Software Plan

Requested By:

Mr. Ken Swarner
Systems Administrator
Computer Science Department of Siena College

Dr. Tim Lederman
Professor of Computer Science
Computer Science Department of Siena College

Environmental Monitoring System

*Saint*Soft

Prepared By:

Daniel Schuldt – Team Leader
Christian Damberg
David Moore
Hannah Palmer
Lioubov Mikhailova
Tina Ting

September 18, 2005

Environmental Monitoring System
Software Plan

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Software Plan

1.1 Problem Definition

With the creation of the Internet and other networks, we have been able to access data from across large distances. Computers now can be controlled remotely, shopping is just clicks away, and the user never had to leave their computer consol. Our clients, Ken Swarner and Dr. Tim Lederman, envisioned this remote flexibility to be applied to home security and monitoring. They would like to be able to monitor their home or office from anywhere they have Internet access to. Sensors and cameras would be placed around the users home or office then connected to the users computer. Then the user of this system could sign onto a secure website and be able to check these sensors and cameras. If a problem were detected then the user would be contacted via e-mail or text message.

1.2 System Justification

The purpose of our software is to give a user the ability to monitor their home or office environment from anywhere there is Internet access. Dr. Lederman has had trouble with thieves in his office and would like in the future to be able to monitor his office from a remote location and check cameras that are installed. Mr. Swarner would like to be able to check the temperature of his server room and be notified if the temperature passes a certain point.

1.3 Goals for the System and Project

The Goal of the project is to be able to sign into a secure website and check the monitoring devices planted around the users house or office. Also the goal is that the user will receive notification by e-mail or text message when a problem is noticed.

The devices will be connected to the users home computer. There is a possibility that host software will be installed on the users computer to ease communication with the server. Information collected from the monitoring devices is then sent to a centralized server. The user will then log onto a secure website with some kind of authorization. This will be the interface for the user to check the information kept on the server.

1.4 Constraints on the Project

The constraints on the centralized server are that it has to be a Linux server running apache namely oraserv. The host computer could be running Linux, Mac OS X, or Windows XP. The website the user logs into must be secure. HTTPS and client/host authentication is required. The website also must run on IE and firefox at least and possibly have the website accommodate cell phones or PDAs. There is no constraint on the programming language we can use; however PHP seems like a good suggestion.

1.5 Functions to be Provided (hard & software/people)

- Monitoring of temperature and water levels.
- Motion sensors and video cameras.
- Notify user of user-defined changes via email or text messaging.
- Remotely view status of sensors through a web browser.
- Notify user when devices (sensors and cameras) fail.

1.6 User Characteristics

There are many types of users. One type of user could be one who wants to monitor their house. They can monitor water levels to make sure all of their sub pumps are working properly and not flooding their basement. They can also use the video camera and motion sensors to monitor activity within their house. Another type of user is one who would like to monitor temperature. For example, the user could monitor the temperature of their servers to make sure the servers do not overheat. Our product can suit a wide variety of users.

1.7 Development/Operating/Maintenance Environments

The product will be developed on the Siena College Software Engineering workstations. Our product will run on Windows XP, Mac OS X, and Linux operating systems. Users will be able to remotely access what they are monitoring through a web browser. Any changes will be notified through email or text messaging. The maintenance of the product will be determined at a future date.

1.8 Solution Strategy

The project team will use the Linear Sequential Model (also known as the Classic Waterfall Model) to develop the product requested by our clients. The Linear Sequential Model involves the following major activities:

1. Project Definition – The project team will define the problem that needs to be solved.
2. Analysis and Requirements – The project team will meet with our clients and document the requirements of the product.
3. Design of the Solution – The project team will translate the system requirements into software requirements.
4. Code and Test the Solution – The project team will translate the software requirements into a programming language. The product will be tested throughout the process. This step will not occur until the Spring 2006 semester.
5. Install and Maintain – This step involves the actual installation of the software product. Documentation that will assist the client in using and maintaining the system will be provided in the Spring 2006 semester.

1.9 Priorities of System Feature

The most important system feature will be the ability to display the information gathered by the sensors and video camera. In addition, the ability to notify user of any changes through e-mail or text message will be a high priority.

