

Kenneth Reily

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Summary

I am a Senior Technical Manager for 3M's Display and Graphics Business Laboratory and an instructor of Information and Decision Sciences in the Carlson School of Management at the University of Minnesota. As a technologist and business person, I have played a key role in several new business development programs at 3M including 3M's RFID File Tracking, RFID Specimen Tracking, and RFID anti-counterfeiting technology. Prior to my current role with 3M I held positions with Cargill, Inc. and Microsoft. At Microsoft, I contributed to the development of the original .NET platform through their Joint Development Program. At Cargill, I was a subsystem designer for the Lynx application, a global grain origination system.

In addition to my professional work, I have published a number of academic papers regarding tracking, mapping, mobile applications, and computer science education. I have also been invited to speak in various forums about topics such as RFID tracking and information management in health care, and using Elliptic Curve Cryptography to combat pharmaceutical counterfeiting.

I have a Bachelor of Science and a Master of Science degree in Computer Science from the University of Minnesota. In addition to my ongoing role in R&D management for 3M, I continue to do research in Computer Science at the University of Minnesota where I am completing my dissertation for a Ph.D.

Professional Experience

Senior Technical Manager

9/2010 – Present

3M Display and Graphics Business Laboratory (Austin, TX / Singapore / St. Paul, MN)

- Manage a research team of over 20 scientists and engineers located in Austin, TX, Singapore, and St. Paul, MN. Annual budget: \$4MM+
- Built a corporate capability in software and electronics by hiring a new team of world-class researchers in diverse locations around the world.
- Led the design and construction of a new world-class research lab in Austin, TX.
- Currently lead the team in conducting Computer Science and Electronics research.
- Under my leadership the team builds prototypes, files invention submissions, and publishes academic papers in the following areas:
 - 3D technology (stereoscopic, autostereoscopic, integral imaging, 3D user interfaces)
 - Interactive surfaces
 - LED Lighting
 - Augmented Reality (markerless, computer vision-based)
- Perform all team management functions including employee contribution ratings, employee development, compensation planning, operational planning, and strategic planning.

Solution Architect

5/2006 – 8/2010

3M Track and Trace Solutions (St. Paul, MN)

- Project or technical lead for 3 Class 5 R&D Programs:
 - 3M RFID Tracking System
 - 3M Secure Supply Chain Solution
 - 3M Asset and Inventory Tracking System
- Regularly developed, refined, and communicated the technical road map for 3M's HVAT business.
- Participated in numerous market exploration activities surrounding the health care market:
 - Pharmaceutical tracking and anti-counterfeiting.
 - Medical device tracking
 - Biological specimen tracking
 - OR/ED Workflow Management
- Recognized as a global expert on software architecture and track and trace technology (such as RFID) as well as smart products (products enhanced with information systems).
- Played an active role in defining new business spaces and for 3M Track and Trace technology.
 - Defined the technical architecture and business model for 3M's hosted services offering for RFID tracking systems. Built on technologies such as Microsoft SQLServer, ASP.NET, Apache, and PHP.
 - Key participant in business development and strategic planning activities. Provided technical leadership for numerous acquisition candidate evaluation teams.
- Regularly rated a top performer during annual performance reviews.
 - Received 5 (out of 5) contribution rating in 3M's forced ranking system.
 - Consistently identified as a high potential employee (every year of employment).
 - Nominated for/attended 3M's Accelerated Leadership Development Program (ALDP).
- Lab programs manager for the High Value Asset Tracking (HVAT) business. Responsibilities include:
 - Department budget
 - Resource allocation
- Formally mentored other employees through 3M's Mentoring SIG.

Consulting Manager

12/2002 – 5/2006

Ambient Consulting (Minneapolis, MN)

- Manage a team of 5 – 7 consultants. Responsibilities include utilization (P&L), annual reviews, and employee development and recognition.
- Software Architect for 3M Corporation (12/2003 – 5/2006, St. Paul, MN)
 - Led the development of the 3M RFID File Tracking System (C++, VisualBasic, MFC, COM/DCOM, ATL).
 - Led the research, planning, and development of the 3M RFID Secure Pharmaceutical Supply Chain pilot (C++, MFC).
 - Led the software planning phase of the 3M RFID Biomedical Specimen Tracking pilot.
 - Contributed to the development of the 3M SelfCheck (for libraries) system. (C#, InstallShield).
- Project Consultant for Vivius, Inc (6/2004 – 6/2005, Minneapolis, MN)
 - Conducted review sessions of product architecture, focusing on best practices for .NET (ASP.NET, C#).
 - Prepared reports detailing strengths and weaknesses of the product architecture.
- Software Architect for Fidelity National Information Systems (12/2002 – 12/2003, Minneapolis, MN)
 - Led the expansion of the AgentOffice Suite, a PIM application for realtors (C++, C#).

