Aim and Scope

By David K. Hsiao

Record-keeping and decision-making in industry and government are increasingly based on data stored in computer processable databases. Thus the need for improved computer technology for building, managing, and using these databases is clearly evident. This need is particularly acute in a complex society where the interrelationships among various aspects of the society must be identified and represented. The data which must be used to represent these relationships are growing more complex in nature and becoming greater in size. Furthermore, the increasing on-line use of computer systems and the proliferation and mass introduction of multilevel secondary storage suggests that future computer systems will be primarily oriented toward database management. The large size of future on-line databases will require the computer system to manage local as well as physical resources. The management of logical resources is concerned with the organization, access, update, storage, and sharing of the data and programs in the database. In addition, the sharing of data means that the database system must be capable of providing privacy protection and of controlling access to the users' data. The term *data* is interpreted broadly to include textual, numeric, and signal data as well as data found in structured records.

The aim of *ACM Transactions on Database Systems* (TODS) is to serve as a focal point for an integrated dissemination of database research and development on storage and processor hardware, system software, applications, information science, information analysis, and file management. These areas are particularly relevant to the following ACM Special Interest Groups: Business Data Processing (SIGBDP), Information Retrieval (SIGIR), and Management of Data (SIG-MOD). TODS will also embrace parts of the Management/Database Systems and the Information Retrieval and Language Processing sections of *Communications of the ACM*.

High quality papers on all aspects of computer database systems will be published in TODS. The scope of TODS emphasizes data structures; storage organization; data collection and dissemination; search and retrieval strategies; update strategies; access control techniques; data integrity; security and protection; design and implementation of database software; database related languages including data description languages, query languages, and procedural and nonprocedural data manipulation languages; language processing; analysis and classification of data; database utilities; data translation techniques; distributed database problems and techniques; database recovery and restart; database restructuring; adaptive data structures; concurrent access techniques; database computer hardware architecture; performance and evaluation; intelligent front ends; and related subjects such as privacy and economic issues.

TODS will not compete with proceedings of various SIG workshops. However, high quality papers from workshops, symposia, and conferences may be recommended to TODS upon prior arrangement with the Editor-in-Chief. The recommended papers will be refereed, and accepted papers cannot be published elsewhere.

TODS is a quarterly publication with an initial annual size of about 400 pages. It is expected that articles will be longer than those appearing in workshop proceedings; the issues will probably average five or six articles.
—D.K.H.