1.10 System Acceptance Criteria

The web-based program will allow for a number of online activities and will, at minimum, allow:

1. Users to see the status and read out of the temperature sensor.
2. Users to see the status and read out of the water level sensor.
3. Users receive notification when there are any user-defined changes by email or text message.
4. Users can remotely access information through a web browser.

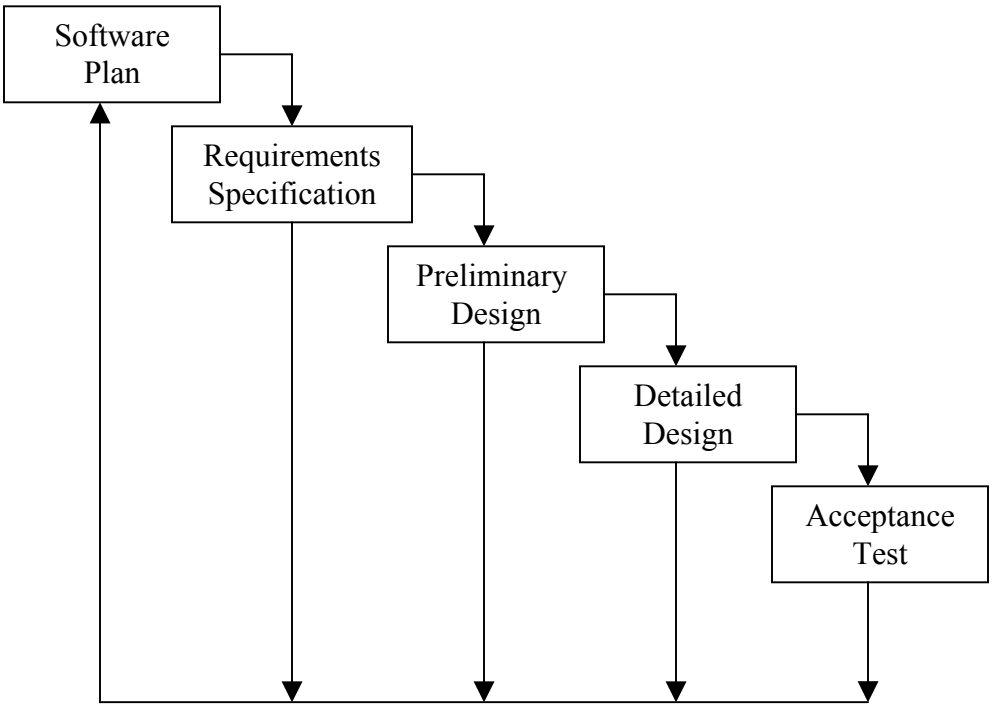
1.11 Sources of Information

The major source of information for this project resulted from meetings with our client, Mr. Ken Swarner and Dr. Tim Lederman. Other sources of information include Dr. Lederman's class lectures, the Software Engineering class textbook *Software Engineering: A Practioner's Approach* by Roger S. Pressman, and previous Software Engineering teams' projects.

Project Plan

2.1 Life Cycle Model

Our project is modeled after the Waterfall Model, an example of the Linear Sequential Model of software development that we have discussed in class:



Software Plan

The team will meet with the clients to define the problem, establish goals and requirements to solve the problem.

Requirements Specification

To develop the software the team members will meet with the clients to obtain a deeper understanding regarding the problem and the clients' requirements.

Preliminary Design

With the goals and requirements of the clients on hand, the team will translate them into software representation that will match the clients' needs.

Detailed Design

The team will take the preliminary design created in the previous phases and implement it. We will continue by coding and testing the product assuring that it will meet the clients requirements. This stage will take place in the Spring 2006 Semester.

Acceptance Test

Nearing the end of spring semester, the team will test all aspects of the product. This will assure that it adheres to the clients' specifications. If there are any errors detected, they can be corrected before final distribution.

