

## SUMMARY

- ⤴ Over 35 years of experience in software and knowledge engineering as a developer, architect, manager, and educator, liaison for business and IT collaboration, with ability to lead, negotiate, learn and share. Shared best practices at Java One, Wireless One, Oracle, Boeing, and Semantic Tech conferences.
- ⤴ Jeff won Belarus's First Prize for his Real-Time Automation System, honored by educational awards from Sun Educational Services and University of Phoenix, and innovator's awards from Boeing;
- ⤴ Certified as Java Instructor and Architect by Sun; In Ontology by Cycorp; TOGAF by OMG
- ⤴ Jeff worked with and mentored local/US and offshore teams in India, China, Israel, Belarus & Russia; Created a set of reference materials to support SOA Governance and business - IT collaboration; Conducted [Semantic SOA](#) seminars at IBM, Ball Corp, NPL, [University of Canterbury, New Zealand](#)
- ⤴ His publications, such as <http://ITofTheFuture.com>, further expand on the subject of Integrated SOA and Knowledge Engineering, originally described in his book, "Integration-Ready Architecture and Design" (Cambridge University Press), an industry reference on Software and Knowledge Technologies.
- ⤴ Jeff is an expert in Java and SOA, distributed knowledge applications and content management; well familiar with .NET, Perl and Web 2.0; proficient in financial, telecom, and defense industry; combines strong architecture and development expertise with the business process modeling and management practices.
- ⤴ One of pioneers in portal development (<http://javaschool.com> - the first educational portal), he participated in the Liferay forum and outlined a plan for [Semantic Liferay](#); worked on **Integration of Structured/Unstructured Data**; used multiple semantic tools, including AllegroGraph, Cyc, GATE, etc.
- ⤴ He developed and patented new approaches to intelligent enterprise systems. Yahoo, Amazon, Facebook followed the directions described in the inventions and Yahoo! acquired one of his patents. Jeff patented and promoted Knowledge-Driven Architecture (Patent US 7774751) and Adaptive Systems (Patent US 7966093) providing **conversational approach to Business Process Modeling, Architecture and Design of business-driven knowledge-rich services**, presented **Aviation Expert Services** at the Boeing conference BTEC15.
- ⤴ At the Semantic Technology conference in SFO, CA, he presented Business Analytic Sandbox for Enterprise (BASE) that leverages SOA with high availability (a cluster of open source ESB/Mule and Message Queue) and built-in collaborative business process modeling & execution.  
BASE places the seeds of rule-based and semantic technologies in the current business ground, provides practical steps to Business Process Automation and transitioning from the current enterprise complexity to less expensive, simpler, and optimized IT of the future with Semantic Cloud Architecture.
- ⤴ His research and development helped engaging business and IT in collaborative work on challenging technical and corporate culture problems, providing more opportunities for non-technical users.
- ⤴ Collaborated with Cycorp, Inc., Stanford/KSL/Protege, Fluid Operations, Rhizomik, EDMCouncil and OMG, Franz (AllegroGraph), GATE, and other companies on Semantic Web and ontology models.
- ⤴ Member of the Technical Committee for Financial Industry Business Ontology (FIBO) by EDMC/OMG
- ⤴ While in partnership with other consulting firms and working directly on client's payroll, Jeff consulted corporate and government organizations, DoD and Airforce in SOA and Integration of Structured/Unstructured Data, e-commerce, Content Management and Knowledge Engineering.

<http://javaschool.com/> | <http://ITofTheFuture.com> | <http://TopDevelopmentSkills.com> | <http://FixingEducation.us>  
[Software Semantic Evolution, SOA and Microservices, RAML and DataSense by MuleSoft, and the next step](#)

**Consulting in Denver, Colorado, open to partially remote work**

## EXPERIENCE

A loyal employee (Sallie Mae, Boeing/Jeppesen, ISS, etc.) or a reliable consultant (with my company, ITS, Inc. and partner firms) lead, negotiate, learn and share; hands-on architect, expert in SOA, Enterprise Architecture and Knowledge/Semantic Engineering.

