

# John A. Toebes, VIII

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## OBJECTIVE

To direct the design and development of state-of-the-art software and systems.

## OVERVIEW

I am a hands-on manager and work closely with my development team. Able to design, direct, and deliver extremely large-scale projects across geographies. Innovator/Inventor with 145 issued patents worldwide. Solid speaking and written skills with dozens of publications and technical conferences appearances.

## EXPERIENCE

- Jun17- Present **CTO & Co-Founder – *Escape Velocity Inc.***
- Architect and develop technology for new startup which focuses on analytics of early stage B2B companies
- Jan16- Present **Independent Contractor , IP Team - *Cisco Systems. RTP N.C.***
- Support and development of Cisco Patents On-Line (CPOL) features including Private Pair integration.
- May12- Dec18 **ECE Strategic Advisory Boards – *NCSU ECE Department. Raleigh N.C.***
- Appointed as Cisco Advisor to the ECE Department, was asked by the ECE Department to remain in the role due to my contributions, even after I left Cisco.
  - Chairman of the Alumni Relations Committee. Led effort to establish the first ECE Hall of Fame to honor distinguished ECE Alumni.
- Apr15- Nov15 **Distinguished Engineer, Solutions Architecture & Innovation – *Extreme Networks. Morrisville N.C***
- Responsible for the developer aspects of the SDN program at Extreme. Drove design and implementation of the Java code generator and IDE for Blockly based visual programming environment.
- Nov08- Mar15 **Director, Patent Effectiveness, Tools and Processes - *Cisco Systems. RTP N.C.***
- Managed a small team responsible for all aspects of Cisco's patent process including inventor entry, patent review process, filing process, payments, annuity, billing and quality.
  - Maintained Cisco Patents On-Line (CPOL) tool consisting of >150,000 lines of Perl with two additional programmers.
  - Managed multi-million dollar budget for paying Cisco inventors for their filings
  - Proposed, planned and implemented improvements in the Patent tools to streamline process for inventors and the IP team as well as reporting for business unit leaders.
  - Co-Creator of internal multi-site collaborative innovation program to generate next generation Intellectual Property.
  - Organizational responsibility for almost 100 outside attorneys from dozens of legal firms.
  - Responsible for evaluation of all external patents offered to sale to Cisco.
  - Work with inventors and patent review committees to generate patents for Cisco
  - Continuing inventor submissions. While on the team, my 51<sup>st</sup> US Patent issued with at least another 50 pending.
- Dec06- Nov08 **Chief Architect/Director, Media Solutions Group - *Cisco Systems. RTP N.C. /San Jose, CA***
- Responsible for long term technical directions for the Cisco Eos™ Platform including evaluating internal and external technologies to incorporate into the platform.
  - Member of Cisco CTO Council.
  - Responsible for dozens of patent submissions, Patents awarded included:
  - 7,356,031 - *Inter-v4 realm routing*
  - 7,327,842 - *Arrangement for delivering applications to a network enabled telephony device*
  - 7,254,610 - *Delivery of services to a network enabled telephony device based on transfer of selected model view controller objects to reachable network nodes*
  - 7,242,328 - *Variable length coding for sparse coefficients*
  - 7,203,871 - *Arrangement in a network node for secure storage and retrieval of encoded data distributed*

*among multiple network nodes*

Dec99-  
Dec06

**Senior Manager, Technology Center** - *Cisco Systems. RTP N.C.*

- Managed a team of 8-13 engineers responsible for a variety of new technology areas including Mobile Routers, VoIP terminals, Network Gaming, XML Applications, and VoIP servers.
- Worked with multiple BUs to plan and deliver projects.
- Worked with external partners to establish requirements, evaluate design approaches and provide technical advice.
- Delivered multiple phone loads for the SIP on the Cisco IP 7960 phone on time and exceeding the the original customer requirements.
- Managed delivery of a network stack for the Playstation 2
- Designed and Managed web site to communicate information about active projects to potential internal partners and developers.
- Responsible for 56 patent submissions. Current patents awarded include:
- 7,106,298 – *Arrangement for arbitration of display information from multiple applications for a network enabled display device.*
- 6,510,065 - *System, method and apparatus for protecting consumer electronic devices from brownouts and short duration power outages*
- 6,711,740 - *Generic code book compression for XML based application programming interfaces*
- 6,882,869 - *Device, methods, and user interface for providing optimized entry of alphanumeric text*
- 6,940,954 - *Arrangement for retrieving recorded audio announcements from a messaging system for identification of a calling party*
- 6,961,590 - *Method, device, and database for providing communication addresses for communication devices*

