

# Patrick Watson

## Contact

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## Address

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## Summary

Patrick Watson is a detail-oriented and an adaptable software developer with over 7 years of professional experience. His breadth of experience, including full life-cycle product development, allows insight into supporting applications in addition to their initial creation. While specializing in C++ network application development and Payment Card Industry Data Security Standards (PCI-DSS), he also has experience working with business experts to gather requirements, certify or test solutions, and investigate deployed issues.

## Key Skills

C/C++  
.NET Framework (C# 2.0)  
C/C++ standard library  
Win32 API  
Microsoft Foundation Classes (MFC)  
Windows CryptoAPI  
CISSP  
Visual Studio 6  
Automated Testing (proprietary language)  
iPhone development including App Store deployment  
Payment Card Industry Data Security Standards (PCI-DSS)

Objective-C  
Java 2 SE  
TCP/IP  
OpenSSL  
Windows Installer XML (Wix)  
Windows Sockets (WinSock)  
CompuWare BoundsChecker  
Visual Studio 2005  
  
Professional development experience for  
Windows CE 3, Windows XP Embedded  
Windows NT 4, Windows XP, Windows 7

## Work Experience

### Radiant Systems

#### Applications Developer (Electronic Payment Systems)

January 2004 to Present

Radiant Systems is a provider of both off the shelf and customized point of sale software and hardware. The Electronic Payment Systems (EPS) team is responsible for implementing and customizing interfaces to 3<sup>rd</sup> party payment systems, allowing the Radiant Point of Sale to complete tender transactions via credit, debit, fleet, EBT, ACH, etc. The system also allows loyalty point accumulation or redemption and 3<sup>rd</sup> party gift card activation.

#### Responsibilities

- Design and implement new credit network interfaces and enhancements to existing products & support tools.
- Design and implement enhancements to the core application framework.
- PCI-DSS technical point of contact for the Electronic Payment Systems team. This includes creating customer-facing compliance documentation such as implementation guides and high-level security models, answering customer questions regarding PCI-DSS, and supporting certifications and audits.
- Train new hire employees and customers in Radiant development standards, software architecture, and support techniques.
- Implement payment industry mandates such as Visa/MasterCard partial authorizations and compliance with new State and Federal laws such as FACTA.
- Maintain and support more than 30 credit products.
- Develop high performance software, ensuring that the electronic payment system can run under constrained resources (<32MB RAM, < 20MB storage, < 400MHz SH3 CPU) while maintaining sub second transaction times.
- On call 24/7/365 for emergency escalated support cases.

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## Notable Accomplishments

- ✓ Designed and developed an interface to the ISD Corp payment network. The TCP/IP based ISD network includes customizations allowing the client to issue their own credit, fleet, and gift cards.
- ✓ Designed and developed an interface to the Payspot gift card network, allowing clients a wide selection of high-profit 3<sup>rd</sup> party gift cards.
- ✓ Designed an interface to Heartland Payment Systems NWS payment network and lead the development team through certification. The NWS project included TCP/IP, Datawire, and dialup (Visa1) application protocols. Its generic nature allows multiple clients to use it to lower interchange rates.
- ✓ Designed and developed an interface to the Mannatec electronic payment device including RS-232 serial communication, allowing the client a low-cost customizable fleet card solution. Due to the generic nature of my design, this product has been reused several times for other projects including NBS and eFueling.
- ✓ Co-designed and developed an interface to the Moneris (Shell Canada) payment network including Canadian/Interac debit, internationalization support, and extensive host-based configuration tools.
- ✓ Designed and implemented an Integrated Development Environment for an in-house automation language including auto-complete, in-line error detection, and "guided development." This allows clients and business analysts to create powerful scripts for automated testing and administrative tasks related to Radiant software.
- ✓ Redesigned proprietary Radiant remote access software user permissions system to increase security granularity and created a pluggable architecture for new permissions.
- ✓ Proactively began publishing a semi-weekly internal security newsletter with current security related news, secure computing tips, and secure development best practice reminders.
- ✓ As developer point of contact for one of Radiant's largest clients, increased customer satisfaction from detractor to passive in 2007.
- ✓ Diagnosed and solved Windows kernel memory leak in 3<sup>rd</sup> party driver enabling release of P845 (EPC3) hardware platform which is standard equipment for sites using Radiant's electronic payments platform.
- ✓ Assisted in diagnosis of a deadlock issue in Windows CE 3.0 FAT16 file system and development of a workaround solution.

## Awards

- ❖ Nominated 2007 & 2010 Developer of the Year ("PCS eXtreme Developer").
- ❖ Numerous "World of Thanks" awards (given quarterly by peers for outstanding teamwork or assistance).

## Education

### 2000 to 2003

### Bachelor of Science with Honor, Computer Science

Georgia Institute of Technology, Atlanta, GA

Specializations in Networking, Databases, and Artificial Intelligence

Computer Science GPA: 3.5, Overall GPA: 3.3

- Developer, CAESAR Project ([www.sae.org/technicalcommittees/caesar.htm](http://www.sae.org/technicalcommittees/caesar.htm)): A PHP/postgreSQL web application for The Center for Assistive Technology & Environmental Access (catea.org), the Society of Automotive Engineers & United States Air Force to provide a browsable online database of ergonomic data with 3d models and statistical analysis.
- Team Leader, C++ (w/ ClanLib) Windows multiplayer OpenGL space shooter game.
- Developer, Vision controlled soccer programming of Sony Aibo.
- UI developer, Online bookstore using Java and Oracle.
- Team leader, Java implementation of Monopoly.
- Team leader, Squeak (Smalltalk variant) implementation of an extensible 3d adventure game engine.

## Other Activities

Entrepreneurial Co-founded an iPhone development partnership.

Community John's Creek Citizen's Police Academy  
Architectural Committee Chairman, Morton Chase Homeowners Association

## References

Reviews and personal references available upon request