## **Internet Technology Systems (ITS, Inc.)**

### **Chief Architect: SOA, Enterprise and Knowledge Architecture; Consulting and Training**

- ⤴ Responsible for architecture, development & communications, consulting and training corporate clients; evangelist of Business Process Automation with integration of software and knowledge engineering.
- ⤴ Provided Java Technology and Architecture training in the US and abroad for Sun Microsystems. Received Sun's highest "Hi five" instructor award for corporate training and consulting.
- ⤴ Conducted consulting and training in J2EE and .NET/C#, enterprise architecture, SOA, and integration for government agencies (DoD, DoJ of California, L.A. Assessor Dept., National Pacific Labs, CO state) and corporations including Sun Microsystems, Corporate Express, Dish Networks, TV Guide, NavTeq, Neiman Marcus, Aurora Loan Services; developed and shared SOA Governance reference materials
- ⤴ Taught classes on: Java Technology Architecture, J2EE, J2EE Design Patterns, Java Language, OOP with Java, EJB, Servlets and JSP, Java Card, Java ME, SOA with IBM Web Sphere, Oracle, BPM & BPEL [Semantic SOA](#) seminars at IBM, National Pacific Labs, [University of Canterbury, New Zealand](#)
- ⤴ Architected and designed one of the first educational portals, JavaSchool.com, expanded this solution to corporate portal, IPServe.com, and transferred the technology into the Telecom provisioning, IQLabs
- ⤴ Architected a new generation of e-provisioning systems based on integration-ready service components. The system provided high interoperability in a mixed OSS/BSS telecommunications environment; deployed at Visa International and other corporations, working in a unified fashion with telecommunications PBX systems as well as Soft-phone, wireless and VOIP switches.
- ⤴ Lead architecture and development teams (25 people) in Hayward/CA, Englewood/CO, and offshore
- ⤴ Developed and patented distributed knowledge solutions (Patent US 7032006), Knowledge-Driven Architecture (Patent US 7774751) and Adaptive Systems (Patent US 7966093) providing conversational approach to Business Process Modeling, Architecture and Design of business-driven knowledge-rich services. Yahoo! acquired one of the patents; developed Liferay-based SOA frameworks
- ⤴ Consulted development & integration of healthcare enterprise portal and LMS for Cancer Diagnostics Systems at Clariant, Inc., California, according to SOA principles and HL7 standards
- ⤴ Evaluated iLog, Blaze, DROOLS & IBM Cognos; developed training courses and consulted business process modeling and business rules; developed Business Analytic Sandbox for Enterprise (BASE) with built-in collaborative modeling and semantic decision support, providing **conversational approach to BPM/Workflow** & Integration of Structured and Unstructured Data for non-technical users.
- ⤴ Architected and developed pilot projects with Hadoop, MongoDB, Big Data Analytics and Mobile Applications

### **ITS, Inc. in partnership with other firms: Apr/2013 – Dec/2014**

- ⤴ Trained Java and Web Development in Detroit (with [Mentor-Global](#) and [UST-Global](#), see the [link](#)) **Jun/14-Dec/14**
- ⤴ Consulted **Jeppesen/Boeing** with InfoFUSION (JBoss, Hibernate, JPA, GIS) on Digital Aviation. **Apr/2013 – Jun/2014**

### **Intelligent Software Solutions, Inc. (DoD, Airforce), Global Enterprise Systems Jun/12 – Mar/13**

- ⤴ Architecture and development of intelligence/defense information systems. Integrating multiple project solutions into a unified SOA platform to collect and analyze global data reports.  
**Environment:** SOAP and RESTful web services, Liferay, SOA, MongoDB, Big Data and Semantic Technologies

- ⤴ **Intuit, Inc.** SOA Consulting (ITS) for Payment Solutions (Mule ESB, ActiveMQ, Cloud) **Mar/12 – Jun/12**

### **Sallie Mae, Inc. Fishers, IN, Director of Enterprise Architecture**

**Mar/10 – Mar/12**

- ⤴ Information Architecture for IT and business optimization; Integration of structured/unstructured data
- ⤴ Established Information Governance and collaboration with multiple IT and business groups on e-Commerce, MDM, FDR Integration, and Business Architecture pilot projects.
- ⤴ Architected and developed methods and software to integrate legacy and modern services, mainframe CICS (zOS) with Java Unix services and open systems; customized HP CMBD for corp. ITSM assets.

