The ACM INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST
sponsored by IBM   hosted by Harbin Engineering University

FACT SHEET – OCT 2009 – First Edition – World Finals at Harbin

About the Contest

The ACM 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 challenge the 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. Operating under the auspices of ACM and headquartered at Baylor University since 1989, the contest has expanded into a global network of universities hosting regional competitions that advance teams to the ACM-ICPC World Finals.

Since IBM became the contest sponsor in 1997, the contest has increased by a factor of eight. Participation has grown to involve several tens of thousands of the finest students and faculty in computing disciplines at 1,821 universities from 83 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 300,000 students in computing disciplines worldwide.

- *Regional Contests* (September to December 2009) – Last year, participation increased by more than 10% from 6,099 to more than 7,100 teams representing more than 1,800 universities from 88 countries on six continents, not counting numerous teams competing in preliminaries.

- *World Finals* (February 1-5, Harbin, China) – One hundred world finalist teams will compete for awards, prizes and bragging rights in Harbin hosted by Harbin Engineering University. These teams represent the best of the finest universities 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
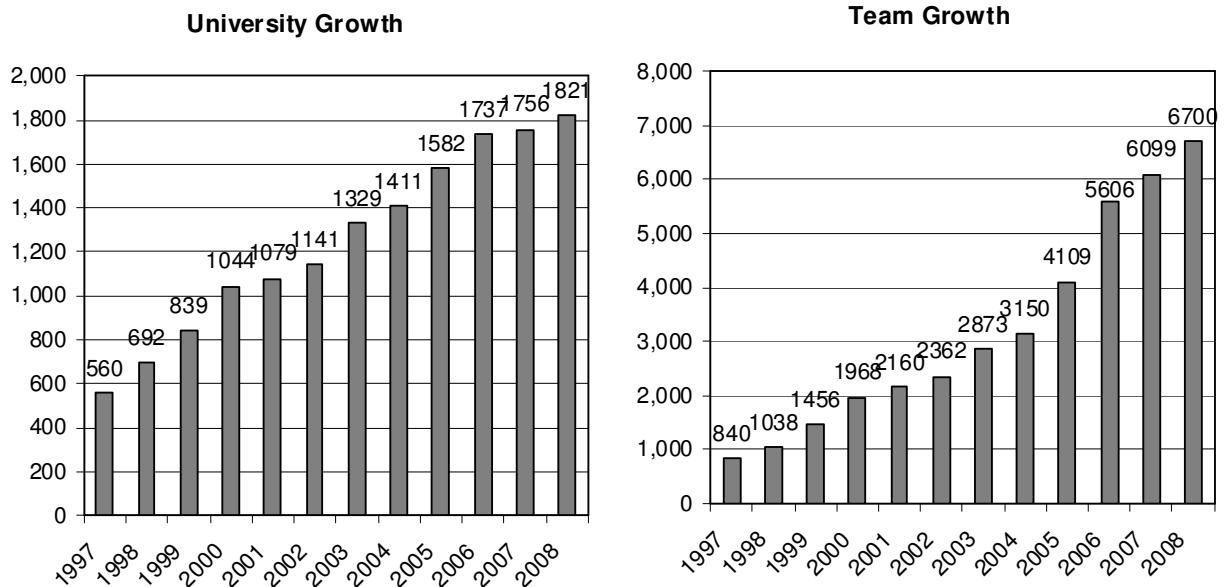
to waste your customer's time when you are dealing with the supreme court of computing. The team that solves the most problems in the fewest attempts in the least cumulative time is declared the winner.

To learn more about the ICPC, please visit http://acmicpc.org or http://icpc.baylor.edu/. Also, visit IBM's contest podcast series at http://battleofthebrains.podbean.com/ that offers students competition insights from past contestants and current IBM executives, or keep up with the latest updates on twitter at http://twitter.com/BrainBattleICPC.

Contest Growth

ACM, IBM, and Baylor University are thrilled that the contest continues to attract the best and brightest students from around the world, with tens of thousands of participants on more than 7,100 teams representing more than 1,800 universities in 88 countries. Since the beginning of IBM's sponsorship in 1997, participation has increased by a factor of eight when the contest drew only 840 teams. 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.ibm.com/university/acmcontest/.

World Finals 2010 – the final round for the 2009 Regionals

University Growth

Team Growth

One hundred teams from regional contests servicing universities worldwide will qualify to advance to the World Finals to be held at one of the finest venues of Harbin, China, Feb. 1 -5. The World Finals is hosted by Harbin Engineering University. Recent medal winners in order of finish are:

- 2009 Gold: St. Petersburg State University of Information Technology, Mechanics and Optics (Russia)
      Tsinghua University (Beijing, China)
      St. Petersburg State University (St. Petersburg, Russia)
      Saratov State University (Saratov, Russia)

- 2008 Gold: St. Petersburg University of Information Technology, Mechanics, & Optics (Russia)
      Massachusetts Institute of Technology (U. S. A.)
      Izhevsk State Technical University (Russia)
      Lviv National University (Ukraine)

- 2007 Gold: Warsaw University (Warsaw, Poland)
  Tsinghua University (Beijing, China)
  St. Petersburg University of Information Technology, Mechanics & Optics (Russia)
  Massachusetts Institute of Technology (U. S. A.)