2.2 Organizational Structure

*Saint*Soft is comprised of the following members:

Name	E-mail Address	Phone
Christian Damberg	scd7960@siena.edu	(518) 782- 6039
Lioubov Mikhailova	la21mikh@siena.edu	(518) 782- ____
David Moore	sdm8052@siena.edu	(518) 782- 6019
Hannah Palmer	shp6908@siena.edu	(518) 782- 5784
Dan Schuldt	sds8081@siena.edu	(518) 782- 5848
Tina Ting	stt8495@siena.edu	(518) 782- 5993

*Saint*Soft. is organized as follows for the Environmental Monitoring System :

Dan Schuldt - Team Leader and Client Correspondent
David Moore – System Administrator
Christian Danberg – Webmaster
Hannah Palmer – Librarian
Lioubov Mikhailova – Design Consultant
Tina Ting – Software Developer

The team structure of *Saint*Soft is Democratic. All of the decisions will be decided by majority vote. The team leader will be the tie-breaker in decisions. There will be no hierarchy.

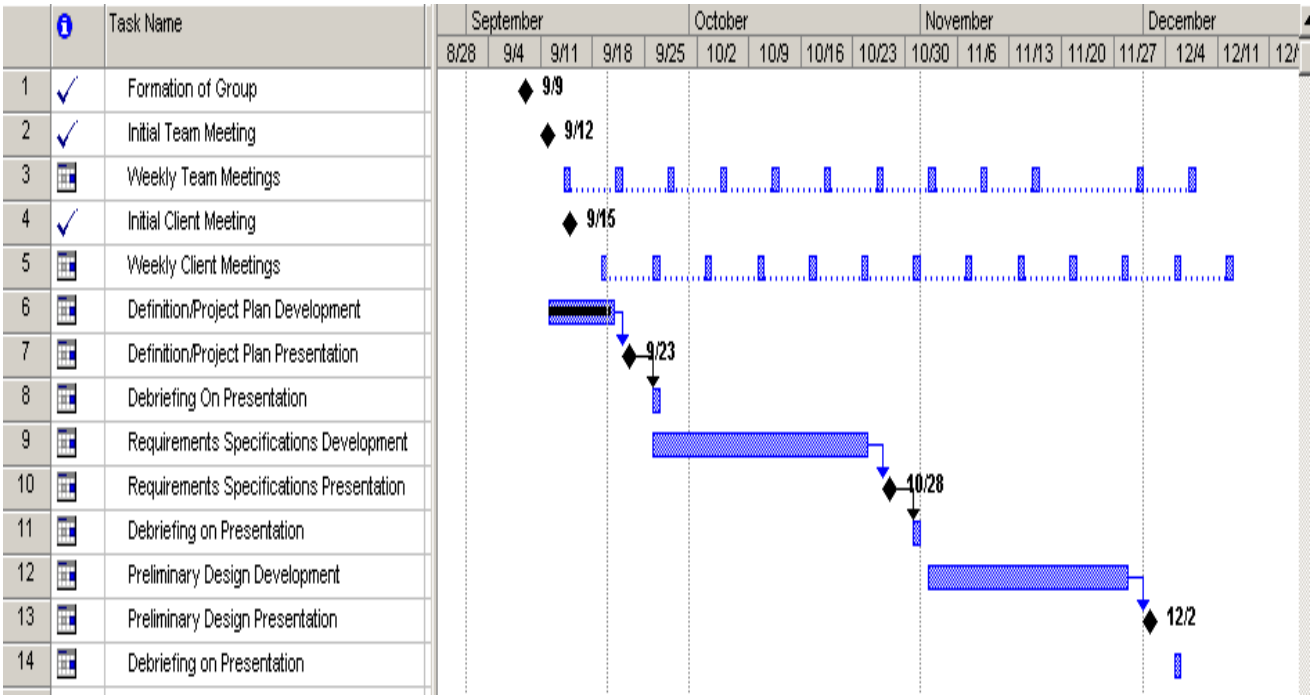
The work assignment for each member is as follows:

Team Leader:	Organize meetings and interviews, guide the team throughout the semester.
Webmaster:	Creates and maintains the project web page.
Librarian:	Track of all documentation at meetings and also keep track of jobs being done by team members throughout the semester.
System Administrator:	Maintains the team users' accounts and team computers
Design Consultant:	Responsible for reviewing and editing design layout and content.
Software Developer:	Responsible for overseeing the overall devolvement of software.

