent. In Westchester, categories with increases were up by 45 percent.

The partners are contemplating analysis of the regional differences, but say that for now, conclusions will have to come from regional manpower experts.

Building high school awareness. "I think you have a methodology which will raise the awareness of skills shortages in IT," said Jeff Gibbs, a Relationship Manager with IBM's Academic Initiative, a group that goes into universities, colleges and high schools to discuss IBM's open sources technology strategy. He added: "To address the national and local skills shortage, we need to raise the awareness at the high school level that these skills are in high demand."

WebCrawler methodology. The index uses data obtained by SkillPROOF <http://www.skillproof.com/home/SkillProof.asp>, a three-year-old company. Every 24 hours the company's specialized WebCrawler randomly scans the posted Manhattan and Westchester job listings of companies in the sample. SkillPROOF maps the openings into the DOL's eleven major IT job categories.

Next, the PSII algorithm assigns a mathematical weight to each category reflecting the relative proportion of job openings in that category during the combined baseline years of 2004/2005, the first two years for which SkillPROOF started to collect information.

Finally, Pace calculates year-to-year and quarter-to-quarter changes in the overall markets and their major categories.

Comparisons with other measures. The partners say the PSII is more current, independent and precise than computer job listings on the industry's more than 20,000 "job boards," the largest of which is Monster.com.

One problem with online job boards is that many employers place only a fraction of their openings there due to the cost of advertising. In addition, job postings are often duplicated across different job boards, making accurate counts difficult. Finally, other job-tallying services often rely on data collected by sampling firms via telephone calls or forms that employers fill out. Because corporate sites are regularly updated, the SkillPROOF data also avoid the danger that job board counts may erroneously reflect postings that have been filled but not taken down.

The author of the index, Farrokh Hormozi, PhD, a professor of economics at Pace's Dyson College of Arts and Sciences said: "These numbers reflect the dynamics of the Information Technology market and show that IT skills are still in big demand."

Henning Seip, the founder of SkillPROOF, is a former Vice President of Management Information Systems at Bantam Doubleday Dell (today part of Random House, a subsidiary of the German publisher Bertelsmann AG). He also sells customized job data to companies, institutions and individuals. He noted: "We hope these kinds of numbers will prove to be useful to companies trying to estimate future labor costs as well as to job seekers and students of all ages who are thinking about careers in this field."

Pace's Merritt added: "While there are a lot of reports about IT job opportunities increasing or decreasing, it is hard to know the actual local trends in this exciting field. This index shows those trends based on real data. Moreover, the IT field is broad and diverse and this index shows the trends for the many IT job categories."

Favorable first reactions. The index has won favorable early comments from business professionals.

The concept was presented in late fall of 2005 to members of the Westchester and Fairfield County chapter of the Society of Information Managers, who expressed strong interest in having this kind of information. One member, who preferred not to be identified, said: "I'm in the market to hire people, and I have to calculate what kind of a deal I need to offer to prospective candidates. If the job market is tight I have to be more lucrative. This index will be very useful as I plan my budgets."

Pace University. A private university in the New York Metropolitan area, Pace is commemorating 100 years of providing opportunity, educating achievers in business, industry, healthcare, education, government, and law. Pace has a growing national reputation for teaching and learning based on research, fostering engagement with critical issues locally and globally, for international perspectives and measurable outcomes. It is one of ten founders of Project Pericles, developing education that encourages lifelong participation in democratic processes. Pace has seven campuses, including downtown and midtown New York City, Pleasantville, Briarcliff, and White Plains. Approximately 13,700 diverse students are enrolled in undergraduate, graduate, and professional degree programs in the Dyson College of Arts and Sciences, Lienhard School of Nursing, Lubin School of Business, Ivan G. Seidenberg School of Computer Science and Information Systems, School of Computer Science and Information Systems, School of Education, and School of Law. www.pace.edu

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APPENDIX I

PSII Index Data for Manhattan

Stats Date	Weights	3/30/2005	6/30/2005	9/30/2005	12/30/2005	3/30/2006	6/30/2006	9/30/2006
IT Manager	0.189	25.6	29.0	32.4	39.4	42.7	49.9	59.4
Scientists Research	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Programmers	0.208	34.1	41.3	53.3	49.4	54.7	54.5	73.7
Software Engineers Application	0.243	77.1	44.5	44.3	57.5	68.5	80.5	90.5
Software Engineers Systems	0.136	14.5	15.8	22.0	21.3	23.3	21.8	21.0
Support	0.077	4.2	6.0	6.2	5.5	5.2	5.5	5.8
System Analysts	0.058	2.7	3.7	4.2	3.1	3.4	3.4	5.1
Database Administrators	0.013	0.2	0.1	0.1	0.1	0.1	0.1	0.2
Network Administrators	0.026	0.4	0.7	1.0	0.7	0.6	0.5	0.5
Network System and Data Analysts	0.029	0.6	0.7	1.0	0.7	0.5	0.8	0.7
Other Specialists	0.018	0.2	0.2	0.4	0.5	0.5	0.5	0.4
Weighted Sums		159.8	142.0	165.0	178.3	199.5	217.5	257.3
Index		103	92	106	115	129	140	166

Quarterly Summary

Stats Date	9/30/2006	6/30/2006	9/30/2005
IT Manager	59	50	32
Scientists Research	0	0	0
Programmers	74	55	53
Software Engineers Appl	90	81	44
Software Engineers Systems	21	22	22
Computer Support	6	5	6
System Analysts	5	3	4
Database Administrators	0	0	0
Network Administrators	1	1	1
Network System and Data Analysts	1	1	1
Other Specialists	0	1	0
Weighted Sums	257	218	165
Index	166	140	106