- 2006 Gold: Saratov State University (Saratov, Russia)
  Jagiellonian University (Krakow, Poland)
  Altai State Technical University (Barnaul, Russia)
  University of Twente (Enschede, The Netherlands)

- 2005 Gold: Shanghai Jiao Tong University (Shanghai, China)
  Moscow State University (Moscow, Russia.)
  St. Petersburg Institute for Fine Mechanics & Optics (St. Petersburg, Russia)
  University of Waterloo (Waterloo, Ontario, Canada)

- 2004 Gold: 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 Gold: 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 Gold: Shanghai Jiao Tong University (Shanghai, China)
  Massachusetts Institute of Technology (Cambridge, MA, U.S.A.)
  University of Waterloo (Waterloo, Ontario, Canada)

- 2001 Gold: 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)

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 80,000 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.ibm.com/university/acmcontest/. and also follow the contest podcast series at http://battleofthebrains.podbean.com/

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.

Harbin Engineering University Technology Commitment

Harbin Engineering University (HEU) is located along the scenic Songhua River in the northern ice city of Harbin, China. Assisting the Commission of Science, Technology and Industry for National Defense, HEU is a national key university of glorious history and fine traditions. It is among the first group of universities in the "211 Project", entitling it to first priority from the state in construction and development. HEU is an important base for talent cultivation and scientific research in the fields of ship industry, ocean exploration and applied nuclear science.

Upsilon Pi Epsilon's Commitment

The Upsilon Pi Epsilon International Computer Science Honor Society recognizes the best students of 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/.

Baylor University's Commitment

Baylor University has been the home of the ICPC since the late 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/.

2009 World Finals Teams – Last Year's World Finalists in Alphabetical order.

Altai State Technical University	South Ural State University
Amirkabir University of Technology	St. Petersburg State University
Arab Academy for Science and Technology	St. Petersburg University of IT, Mechanics and Optics
Bangladesh University of Engineering & Technology	Stanford University
Beijing Jiaotong University	SUNY Stony Brook
Beijing University of Posts and Telecommunications	Taras Shevchencko Kiev National University
Belarusian State University	Taurida V.I. Vernadsky National University
Bina Nusantara University	Tianjin University
California Institute of Technology	Tsinghua University
Carnegie Mellon University	Universidad de Buenos Aires – FCEN
Chinese University of Hong Kong	Universidad Nacional de Colombia – Bogota
College of Technology, Vietnam National U., Hanoi	Universidad Nacional de La Plata
Cornell University	Universidad Nacional del Sur
Duke University	Universidad Tecnologica de la Mixteca
EAFIT University	Universidade Estadual do Cear
East China University of Science and Technology	Universidade Federal de Pernambuco
Ecole Normale Superieure de Lyon	Universidade Federal de Santa Catarina
Escola Politecnica de Universidade de Sao Paulo	Universidade Federal do Espirito Santo
Fudan University	Universidade Federal do Paran
German University in Cairo	Universitat Politecnia de Catalunya
Huazhong University of Science & Technology	University of Aizu
I. Javakhishvili Tbilisi State University	University of Alberta
Indian Institute Of Technology and Management	University of British Columbia
Instituto Tecnológico de Culiacán	University of California – San Diego
International Institute of Information Technology - Hyderabad	University of California at Berkeley
Iowa State University	University of Cambridge – Trinity College
ITESM Campus Monterrey	University of Canterbury
Jagiellonian University	University of Cape Town
Korea Advanced Institute of Science and Technology	University of Central Florida
KTH Royal Institute of Technology	University of Chicago
Massachusetts Institute of Technology	University of Dhaka
McGill University	University of Hong Kong
Moscow State University	University of Illinois at Urbana-Champaign
Nanjing University of Aeronautics and Astronautics	University of Maryland
Nanyang Technological University	University of Melbourne
National Taiwan University	University of Nebraska – Lincoln
National Technical University of Ukraine KPI	University of Oxford
National University of Singapore	University of Tasmania
North South University	University of Texas at Austin
Northwestern College	University of Tokyo
Novosibirsk State University	University of Virginia
Peking University	University of Warsaw
Purdue University	University of Waterloo
Saitama University	University of Wisconsin - Madison
Saratov State University	Ural State University
Seoul National University	Washington University in St. Louis
Shanghai Jiao Tong University	Wuhan University
Sharif University of Technology	Zhejiang University
Sichuan University	Zhejiang University of Technology
South China University of Technology	Zhongshan (Sun Yat-sen) University