# Performance of Future Database Systems: Bottlenecks and Bonanzas

**Panel Chair:**
Chaitanya K. Baru, San Diego Supercomputer Center

**Panel Members:**
Dieter Gawlick, Oracle
Don Haderle, IBM
T. K. Rengarajan, Sybase
Prof. Ken Sevcik, Univ. of Toronto

This panel will discuss how advances in database technology, hardware technology, and applications, will impact database system performance.

Current trends in database systems include the incorporation of parallel processing; object-relational capabilities; support for data warehousing, data mining, and OLAP. The typical hardware systems on which such database systems are being implemented include SMP's, MPP's, clusters, 64-bit processors, disk caches, and RAID and other high availability configurations. In addition, as database technology and products have matured, they have been employed in a wide range of *traditional* business applications including transaction processing, decision support, and OLAP, as well as newer, *emerging* applications which require, for example, handling of multimedia and spatial data; handling historical data and providing support for tertiary storage; and dealing with multiple, heterogeneous data sources.

As the database, hardware, and application trends continue, and new ones emerge, what will be their impact on the overall performance of database systems. What does the future hold?

Topics to be discussed by this panel include:

- In addition to the usual, *power* measures of performance, such as transactions per second or queries per minute, will new, *holistic* metrics emerge to measure overall system performance?

- Will utility performance and the impact of providing 24x7 availability be factored into system performance?

- Should one care only about server performance, or also client/server performance?

- How does the importance of database engine performance compare with the performance of applications that use the database?

- Will customers and vendors care about the same aspects of performance, or will there be a *performance gap*?