

Using the Crowd to Solve Database Problems

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1. ABSTRACT OF THE INVITED TALK

Database systems have been quite successful over the last decades for a wide range of applications. One of the strengths of the current generation of database products is their precise, formalized semantics based on the relational data model (i.e., SQL) and a closed world assumption. These properties allow databases to scale well and to perform a number of optimizations (e.g., use of indexes, automatic parallelization, and the use of specialized, highly tuned algorithms). However, these properties also limit the usability of state-of-the-art database systems to a number of applications that require a more open world of information. This talk gives an overview of such applications, shows how databases can be extended to meet such requirements, and specifically shows how crowd-sourcing can be integrated to meet the requirements of such applications. Experience of the CrowdDB project at ETH Zurich and UC Berkeley is given. The results reported in the talk are joint work with: Mike Franklin (UC Berkeley), Tim Kraska (UC Berkeley), Sukriti Ramesh (ETH), Reynold Qin (UC Berkeley), and Florian Widmer (ETH).

2. SPEAKER BIOGRAPHY

Donald Kossmann is a professor for Computer Science at ETH Zurich (Switzerland). He received his MS in 1991 from the University of Karlsruhe and completed his PhD in 1995 at the Technical University of Aachen. After that, he held positions at the University of Maryland, the IBM Almaden Research Center, the University of Passau, the Technical University of Munich, and the University of Heidelberg. He is a former associate editor of ACM Transactions on Databases and ACM Transactions on Internet Technology. He is an ACM fellow, a member of the board of trustees of the VLDB endowment, and was the program committee chair of the ACM SIGMOD Conf., 2009. He is a co-founder of i-TV-T (1998), XQRL Inc. (acquired by BEA in 2002), and 28msec Inc. (2007). His research interests lie in the area of databases and information systems.