Software/Data Architect (Consultant)

12/2001 – 12/2002

Drop Ship Express (Long Lake, MN)

- Guided technological expansion of the company into .NET and business-critical systems.
- Assumed SQL Server DBA role and implemented a code-review system to dramatically improve database efficiency.
- Architected and implemented piece-management application, an n-tier transaction-based system, using OO modeling techniques, UML documentation, ASP.NET, and VB.NET.
- Architected and implemented business-critical manifesting, an n-tier transaction-based system, in ASP.NET w/VB.NET code-behind.
- Architected and implemented delivery testing, an n-tier transaction-based system, using OO modeling techniques, UML documentation, ASP.NET, and VB.NET

Software Architect (Consultant)

8/2001 – 10/2001

Tightrope Media Systems (Minneapolis, MN)

- Architected, developed, and documented the latest version of the company's flagship Cablecast software using C# and .NET Remoting.
- Maintained a DirectX-based C++ video display application called Carousel. Carousel connects with a SQL Server database.

Associate Consultant

12/2000 – 8/2001

Microsoft Corporation (Bloomington, MN)

- West Group .NET Joint Development Program
 - Architected and developed Find and Print, a legacy application requiring integration, in ASP.NET using both C# and Visual Basic.NET.
 - Researched problems and issues with porting lawschool.com site to ASP.NET.
 - Wrote article for MSDN on migrating to Visual Basic.NET.
- iXmatch, Inc.
 - Architected a Microsoft-centric solution for bringing proprietary code to the web.
 - Wrapped DLL-based matching engine in a COM component using C++.
 - Assisted with debugging a Smalltalk-based client application for the COM component.
- Target Corporation
 - Debugged DCOM software issue with Target's gift registry.
- Internal Training included:
 - Windows 2000
 - SQL Server
 - Exchange
 - BizTalk Server (B2B integration software)
 - Commerce Server
 - AppCenter

IT Technical Analyst

6/1997 – 11/2000

Emerging Technology Lab, LYNX Project
Cargill, Inc. (Minnetonka, MN)

- Report Distribution System
 - Architected entire distribution system, an n-tier transaction-based distributed system, using OO and data modeling techniques.
 - Developed and maintained over 10 different components written in Visual Basic and Visual C++.
 - Distribution components utilized the Actuate Report Server API and Requester API.
 - Developed interface for distribution using StarBurst (now Adero) Omnicast software.
 - Components connected to a Sybase database.
- Report Execution System
 - Maintained 5+ components written in C/C++ for the UNIX platform.
 - Report execution system components interfaced with a Sybase database and the Actuate Report Server.
- Distributed Processing Framework
 - Developed tools in Smalltalk to help developers develop for a distributed environment.
- Lynx UI
 - Designed and developed the “Report Generator Window” – the most complex window in the Lynx application – using Smalltalk.
- Lynx on the Web
 - Developed a web-based Java front end for the Lynx application using VisualAge for Java and Websphere.
 - Application connected to a Sybase database via JDBC.

Education

PhD in Computer Science

12/2011 (expected)

Dissertation Topic: Techniques and Technologies for Distributed Review
University of Minnesota, Twin Cities

Master of Science in Computer Science

8/2007

Technical Focus: Social Geographic Information Systems (GIS)
Related Field: Carlson School MBA
University of Minnesota, Twin Cities

Bachelor of Science in Computer Science

5/2000

Management Minor
University of Minnesota, Twin Cities

Invited Speaking Engagements

Combatting Pharmaceutical Counterfeiting with Cryptography and Physics SECSI Conference Berlin, Germany	3/2008
<i>ECC, RFID, and the Counterfeit Problem</i> Certicom Elliptic Curve Cryptography (ECC) Conference Toronto, Canada	11/2007
<i>Moving Information within the Healthcare Market</i> 3M Tech Forum, Software and Systems Chapter St. Paul, MN	9/2007

Publications

Reily, K., Finnerty, P. L., and Terveen, L. 2009. Two peers are better than one: aggregating peer reviews for computing assignments is surprisingly accurate. In *Proceedings of the ACM 2009 international Conference on Supporting Group Work* (Sanibel Island, Florida, USA, May 10 - 13, 2009). GROUP '09. ACM, New York, NY, 115-124.

