



Experienced, hands-on technical leader with outstanding track record of highly successful market delivery and support of multiple product lines. Proven ability in building high performance inter-continental development teams (US, India and Ukraine) and managing product development from concept to delivery.

Areas of Expertise

OLAP, Business Intelligence, Analytics, Enterprise Performance Management, Databases and Transaction processing

11/2009 – 04/2010

Temporary relocation to India

03/2009 – 10/2009

Director of eCommerce Business Intelligence, Amazon Inc. Seattle, WA

Responsible for Amazon's eCommerce BI platform that provides reporting and analytics to thousands of internal and external customers world-wide. Managed a team of about 70 engineers located in Seattle and India. Accomplishments include:

- Turned around a fragile and unreliable data platform into a robust deployment that predictably met daily service level agreements.
- Standardized business analytic needs for all categories across Amazon's retail business that enabled automation of daily business reporting across the entire business world-wide.
- Launched an open source like development environment to enable self-service delivery of user analytic needs.

08/98 – 02/2009

Hyperion Solutions/Oracle Corporation

Oracle acquired Hyperion in early 2007.

2004 – 02/2009

Vice President, Engineering

Responsible for R&D for three product lines.

1. Essbase (Since 2000) - An industry leading OLAP engine. Essbase has over 4000 customers (the largest of Hyperion products in revenue and footprint) and is sold stand-alone, embedded with Hyperion Budgeting, Planning and Profitability applications.

Essbase was selected as the analytics foundation for Oracle's emerging fusion applications, after a detailed technical evaluation and comparison with other technologies.

As an early engineer on Essbase, I played a pivotal role in architecting the software and implementing several core modules - including introduction of parallel processing, Query time integration with SQL databases, MDX query engine and re-architecting Essbase to support multiple metadata and data subsystems. Built and managed initial core team of 4 engineers in 2000, and grew it to more than 100 engineers in 2007. Stand-alone license revenues for the product grew several fold in the same period from 20 million to over 100 million with the largest maintenance renewal rate of any Hyperion product.

2. Hyperion Smart View for Office (Since 2004) – An office-based end user interface to work with Essbase and Hyperion's Performance Management applications.

I was responsible for the product concept in early 2004 to its first delivery in Dec 2004. The product is used extensively at over 3000 Hyperion-Oracle customers.

3. Crystal Ball (Since 2007) - Portfolio of risk analysis software, a 15m dollar business whose acquisition I led in Jan 2007.

Led rearchitecture of Essbase to allow pluggable storage and calculation engines to support Operational Analytic workloads characterized by large volumes of data (billions of cells) and high dimensionality (over a dozen dimensions). Such applications were hitherto considered impossible for OLAP databases to handle.

The combination of flawless engineering execution, business partnerships and association with key customers through every step of the rearchitecture enabled us to launch a successful 7.1 release of Essbase. This release was called "**the most significant advancement in the company's analytical technology since the introduction of Essbase in 1994**" in Hyperion's fiscal year results report of 2004.

After the initial release, new product features were rapidly delivered in some cases with less than two months time to market. The landmark 7X releases of Essbase enabled Hyperion to significantly expand product license revenues - a 2 fold increase in revenues in the first 18 months; and turned Hyperion's fortunes.

In 2005, Essbase was named one of "**Top Ten Influential Technology Innovations of the last 10 years**" alongside Netscape, Blackberry, Google, VOIP, Virtualization and Linux by Information Age (<http://www.computerworld.com.au/index.php/id;1543076334>)

Other responsibilities as Vice President of Engineering were:

1. Ownership of OLAP and Office integration product strategy
2. Strategic technology alliances with Teradata, HP, IBM and Microsoft.
3. Collaborating with various marketing and sales functions
4. Manage relationships with industry analysts
5. Manage OEM technologies and partner relationships

Peer Reviewed Essbase Publications

1. "What-if OLAP queries with Changing Dimensions", ICDE 2008
With L.V.S. Lakshmanan and A. Russakovsky
Full version of the paper available at <ftp://ftp.cs.ubc.ca/local/laks/icde2008/PersCube.pdf>
2. "Collaborative Analytical Processing – Dream or Reality" , Panel at VLDB 2001
With Bill O'Connell (IBM) and Andy Witkowski (Oracle)

- **2001 : Senior Director, Development, Essbase**

Managed R&D for Essbase server and tools. Delivered several product releases including introduction of parallel processing in Essbase, debut of a new administration tool and java interfaces. Parallel processing delivered 5X performance improvements for cube construction latencies and ensured a successful debut of Hyperion Planning in 2002 – a browser-based application built on Essbase.

Hyperion Planning application has grossed over 120 million in revenues in the 7 years since its introduction.

I also participated in implementation.

1. I designed functional scope and algorithms for multi-threading load and aggregation operations and implemented the same. Worked closely with one storage layer engineer to re-design concurrency control to eliminate major contention points and optimize interfaces for aggregation logic.
2. I was the lead architect responsible for a new relational module to leverage data available in de-normalized relational schemas. I wrote the query engine for the relational module and implemented several performance optimizations in SQL generation. This module was the enabler of sales partnerships with relational database vendors.

- **2000 : Distinguished Software Engineer, Essbase**

Responsible for implementation of several areas of attributes functionality that enabled Essbase to be used for analysis across descriptive categories. This feature widened use of Essbase outside of its traditional finance niche.

- **1998 - 2000: Senior Software Engineer**

Worked on the calculator and aggregation modules of Essbase

01/96 - 08/98

Senior Software Engineer

Sybase SQL Server Development, Emeryville, CA

- Part of a 10 member development team that worked on enabling a new method of concurrency control (called Row-level locking) in Sybase SQL server database version 11.9.1. I implemented the data access layer (SQL DML) on row-locked tables from scratch.

06/95 - 01/96

Student Researcher, IBM Research (Database Technology Institute Group), San Jose

Worked in a 4-member team that developed software to enable transactions over web.

05/94 - 09/94

Summer Intern, Intel Research, Portland

Worked in the Architecture team benchmarking Pentium cache performance with TPC-C (relational database workload) benchmark using Oracle database.

EDUCATION:

MS in Computer Science, 1995, University of Wisconsin, Madison.

(Passed PhD qualifying exam in May 1995)

B.E in Computer Science, 1993

College of Engineering, Guindy, Anna Univerisity, Madras, India

Miscellaneous

- "Frog & Turtle – Visual Bridges between files and Object Oriented data", SSDBM 1996
With Y. Ioannidis and M. Livny
- Featured in the select-list of Wisconsin alumni as part of 2006 CS Department, University of Wisconsin Madison annual report