- ^ Participated in SOA governance; helped transitioning from data islands to linked and living knowledge;
- ^ Provided a vision and practical steps towards optimized e-Commerce/IT semantic cloud architecture.
- ^ Collaborated with business analysts on business process modeling with Savvion and inteGREAT/eDevTech&KPI for operations; JBoss BPM and Guvnor (DRools) for cross-sell marketing e-Commerce services; consulted SharePoint/collaboration solutions, integrated content management, and Call Center decision support portals; engaged business in the pilot projects with the Business Analytic Sandbox for Enterprise (BASE) ranging from CSV to BPM and semantic modeling, and to IBM MDM Architecture.
- ^ Member of Technical Committee for financial industry business ontology (FIBO) by EDMC & OMG
- ^ **Environment:** Open Source (JBoss/DRools, D2R-Server, Mule) and vendor-based products (Actional, Oracle BPM and HP-Systinet Service Registry, Sonic ESB, IBM Mainframe zOS Java Services), Data Dictionary, Ontology Models for FDR Integration, SOA Web Services for online payments, Liferay and BASE;
- ^ Consulted development of business pilot projects with Big Data and Mobile technologies.

**ITS, Inc.** in partnership with other firms: - **Apr/2009 – Mar/2010**

- ^ Consulted **CanDoGo.com** Marketing Portal development (Alfresco, Java, MySQL) – **Apr/2009 – Oct/2009**
- ^ Consulted **Colorado Educational Technology Department**, Jefferson County, on SOA and Liferay educational portal - **Nov/2009 – Mar/2010**

**JEPPESEN, A BOEING COMPANY, Englewood, CO Apr/07 – May/09**

- ^ Responsible for Service Oriented Architecture and Knowledge Engineering, connected business and architecture vision, participated in SOA Governance and Next Gen development for Aerospace industry.
  - ^ Consulted software development and architecture in Aviation, Marine, Global Navigation and Advanced Research projects; mentored and trained architects and developers in best development practices.
  - ^ Led transition from legacy to SOA applications and system integration projects; engaged in the current state analysis and target architecture design, responsible for roadmaps and implementation steps; evaluation and utilization of the enterprise service bus (ESB), rules engines, Web Portal (Liferay, MySQL/Postgres) and SOA/ESB tools on Tibco, Oracle/BEA and IBM platforms; created/promoted SOA/EA governance policies, unified access and identity solutions.
  - ^ Reviewed the Next Gen Aviation Architecture (a billion dollar project) with the Boeing/JPDO team.
  - ^ Received the Boeing Inventor 2007 and the Boeing Special Inventor 2008 awards; Invented Rules Collector system to transfer “Tribal Knowledge” into business rules directly driving applications.
  - ^ Patented Collaborative Decision and Security methods that made the beautiful concept of collaborative decision making collaborative services a reality with estimated billion dollar markets.
  - ^ Proposed the Service Integration Model to dynamically create and execute service scenarios in a collaborative fashion. This was accepted by the FAA and included in the Jeppesen’s Volpe proposal, which won the bid for Jeppesen/Boeing as a vehicle for estimated \$100 million in future contracts.
  - ^ Initiated Jeppesen Expert Services and unified rule-based architecture for several Jeppesen’s products. This approach increased functionality and efficiency, yet significantly saving development costs.
  - ^ Presented the subject of **Aviation Expert Services** at the Boeing Technical Excellence Conference.
  - ^ Consulted: development of e-Commerce web sites; integration of WebLogic and Oracle environments; identity and access management; architecture road maps and development of Next Gen rule-based onboard components.
  - ^ Worked as a Knowledge Strategist in the Knowledge Management project to automate collecting numerous government and Aerospace industry regulations as well as “tribal knowledge” developed in house.
  - ^ Consulted and trained architects and developers in Denver, Sweden, and Germany branches.
  - ^ Facilitated collaboration of business decision-makers and IT, worked on business process modeling (BPM) and rules optimization together with business analysts.
  - ^ Created and taught for business analysts a class on BPM with Tibco BPM Studio.
  - ^ Filed an invention with USPTO and was rewarded by a patent on the Rules Collector, a system for conversational business process modeling and transferring aviation expert's knowledge into business rules.
- Environment:** J2EE, ATG, and Web Services for online payments, Tibco ESB, Oracle Suite, BEA, IBM, and Liferay portals, Rational Unified Process (RUP).