PSII Index Data for Westchester

Stats Date	Weights	3/31/2005	6/30/2005	9/30/2005	12/31/2005	3/31/2006	6/30/2006	9/30/2006
IT Manager	0.089147	1.0	1.1	0.6	0.7	0.5	0.4	0.5
Scientists Research	0.375194	21.5	11.5	8.5	14.9	21.6	26.3	17.6
Programmers	0.174419	2.4	2.6	5.1	5.7	4.3	5.7	6.9
Software Engineers Application	0.105426	1.0	0.9	1.5	1.5	1.7	1.9	2.3
Software Engineers Systems	0.05814	0.3	0.3	0.2	0.3	0.4	0.7	0.5
Support	0.031783	0.1	0.1	0.1	0.1	0.1	0.2	0.2
System Analysts	0.086047	1.2	0.7	0.9	1.0	0.9	1.2	0.6
Database Administrators	0.006977	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Network Administrators	0.006977	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Network System and Data Analysts	0.053488	0.5	0.1	0.0	0.1	0.1	0.1	0.1
Other Specialists	0.012403	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Weighted Sums		28.0	17.3	16.9	24.2	29.7	36.4	28.8
Index		101	62	61	87	107	131	104

Quarterly Summary

Stats Date	9/30/2006	6/30/2006	9/30/2005
IT Manager	0.5	0.4	0.6
Scientists Research	17.6	26.3	8.5
Programmers	6.9	5.7	5.1
Software Engineers Appl	2.3	1.9	1.5
Software Engineers Systems	0.5	0.7	0.2
Computer Support	0.2	0.2	0.1
System Analysts	0.6	1.2	0.9
Database Administrators	0.0	0.0	0.0
Network Administrators	0.0	0.0	0.0
Network System and Data Analysts	0.1	0.1	0.0
Other Specialists	0.0	0.0	0.0
Weighted Sums	28.8	36.4	16.9
Index	104	131	61

APPENDIX II

Founder Biographies

Farrokh Hormozi, professor of economics and public administration at Pace University, is co-investigator of both the Pace Downtown Index, the first post-9/11 index to track the economic and developmental progress of lower Manhattan, and the newly created Pace IT Index, the first index to track the IT job market in both New York (Manhattan) and Westchester Counties. He is an assistant to the Provost, teaches in the Graduate Public Administration Program at Pace's Dyson College of Arts and Sciences. He is also an adjunct professor of economics in Pace's Lubin School of Business. Hormozi was the recipient of the Pace Distinguished Service Award in 2006. In addition, Hormozi serves as senior economist and econometrician at the Michaelian Institute for Public Policy and Research of Pace University, senior economist and economic adviser to Kish International University and statistical consultant to the Westchester County Department of Transportation. In fall 2006, he received the Pace University Distinguished Service Award.

Hormozi has extensive experience as a consultant. He has developed, research and implemented market studies, forecasting programs and analysis, as well as productivity measurement techniques and job designs, for corporations and institutions including market research firms, public universities, government organizations and leading technology companies. His research interest is in applied economics, specifically job design, job complexity, and productivity. He also conducts research in theoretical economics, focusing on catastrophe chaos theory and its application to economic growth and development. His research has appeared in professional journals including *the Journal of Mathematical Social Sciences*, *the Journal of Human System Management* and *the Journal of Management and Office Information Systems*. He is currently conducting research in the macro foundation of microeconomics.

Hormozi received his undergraduate degree from Tehran University. He earned a master's degree in mathematics at Farleigh Dickinson University, where he studied numerical methods, and a master's in economics from the New School for Social Research, where he focused on statistical analysis and econometrics. He then studied growth theory at the New School, where he earned his doctorate in economics. He has conducted postgraduate work in topology, numerical methods, and automata theory at the Courant Institute of Mathematical Sciences of New York University.

Henning Seip founded SkillPROOF, Inc. in response to the need for better statistical information about local, national, and global job markets and skills needed by employers. SkillPROOF's publications supplement labor information provided by the Bureau of Labor Statistics. Mr. Seip is also the founder of The Consultants Network, Inc., a specialty consulting firm advising customers implementing Enterprise Resource Planning (ERP) software. Earlier in his career he also served as a vice president and director of information systems at Bantam Doubleday Dell Publishing (now Random House), a subsidiary of Bertelsmann AG, Germany. In this capacity, he was responsible for the successful restructuring of Bantam's data centers and enterprise software. Mr. Seip received the degree Diplom-Wirtschaftsingenieur in Industrial Engineering from the University of Hamburg (Germany). He has been a speaker at the national America's SAP Users Group (ASUG) and is the co-author of *Implementing SAP R/3* (1996).

Susan M. Merritt, Ph.D. is founding and current dean of Pace University's Ivan G. Seidenberg School of Computer Science and Information Systems, where she is a professor of computer science. Founded in 1983, the school was recently the recipient of a \$15 million endowment and was renamed for the donor, Ivan G. Seidenberg, the CEO of Verizon, Inc. The School has some 1,500 students studying computer science, information systems, networking and telecommunications, information technology, information assurance and security from the undergraduate through the doctoral level. Under Dean Merritt's leadership, more than 20 educational programs and several research centers have been developed in computing.

Dr. Merritt received the PhD and the MS in computer science from New York University's Courant Institute of Mathematical Sciences. She received the BA from the Catholic University of America where she was elected to Phi Beta Kappa and graduated summa cum laude. She has published more than 100 contributions to the computing literature in computer science as well as in the social and educational issues related to information technology. She is the recipient of an IEEE Computing Society Service Award, the Carol S. Russett Award for Distinguished Service conferred by the American Council in Education (ACE) National Women's Leadership Network and was on the cover and author of the cover story "Women in Computing," in *Westchester Women's News*.