

Marvin D. Toll

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PROFESSIONAL SUMMARY

An innovation enthusiast with thirty years of hands-on Application Development and leadership experience; Marvin was an early adopter of Agile Practices and more recently a regional force for moving 'beyond' to practices such as Pattern First Thinking. As a Java Architect he has demonstrated effectiveness primarily with successful large enterprises implementing cloud-based object-oriented designs, concurrent (multi-core) processing, product development and full-stack Responsive Web Architecture in the context of stateless implementations.

His experience includes the automotive, education, financial, county government, federal government, human resources, legal, and utility sectors. He has specific expertise for those optimizing JUnit Testing with "functionally equivalent" services... that is, testing within the JUnit JVM.

Marvin has contributed to team empowerment by authoring multiple open source initiatives and founding Pattern Enabled Development®:

- Target; 2018: *Justify Spring* – An innovative Adaptable Technology Wrapper (<http://pedcentral.com/principles/adaptable-technology-wrapper/>)
- 2015: *Justify* - JUST Integrated Framework (<http://pedcentral.com/hands-on/justify>)
- 2011: *Pattern Enabled Development*® (PED) (<http://pedCentral.com>)
- 2009: "Agile and Beyond" regional conference (<http://agileandbeyond.com>)
- 2008: *jPED* – (deprecated)
- 2005: *TestUtil* (<http://gtcgroup.com/testutil.html>) – Automated Method Testing Tool
- 2002: *JSlim* (<http://gtcgroup.com/jslim.html>) – "Service Locator Information Manager"
- 1999: *protodev* – Prototyping Tool (deprecated)

CURRENT TECHNICAL OVERVIEW

<i>Languages/APIs</i>	Java SE/EE, JPA2 (EclipseLink), CDI (Weld/OWB), DeltaSpike, Fork/Join Framework (JSR 166 - concurrency), JSF, Angular, HTML5, RESTful Services (JAX-RS), Java Bean Validation, Web Services (JAX-WS), Spring, JMS, JTA, JSP, XML, JMACX (video distribution API)
<i>Testing Tools</i>	JUnit, Justify, Embedded Database (H2), Embedded JNDI/JTA, Embedded CDI (Delta Spike), Embedded RESTful Services (Jersey), TestUtil, Human Factors (lab testing)
<i>Primary Patterns</i>	Pattern Enabled Development (PED), Anzeneering (Safety Engineering - Kerievsky), "Implementation Patterns" (Beck); "Effective Java, 2 nd Edition" (Bloch); "SOA Design Patterns" (Erl); "Core J2EE Patterns: Best Practices and Design Strategies, 2 nd Edition"; "Test-Driven Development: By Example" (Beck); "Patterns of Enterprise Application Architecture" (Fowler)
<i>Management Tools</i>	Git, AccuRev, Subversion, PVCS
<i>Build/Deployment</i>	Ivy (client), Gradle, Apache Ant

Application Servers Liberty, Tomcat, WebSphere, WebLogic, Jetty

Cloud Computing

Environments Pivotal, Amazon EC2/RDS, Joe's Data Center (out of Kansas City).

LEGACY TECHNICAL OVERVIEW

Legacy Old BASIC, COBOL, JCL, Assembler, CICS, IMS

Legacy New JAX-RPC, XMLDOM (MS), XPath, XSL, XSLT

PROFESSIONAL EXPERIENCE SUMMARY

Ford Motor Company

10/12 – present

Java Center of Excellence (JCOE)

CONSULTING ARCHITECT (3rd Engagement at Ford)

- Hands-on leadership for building out the Ford JEE Stack and application architecture.
- Periodically manage upgrades to the Ford reference application demonstrating use of the Stack and Patterns.
- Provide Application Development consulting with internal project teams as requested. [current project estimate: 250,000 Java instructions]
- Active liaison between the Java Center of Excellence and the Web Center of Excellence.
- Informal leadership for migration of 480 existing applications to a cloud solution.
- Advocate for cross-organizational challenges... such as the Open Source Contribution Process, enhancing the System of Delivery, establishing a direct technical connection between the Java Center of Excellence and Ford senior IT leadership.

ProQuest

06/12 – 07/12

PED Consultant

CONSULTING ARCHITECT

- Established a reference application demonstrating a set of recommended practices and patterns for use with a Tapestry UI.

Ivar Jacobson International

09/11 – 04/12

PED Consultant

CONSULTING ARCHITECT

- Provided on-going consulting in Java application development on a distributed US Government project using Amazon cloud services.
- Delivered a concurrent (multicore) processing architecture running on a single Tomcat (Java SE) server instance that surpassed legacy (COBOL running on RISC box) application benchmarks.

