The ACM INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST sponsored by IBM

FACT SHEET – December 16, 2004 – World Finals Second Edition

About the Contest

The ACM (Association for Computing Machinery) International Collegiate Programming Contest (ICPC) traces its roots to a competition held at Texas A&M in 1970 hosted by the Alpha Chapter of the UPE Computer Science Honor Society. The idea quickly gained popularity within the United States and Canada as an innovative initiative to assist in the development of top students in the emerging field of computer science.

The contest evolved into a multi-tier competition with the first Finals held at the ACM Computer Science Conference in 1977. Headquartered at Baylor University since the 1980s, the contest has expanded into a global network of universities hosting regional competitions that advance teams to the World Finals.

Since IBM became sponsor in 1997, the contest has increased by a factor of five. In fact, inclusive of the European preliminary teams, the contest has increased in just eight years by a factor of six! Participation has grown to involve several tens of thousands of the finest students and faculty in computing disciplines at over 1,582 universities from 71 countries on six continents.

The contest fosters creativity, teamwork, and innovation in building new software programs, and enables students to test their ability to perform under pressure. Quite simply, it is the oldest, largest, and most prestigious programming contest in the world.

The annual event is comprised of several levels of competition:

- *Local Contests* – Universities choose teams or hold local contests to select one or more teams to represent them at the next level of competition. Selection takes place from a field of over 100,000 students in computing disciplines worldwide.

- *Preliminary Contests* – Many teams competed in European preliminary contests. This year, 886 teams from 249 European universities participated with a select few advancing to the first round of the Regionals. In 2006, they the first round will be expanded to include these competitions.

- *Regional Contests* (September to December 2004) – Participation in preliminary and regional contests increased by over 30% from 3,150 to 4,109 teams from 71 countries on six continents. Even with the number of regional sites increased from 126 to 144, hundreds of teams were turned away due to lack of space!

- *World Finals hosted by Shanghai Jiao Tong University* (April 3 – 7, 2005, Shanghai) – Seventy-eight (78) World Finalist teams will compete for awards, prizes and bragging rights at exotic Pudong Shangri-La Hotel as the guests of the City of Shanghai and host Shanghai Jiao Tong University. These teams represent the best students of over 1,582 universities who made it to the Regionals on six continents, the cream of the crop.

Battle of the Brains

The contest pits teams of three university students against eight or more complex, real-world problems, with a grueling five-hour deadline. Huddled around a single computer, competitors race against the clock in a battle of logic, strategy and mental endurance.
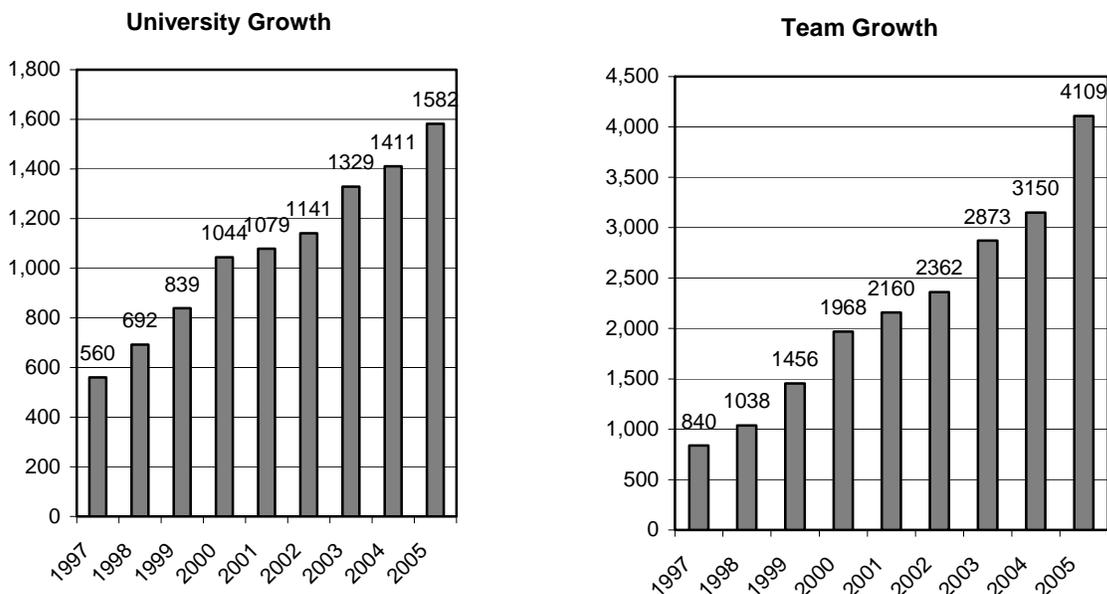
Teammates collaborate to rank the difficulty of the problems, deduce the requirements, design test beds, and build software systems that solve the problems under the intense scrutiny of expert judges. For a well-versed computer science student, some of the problems require precision only. Others require a knowledge and understanding of advanced algorithms. Still others are simply too hard to solve – except, of course, for the world's brightest problem-solvers.