Reily, K., Ludford, P. J., Terveen, L. 2008. Sharescape: An Interface for Place Annotation. *NordiCHI 2008: Using Bridges* (Lund, Sweden, Oct 18 – 22, 2008). NordiCHI 2008.

Ludford, P. J., Priedhorsky, R., **Reily, K.**, and Terveen, L. 2007. Capturing, sharing, and using local place information. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (San Jose, California, USA, April 28 - May 03, 2007). CHI '07. ACM Press, New York, NY, 1235-1244.

Ludford, P. J., Frankowski, D., **Reily, K.**, Wilms, K., and Terveen, L. 2006. Because I carry my cell phone anyway: functional location-based reminder applications. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Montréal, Québec, Canada, April 22 - 27, 2006). R. Grinter, T. Rodden, P. Aoki, E. Cutrell, R. Jeffries, and G. Olson, Eds. CHI '06. ACM Press, New York, NY, 889-898.

Teaching Experience

Adjunct Faculty (Senior Teaching Specialist) Information and Decision Sciences University of Minnesota, Twin Cities	8/2006 - Present
<ul style="list-style-type: none">• <i>Information Systems for Business Processes and Management</i> (IDSC 3001, 3cr)<ul style="list-style-type: none">○ Fall 2006○ Spring 2007○ Summer 2007○ Spring 2008• <i>Introduction to Programming for Systems Development</i> (IDSC 3201, 4cr)<ul style="list-style-type: none">○ Fall 2007• <i>Introduction to Programming</i> (IDSC 3101, 2cr)<ul style="list-style-type: none">○ Fall 2008○ Fall 2009○ Spring 2010	

- *Intermediate Programming* (IDSC 3102, 2cr)
 - Fall 2008
 - Fall 2009
 - Spring 2010
 - Fall 2010
- *Business Intelligence* (IDSC 4490, 2cr)
 - Spring 2009

Adjunct Faculty

9/2007 - present

Bachelor of Applied Science program
University of Minnesota, Twin Cities

- *C for Java Programmers* (INET 3101)
 - Fall 2007
 - Fall 2008

Guest Lecturer

1/2006 – 5/2006

University of St. Thomas, St. Paul, MN

- *Systems Analysis and Design I* (QMCS 420)
 - Developed lesson plans for 3 105 minute class periods.
 - Incorporated active learning principles into an intimate classroom setting.
 - Topics included use cases, data modeling, and modern design paradigms.

Guest Lecturer

4/2006

University of Minnesota, Twin Cities

- *Program Design and Development* (CSCI 3081W)
 - Prepared and delivered 75 minute lecture on coding standards.
 - Incorporated active learning techniques.

Graduate Teaching Assistant

8/2005 – 5/2006

University of Minnesota, Twin Cities

- *Program Design and Development* (CSCI 3081W)
 - Led weekly 50 minute lab section for up to 30 students.
 - Met with students 1-on-1 during weekly office hours.
 - Provided feedback to students on their writing as well as their programming.

Instructor

11/2001 – 11/2003

KRS Computer and Business School
Bloomington, MN

- Selected textbook for courses.
- Designed and prepared a syllabus for each course.
- Prepared and delivered 4 – 8 hours of lecture per week.
- Courses included:
 - *Overview of the Standard Template Library (STL)*
 - *Mastering COM Development Using Microsoft Visual C++*
 - *Mastering MFC Fundamentals Using Microsoft Visual C++*

Undergraduate Teaching Assistant

University of Minnesota, Twin Cities

9/1996 – 12/1998

- *Introduction to Programming in C* (Csci 3113)
 - 200 – 400 students per-quarter enrollment.
 - Guest lecturer for Professor Chris Dovolis.
 - Led 4-hour lab sections of 30 – 40 students.

Professional Certifications

Microsoft Certified Solution Developer (.NET)

12/2004

References

Available upon request.