**Ford Motor Company
Java Center of Excellence (JCOE)**

6/07 – 10/11

CONSULTING ARCHITECT

- Provided on-going consulting in application development with project teams as requested.
- Responsible for developing course content and teaching the suite of hands-on “Java Application Development at Ford” (JADAF) courses.
- Built community consensus and authored many of the **Ford Java Patterns** used to communicate Enterprise Application Architecture/Design/Implementation to self-organizing project teams on five continents. The lessons learned provided inspiration for *Pattern Enabled Development*[®].
- Established design criteria and authored three higher-order frameworks providing an abstraction layer for existing proven technologies. (*PersistenceCore* [Toplink]/*StrutsCore* [Struts Classic]/*WsCore* [JAX-WS])
- Lead responsibility for assembling and publishing the initial roll-out of the “Reference Application” (*JCOE Adventure Builder*) – used as a global model for JEE development and unit testing recommended practices.
- Periodic lead responsibility for technology research projects for inclusion into the Ford Application Architecture.

DTE Energy (Detroit Edison)

6/06 – 6/07

ARCHITECT (3rd Engagement at DTE)

- Designed and implemented a J2EE “Promotion Protocol” encompassing development, build, deployment and verification of a COTS ERP application (Maximo).
- Optimized the localhost development environment for agile techniques.
- Ensured process compatibility with a concurrent SAP implementation.
- Sought collaboration with stakeholders and synergy with existing corporate standards.

Grand Rapids Commercial Development Firm

4/06 – 5/06

PRODUCT DEVELOPMENT CONSULTANT

- Established an eighteen-month “Roadmap for Change” to raise the overall level of J2EE application delivery capability for the COTS software product lines.
- Worked with the President and direct reports.

ARCHITECT

- Developed a “proof-of-concept” implementation for video distribution over IP. Delivered both multi-cast (igmp) and video on demand (rtsp) via set-top-box.

**Ford Motor Company
Java Center of Excellence (JCOE)**

5/04 – 3/06

CONSULTING ARCHITECT

- Provided Java consulting and mentoring to application development teams as a member of the corporate-wide Java Center of Excellence (JCOE).
- Pioneered the concept and implemented a "J2EE Platform Abstraction" to accelerate adoption and optimization of the Ford "Transaction Pattern". This initiative led to high quality applications implemented with sometimes inexperienced Java developers. It was named the "JCOE Consultants Reference Implementation" (**Jcri**) enabling fewer maintenance points per use case.
- Contributed design approaches (and text) to the corporate-wide "Software Design Guide".
- Articulated "recommended practices", distributed code samples, and delivered presentations to the 700 member Ford J2EE User Group.
- Participated in maturation of corporate-wide configuration management by working with a team to enhance the WebSphere build/deployment framework.

GTC Group

6/03 – 4/04

ARCHITECT

- Worked independently to analyze/design/implement a descriptor document facilitated J2EE services layer enabling the use of shallow Mock Objects for unit testing.
- Established an extendable design for Web Services support.
- Utilized an iterative methodology and Test-Driven Development (test-first) approach.
- Developed a data model, UML notated object model and complete JavaDoc.

DTE Energy (Detroit Edison)

7/01 – 6/03

PROJECT MANAGER/ARCHITECT

- Developed the initial releases of the J2EE clustered multi-tier site providing outward facing transactional services to DTE Energy's three million customers.
- Led a team of six in developing a J2EE near real-time reporting system identifying the financial contribution of electricity generation (at the plants) while collaborating with multiple stakeholders for analysis and design.
- Led approximately twenty developers in re-hosting a first-generation Java deployment to the J2EE platform.
- Utilized a hybrid (XP and RUP) methodology and ClearQuest for assignment/tracking.
- Championed use of daily automated testing (WinRunner).
- Maintained an Enterprise Application Architecture Patterns document.

Oakland County Government Information Technology Department

3/00 – 7/01

PROJECT MANAGER/ARCHITECT

- Managed multiple projects and developed proposals ranging from 120 hours to ~20,000 hours (\$2.2M) using ABT Workbench and Use Cases.
- Reported status on a weekly basis to the Project Management Office.

- Managed a PeopleSoft initiative to provide historical data imported from a deprecated system.
- Prepared contracts and managed third-party vendors for COTS and custom implementations while seeking win-win scenarios.
- Contributed to analysis and selection of an application development platform (WebSphere).
- Championed formation of a "Developers Component Kit" (DeCK) to house reusable Java components.