Judging is relentlessly strict. The students are given a problem statement – not a requirements document. They are given an example of test data, but they do not have access to the judges' test data and acceptance criteria. Each incorrect solution submitted is assessed a time penalty. You don't want to waste your customer's time when you are dealing with the supreme court of computing. The team that solves the most problems in the fewest attempts in the least cumulative time is declared the winner.

To learn more about the ICPC, please visit http://acmicpc.org or http://icpc.baylor.edu/.

Contest Growth

ACM and IBM are thrilled that the contest continues to attract the best and brightest students from around the world, with tens of thousands of participants from 1,582 universities at 144 sites in 71 countries. Since the beginning of IBM's sponsorship in 1997, contest participation has tripled and team participation has increased by a factor of five – actually by a factor of six when the 886 European preliminary teams from 249 European universities are included. For more information on previous contests, and last year's final standings and problem sets, please see http://icpc.baylor.edu/past/ or http://www.software.ibm.com/acm.

University Growth

Year	Universities
1997	560
1998	692
1999	839
2000	1044
2001	1079
2002	1141
2003	1329
2004	1411
2005	1582

Team Growth

Year	Teams
1997	840
1998	1038
1999	1456
2000	1968
2001	2160
2002	2362
2003	2873
2004	3150
2005	4109

* For 1997-98 university count was estimated as 2/3 of the team count based on the practices of the time.

World Finals 2005

Seventy-eight teams from regional contests servicing universities world-wide will qualify to advance to the World Finals, which will be held at the exotic Pudong Shangri-La Hotel in Shanghai, hosted by Shanghai Jiao Tong University, April 3-7, 2005. Recent gold medal winners in order of finish are:

- 2004: St. Petersburg Institute for Fine Mechanics & Optics (St. Petersburg, Russia)
  KTH – Royal Institute of Technology (Stockholm, Sweden)
  Belarusian State University (Minsk, Belarus)
  Perm State University (Perm, Russia)

- 2003: Warsaw University (Warsaw, Poland)
  Moscow State University (Moscow, Russia)
  St. Petersburg Institute of Fine Mechanics and Optics (St. Petersburg, Russia)
  Comenius University (Bratislava, Slovak Republic)

- 2002: Shanghai JiaoTong University (Shanghai, China)
  Massachusetts Institute of Technology (Cambridge, MA, U.S.A.)
  University of Waterloo (Waterloo, Ontario, Canada)

- 2001: St. Petersburg State University (St. Petersburg, Russia)
  Virginia Tech (Blacksburg, VA, U.S.A.)
  St. Petersburg Institute of Fine Mechanics & Optics (St. Petersburg, Russia)
  University of Waterloo (Waterloo, Canada)

- 2000: St. Petersburg State University (St. Petersburg, Russia)
  The University of Melbourne (Melbourne, Australia)
  The University of Waterloo (Waterloo, Ontario, Canada)

- 1999: The University of Waterloo (Waterloo, Ontario, Canada)
  Albert-Ludwigs-Universitat Freiburg (Freiburg, Germany)
  St. Petersburg Institute of Fine Mechanics & Optics (St. Petersburg, Russia)
  Bucharest University (Bucharest, Romania)
  Duke University (Durham, North Carolina, U.S.A.)

About ACM

The Association for Computing Machinery (ACM) is a major force in advancing the skills of information technology professionals and students. ACM serves its global membership of 75,000 by delivering cutting edge technical information and transferring ideas from theory to practice. ACM hosts the computing industry's leading Portal to Computing Literature. With its journals and magazines, special interest groups, conferences, workshops, electronic forums, Career Resource Centre and Professional Development Centre, ACM is a primary resource to the information technology field. For more information, see http://www.acm.org.

