Adam Cheyer

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SUMMARY OF QUALIFICATIONS

<u>Technical Leader</u>: Hired and managed research and development teams in public companies (VP Engineering, Verticalnet: 70 developers, responsible for products resulting in \$100M in software sales), startups (VP Engineering, Dejima: deployed products at Salesforce.com, SAP, France Telecom; company successfully acquired by Sybase), and academic/research environments (Program Director, SRI: responsible for product definition, architecture, and engineering management for one of the largest A.I. programs ever funded, 250 researchers including 25 academic and commercial subcontractors).

<u>Visionary</u>: Award-winning researcher at SRI International, author of more than fifty peer-reviewed publications and eight US patents, with track record of transforming cutting-edge ideas into practical, deployable systems that address a market need.

Operator: Responsible for satisfying the carrier-grade availability and scalability requirements of a telecommunications company (France Telecom), the security requirements of a major ASP (Salesforce.com), and the enterprise integration requirements of a global trading exchange (Converge).

<u>Builder</u>: Authored software used in fifty countries (e.g. Bull's NOEMIE configurator) and on the international space station (OAA part of "Clarissa" project, deployed by NASA in December 2004).

<u>Specialized Expertise</u>: *Domain knowledge* in supply chain and business intelligence, wireless and mobile computing, search, knowledge management, and web service frameworks and standards. *Hands-on experience* working with all aspects of artificial intelligence (e.g. machine learning, information retrieval, natural language dialog, speech recognition, planning, reasoning, scheduling, expert systems, vision, neural networks). *Research* in semantic information systems, web-service architectures, distributed agent coordination, advanced user interfaces (e.g. multimodal, adaptive, collaborative, dialog-based).

EMPLOYMENT EXPERIENCE

SRI International, Menlo Park, CA

Apr 2003 - Present

The world's largest not-for-profit independent research organization, SRI has been "inventing the future" since 1948. SRI <u>innovations</u> include the mouse, hyperlinks, HDTV, and the first Internet and ARPAnet transmissions.

Program Director, Cognitive Computing Group

Responsible for the technology, vision and engineering management for several large AI projects:

Chief Architect of the <u>CALO/PAL project</u>, an ambitious effort to create a next-generation personal cognitive assistant that learns and self-improves "in the wild" (e.g. with no code changes). Responsible for the vision and for all technical deliverables from this multi-year, 250-person, \$33M/year project. The deployed software integrates state-of-the-art Al technologies from 25 universities, and commercial companies into a system that can provide user value and show improvement on a set of yearly SAT-like tests.

Designer and Product Manager for <u>IRIS</u> (the "Clarity Machine"), an ontology-based Personal Information Manager (PIM) that enables individuals and teams to organize, integrate, search, and share their work-related information (e.g. email, files, web, contacts, projects) for increased productivity.

Technology Lead for Vanguard, an SRI Presidential Initiative in the mobile computing space. For European telecom companies, provided strategic thinking, multiple application concepts, and several prototype systems leveraging advanced web service infrastructures and multimodal user interfaces.

Dejima, Inc., San Jose, CA (Acquired by Sybase, IAnywhere Division)

Jan 2002 - Apr 2003

Dejima, Inc. develops natural interaction software products that enable companies to provide their end-users with easy, intuitive, direct access to applications and services. Customers include Salesforce.com, SAP, Toyota, Oracle, Sun, France Telecom (Orange), Japan Airlines, and Motient.

Vice President, Engineering

Responsible for all aspects of development for Dejima's product line, including product management, engineering, and engineering services (QA, Training, Support, Technical Publications, IT). Dejima's products include a suite of integrated development tools supporting a patented approach to software engineering; a carrier-grade application server for deploying highly available and scalable Dejima applications; and a number of applications providing natural-language enhanced Direct Access to consumer and enterprise content and services.

