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Senior Software Architect: consistently delivers effective, robust, scalable, high performance solutions to complex technical and business problems. Awarded US software patents, and Oscar and Emmy Technical Achievement awards for software architecture.

## Sample Achievements

Software Engineer, Google, Inc. December 2008 - January 2023

- Designed and developed an XML to Protocol Buffer Translator as a side project. The translator eliminates the need to write custom SAX handlers, and shrinks what would be a multi-month effort into at most a day's work.
- Developed the Corporate Engineering standard double dispatch-based syntax tree that is used in multiple code generators at a considerable savings over conventional methodologies.
- Developed an access optimizer that incorporates access predicates into arbitrary SQL queries so the DBMS would apply access conditions natively. This reduced network load and required post-processing, yielding shorter response times and an improved user experience.
- While tech lead on a message bus upgrade, developed an adaptor API that saved the company 3,000 engineering hours, a savings of \$1,000,000 plus opportunity costs.

Technical Architect, Macrovision EMEA, October 2007 – September ???  
2008

- Streamlined website dataflow for an international business publication. Eliminated long-standing usability issues to enhance the user experience and increase subscription rates.
- Enabled access control and e-commerce for a nationwide British video provider consortium; architected highly scalable, low-latency authorization and e-commerce services. Worked closely with clients to deploy a solution with high throughput and strong security.

Technical Architect, eMeta Inc./Macrovision Corporation, December 2005 – Jun 2007

- Provided on-site vendor presence for the first deployment of release 4.0 of the eRights digital rights management package at a world-leading on-line database provider. Worked

with a client to develop and successfully deploy highly scalable, redundant, high-availability, low-latency application architecture. Resolved key project roadblock by specifying a scalable, near real-time data flow between legacy application and new deployments. "Eric demonstrated a rare ability to grasp business challenges and express them in technical terms ... moved freely between different levels of solutions, from high-level architectural tuning to low-level profiling ... always ready and willing to go the extra mile to identify the source of a problem or to communicate a recommended solution ..." Client-side Software Architect. "... does not let you walk away with the wrong understanding of a problem ... willing to compromise to work with others ... most of all, he thinks ..." Colleague, eMeta/Macrovision

### Director of Architecture and Engineering, Direct Revenue, LLC, April – August 2005

- Introduced best development and release practices to improve interdepartmental relations, reduce project backlog, improve system quality and reduce time to market. Resulting improvements increased revenue while raising developer productivity and morale. Launched business critical development effort to deploy Linux-based Java advertising servers to increase capacity and broaden advertiser update while raising return on investment.  
Designed, developed, and deployed a pipelined architecture and object/property based protocol that simplified development by factoring key functionalities into well-isolated, thread-safe, and stateless engines.
- Defined an inventory allocation strategy that simultaneously maximized expected revenue and quality of service. Collaborated with the Director of Data Services to validate algorithms, since proven to have significant advantages over standard practice.

### Manager, Search Technology, Barnes&Noble.com, December 2003-March 2005

- Provided technical leadership for improvements to critical search engine performance to enhance user experience and increase site availability. "Eric is an engaging, highly knowledgeable, effective, and articulate software professional who is able to engage in effective analysis and dialog on a wide range of software architecture issues..." Manager, BN.com
- Diagnosed and repaired long-standing resource leaks in critical production processes, which improved operational stability of essential business functions.
- Enabled near real-time indexing by circumventing the Windows 2000 four gigabyte/process memory limitation, thereby positioning the company to respond quickly to changing customer preferences.

### Senior Software Architect, Bear Stearns & Co.

2000-2003

- Diagnosed and resolved critical issues in a Java/Swing, Windows and Unix-based, multi-

- threaded, real-time global equity order management system, preserving a \$10M investment.
- Refactored, applied Filter/Functor Design Patterns, and introduced appropriate data structures to resolve severe performance problems in order cancellation.
- Fixed long-standing errors in SQL stored procedures, thereby improving accuracy and timeliness, and increasing client retention.