IBM's Commitment

IBM's sponsorship commitment to the ACM International Collegiate Programming Contest is part of a company-wide effort to advance the next generation of computer scientists. For more information about other IBM college initiatives, please visit the IBM/ACM contest Web site and click on the Student Portal button - http://www.software.ibm.com/acm.

About IBM

IBM is the world's largest information technology company, with 80 years of leadership in helping businesses innovate. IBM software offers the widest range of e-business infrastructure software for all types of computing platforms, allowing customers to take full advantage of the new era of e-business. The fastest way to get more information about IBM software is through the IBM home page at http://www.software.ibm.com.

Baylor University's Commitment

Baylor University has been the home of the ICPC since the 1980s, where it has been managed under the direction of Executive Director and Professor, Dr. William B. Poucher. The ICPC contributes to Baylor's global mission to encourage the next generation to develop and apply their problem-solving talents to the challenges that face the world today and the world to come. Chartered by the Republic of Texas, Baylor is the oldest institution of higher learning in the State of Texas. You may find more about Baylor at http://www.baylor.edu/.

Upsilon Pi Epsilon's Commitment

The Upsilon Pi Epsilon International Computer Science Honor Society recognizes the best and brightest student in computer science and engineering in the world. Since its earliest participation, the UPE has provided support and scholarships to the World Finals teams. The UPE boasts the longest continuous relationship to the ICPC, dating back to 1970 with the first event held at Texas A&M by members of the Alpha Chapter of the UPE. For more information about other UPE activities, its chapters, and its membership click on: http://www.acm.org/upe/.

Shanghai Jiao Tong University's Commitment

Founded in 1896, Shanghai Jiao Tong University educates future experts and leaders in technical fields. The University supports scientific work, educates new scientists, and is one of the premiere centers in China for scientific and educational activities in technology. Consistent with its commitment to a continuous and wide-ranging development of international cooperation, under the mentorship of President Xie Sheng-Wu, Shanghai Jiao Tong University is pleased to host the 2005 World Finals in the finest facilities Shanghai has to offer at the lovely and exotic Pudong Shangri-La Hotel.

Shanghai Jiao Tong University fielded the first ACM-ICPC World Championship team from Asia in 2002. More about SJTU can be found at http://www.sjtu.edu.cn/www/english/.

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2005 ACM-ICPC World Finals Teams (78 of 4,109 representing 1,582 universities from 71 countries)

Altai State Technical University
Amirkabir University of Technology
Ateneo de Manila University
Bangladesh University of Engineering & Technology
Belarusian State University
Benemérita Universidad Autónoma de Puebla
California Institute of Technology
Carnegie Mellon University
Duke University
École Normale Supérieure de Lyon
Fudan University
George Mason University
Georgia Institute of Technology
Illinois Institute of Technology
Indian Institute of Technology, Bombay
Indian Institute of Technology, Madras
Information & Communications University
Instituto Tecnologico de Aeronautica
Izhevsk State Technical University
KTH - Royal Institute of Technology
Kyoto University
Massachusetts Institute of Technology
Michigan Technological University
Moscow State University
Nanyang Technological University
National Taiwan University
National University of Singapore
New York University
Norwegian University of Science & Technology
Novosibirsk State University
Peking University
Perm State University
POLITEHNICA University Bucharest
Renmin University of China
Rutgers, The State University of New Jersey
Saratov State University
Seoul National University
Shanghai Jiao Tong University
Sharif University of Technology

Simon Fraser University
Sofia University
St Petersburg Institute of Fine Mechanics & Optics
St. Petersburg State University
State University of Nizhny Novgorod
Texas A&M University
The American University in Cairo
The University of Hong Kong
Tsinghua University
Ufa State Technical University of Aviation
Universidad de Buenos Aires
Universidad Simón Bolívar
Universidad Tecnologica de la Mixteca
Universidade Estadual de Campinas
Universidade Federal do Rio de Janeiro
Universitat Politècnica de Catalunya
University of Alberta
University of Auckland
University of British Columbia
University of Calgary
University of California - San Diego
University of Cape Town
University of Central Florida
University of Illinois
University of Michigan - Ann Arbor
University of Nebraska - Lincoln
University of New Brunswick
University of New South Wales
University of Texas at Austin
University of Tokyo
University of Waterloo
University of Wisconsin - Madison
University of Wroclaw
Ural State University
Virginia Tech
Warsaw University
Yonsei University
Zhejiang University
ZhongShan (Sun Yat-sen) University