**ITS, Inc.** in partnership with other firms: **Sep/2001 – Mar/2007**

- ♣ Consulted **Echostar/Dish** on SOA and e-Commerce, while working for VP, Rob Strickland. **Mar/2006-Mar/2007**
- ♣ Consulted **Comcast** on Enterprise Systems Development (Struts, JBoss, Oracle) - **Mar/2005-Feb/2006**
- ♣ Consulted **Corporate Express**, developed optimized e-Commerce systems significantly improving sales for 5,000 sales reps (JBoss, IBM Web Sphere, Oracle) **Sep/2003-Mar/2005**
- ♣ Conducted Java Architecture and SOA training with **Horizons, TechTrain, Class Trainers** and other corporate training organizations. **Sep/2001 – Aug/2003**

**QLabs, Inc. Start-Up developing self-provisioning Telecom/IT management technology –Feb/2000 – Sep/2001**

**Chief Architect, responsible for Denver branch of development**

- ♣ Lead architecture and development of a Java-based Telecommunications self-provisioning products with server side and client side (a signed Java applet) engines.

**ITS, Inc. in partnership with Sun Microsystems: Apr/1999 – Feb/2000**

**Consulting/Training for Sun Microsystems, DoJ, DoD, Corporate and Government Agencies**

**US WEST COMMUNICATIONS, Denver, CO,**

**Apr/1994 – Apr/1999**

- ♣ Team lead, architect, and developer of Java and Web based distributed enterprise applications in the prototyping group by Victor Korea.
- ♣ In the Outside of Plant Facility Management (OSPFM by Michael Nelson) department, initiated, architected and developed the first Java-based Geo Information System (GIS) with encrypted map distribution (ESRI and AutoCad formats). This allowed telephone technicians in 14 states to use laptops instead of many tons of paper maps. US West's corporate image was significantly enhanced by the resulting improvements in customer service.

**US Citizen, SECURITY CLEARANCE: Top Secret (with ISS, Inc.)**

**HONORS:** First Prize in Belarus for the best Real-Time System Development

"Teaching Excellence" award from University of Phoenix

"Hi-Five" award from Sun Educational Services for corporate consulting/training

"Boeing/Jeppesen Inventor 2007" and "Boeing/Jeppesen Special Inventor 2008" awards

**EDUCATION:** Belarus University, Minsk, MS in Computer Science and Digital Electronics 1973.

**PATENTS:**

Distributed Knowledge Systems, Robots and Collaborative Systems, Conversational Decision Support

**Distributed Active Knowledge and Process** | US Patent | Yefim (Jeff) Zhuk/Yahoo

**Knowledge-Driven Architecture** | US Patent | Yefim Zhuk – Driving applications with business scenarios

**Adaptive Mobile Robot System** with Knowledge-Driven Architecture | US Patent | Yefim Zhuk - Integrates software and knowledge engineering with robotic technologies

**Rules Collector** | US Patent | Yefim Zhuk/Boeing – Transforming "tribal knowledge" into formal rules

**Service Knowledge Map** | US Patent Pending | Yefim Zhuk – Dynamic service design, assembly, negotiation, and execution for architects, developers, and business users

**Collaborative security and decision making** in service-oriented environment | US Patent| Yefim Zhuk/Boeing – Turning a beautiful idea of collaborative decision making into a working system

Nine patents in Europe on data processing and pattern recognition

**PUBLICATIONS**

27 in data processing and integrated software and knowledge engineering

Recent articles:

**Fixing Society** - <https://www.linkedin.com/pulse/article/20140618203640-19801198-fixing-society>

Semantic Cloud Architecture (<http://semanticweb.com/tag/jeff-zhuk>)

Books:

"**IT of the future**" – <http://ITofTheFuture.com>

"Integration-Ready Architecture and Design", <http://javaschool.com/about/publications.html>

Conferences: Java One, Oracle, Wireless One, Boeing Technology Excellence, Semantic Business Technology

**MEMBERSHIPS**

Faculty of University of Phoenix and DeVry University

**CERTIFICATIONS:** Sun Certified Technical Instructor and Java Architect; Certified in Knowledge Engineering by

Cycorp Inc.; In Critical Thinking Methods by University of Phoenix; TOGAF by OMG; CMMI by SEI

**More:** <http://javaschool.com/about/SummaryOfQualifications.pdf>

**Consulting/training feedback:** “Mr. Zhuk brings the wealth and depth of years of Java development and training experience. I consider this the best training investment I’ve made for my staff in over 15 years of Software Engineering management.” - Jay DiGiovanni, Director of Software Development, TV Guide | [More](#)

**Hobby:** <http://Everest6500.com>