2.3 Preliminary Staffing and Resource Requirements

Our required software resources will include Oracle, a web page editor such as Dreamweaver, as access to the application will take place via the web. The hardware resources required include computer systems, a LINUX based web server with Oraserv, sensors with the ability to monitor temperature, motion, moisture, and capture video, along with printers and services. Our primary resources are those who are directly involved with this project. Our clients, Mr. Ken Swarner of the Siena College Computer Science Department, and Dr. Tim Lederman, our Software Engineering professor, are a major resource.

2.4 Preliminary Development Schedule



2.5 Project Monitoring and Control Mechanisms

Out weekly team and client meetings will serve as a check for the progression of our project. Using the clients' feedback from our various presentations, our documents will ensure consistency with our vision of the project and the clients' expectations. Through out the process each team member will have a part in creating the project while being monitored by the Team Leader.

2.6 Tools and Techniques to be Used

Computers running Windows XP Professional edition with MS Project, Dreamweaver, Oracle and Microsoft Office software will be used. Our team will be using Dreamweaver for website development. Management of the system will be performed through the internet and Oracle. Small client side applications may also be utilized, written in C++ possibly. MS Project will be used to detail the ongoing progress of the software development. Explicit software engineering techniques provide the basis for our plan and will be part of the process.

2.7 Programming Languages

In order to develop the Remote Environmental Monitoring System web page we will use the scripting language PHP as well as HTML. There is a possibility we will have to use C++ or Java to create a small host application on the host computer.

2.8 Testing Requirements

Testing will occur upon completion of each component within the project. The client, Mr. Swarner and Dr. Lederman, will be notified of official testing sessions; and will also be encouraged to participate in the testing process. Final product testing will be subject to all specifications and requirements of our client. Final product will be compatible to run on all major platform configurations (for details we refer the reader to Section 1.4, pg. 3).

2.9 Supporting Documents Required

At minimum, the supporting documentation that will be provided to our client includes:

1. The Project Definition / Project Plan - This document is due to the client on September 23, 2005.
2. The Software Requirements specification - This document is due to the client on October 26, 2005.
3. The Preliminary Design - This document is due to the client on November 30, 2005.

Additional documentation on the Detailed Design will be provided to the client in the Spring of 2006.

2.10 Manner of Demonstration and Delivery

Through PowerPoint presentations and documents we will demonstrate our progress and software development to our clients as well as the members of our class. The project phases and presentation dates are as follows:

1. Software Plan:	September 23, 2005
2. Software Requirements Specification Presentation:	October 26, 2005 October 28, 2005
3. Preliminary Design Presentation:	November 30, 2005 December 2, 2005
4. Detailed Design Document	Spring 2006
5. Acceptance Test	Spring 2006

2.11 Sources of Information

The majority of information for the software plan was obtained through our clients, Mr. Ken Swarner and Dr. Tim Lederman. Two other significant sources relevant to this project include Dr. Lederman's Software Engineering class, and the accompanying textbook Software Engineering: A Practitioner's Approach 6th Edition, by Roger S. Pressman, in addition to previous Software Engineering projects also helped in providing relevant information for our plan.

Appendices

Appendix A: Team Resumes

Daniel E. Schuldt

Present Address (until 5/06)
Siena College
SPOB 3235/515 Loudon Road
12019
Loudonville, NY 12211
(518) 782- 6325; E-mail: sds8081@siena.edu
spikeman44@hotmail.com

Permanent Address
11 Sequoia Drive
Ballston Lake, NY

(518) 399-5702

OBJECTIVE

A challenging position in the field of computer science that will allow growth and utilize my education and expericence.

Special interest in networks and/or security.

EDUCATION

Siena College, Loudonville, NY.

B.S. in Computer Science, Mathematics Minor, May 2006

COMPUTER COURSES / TECHNICAL SKILLS

Courses:

Data Structures, Assembly Language, Object Oriented Design and Programming, Analysis of Algorithms, Programming Languages, Database Management, Bioinformatics independent study involving SVMs and pre-secondary structures of proteins, Artificial Intelligence, Operating Systems, Network and Communications, Software Engineering I and II.

