**US DOD**

**Current Active Secret Clearance**

**Craig A. Scharf**

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***Software and Systems Engineering***

***Development, Integration, Collaboration, Migration, Enhancement and Support***

**Professional Summary**

Over 45 years software and systems engineering experience in prototyping, development, project management, quality assurance, system assessment, security, training and system administration including on-site installation and support. Roles mainly focus on completing mission critical projects residing on multiple platforms using various strategies, languages, and tools for a variety of customers.

**Primary Abilities**

 Technical communication between management, customers, and engineers.

 Ensuring customer project control.

 Making complex technology simple to understand.

 Project completion.

 Mentoring and training peer, junior and mid-level engineers.

**Employment History**

**Current Contract, Johnson City, TX, Software Developer/Consultant.** August 2022 to present.

* **Tools:** VS Code 1.74.3, HTML5, JavaScript ES6-9, JSX/React/Babel, Java / Spring Boot, Teams, GitHub, Git Bash, GitGui, Kdiff, meld, git diff, git difftool, git config, Section 508 / WCAG, W3C-WAI.
* **Platforms**: Windows 10 Enterprise, Node.js 16.14.2, npm 8.19.2, Java 19.
* Defined, implemented, and participated in a training and on-boarding approach for the Integrated Enterprise Portal (IEP) effort which included noting IEP project details and goals.

**Computer Systems Implementations, Johnson City, TX, Software Developer/Consultant.** February 2022 to June 2022.

 **Tools:** Python, egg files, git/github, VNC, V4L2Loopback, GStreamer, RabbitMQ, mpv, Trueconf, JFrog, slack, dpkg-reconfigure, gdm, gdm3, nodm.

 **Platforms**: Windows, MacOS, Redhat Linux, VMware, Apple.

 Participated with a number of various projects to integrate and enhance a Kiosk/Mirror entry system for a Startup.

**Owl Cyber Defense, Johnson City, TX, Sr Software Engineer.** August 2021 to January 2022.

 **Tools:** Java (8-11), C/C++, make, gcc, ant, junit, git, svn, Jira, IntelliJ-Idea, Jitsi, Eclipse, vi, Collaborator, unix scripts.

 **Platforms**: Windows 10, Redhat Linux, VMware.

 Prepared and presented reverse engineering diagrams, design documentation and presentations of a Java component of the Medooze Multiconference Server (MCU) / Media Mixer with focus on support of trusted cyber security based on the existing Session Initiation Protocol (SIP)enabled software for VoIP communication. Also, prepared and presented training for integration for CI/CD (Continuous Integration and Continuous Delivery) DevOps planning for future products incorporating IntelliJ.

**Elbit Systems of America, Johnson City / Fort Worth TX, Embedded Software Engineer.** June 2020 to January 2021.

 **Tools:** C/C++, make, gcc version 5, cmake, xming, DOORS, Oracle VM VirtualBox, klocwork, qtcreator, git, Jira, Collaborator, unix scripts, Lauterbach, U-Boot, limited perl and python.

 **Platforms**: Windows, UNIX, Ubuntu, Virtual 64 bitVmware.

 On team tasked with the development of a Data Transfer Unit (DTU) for the Boeing T-7 Red Hawk Trainer.

**Thales Defense & Security, Inc, MD, Principal Software Engineering Contractor – Embedded Software Design.** July 2019 to June 2020.

 **Tools:** C/C++, make, kMake, Coverity, Understand C++, Eclipse, Git, Bamboo, Jira/kanban, Unix Scripts, Coan, kernel, perl and python.

 **Platforms**: Windows, UNIX, Redhat Linux.

 On team tasked with development of Secret and below personal MBITR tactical radios.

