

Yefim (Jeff) Zhuk | Jeff_Zhuk@yahoo.com | 720-299-4701

Enterprise / Integration / SOA and Knowledge Architecture

Summary of Skills

Over 40 years of experience in software and knowledge engineering as a developer, hands-on architect, manager, and educator, liaison for business and IT collaboration, leader and negotiator, open to learn and share. Author of books and patents on integration-ready architecture, big data and business intelligence. Shared best practices at Java One, Wireless One, Oracle, Boeing, and Semantic Tech conferences. Awarded for the best Real-time automation system in Belarus, as the best trainer of the year by Sun Educational Services, honored with Teaching Excellence award by University of Phoenix, received innovator's awards from Boeing for numerous patented solutions.

Jeff worked with and mentored local/US and offshore teams in India, China, Israel, Belarus & Russia;

Created a set of reference materials to support Enterprise/SOA Governance and Business - IT collaboration;

Developed patented solutions in the area of **Integrated Software and Knowledge Engineering**;

Conducted [Semantic SOA](#) seminars at IBM, Ball Corp, NPL, [University of Canterbury, New Zealand](#)

- ◆ His publications, such as <http://ITofTheFuture.com> and <http://FixingEducation.us> further expand the concepts of Integrated SOA and Knowledge Engineering, originally described in his book, "[Integration-Ready Architecture and Design](#)" (Cambridge University Press), an industry reference on Java, SOA, Voice and Knowledge Technologies.
- ◆ His recent articles on [Microservices and Software Semantic Evolution](#) and [Changing Formula of Education](#) described the approach to accelerate development and training.

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; One of the pioneers in portal development, he outlined a plan for [Semantic Liferay](#); worked on **Integration of Structured/Unstructured Data**.

As an architect, manager and trainer has been exposed to many different business and technical environments, constantly advanced and developed a unique set of skills; learned how to solve difficult problems while working with very different groups of business and technical people, with different personalities and approaches.

- ◆ Developed and patented new approaches to intelligent enterprise systems, such as Distributed Active Knowledge and Services, Knowledge-Driven Architecture, Adaptive Robot Systems, Collaborative Security and Decisions, and more, providing **conversational semantic approach to BPM, Architecture and Design**.
- ◆ Presented **Aviation Expert Services** at the Boeing conference BTEC15; His Business Analytic Sandbox for Enterprise (BASE, presented at SemTech International) leverages SOA (Mule) with built-in semantic BPM
- ◆ Certified as JEE Architect, Developer and Technical Instructor by Sun Microsystems; TOGAF, CMMI by OMG
- ◆ Certified in Knowledge Engineering by Cypcorp; Certified as "Critical Thinking" science Instructor by UoP
- ◆ Extensive experience with major platforms from IBM Mainframe (z-system) to Unix, from JavaCard to Hadoop
- ◆ Experience and publications on Big Data and Semantic Cloud Architecture; prototyping with AllegroGraph, Cyc, GATE, Neo4J, NoSQL (Cassandra, MongoDB), high availability cluster solutions with Mule/ESB & AWS
- ◆ Member of OMG/EDMC Technical Committee for standard on financial industry business ontology (FIBO)

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| <ul style="list-style-type: none">◆ Hands-on Architect and Developer◆ Extensive experience with RDBMS including Oracle, MS SQL Server, MySQL, PostgreSQL◆ Strong telecommunications industry background in OSS/BSS and network systems | <ul style="list-style-type: none">◆ Author of patents and publication in the field of Integrated Software and Knowledge Engineering (AI)◆ Expert in Java, SOA, Web services and Microservices; books and patents on the subject |
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<ul style="list-style-type: none"> ◆ Extensive experience with Open Source software including JBoss AS, Drools, BRMS, Mule, Microservices, RAML, Cassandra, and more ◆ Education: Master Degree in Computer Science and Electronics from Belorussian University 	<ul style="list-style-type: none"> ◆ Expert in Business Modeling and translation of business ideas into technology solutions ◆ Experience with ESB including Sonic, IBM WebSphere, Oracle, Tibco and Mule Software ◆ Corporate trainer in Java, Big Data and AI fundamentals
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EXPERIENCE

Chief Architect – Enterprise and Knowledge Architecture Consultant and Mentor

04/2013 - Present

ITS, Inc. (Englewood, CO)

- ◆ Consulting Enterprise Project for Zachary Corp.
- ◆ Consulting Enterprise Rule-based SOA Project with distributed processing for Cigna / CGI
- ◆ Conducted corporate training in JEE and Web Development for Mentor-Global and UST-Global
- ◆ Consulted Jeppesen/Boeing (JBoss, Hibernate, JPA, GIS) on Digital Aviation system integration. Provided analysis, data modeling with Power Designer, architecture, design and prototyping a new integrated system consolidating numerous data sources and applications for airspace navigation.
- ◆ Prototyping Business Architecture Sandbox for Enterprise (BASE/Mule3) to foster IT & Business collaboration
- ◆ AWS and Cloud Services: Sallie Mae, and ISS, Inc., Intuit, Inc. and ITS, Inc.