**DTE Energy (Detroit Edison)
Technology Planning and Consulting Team**

7/97 – 3/00

PROJECT MANAGER/ARCHITECT

- Established a Project Management Office for advancing skills within the 700-member information systems organization.
- Led analysis/design/deployment of DTE Energy's first enterprise-wide Java application while working collaboratively with stakeholders to design the new business process. (First use of agile iterative methodology at DTE Energy.)
- Championed use of load testing (LoadRunner).
- Coordinated the Supply Chain Management (SCM) team in analysis and translation of a process model to an UML object model.
- Assisted the SCM team RFI/RFQ assessment of ERP application suites (PeopleSoft, SAP, Oracle and Indus).
- Served as integration architect for a client server (1,500 users) enterprise workflow/document management implementation.
- Prepared numerous Technical Architectural specifications and related work products for review boards.
- Prepared an eCommerce proposal using Ariba or Commerce One with MQ Series and adapter vendor Neon, Mercator, Vitria, or Tibco.
- Led a team refining the corporate Contingency Management strategy.
- Developed an approach for tracking emerging technologies.

**Electronic Data Systems (EDS)
Strategic Facilities Planning Team (General Motors Account)**

8/96 – 6/97

PROGRAM/PROJECT MANAGER

- Co-managed the initial transition of an eventual 9,000 employees to the GM Global Headquarters in Detroit.
- Coordinated the deployment of the complete computing infrastructure.
- Leveraged knowledge, experience and connections to other EDS organizations to remove barriers and meet deadlines.
- Developed/negotiated/administered contracts for service.
- Coordinated interaction with clients.

**Electronic Data Systems (EDS)
Office of Chief Technologist**

2/96 – 7/96

BUSINESS PLANNING SPECIALIST

- Analyzed/tracked twenty-four emerging technologies to determine potential “fit” in the General Motors environment.

**Electronic Data Systems (EDS)
People Systems Division (General Motors Account)**

11/95 – 1/96

CONSULTING ROLE

- Architected a 550-seat client-server infrastructure implementation.
- Participated in costing and proposal development.
- Assisted in authoring an Information Technology plan for a 4,000 student college.

Electronic Data Systems (EDS)

8/94 – 10/95

LEAVE OF ABSENCE (CoMission Project)

- Led an eight-person American team with 15 part-time Russian employees working with teachers/administrators on Christian ethics/morality education in St. Petersburg, Russia.

**Electronic Data Systems (EDS)
People Systems Division (General Motors Account)**

10/91 – 7/94

SYSTEMS ENGINEER SUPERVISOR

- Proposed and then formed a team to deploy a 360-seat client-server infrastructure complete with application development tools.
- Managed the “Common Modules and Tools” (CMAT) team in the development and support of reusable mainframe software modules, application interface systems and client-server tools.
- Managed a pilot project to determine if quality and productivity gains could be realized through the utilization of client-server tools in support of mainframe applications.
- Supervised a production support team responsible for delivery of approximately 500,000 weekly EFT payments or payroll checks.

**Electronic Data Systems (EDS)
Legal Staff Support (General Motors Account)**

3/90 – 9/91

SYSTEMS ENGINEER SUPERVISOR

- Supervised a project team implementing prioritized customer initiatives and explored emerging technologies for applicability to legal processes.
- Supported document management initiatives as a result of discovery motions.
- Supported case management initiatives.

Electronic Data Systems (EDS)

1/86 – 3/90

Financial Information Services Division (General Motors Account)

SYSTEMS ENGINEER

- Developed/enhanced/maintained mainframe computer applications.
- Served briefly as an assistant instructor for COBOL, CICS and Assembler.
- Designed/implemented an application generator for global consolidation systems run on a HP minicomputer.

OTHER EXPERIENCE

Electronic Data Systems (EDS)

3/92 – 4/92

BUSINESS DEVELOPMENT

- Participated on a study/proposal team targeting a new vertical market for EDS.

Hazard City Schools, Hazard, Kentucky

8/80 – 6/85

DIRECTOR OF INSTRUMENTAL MUSIC

- Directed High School and Junior High Bands.

EDUCATION

COMPUTER LEARNING CENTER
Diploma: Computer Programming

Chicago, Illinois
November, 1985

UNIVERSITY OF LOUISVILLE
Master of Music: Music Education
GPA: 3.75/4.0 scale

Louisville, Kentucky
December, 1988

UNIVERSITY OF ILLINOIS
Bachelor of Science: Music Education
GPA: 4.4/5.0 scale

Urbana-Champaign, Illinois
May, 1979

CERTIFICATION

1999 - 2009 Certified Project Management Professional (PMP) - Project Management Institute.

1993 Completed the EDS Leaders Internship Program.

References are available upon request.