Apr94-  
Dec99

**Vice President Research & Development** – *SouthPeak Interactive. Cary N.C. (Part of SAS Institute)*

- Co-Inventor and primary architect of the Video Reality technology. Multiple patents pending. Awarded US patent 5,959,690 on September 28, 1999.
- Managed team of 40+ developers responsible for design, development, testing and application of the Video Reality toolset.
- Personally responsible for the creation of a Software MPEG-1 player for Windows 95 and Windows NT.
- Participated in the creation and delivery of several titles including “Temujin” and the Virtual Jigsaw series.
- Personally responsible for managing delivery of “Men in Black: The Game” which sold over 100,000 units and has been named 5<sup>th</sup> best Movie Game of all time by E!Online.
- Responsible for hardware and software selection for SouthPeak.

**Principal Systems Developer** – *SAS Institute Inc. Cary N.C.*

- Responsible for the design and implementation of Enterprise Reporter and Color Syntax Editor products.
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Jul91-  
Apr94

**MSS** – *BNR, Inc. Research Triangle Park, N.C. (now NORTEL)*

**Series III LTS**

- Participated in Series III translation efforts for the LTS.
- Responsible for the creation and design of the LTSPHONE user interface.
- Responsible for the creation and organization of the LCM Messaging guide

**SMA EOC Protocol Stack**

- Responsible for the EOC protocol stack performance analysis. Created performance analysis document and organized input from several designers on application stack utilization. Collected and analyzed CM performance data. Enhanced tools necessary to create appropriate testing traffic.

**XPM Architecture Team**

- Analyzed and documented operating system and language impacts for the XPM2 project.
- Prepared project planning estimates and researched software impact issues of XPM2 hardware changes.
- Updated and taught PROTEL course.

**XPM Architecture Task Force**

- Responsible for facilitating and documenting the XPM architecture.
  - Organized and directed discussions aimed at capturing functional organization of existing XPM software.
  - Created, organized, and managed documentation of the XPM architecture.
  - Acting XPM representative to the DMS Architecture Council.
  - Coordinated and managed task force to capture and define the ISP/DCH architecture.
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May83-  
Jul91

**Manager/Senior Systems Developer** - *SAS Institute Inc. Cary N.C.*

Responsible for a wide variety of tasks in a general problem solving role:

- Participated in and managed development of internal C Compilers for the Motorola 88000, Apollo 680x0
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based systems, and the HP 700 PA-2 series.

- Led team to evaluate feasibility of hosting the SAS System on the Macintosh.
- Developed Motorola 680x0 C compiler for AmigaDOS.
- Implemented X-Windows interface for internal Source Level Debugger.
- Enhanced Internal 8086 C compiler used for the SAS System to the IBM/PC.
- Design and implementation of a machine independent make facility now used for building the SAS system on over 30 hosts.
- Coordination of initial Host system layer design for the SAS System.
- Implementation of code generation routines and optimizer for internal IBM/370 language based on the TSI PL/I Subset G compiler.

Sep85-  
Aug92

**Coordinator - *The Software Distillery, Cary N.C.***

Responsible for a team of programmers writing Freely Redistributable software for the Commodore Amiga. Our first project BLINK became the de-facto standard linker for the Amiga. Through high quality software and excellent QA, the group has become known worldwide. Because of this, Commodore selected us to rewrite the system commands in C for the 2.0 operating system release. Other projects I have worked on include a hot-key utility, floppy disk file system, memory watch utility, and a peer-to-peer network file system that has been licensed to Commodore.

Sep84-  
Sep85

**2<sup>nd</sup> Lt. United States Air Force – *Pentagon, Arlington V.A.***

Responsible for maintaining a XEROX Star network. Supervised design and development of a DBase application to track Security Clearances. Obtained Top-Secret clearance. Honorable discharge.

## SKILLS

Languages Proficient in Typescript, Javascript, Perl, C++, MFC, HTML, C, PROTEL, Assembler(Pentium/80x86, PIC 165x, 6805, 680x0, 88000, HP-PA, 370, 6809) Pascal, 6809 Asm, PL/I, SAS, Fortran, Forth. I am particularly able to debug at the machine code level. Proficient in OLE and OO design techniques.

Machines Experienced with Windows, Linux, HP-UX, Mac OS/X, AmigaDOS, Unix, Apollo Aegis, Data General MV Series, CMS, MVS/TSO, and Multics. I can readily adapt to new environments.

Adept at designing and evaluating end-user interfaces. Proficient in Photoshop and web Design.

