Random Prognostications

an evening with Andy Pavlo
How I Got Hired
SCS Faculty, Staff and Student Directory

Faculty -- Adjunct Faculty -- Staff -- All SCS
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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My Nine Year Tenure Clock
Year 1
Year 2
Year 3
Nine Year Predictions
• Will become first choice in new start-ups & Web apps.
  – Flush with cash, with more on the way.
  – MySQL-like growing pains.
• Fracturing will hurt perception & adoption.
  – See CouchDB vs. Couchbase.
  – This may be intentional.
• Academic systems will be the first to adopt new hardware.
  – NVM (e.g., PCM, Memristors, Spintronics)
  – Co-Processors (e.g., Phi, “Son of iRAM”)
• Many-core will still be a problem.
  —Preliminary results show that nothing works well at 1000 cores.
  —Variable concurrency control schemes for heterogeneous cores.
• One-Size Almost Fits All:
  – Geo-distributed transactions.
  – Main memory-oriented storage.
  – Self-configuring/elastic.
  – Hardware acceleration.
The “Old Fart” Obsession
old fart

/olhd fahrt

noun

1. a bad-tempered or surly elderly person.
2. a person who published a paper before you were born.
Introduction to a System for Databases (SDD-1)

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A. LANDERS, C. REEVE, D. W. SHAPIRON
Computer Corporation of America

The declining cost of computer hardware and the increasing demand for sophisticated database management systems have led to a substantial interest in distributed database management systems. Many users interact with SDD-1, especially if it is part of a SDD-1 system. SQL handles a wide range of queries, including complex queries, query processing, and transaction management. This paper presents an overview of the system's capabilities.

This paper is the first of a series of companion papers by Bernstein et al. [4] and Burnette and Shapero [4].

Keywords and Phrases: Databases, database system, query processing, database reliability.

CR Categories: B.4.2

1. INTRODUCTION

SDD-1 is a distributed database management system developed by the Computer Corporation of America. It is a system for handling data in a distributed environment. The system allows for the storage and retrieval of large volumes of data in a distributed manner. The system is designed to provide a high level of performance and reliability.

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INGRES—A relational database system

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INTRODUCTION

INGRES (Interactive Graphics and Retrieval System) is a relational database and graphics system being developed at the Research Laboratory. The system is designed to provide a high level of performance and reliability.

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For example, a relation R on a database D is defined as R(D) = (D, R(x, y) = r(x, y)) where r is understood to mean that any duplicate values are eliminated. If one visualizes R as a table with its elements appearing as rows, then R(D) is just the column corresponding to D.

We have found it convenient to distinguish the projection of R(D) from the domain D itself, i.e., to distinguish columns from the set of possible values. To do this, we have introduced a new term to stand for R(D). An attribute can be viewed as a function on R(D) taking values in D and its alternative notation R(D)[R] makes this clear. This point of view is important in understanding the system of QUERL.

QUERL: A RELATIONAL QUERY LANGUAGE

QUERL is a relation-based language. A relation is a set of tuples. A tuple is a set of values. Each value is an ordered pair. A tuple can be viewed as a function on D taking values in D and its alternative notation R(D)[R] makes this clear. This point of view is important in understanding the system of QUERL.

Example: R(D) = (D, R(x, y) = r(x, y)) where r is understood to mean that any duplicate values are eliminated. If one visualizes R as a table with its elements appearing as rows, then R(D) is just the column corresponding to D.

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• Stop Complaining.
  – Nobody cares where good ideas come from.
  – The low-hanging problems are solved.
  – I’m Young. You’re Old.
  – And I’m going to live forever.
End

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