Software Engineer 5 / Lead

06/2012 – 03/2013

Intelligent Software Solutions, Inc. (DoD, Air Force), Global Enterprise Systems

- ◆ Architecture and development of global intelligence/defense information systems. Integrating multiple project solutions into a unified SOA platform, transitioning from RDBMS to NoSQL

Director Enterprise Architecture

03/2010 – 03-2012

Sallie Mae, Inc. Fishers, IN

- ◆ Responsible for Information Architecture for IT and business optimization;
- ◆ Established Information Governance to collaborate 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 CMDB 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, worked with enterprise ITSM on integration structured and unstructured data and systems; 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; integration efforts with HP, Weblogic, Progressive and IBM platforms
- ◆ Lead data modeling and integration for structured and unstructured data and systems; participated in creation of Data Dictionary and CMDB

Enterprise Architecture and SOA Consultant

04/2009 – 03/2010

ITS, Inc. (Englewood, CO)

- ◆ Consulted and mentored Educational Enterprise Portal architecture and development for Jeffco Education Technology Department.
- ◆ Consulted marketing portal architecture and development for CanDoGo, Inc.

SOA and Knowledge Architecture Consultant

04/2007 – 04/2009

Boeing/Jeppesen (Englewood, CO)

- ◆ 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; Lead IBM integration efforts.
- ◆ 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 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.
- ◆ Invented and patented the Rules Collector, a system for conversational business process modeling and transferring aviation expert's knowledge into business rules.
- ◆ Participated in modeling data and processes

Enterprise Architecture Consultant

04/1999 – 04/2007

ITS, Inc. (Englewood, CO)

- ◆ Consulted Echostar/Dish on SOA and e-Commerce, while working for VP Rob Strickland;
- ◆ Architected a Call Center portal with the decision tree for Telco self-service help system.
- ◆ Consulted Corporate Express, developed optimized e-Commerce systems significantly improving sales for 5,000 sales reps (JBoss, IBM Web Sphere, Oracle)
- ◆ Conducted Consulting/Training in J2EE, SOA and Enterprise Architecture for DoJ, DoD, Corporate and Government Agencies in partnerships with Sun Microsystems, Horizons, TechTrain, Class Trainers
- ◆ Consulted IQLabs, Inc. Start-Up developing self-provisioning Telecom/IT technology; Lead architecture and development of a Java-based self-provisioning products based on emulation of switch protocols (Lucent, Norton, Cisco) via web services with graphical user interface. Helped raising \$10 million investment.
- ◆ Team lead, architect, and developer of Java and Web based distributed enterprise applications in the prototyping group (under 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.

Member of Technical Staff
04/1994 - 04/1999

*U S WEST Communications
(Denver, CO. now CenturyLink)*

Training Experience –Corporate and Public since 1994

- ◆ Corporate Training in Java and Knowledge Architecture, SOA, Design Patterns, TOGAF and Best Development Practices
- ◆ Teaching Information Technology classes at University of Phoenix, CTU, DeVry University, CCD

Education

Belorussian University (Minsk, Belarus)

- ◆ Masters Degree in Computer Science and Digital Electronics

Patents / Publications / Certifications / Awards

PATENTS

- ◆ 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 | US Patent | Yefim Zhuk - Integrating software and knowledge engineering with robotic technologies
- ◆ Rules Collector | US Patent | Yefim Zhuk/Boeing – Formalizing “tribal knowledge”
- ◆ Collaborative security and decision making in service-oriented environment | US and Europe Patent| Yefim Zhuk/Boeing – Turning a beautiful idea of collaborative decision 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:

- ◆ Changing Formula of Education:

<https://www.linkedin.com/pulse/changing-formula-education-jeff-yefim-zhuk>

- ◆ Microservices and Software Semantic Evolution:

<http://www.dataversity.net/software-semantic-evolution-and-the-next-step-part-1/>

- ◆ From Business as Usual to Knowledge-driven architecture

<http://www.dataversity.net/from-business-as-usual-to-knowledge-driven-architecture-part-i/>

Books:

- ◆ “IT of the future” – <http://ITofTheFuture.com>

- ◆ “Integration-Ready Architecture and Design”,

<http://www.amazon.com/Jeff-Zhuk/e/B001H6O9IU>

- ◆ **Conferences:** Java One, Oracle, Wireless One, Boeing Technology Excellence, Semantic Business Technology.

CERTIFICATIONS

- ◆ Knowledge Engineering – Ontology by Cyc Corp.
- ◆ Java Technical Instructor by Sun Microsystems
- ◆ J2EE Architect by Sun Microsystems
- ◆ Critical Thinking Methods by University of Phoenix
- ◆ CCMI by Carnegie Mellon University
- ◆ TOGAF by OMG

AWARDS

- ◆ Belarus Republic First Prize for the Real-Time Automation System development
- ◆ Sun Educational Services award as the best instructor of the year 2001
- ◆ University of Phoenix “Teaching Excellence”
- ◆ Boeing Innovator 2007 and Special Innovator 2008

HOBBIES: Mountaineering & guitar <http://everest6500.com>

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