Letter from the Editor-in-Chief

TCDE Chair Election Result

Members of the Technical Committee on Data Engineering (TCDE) have voted for a new TCDE. The turnout for the election was higher than in past elections, which demonstrates, I think, two things. One, past TCDE Chair Kyu-Young Whang's initiative to enlarge membership has resulted in a larger overall TCDE membership, and hence a larger electorate. Two, we had two strong candidates in Xiaofang Zhou and Erich Neuhold, which generate more interest than in the past.

The outcome is that Xiaofang Zhou is the new chair of the TCDE. I want to congratulate Xiaofang on his election victory. I am confident that Xiaofang will be a fine TCDE chair, and I look forward to working with him going forward. Xiaofang's letter as TC Chair appears on page 2 of the current issue.

The TCDE Chair is the one empowered to appoint the TCDE Executive Committee. The new committee is shown on the inside front cover of this edition of the Bulletin. You can also find the committee on the TCDE web site at http://tab.computer.org/tcde/exec.html.

The Current Issue

Not so long ago, it was thought that CAP theorem meant that one had to give up consistency if one wanted high availability and partition tolerance. This led some members in our community to advocate using some form of reduced consistency, e.g. eventual consistency. While the CAP theorem has not been overturned, the community more recently has refocused efforts on providing transactional consistency even in the presence of high availability and partition tolerance requirements. For example, when all nodes of a distributed system are within one data center, the risk of partitioning is enormously reduced. Under such a setting, providing transactional consistency is once again feasible, though even then it can be difficult.

Giving up transactional consistency was a characteristic of, e.g., Amazon DynamoDB, which left reconciliation up to applications. While this might be "feasible" when both application and system are done in the same organization, it exports from platform to applications (users) an enormous burden. In the platform business, imposing this kind of a burden on users is a prescription for going out of business. Thus, and not for the first time, our technical community is exploring how to provide transactional consistency with high performance and low latency in a distributed setting where high availability is required.

This "consistency" is the topic that Bettina Kemme has tackled in the current issue. Bettina knows this subject exceptionally well, and has used her knowledge of the field to bring together articles by leading researchers in the area who are working at the technical "frontier". I am particularly excited and interested in this issue as this is one of my core research areas. I have already scanned the articles in the process of working on the issue, and am eager to read them more thoroughly. I think you will be very well rewarded if you undertake a similar plan and study this issue.

David Lomet
Microsoft Corporation