Europe's Computer Scientists Take Fate into Their Own Hands

CS chairs from universities throughout Europe and beyond came together for a momentous meeting to examine the fate and the future of the field.

Europe's contribution to computer science, going back more than 70 years with Alan Turing and Konrad Zuse, is extensive and prestigious; but the European CS community is far from having achieved the same strength and unity as its U.S. counterpart. Last October, a European Computer Science Summit was called to bring together—for the first time—CS department heads throughout Europe and its periphery. This landmark event was a joint undertaking of the CS departments of the two branches of the Swiss Federal Institute of Technology: EPFL (Lausanne) and ETH (Zurich).

The initiative attracted interest far beyond its original scope. Close to 100 people attended the summit representing most countries of the European Union, along with Switzerland, Turkey, Ukraine, Russia, and Israel. A delegate from South Africa also participated in the event as did a U.S. representative of the ACM, Russ Shackelford. The program consisted of two keynotes and a number of panels and workshops on such themes as research policy, curriculum harmonization, attracting students, teaching CS to non-CS students, existing national initiatives, and plans to create a Europe-wide organization.

A major reason the summit attracted such immediate and widespread interest is that CS in Europe faces a unique set of challenges as well as opportunities. The challenges discussed at the meeting include some old and new themes. The fragmentation of Europe and its much treasured cultural diversity have their counterparts in the organization of the educational and research systems. To take just three examples from the education side, the U.K. has a system that in many ways resembles the U.S. standard, although with significant differences (three- rather than four-year bachelor's degree, and different hierarchy of academic personnel with fewer professors and more lecturers); German universities have relied on a long (nine-semester) first degree, the "Diplom;" and France has a dual system of "Grandes Écoles" engineering schools, some very prestigious and highly competitive, but stopping at a master's-level engineering degree, and universities with yet another sequence of degrees including a doctorate.

To harmonize these systems, the ministers of education of European countries adopted the "Bologna declaration" in 1999 defining standard study cycles— bachelor's, master's, Ph.D.—with the goal of facilitating mutual recognition of degrees, enforcing a common way of counting credits, and promoting such goals as student mobility (which was already on the rise thanks to quality control and such programs as Erasmus).

How to implement the Bologna process remains a major worry for many CS departments in continental Europe. One of the benefits of the summit has been to illustrate that it is not necessarily a life-threatening issue, rather