Letter from the Editor-in-Chief

IEEE Computer Society Activities

Those who read these letters know that I have commented before about the shortcomings in the way the Computer Society is organized and run. The organization currently concentrates financial control at the top and makes it difficult for technical committees like our Technical Committee on Data Engineering (TCDE) to undertake initiatives, limiting bottom up entreprenurial opportunities. My thought has long been that changing this would open up new possibilities for the TCDE to better adapt to the current landscape of professional activities and engagements. And those changes would benefit the database technical community.

I have nothing final to report here. However, there are two committees within the Computer Society that are currently studying the fundamental organizational arrangements, one led by the Technical Activities Committee Chair Sven Dietrich, the other by Computer Society President-Elect Dejan Milojicic. For the Computer Society to thrive in the future, my view is that this kind of organizational scrutiny is an essential first step. I hope to have something more definitive to report in my next letter.

The Current Issue

Science has long prided itself on the primacy of data. The big breakthroughs usually occur because of data that is unexplained by the prior paradigm. The exploitation of science by technology depends upon using data to improve processes and techniques. So data is central to the scientific enterprise.

Given that, one would perhaps conclude that databases are similarly central. But that has not been the case. Databases were originally developed to solve the business data processing problem. Think payroll and orders. It was not developed with science in mind. But that is changing.

Two of the key people in re-orienting the database area toward the needs of science have been Jim Gray and Michael Stonebraker. Jim worked early on with astronomers to use database technology to serve as the backbone for their sky survey. Mike's efforts have resulted in the multi-university SciDB effort to provide database technology broadly to many scientists in many disciplines.

The current issue captures the now sizable effort to provide database technology tailored to the needs of scientists. It also demonstrates that this effort is a two way street in which methods from other sciences can influence how computer science might use data. This is both an active and a very important area of database research. Juliana Freire, the editor for the issue, has succeeded in bringing together a set of papers that captures many of the threads in "scientific data management", from leaders in this area. This area is a great opportunity for our field to help the overall scientific enterprise. My thanks to Juliana, who has worked hard to produce an issue that is a great introduction to the area and a valuable snapshot of its state of the art.

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