**Lockheed-Martin / EASi, Fort Worth, Texas and Syracuse, NY Software Development Team Lead Level 5 Scrum Master and Developer.** August 2018 to July 2019:

 **Tools:** Gnu C++, Eclipse, Git, RPM, XML, gTest, gMock, Jenkins, Jira, Unix Scripts, Open Mission Systems (OMS) Critical Abstraction Layer (CAL) / Avionics Service Bus (ASB) Universal Command and Control Interface (UCI) standard for UAVs, UML, SYSML, CAMEO, Vita 49.2, Doxygen.

 **Platforms**: Windows, UNIX, Redhat Linux.

 Tasks include building a development team to address UAV Advanced Development Programs’ (Skunk Works) product initially targeted for the MQ-25 program. Later, worked on radar systems new product development for a high throughput BEMA (Broadband Electromagnetic Aperture) Controller.

**Textron Systems / AAI / Hunt Valley, Maryland, Software Engineer IV.** Contract, August 2017 to August 2018:

 **Tools:** Gnu, Java, Eclipse, Mercurial, ANT/RPM, XML, Jenkins, Jira, Collaborator, Unix Scripts, Postgres, RTI, UML, Matrix, Hibernate, PowerShell.

 **Platforms**: Windows, UNIX, Redhat Linux.

 Tasks included successful on-schedule removal of the previously integrated Mulesoft overhead and wrapper software and database synchronization processes from an existing Task Automation Program which handles tactical messaging for the ***Universal Ground Control Station*** system used by the **Shadow** and **Gray Eagle** (optionally, Hunter) Unmanned Air Vehicles, UAVs for the US Army.

**Raytheon Integrated Defense Systems / USS Zumwalt, Massachusetts, Software Systems Integrator and Developer (SSID).** Contract, August 2016 to July, 2017.

 **Tools:** Gnu, C++, Java, Eclipse, Clearcase, Make, XML, Perl, Jenkins, RTC, Unix Scripts, Orbix/CORBA, UML, Agile / SCRUM, RTC, DOORs.

 **Platforms**: Windows, Sun/Solaris UNIX, Redhat Linux.

 Role was split between development and integration migrating to full development for a Cooperative Engagement Capability (CEC) Naval Tactical Communications System based on the U.S.S. Zumwalt DDG-1000. Primary focus is C++ development for RTI messaging interface(s) systems for the MMFD – Module Measurement Fusion DAP (Distributed Adaptation Processor) ensemble for integrated radar tracking and doctrine systems.

**Lockheed-Martin, Mission Systems and Training - now Rotary and Mission Systems / USN, Moorestown, NJ. Software Development Engineer.** Contract, March. 2015 to March 2016.

 **Tools:** Gnu, C++, Java, Eclipse, Clearcase, Make, XML, CORBA, UML, Agile / SCRUM, JIRA, DOORs.

 **Platforms**: Windows, Sun/Solaris UNIX, Redhat Linux.

 Work in a support/development software group primarily responsible for implementing planning and calculations for radar based search, tracking and interception of missiles.

**Lockheed-Martin, Fort Worth, TX. Embedded Software Development Engineer.** Contract, July. 2013 to Dec. 2014.

 **Tools:** Java / JDK, XSL, XML, Eclipse, PVCS/Dimensions, JacORB (CORBA), UML (Factory, Composite, Singleton and other patterns utilized).

**Platforms**: Windows, Sun OS, UNIX, Oracle / SQL.

**Protocols**: 1553B.

 Work in a support/development software group primarily responsible for the *Signal Information Management System* (SIMS) used by multi-national customers as part of the Software Collaborative Environment for the Joint Strike Fighter (JSF/F35) and F16 embedded systems using standards and protocols including 1553B. Tasks included being involved in and/or augmenting of requirements definition, development, implementation, communication, documentation, presentation and training/mentoring.

**Bell Helicopter- Boeing - US Navy, Fort Worth, TX and San Diego, CA. Systems Integration Specialist for CAMEO use of V-22 Osprey.** Non-contract, July 2011 to June 2013.

