

## **Kenneth F. Guerin**

### **TECHNICAL EXPERTISE**

Languages: C/C++, Ruby, Java, Python, Perl, PHP5, Javascript, SQL, XHTML, CSS, Unix shells, PL/I, Dibol  
Data Formats: XML, YAML, JSON, CSV, Windows INI  
Platforms: Unix/Linux, Windows, OS X, System 7, DOS, VAX/VMS, MVS/CICS, Embedded, p-code  
Protocols: HTTP, CGI, FastCGI, X-Windows, SCSI, PCI, Serial, Parallel  
Printing: PCL5, PCL6, Postscript, PDF, XPS

### **SUMMARY**

- Full cycle development expertise - spec, design, implementation, refactoring and application maintenance
- Professional staff & project management experience
- Freelance software development & website design experience
- Employed by startups and major corporations

### **HIGHLIGHTS**

- Search Engine Redesign:
  - ISAM file schema redesign: key pair records (one-to-one) -> key list records (one-to-many)
  - C language engine redesign: tick buffers allowing for optimized boolean queries
  - Performance improvement: 8 hours to 8 seconds on test query
  - Redesign ensured short-term company survival
- Interpolation Scaling Algorithm Redesign:
  - C language computation redesign: repeated floating point ops -> pre-calculated LUTs
  - Process no longer CPU-bound: up to 50% performance improvement
- Overlapping Objects Optimization:
  - C language detection of overlapping rectangles & trapezons in rendering display list
  - Removed billions of pixel overwrites from customer test case: 25% to 40% performance improvement
- CTES Application:
  - Sole developer of C++ imaging application which used a plug-in / COM-based OO architecture
  - Combined development, demo & testing platform to showcase software algorithms and multiple hardware implementations
  - Used for 10+ years across multiple corporate acquisitions
- Citibank Project:
  - C++ language redesign of integrated image scanner / storage Windows application
  - Successful high-priority redesign which allowed multi-million revenue gain after customer acceptance

### **PROFESSIONAL EXPERIENCE**

**Principal Software Engineer / Technical Lead**, CSR Corporation, Burlington, MA 5/98 – present  
(formerly Zoran Corporation, Oak Technology Ltd, XLI Inc.)

- “Code owner” of several IPS subsystems
- Involved in strategy and plan participation for development and design deployments
- Serves as primary engineer liaison for Xerox, the Imaging Division’s second largest customer
- Manages project status, customer-specific QA activities, build systems and customer hardware
- Conducts weekly teleconference with customer
- Manages three senior engineers
- Designs, implements and maintains customizations for the Xerox environment
- Designed and implemented numerous features and optimizations throughout product history

**Senior Software Engineer**, Pegasystems, Ltd., Cambridge, MA 5/96 – 5/98  
• Responsible for maintenance and functional improvements to Storage Manager (HSM) and PegaPRISM products

**Chief Software Engineer**, Image Concepts Technologies, Marlboro, MA 12/89 – 5/96  
• Chief software architect of the C-QUEST suite of image database products; hired as sole consultant to redesign version 2.0 in order to roll out to customers  
• Full architectural redesign with version 3.0, including search engine redesign, client/server architecture  
• Digital image support (JPEG) added with version 3.1

**BIOS Engineer**, Phoenix Technologies, Norwood MA 9/88 – 12/89

**Principal Software Engineer**, Omtool Corporation, Tewksbury MA 5/87 – 9/88

## INDEPENDENT DEVELOPMENT EXPERIENCE

**Designer/Webmaster**: Compass Games, LLC, <http://compassgames.com> 2/09 – present  
• Designer and maintainer of the Compass Games website, a game catalog and ordering system  
• Built with a custom framework using: Ruby, RHTML templates, data files (.INI format)  
• Added magazine issue and subscription sales to the website architecture based on purchase of Paper Wars magazine

**Webmaster**: DeerBoy! Webcomic, <http://deerboy.net> 3/10 – present  
• Manages the DeerBoy! webcomic, a WordPress/ComicPress site

**Owner/Operator**: Ken's Dice Service, <http://dice.kenware.com> 6/01 – present  
• Built and currently manages Ken's Dice Service, an on-line dice roller, strategy game battle resolver & messaging system  
• Supports specialized game-specific tools such as Britannia Battle Resolvers  
• Used by the WEBC: World E-mail Britannia Championship  
• Original site built using Perl and C-based random bit generator (Blum Blum Shub algorithm)  
• Current site built using Ruby and Ruby-based Mersenne Twister algorithm with state preservation

**Administrator**: Barscape Bulletin Forum, <http://barscape.net> 2005 – present  
• Built to replace an ad-driven "free" (and bug-ridden) 3rd party forum  
• Heavily modified phpBB application to support features that existed in the original forum  
• Ongoing modifications to add new features, including enhanced avatar management features

**Designer**: Steady and Comfortable Yoga, <http://steadyandcomfortableyoga.com> 4/12 – present  
• Designer and ongoing maintainer of this WordPress-based site

**Blog Author/Owner**: Effluency, <http://effluency.net> 4/12 – present  
• Personal WordPress blog with 2 chess-oriented plug-ins in development  
• FEN, filters tags within posts to generate a chessboard position graphic  
• PGN, will replay a chess game  
• Ongoing theme development and user-interface work

## EDUCATION

**Bachelor of Science**, *Computer Science*  
University of Lowell (now UMass/Lowell)

## INTERESTS

• Programming, Design, Hiking, Skiing, Sports, Yoga, History, Writing