In one year, helped Dejima develop a new product providing "use-your-own-words" access to sales force data over wireless devices (email and web), deploy it initially as a Dejima-hosted service, OEM it to Salesforce.com and SAP, and now Dejima Direct SFA is used by more than 250 companies.

Deployed two applications meeting carrier-grade operational requirements of a mobile operator (France Telecom), to provide "use-your-own-words" access over SMS for location-based services.

Product manager for three releases of the Dejima Direct Platform, a set of development and runtime tools for creating, testing, deploying and monitoring Dejima applications.

Designed the Dejima Direct Control Center product, implemented complete prototype for Salesforce Automation domain, and then led product development for first customers.

Verticalnet, Inc., Palo Alto, CA

Nov 1999 - Jan 2002

One of the top IPO's of 1999, VerticalNet ran a network of 59 industry-focused marketplaces offering content, community tools, and collaborative commerce for 30,000 suppliers and millions of users/buyers. For enterprises and industry consortiums such as <u>Converge</u>, Verticalnet's software products provide trade functionality, data visibility and spend management across the supply chain. Revenue in 2000 was \$112M, and \$125M for 2001.

Vice President Engineering, Enterprise Products

Responsible for managing Verticalnet's distributed development teams creating products for deployments totaling more than \$100M of committed revenue.

Verticalnet's products include a set of integrated trading applications (auction, reverse auction, RFQ, structured negotiation), C2 Suite (an ontology-driven distributed data visibility and comprehension framework), OSM, an advanced web-service platform for managing intelligent integration throughout the extended enterprise, and applications leveraging these, including strategic sourcing, spend analysis, and demand visibility.

Development utilized Java/J2EE, WebLogic, WebMethods, SQL Server, and Oracle.

Vice President, Advanced Technology

Managed a multi-disciplinary team of business analysts, software engineers, and research scientists, leading Verticalnet's advanced technology strategy and development.

Headed Verticalnet's participation in e-commerce related standards. Verticalnet is a founding member of UBL, UDDI, BPML, an author of the Topic Maps (XTM) standard, and a member of CommerceNet, RosettaNet, Ontology.org, ebXML, and UN/SPSC.

Led projects on knowledge management, community, and intranets for Verticalnet.

Senior Director, Advanced Products and Strategy

Led marketplace development effort for an electronic components trading hub.

Managed development of e-commerce components, including a rule engine used for pricing and cross-sale/up-sale logic, ontology development tools and apps, and a learning-based classification tool for semi-automated mapping of supplier data.

SRI International, Menlo Park, CA

July 1993 - Nov 1999

Sr. Computer Scientist, Artificial Intelligence Center

Primary inventor of a new approach to building complex, dynamic systems, called *Delegated Computing*. Leader of research group focusing on distributed agent architectures and advanced user interfaces for web services. Managed successful projects for government and commercial clients totaling several millions dollars in research and development.

Principal designer and developer of the Open Agent Architecture TM (OAA®), a framework for constructing distributed applications using a dynamic community of web services. OAA has been downloaded by thousands of developers around the world, and used in many applications, including Clarissa, deployed to astronauts on the International Space Station.

Architected and contributed to the implementation of more than twenty-five OAA-based applications, for the consumer, office worker, and for the government.

Contributor to <u>Douglas Engelbart's Open Hyperdocument System (OHS)</u> project for advanced collaborative knowledge management.

Co-Director, Computer Human Interaction Center

Responsible for providing research direction for SRI's advanced user interface group, comprised of eleven research staff and eight international visitors. Our initial research focus was on "mediated spaces", where we constructed six integrated applications - two for the home, two for the car, two for the office, all implemented using a web services approach.

Bull S.A., Billerica, MA and Paris, France

Sept 1987 - Aug 1992

Bull S.A. was the largest computer-related enterprise in Europe, ninth largest in the world.