 **Tools: Enovia, Java, SVN, Hadoop.**

**Platforms:** Windows.

 Responsible for planning, budgeting, establishing goals, allocating personnel resources, disseminating technical information and maintaining a working interface with the customer, subcontractors, employees and partners. This position is the focal point for developing information technology processes utilized for collecting, storing, monitoring and delivery of contractual information that adequately satisfy contractual requirements and customer expectations. A broad knowledge of information technology systems and military program integration as well as organizational and managerial skills are essential. Responsible for leading assigned projects that standardize military aircraft support information technology processes across the organization.

**The Boeing Company, Mesa and Tucson AZ. Software Development Consultant.**

Contract, May 2009 – Oct. 2010

 **Tools:**eMatrix, Ada 2005, Java, Groovy, ClearCase, ClearQuest, Rose.

**Platforms**: Linux, Windows XP and NT.

 Brought in to be part of SBInet program turnaround to help bring functional border security to the Tucson, AZ (Southern) sector.

 Addressed roles: Software/Systems Development, Project Management (20+ people), Quality Assurance and System Administration including on-site installation and support of territorial area training simulator for SBInet. Software is based on flight simulation applications. Also, tests, release processes and installation documentation implemented. Main responsibilities include support for camera control functions such as continuous zoom, discrete zoom, skew (pan) and related activities. On-site customer demonstrations, operations and support provided.

 Received a formal accolade at the culmination of the first development, installation and support effort. (See accolades section below.)

**Vought Aircraft Industries / Northrop-Grumman, Dallas, TX/Johnson City, TX. PLM Software Development Consultant.** Contract, February 2008 – April 2009

 **Tools:** Visual C++ 2005 .NET, VB .NET, Perl, Excel, TCP/IP, FORTRAN, Visual Basic 6, CVS, SVN, UML (Observer (MVC)), Microsoft Excel, Web publishing, TeamCenter, CAA-RADE

**Platforms**: Windows XP and NT, Win32 and UNIX.

 Support for 787, 747-8, C5 and other airplane programs in the design, development and maintenance of PLM using CATIA V4 and CATIA V5 (graphics/CAD/CAM) tools and customizations integrated with TeamCenter Enterprise and Engineering products.

**Rockwell Collins Avionics Development for U.S. Army, Cedar Rapids, IA. Embedded Software Development Engineer.** Contract, May 2007 – January 2008

 **Tools:** Win32 C++, VMOS, TCP/IP, FSSL/CIO, Eclipse, ClearCase, DOORS, PAT, UML (Observer, Singleton and other patterns utilized), Ada.

**Platforms**: Windows XP and NT, Win32, VMOS, UNIX, SunOS.

 Developed parts of an embedded avionics central communication component for a helicopter multi-function display (MFD) tracking system.

**Advanced Micro Devices (AMD), Austin, TX. SiView Development Engineer.**

Contract, Oct. 2005 – May 2007.

 **Tools:** Visual C++, Orbix (CORBA), Eclipse, JUnit / Java, Ant, cvs, UML (Factory, Singleton and other patterns utilized), MFC.

**Platforms**: Windows XP and NT, UNIX, Oracle 9, DB2, SQL, PL/SQL.

 System developer for global support/development customization software group responsible for maintenance and enhancement of IBM produced (core development located in Japan) SiView automation robotics product for worldwide wafer production Fab (manufacturing facility) support. Most work was primarily for the support of the 300 mm Dresden, Germany AMD FAB 36.

**Lockheed-Martin Aerospace, Fort Worth, TX. Embedded Software Development Engineer.** Contract, Nov. 2003 to Oct. 2005.

 **Tools:** Java / JDK, XSL, XML, Eclipse, PVCS, JacORB (CORBA), UML (Factory, Composite, Singleton and other patterns utilized).