## Consultant to E-Vue, a Sarnoff Corporation spin-off, 1999

Reduced CPU and memory use in proprietary Visual C++, Windows desktop-based video decompression software.

## Architect for Logic Works, Inc./Platinum Technology, Inc., 1995-1999

- Developed a COM/C++-based API that enabled the rapid integration of Model Mart, Complete Compare, and Reporting into Platinum Technology's integrated software development suite, meeting key marketing and product positioning deadlines.
- Designed a novel link from BPwin to the Model Mart multi-RDB platform repository after the first two integration projects failed. The ModelMart-enabled BPwin sold briskly to the existing ERwin/Model Mart user base.
- Designed and developed a reusable property page and dictionary editor framework that enabled inexperienced programmers to modernize the BPwin property editors. The improved UX made the system far more attractive; sales soared and the return rate dropped, which had been alarmingly high, dropped dramatically. The design was awarded US patent [6,305,007](#).
- Automated SQL code generation:
  - Cleared a project logjam by developing a semantic-free macro language to support SQL emission, thereby keeping development on schedule. "Ideal, just-in-time engineering ..." Manager, LogicWorks. Awarded US patent [7,711,685](#) with co-inventor Tad A. Deffler.
  - Replaced an poorly scaling view definition generator with a novel, high-performance join predicate generator, thereby implementing an extremely important selling point.
  - "Eric's preliminary results are higher quality and more complete than most developers' final product." Manager, LogicWorks

## Senior Software Engineer, Information Builders, Inc./iWay, 1990-1995

- Designed and developed key components of EDA/SQL, the core iWay Software offering. Designed, validated and implemented a generalized SQL join optimizer, which supported full relational joining of data in relational and legacy data stores – a significant selling point for EDA/SQL. "The finest developer I have ever managed ..."
- Conceived, proved correct, and implemented a generalized SQL view reducer, which accelerated qualifying query processing up to 100-fold and increased user acceptance. "... the most brilliant code I have seen in my career ..." Colleague, Information Builders

## Prior Experience

1989-90 Independent Consultant, New York, NY  
1988-89 Contractor to IBM Glendale Laboratory  
1987-88 Director of Software Development, Trepp Information Systems, Inc., New York, NY  
1986-87 Independent Consultant, New York, NY  
1982-86 President, Idea Ware, Inc., New York, NY  
1981-82 President, Mintz, Pappas and Van Dyk, Inc., New York, NY-based consultancy  
1980-81 Independent Consultant, New York, NY  
1976-80 Director of Operations, Manamation, Inc., Lynbrook, NY  
1974-76 Nuclear Scientist, Westinghouse Electric Corp., Pittsburgh, PA  
1974 Programmer, Sage Action, Inc., Ithaca, NY

## Technical Interests

Functional programming and formal requirements analysis

## Publications

Software Packages from IdeaWare, Inc. and Paperback Software, Inc.: Idea Processor, Paperback Writer, Executive Writer, Executive Filer, Paperback Speller

## Education

Fundamentals of Object Oriented Analysis, Kennedy Carter Ltd.  
6 graduate credits, Bettis Reactor Engineering School  
M. A. Mathematics, Wesleyan University. Thesis topic: Flows in Networks.  
B. A. Physics, Cornell University

## Awards

US Patent [6,305,007](#): Object Property Meta Model Emulator For Legacy Data Structures and [7,711,685](#) with Tad A. Deffler: Method and System for an Extensible Macro Language.  
Academy of Motion Picture Arts and Sciences, Technical Oscar Award 1988-1989 and Technical Achievement, Primetime Emmy Awards, 1989 Engineering Award, both for the Streamline Scoring System from OffBeat Systems

## Other Interests

Education: Served on the Metuchen Board of Education 1991 - 1993. Developed and taught an introduction to logical data modeling course at Google.  
Mentoring: electrical coach for [Metuchen Momentum](#), FIRST Team 7587.  
Construction: electric and network wiring, metal working

Music: Clawhammer 5-string banjo, performance