Report

This refers to the fact that the traditional DBMS architecture (originally designed and optimized for business data processing) has been used to support many data-centric applications with widely varying characteristics and requirements. The main thrust of both prototypes was to surpass IMS in value to customers on the applications that IMS was used for, namely “business data processing”. Hence, both systems were architected for online transaction processing (OLTP) applications, and their commercial counterparts.

DBMS Services use multiple code lines causes various practical problems including:
a) **Cost problem:** because maintenance costs increase at least linearly with the number of code lines.
b) **Compatibility problem:** because all the applications must run against every code line.
c) **Sale problem:** because salespeople get confused about which product to try to sell a customer
d) **Marketing problem:** because multiple code lines need to be positioned correctly in marketplace.

● Data warehouses are very different from OLTP systems, OLTP systems have been optimized for updates, as the main business activity is typically to sell a good or service.

● A well-known homily that warehouse applications run much better using bit-map indexes While OLTP users prefer B-tree indexes.

Applications: 1) Emerging sensor-based applications: Obvious applications of sensor network technology in military domain.
2)Financial-feed processing: feeds that deliver real-time data on market activity.

Primitives: SQL systems contain a sophisticated aggregation system, whereby a user can run a statistical computation over groupings of the records from the table in a database. StreamBase which is also a real time application also aggregates that have been constructed to deal Intelligently with messages which are late, out-of-order, or missing. StreamBase allows aggregates on windows to have two additional parameters. First is Timeout parameter, which instructs streamBase execution engine to close a window and emit value. Second, parameter is slack, which is directive to the execution engine to keep a window open. These two parameter addresses disorder in tuple arrival.

Conclusion: There may be a substantial number of domain-specific database engines with Differing capabilities off into the future. There are a variety of existing and newly emerging applications that can benefit from data management and processing principles and techniques.