**Platforms**: Windows 2000 and NT, Sun OS, UNIX, Oracle 9 / SQL.

 Worked in a support/development software group with electrical engineering staff as software developer and other roles for the *Signal Information Management System* (SIMS) used by a multinational organization as part of the Software Collaborative Environment for the aerospace SDD phase for the Joint Strike Fighter (JSF/F35). Specific responsibilities included development and maintenance of an integrated *ReportService.*

**Boeing Commercial Airplanes, PLM Software Development Engineer, Puget Sound, WA. Consultant.** Contract, June 1996 to Jan. 2002.

Primarily involved in the development, integration and support of CATIA Design Tools for the 777-200 (LR, ER, and other), 737 Next Generation, 767, 757 and 747 programs. Also, worked on the *Sonic Cruiser, ECAF,* and international design integration (offloading).

 **Roles:** Functional Architect, System Architect, Design Architect, Project Manager, Trainer, Editor, Software Engineer, Programmer, Other.

 **Tools:** C, C++, Perl, Java, JavaScript, VB, VBScript, FORTRAN, ClearCase, RCS, Rational Rose / UML, JCL, SoftBench, UNIX shell, HTML, XML, ASP, CGI, Syncsort, QMF, Chart F/X, CATIA V4, CATIA V5, PL/SQL, SQLPlus, Oracle, DB2, MS SQL and implementing embedded SQL procedures.
**Platforms**: MVS, UNIX – HPUX, AIX, SGI UNIX, Windows NT, MS Windows, Oracle, DB2.

 System Architect, Project Management, Functional Architect, Developer, Editor, Unit Representative, training augmentation for metrics and other roles during almost 6 year period with Boeing on a number of projects for CATIA CAD/CAM applications including DCAC-MRM PDM/PLM, spatial integration development with 24x7 support, tubing, human modeling, standard part selection, standard profile (extrusion) selection, OOA/OOD migration and single source development.

 Received ten formal accolades during this contract for work on a variety of projects for various managers. (See accolades section below.)

**Chase/Chemical/Texas Commerce Bank, Houston, TX. Systems Analyst.** Contract, July 1995 to February 1996.

 **Tools/platforms**: PCs, VMS/Fortran, Rdb/SQL/CDO, CQCS menus, MVS, Bloomberg, Lotus.

 Consultant/developer: Addressed collateralized and non-collateralized bond management/trust in anticipation of the *Chase-Chemical* bank merger.

**Sector 7, Software Engineer, Austin, TX.Software Engineer**. Contract, March 1995 to July 1995.

 **Tools and platforms:** VMS Alpha-AXP and OSF/1, 36,000 lines of MACRO-32 assembler and 1,000,000 lines of VAX BASIC to HP 9000 and C/UNIX (HPUX).

 Developer: Migration of inventory and production control system from VMS/Alpha to UNIX.

**Thiokol Corporation, Brigham City, UT.Software Engineer.** Contract, March 1994 to Jan 1995.

 **Tools and platforms:** C, VMS, DECNET, PATHWORKS, SHERPA/DMS and INGRES.

 Developer / Analyst: US Space Shuttle’s Solid Rocket motor redesign project (result of Challenger explosion). Implement tracking of parts and refurbishment procedures.

**Dow Jones and Company, Princeton, NJ.Consultant.** Contract, October 1993 to March 1994.

 **Tools and platforms:** VAX/VMS C, BASIS, MOTIF and DCL.

 Developer / Analyst: Automated feed for *Far Eastern Economic Review* from Hong Kong.

**1976-1993 Summary**

 **Organizations:** Digital Equipment Corp, MCI, USAF, PureData, Electrocom Corp, TXE/Frito, Dow Chemical, City Public Service Board of San Antonio, Datapoint Corp, Synercom Inc., Tech for Communications, Int’l, NASA and the University of California.

 **Tools and Platforms:** DPT RMS/DOS, VAX, PDP 11s, C, local databases, VMS, MMS, CMS, IDEs, Fortran, Assemblers, Borlands C++, RASL/DASL, CLI, KSH, scripting.