## EDUCATION

*North Carolina State University* Raleigh N.C. B.S. Computer Science, Dec 1983

## COMMERCIAL PRODUCTS

2018	<u>CodeBusters Tools</u>	<i>Science Olympiad</i>	Architect, Lead Developer
2010	<u>Samantha Module</u>	<i>US FIRST</i>	Inventor, Lead Programmer
2009	<u>CPOL</u>	<i>Cisco</i>	Management, Lead Developer
2007	<u>PicMas Tree</u>	<i>B.C.&amp;Co</i>	Software Design and Development
2006	<u>Eos</u>	<i>Cisco</i>	Chief Architect
1997	<u>Men In Black: The Game</u>	<i>SouthPeak Interactive, LLC</i>	V.P. R&D, Producer
1997	<u>Temujin</u>	<i>SouthPeak Interactive, LLC</i>	V.P. R&D, Development team leader
1996	<u>Virtual Jigsaw (Series of 5 titles)</u>	<i>SouthPeak Interactive, LLC</i>	V.P. R&D, Development team leader
1994	<u>DICE</u>	<i>Obvious Implementations Corporation</i>	Developer, Documentation
1990	<u>SAS/C Compiler for the Amiga</u>	<i>SAS Institute Inc</i>	Product Manager, Lead Programmer
1988	<u>Lattice C Compiler</u>	<i>Lattice Inc.</i>	Lead Programmer

## PUBLICATIONS/PRESENTATIONS

Speaker at the W3C Video on the Web Workshop presenting: Enabling A Richer Video Experience With Metadata, John Toebes (Cisco Systems). A position paper for the W3C Video on the Web Workshop 12-13 December 2007. This paper and talk was a key motivator for the W3C making Video a first class part of the HTML5 standard.

White Paper on Socially Collaborative Filtering – This is an improvement on Collaborative Filtering and the algorithm has issued as a US Patent.

Invited by Director Seema Rao of the USPTO to present at the USPTO Software Partnership meeting on the topic of prior art searching on December 5, 2013. This utilized learning from Cisco's IP practice and enhancements that I implemented in order to improve prior art searching to eliminate bad software patents.

Speaker at the NCSU ASSIST Center – Recognizing and Generating Patentable Inventions – 31 October, 2013

Invited Speaker AITP. Regular speaker at FIRST Tech Challenge Partner conferences. Panel speaker "The Knowledge Worker of the Future" OOPSLA, 27 October, 2009. Keynote speaker Second IEEE International Conference on Semantic Computing, August 6, 2008. Front cover article for November 2008 Nuts and Volts Magazine. Presented position paper

Enabling A Richer Video Experience With Metadata at the W3C Video on the Web Workshop 13 December 2007, San Jose, California. Speaker at Game Networks conference April 27,2004. Speaker at 1997 CGDC presenting the Video Reality technology. Digital Video Magazine "Not All Mpegs are created Equal" (<http://www.dv.com/magazine/1995/0895/NotAllMPEGs.html>), C Language Columnist (18 articles) for The Amigan Apprentice and Journeyman, Technical Reviewer for AmigaWorld Tech Journal, six articles in Transactor for the Amiga including premier issue and Assembly language optimization tricks. 3 Articles in German Amiga magazine including 18 Schritte zur Spitze [18 Steps to the Top]. Was a regular speaker at American and European Amiga Developer Conferences.

## **HOBBIES/OUTSIDE ACTIVITIES**

National Event Supervisor for Science Olympiad CodeBusters. Designed rules for competition and implemented web-based tools for generating tests. Web tools used by over 15,000 students/coaches in all 50 states.

Inducted into North Carolina State University Computer Science Hall of Fame in 2018.

Wi-Fi Technical Advisor for FIRST Tech Challenge worldwide Championship for 5 years

Initiated design for and led geographically dispersed team to create the Samantha Wi-Fi Adapter for the Lego Mindstorms now in use by thousands of High School Robotics teams. Awarded Volunteer of the Year in 2011 at the FIRST World Championship.

Coach Cardinal Gibbons Robotics Team for 11 years that won the Inspire award and went to the World FIRST Tech Challenge Championship in 2011. Coach for Cardinal Gibbons Science Olympiad team for 13 years during which time the teams have taken medals at every regional and state competition.

Disassembled Timex Datalink Watch software and created a complete development kit for writing Wristapps to download to the watch. Maintained a web site of development tutorials (over 160 pages when combined into a single word document). Responsible for the software component of a Digital Christmas tree (flashing LEDs on a tree shaped board).

Planned and created initial Web site for the North Carolina PTA.