Sr. Software Engineer

Responsible for the implementation of the core inference engine of NOEMIE, an expert tool that automates the configuration of all hardware and software orders from a product line of more than thirty thousand parts.

Direct returns for Bull have been estimated at more than fifteen million dollars per year.

NOEMIE was sold as a general-purpose commercial solution for complex configuration problems, and has been used in more than fifty countries.

Involved in all aspects of producing a major commercial software product, including internationalization, localization, testing, installation, porting, and documentation.

PUBLICATIONS & PATENTS

This list is selected from more than <u>fifty publications</u> and eight U.S. patents.

A Collaborative Programming Environment for Web Interoperability. With J. Levy. 1st Workshop on Semantic Wikis, Budva, Montenegro, June 2006. Describes WubHub collaborative portal.

IRIS: Integrate. Relate. Infer. Share. With J. Park, R. Giuli. International Semantic Web Conference, Galway, Ireland, November 2005. Describes IRIS open source semantic desktop.

<u>Communication and Collaboration in a Landscape of B2B eMarketplaces</u>. With D. Roddy and L. Obrst. Whitepaper distributed by VerticalNet Solutions, Inc. June 2000.

<u>Evolution of the Laws that Deal with the Utilization of Information Networks</u>. With B. Hodjat. *BISC International Workshop on Soft Computing for Internet, 15-19 Dec 2003, U. Berkeley*

<u>US Patent 6,757,718: Mobile Navigation of Networked-Based Electronic Information using Spoken Input.</u> With C. Halverson, L. Julia, D. Voutsas. Jun 29, 2004.

<u>US Patent 6,691,151: Unified Messaging Methods and Systems for Communication and Cooperation Among Distributed Agents in a Computing Environment.</u> With D. Martin. Feb 2004.

<u>The Open Agent Architecture</u>. With D. Martin. Journal of Autonomous Agents and Multi-Agent Systems, Vol. 4 (1/2), pp. 143-148, March 2001.

<u>Multimodal Maps: An Agent-based Approach.</u> With L. Julia. In book **Multimodal Human-Computer Communication**, Lecture Notes in A.I. #1374, Springer, pp. 111-121. 1998.

<u>MVIEWS: Multimodal Tools for the Video Analyst</u>. Conference on Intelligent User Interfaces (IUI'98), San Francisco, January 1998.

InfoWiz: An Animated Voice Interactive Information System. With L. Julia. Agents'99 (WS Communicative Agents): Seattle (USA), May 1999.

Computer Skills & Activities

<u>Programming Languages</u>: Java, C[#], C/C++, Ruby, Javascript, Prolog, Lisp, WebL, Perl <u>Distributed Objects, Agents & Web-Services</u>: UDDI, WSDL, .NET, J2EE, CORBA, OAA, FIPA

<u>Systems and Servers</u>: MySQL, Oracle 8i, MS Sql Server, WebLogic, WebMethods, under Windows NT/2000, Linux and Unix. Knowledgeable about SAP and Oracle ERP systems

<u>Engineering Process Tools</u>: Version control (CVS, ClearCase), Issue tracking (JIRA, FogBugz, ClearQuest), Continuous build (ANT, CruiseControl), Collaborative content management (Plone).

Member of Technology Council for the Silicon Valley World Internet Center (2002-present)

Open Source developer of collaboration software for United Nation University's Millenium Project.

Invited presentations to Fortune 500 executives: Delphi IKMS 1999, CSC Exchange 1998

Visiting professor, Swiss Federal Institute of Technology (Summer 2004). Teacher and invited lecturer on Agents and User Interfaces (WICS 1998, Stanford '97,'99,'05)

EDUCATION

M.S. Computer Science, UCLA (1993)

Awarded Outstanding M.S. Student, School of Engineering and Applied Sciences Thesis: "Adapting Speech Synthesis Drivers to Graphical User Interfaces"

B.A. Computer Science, <u>Brandeis University</u> (1988) Graduated with highest honors