USENIX notes

USACO: The International Finals

by Rob Kolstad

The 2004 International Olympiad on Informatics (the final leg of the programming contest circuit for pre-college programmers) was held in Athens, Greece, September 11–18. Athens was still in "Olympic mode": The 700 IOI participants stayed in one of the buildings erected for Olympic journalists; the Paralympics overlapped the IOI by about five days.

Athens is a bustling place full of new Olympic construction, fine Mediterranean weather, and a "can do" attitude.

I arrived several days early to set up and tune the automated grading system. I ended up spending six days in the beautiful basement/parking garage where the actual competitions were held. The parking garage was chosen for the actual contest because the addition of a few walls, power, lights, and air-conditioning made it workable, and it was one of the few places in the vicinity that had enough room for 300 PCs, desks, chairs, aisles, and networking equipment.

The USA delegation, which included not only our four finalists, Brian Jacokes, Anders Kaseorg, Eric Price, and Alex Schwendner, but also Don Piele (USACO director and this year's chair of the main IOI governing body), Greg Galperin (the USA delegate to the International Scientific Committee), coaches Hal Burch and Brian Dean, and some spouses/visitors.

Contestants were challenged with two five-hour contests, each with three tasks. These tasks are generally very difficult and concentrate on algorithms (rather than, say, systems programming, administration, or databases). Here—written by coach Brian Dean—is a typical problem from the USACO March 2004 competition:

Moo University Gymnastics Team Tryouts

N (1 <= N <= 1,000) calves try out for the Moo U gymnastics team this year, each with a positive integer height and a weight less than 100,000. Your goal is to select a team of as many calves as possible from this group. There is only one constraint the team must satisfy: The height H and weight W of each calf on the team must obey the following inequality:

$$A*(H–h) + B*(W–w) <= C$$

where h and w are the minimum height and weight values over all calves on the team, and A, B, and C are supplied positive integral constants less than 10,000. Compute the maximum number of calves on the team.

The USA tied their best performance ever, with two gold medals. Brian Jacokes placed 6th overall; Anders placed 13th. Eric just missed a gold medal by 10 points out of 600; Alex was only 25 points out. Both Eric and Alex have one more year of eligibility.

Over the (North American) 2004–2005 school year, USACO will hold half a dozen Internet-based contests for pre-college students before the USA Invitational Olympiad next June; the contests are open to all pre-college students on the Internet. No entry fees are charged. Teachers and students can sign up for the low-traffic mailing list by sending a "subscribe hs-computing" email to hs-computing@usaco.org.

We're working hard this year to expand the competition levels so that students of all abilities can compete in C, C++, Pascal, and Java. Please tell those who might benefit!

USENIX is a major sponsor of the USA Computing Olympiad. Other sponsors include SANS, the ACM, IBM, and Google. If your organization would like to contribute (in any way—e.g., we need a few higher speed servers for running contests), please contact me.

Thanks to Our Volunteers

by Ellie Young
USENIX Executive Director

USENIX's success would not be possible without the volunteers who lend the expertise and support for our conferences, publications, and member services. While there are many who serve on program committees, coordinate the various activities at the conferences, work on committees, and contribute to this magazine, I would like to make special mention of the following individuals who made significant contributions in 2004:

The program chairs for our 2004 conferences:

Chandu Thekkath, Third Conference on File & Storage Technologies

Robert Morris and Stefan Savage, First Symposium on Networked Systems Design & Implementation

Tarek S. Abdelrahman, Third Virtual Machine Research & Technology Symposium

Andrea Arpaci-Dusseau and Remzi Arpaci-Dusseau, 2004 USENIX Annual Technical Conference

Matt Blaze, 13th USENIX Security Symposium

Ted Ts'o for organizing the 2004 Linux Kernel Developers Summit

Lee Damon, 18th LISA Conference

Eric Brewer and Peter Chen, 6th Symposium on Operating Systems Design & Implementation

David Culler and Timothy Roscoe, 1st Workshop on Real, Large Distributed Systems

The conferences' Invited Talk/Special Track chairs:

For USENIX '04 Annual Tech:

Bart Massey and Keith Packard, 2004 Freenix Program Chairs at USENIX Annual Tech

Murray Stokley, Avi Rubin, Ted Ts'o, Rob Kolstad, and Jon "mad-dog" Hall for serving as SIG Session chairs

Peter Salus for lining up the plenary speakers

Clem Cole for organizing the Guru Is In sessions

Esther Filderman for organizing the AFS workshop

For the 13th USENIX Security Symposium:

Avi Rubin and Vern Paxson

For LISA '04:

Deeann Mikula, Adam Moskowitz, and Marcus Ranum for the invited talks

Phil Kizer for the Guru Is In sessions

Gretchen Phillips for the workshops

Other major contributors:

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USENIX is grateful to all!