

PANEL DISCUSSION

DATABASE MACHINES

Friday, June 2, 1978
8:30 a.m. to 10:15 a.m.

Prof. Stanley Y. W. Su, Panel Chairman
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Prof. P. Bruce Berra
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There is much to be said on the limitations of the conventional Von Neumann processors and the available hardware organizations for database applications. Through research and development, several recent efforts have been in the investigation and development of new architectures and special purpose machines for supporting database applications. This panel aims to familiarize the attendants with 1) the motivations for works on data machines, 2) the objectives and characteristics of several categories of database machines, 3) the accomplishments made in this area of research and development, 4) the problems and current issues confronting the area, and 5) the impact of the current and future technologies on database management.

QUESTIONS

1. What is a database machine?
Why do we investigate new computer architecture or new machines for database applications?
2. Give a brief description of the objectives and characteristics of the following categories of existing database machines.

- a. Associative Secondary Memory Systems
by George Copeland
 - b. Back-End Data Processors
by Paul Fisher
 - c. Associative Memories
by P. Bruce Berra
 - d. Multi-Processing, Parallel Systems
by Stuart Schuster
 - e. Associative Processing using Magnetic Bubble Memories
by Hsu Chang
- 3. Give your assessment of the progress made in this field. Are there real breakthroughs?
 - 4. What are the main problems confronting this area of research and development?
 - 5. What impact would microprocessors, CCDs, magnetic bubbles or other technology have on the database management area? Where do we go from here?