

TCDE Activities

Those of you who read my Bulletin letters know that I was recently elected as Chair of the Technical Committee on Data Engineering (TCDE). One of my first responsibilities is to form an Executive committee. My overall approach in this has been to seek a combination of new members plus experienced members, to try to ensure that all geographic regions are represented, and to maintain a strong connection with the ICDE Steering Committee. The end result is that the new Executive Committee has a mix of new and prior members, and retains ties to the Steering Committee. The people I am appointing all have been involved with the TCDE, mostly via ICDE involvement. They are Calton Pu (Vice Chair), Thomas Risse (Secretary/Treasurer), Malu Castelanos, Paul Larson, Erich Neuhold, and Kyu-Young Whang (members), Guy Lohman (Chair DEW: Self Managing Database Sys.), and Christian Jensen (SIGMOD Liason). I want to thank Calton Pu and Karl Aberer for having served on the Executive Committee. Their thoughtful and careful examination of issues sets a high standard for the new committee.

The Current Issue

How does our industry become “green”. While there are many aspects to being “green”, in the immortal words of Kermit the Frog, “it is hard being green”. The high tech industry has, for many years now, employed some very good practices to enable resources to be recycled or, at a minimum, disposed of safely. For example, I regularly mail back to the printer manufacturer my used printer cartridges. The industry has also paid attention to energy use in terms of battery charge duration, where how many hours you can use your laptop or your cell phone without a power cord directly impacts the usability of the device. But the study of and minimization of energy use will only grow in importance. It may be “hard being green” but it will be unavoidable before long.

While it is not true that energy consumption of desktop and server machines has been ignored, it is true that this has not been a major consideration, as power from the electrical grid was on hand to provide as much as was needed. But times are changing. Our industry is such a large part of the world economy now, that how effectively our industry uses power now shows up on charts describing the entire economy.

The current issue focuses on energy management for “Big Data Processing”. One of the remarkable artifacts of our age is the number and size of huge data centers, and their significant power consumption. Energy consumption is not just a “green” aspiration, it is a “nuts and bolts” economic issue. Those companies building large data centers, especially those who intend to compete in the cloud services market, now see energy cost and consumption as a major factor. Further, the electrical grid will not become “smart” without the application of data intensive analysis to the problem.

The current issue draws on work and research done by both university and industrial technologists. This is very much in the Bulletin tradition of bringing these parts of the database community together for information interchange. Brian Cooper has assembled an issue that accomplishes just that, providing a broad perspective on this area. I want to thank Brian for his fine job of handling this issue. Even now, a focus on energy is not mainstream. But this issue is a good start on raising awareness of the technical challenges in this area.