 **Roles:** Functional Arch, Tech Arch, Designer, Project Manager, Manager, Systems Analyst, Consultant, Project Lead, Sr. Programmer Analyst, Sr Coder, Engineer, Software Engineer and Developer.

 **Industries:** Computer Mfg, Communications, Defense, Networking, Robotics, Manufacturing, Chemical, Public Utility / Energy, Computer Graphics and Mapping and Aerospace.

**Education and Certifications**

University of California, Irvine. B.S. Chemistry Major. 1975 to 1979.

University of Texas, San Antonio. Computer Science. 1983 to 1985.

Citizenship: United States

Clearances Held:

DoD (Dept. of Defense) Secret Clearance: *Active Final.*

DHS (Dept. of Homeland Security): Final Suitability: *Current until September 23, 2012. Eligible for renewal. Current status unknown.*

Some training from 2022-2023 IEP Project defined, coordinated, taken and passed included:

EDX courses: Information and Communication Technology (ICT) Accessibility, and HTML5 and CSS Fundamentals,

Section 508 Intro: https://www.section508.gov/training-home/#Onlinetraining, : https://training.section508.gov/508-training/courses/new/index.html,

WCAG: https://www.w3.org/WAI/demos/bad/, https://www.youtube.com/watch?v=gq4S-ovWVlM,

React, Javascript, Codecademy...: https://www.codecademy.com/learn/introduction-to-javascript.,Learn Intermediate JavaScript | Codecademy, Learn React: Introduction | Codecademy,Learn React | Codecademy (REACT 101) training, Percipio’sReact Introducing JSX, - React: Props and State, React: Local Machines and On-Line Playgrounds, React training class Build Apps and Using React: Working with Forms.

**Accolades and Customer Comments**

**Accolades are written and signed certificates of appreciation or letters generally accompanied with monetary awards for work on various projects for various managers. Some of the quotes from these accolades include:**

**Boeing SBInet Sr. Mgt, April 2010:**

*This award is presented in recognition of the exceptional manner in which you contributed to, prepared for and accomplished the Early Operation Training. Your exemplary performance, pride in workmanship and constant effort to improve the quality of the training stand as testimonials to your professionalism. Your efforts and dedication, expertise, and willingness to assume additional duties whenever required make you a valuable asset to the U.S Training organization, the SBInet program, and The Boeing Company. Your efforts contribute significantly to the overall objectives of the SBInet Program.*

**Lockheed Martin, Embedded S/W Engineer Senior Staff - Joint Strike Fighter, August 2005:**

*…I have worked with hundreds of people during my 20 plus years at Lockheed. One way I judge people is by asking if I would want to work with this person again on a future project. In Craig’s case the answer is a quick  "yes" .*

**Boeing Web Based Extrusion Selection, 2001:**

*Your cooperation, teaming, and positive approach to the many obstacles the team faced during this project* [WebCADRE] *provided significant motivation to the team and resulted in a product that exceeded the customer’s expectations…. Through your efforts, the Boeing Company can realize substantial savings by reducing procurement costs of raw materials and reducing proliferation of new profile standards.*

**Boeing Off-Load Airplane Design, June 2001:**

*…[Y]ou accomplished this extraordinary task* [design work transfer to BAE Systems in Prestwick, Scotland] *efficiently and effectively… was critical to the success of this project and very much appreciated. We thank you for the quality job you performed.*

**Boeing Standardized Parts, June 1999:**

*…[P]atiently put up with changing design and new documentation requirements during the software development life cycle.*

**Boeing Single Source Catia Development, 1998:**

*…[Y]our ability to “make things happen” has been a significant contribution to the success of this project.*

**Boeing OO Staff Training and Augmentation, 1998:**

*You have been influential in working with the Rational Corporation to direct the team in using the OO modeling tool Rose/C++.*