Computer Skills:

- Programming in C/C++, MIPS Assembly Language, Scheme, Ruby Script, and SQL.
- Proficient in Unix/Linux, Windows 3.1/9x/NT/2000/XP.
- Proficient in Word, Excel, Internet, Crystal Reports, and Outlook 2002.
- Some experience in Access, Visio, Rational Rose, HTML and Common Spot.

RELEVANT EXPERIENCE

***Developer*, Software Engineering II with Dr. Timoth Lederman,** January 2005 – May 2005.

- Work with my team to program and design our Environmental Monitoring system.
- Extensively test our system to ensure correctness and quality.
- Present the various parts to our client and deliver at the end of the semester.

***Team Leader*, Software Engineering I with Dr. Timoth Lederman,** September 2005 – December 2005.

- Plan and organize meetings for our team, our client, and the Instructor.
- Allocate work that needs to be done to the rest of the team.
- Responsible for getting our documents and other deliverables done on time and to ensure quality.
- Visit www.cs.siena.edu/saintsoft to view our project progress.

***Student Intern*, New York State Thruway Authority Desktop Services,** August 2005 – Present.

- Visit or Remote to Users PCs to troubleshoot or fix problems they are having.
- Repair minor problems to PCs and Printers if need re-Imaging PC or back up the PC imagine with Novell Ghost.
- Cover helpdesk and either fix the users inquiry or route it to the appropriate place.

***IT Intern,* Department of Motor Vehicles, Control and Standards Department,** May 2005 – August 2005.

- Analyzed trouble ticket data in order to create a better categorization system.
- Created various reports in Crystal Reports about our findings and other information about the trouble ticket data.
- Created/edited a web page to fit the needs of the DMV using HTML and Common Spot.
- Updated the Microsoft Outlook manual for the newest version of Outlook.

***Research Assistant,* Bioinformatics Research with Dr. Darren Lim**, October 2004 – May 2005.

- Programmed applications in Ruby script to organize retrieved data for further analysis.
- Wrote scripts to retrieve PAM matrices from the Internet for use in experiments.
- Presented current research to the HRUMC conference.

***Consultant,* Siena College Information and Technology Services**, January 2003 – May 2005.

- Troubleshoot and solve student and facilities computer related problems.

- Provide main help desk support for students, faculty, and staff.
- Maintain lab computers, printers, and scanners.

ACTIVITIES

President, Siena College Karate Club, September 2004 – May 2005.
Treasurer, Siena College Karate Club, September 2003 – May 2004.
Committee Member, IT Steering Committee, September 2004 – May 2005.
Participant, ACM International Collegiate Programming Contest, October 2004.
Participant, ACM International Collegiate Programming Contest, October 2005.
Participant, Programming Contest, Union College, Spring 2004.

ADDITIONAL EXPERIENCE

Maintenance Worker, New York State Thruway Authority, Selkirk, NY, Summers 2002 – 2004.
Veterinary Aid, Glenville Veterinary Clinic, Scotia, NY, February 1999 – June 2002.

Christian F. Damberg

scd7960@siena.edu

Present address: (until 05/06)
Siena College, SPOB 3084
515 Loudon Road
Loudonville, NY 12211
(518) 782-6039

Permanent address:
14 H.M. Chadderdon Street
Purling, NY 12470
(518) 622-3798

OBJECTIVE

To pursue a career in the Computer Science field; special interest in programming.

EDUCATION

Siena College, Loudonville, NY
B.S. in Computer Science, Mathematics Minor, May 2006

COMPUTER EXPERIENCE

Languages: C++, Visual Basic 6, .NET, Java, HTML, JavaScript, PHP, Ruby, Scheme, MIPS Assembly
Operating Systems: UNIX, Windows 98/NT/2000/XP
Software Packages: Microsoft Office, Microsoft PowerPoint, Microsoft Visual Studio, Metrowerks CodeWarrior, Macromedia Dreamweaver, Macromedia Fireworks, Dr. Scheme, OpenGL, EZWin
Database Management: Oracle 9i/10g, Microsoft SQL Server, Toad

RELEVANT COURSEWORK

Procedural Design and Programming, Data Structures, Object-Oriented Design and Programming, Computer Architecture and Assembly Language, Analysis of Algorithms, Database Management, Programming Languages, Computer Graphics, Web Design, Java for C++ Programmers, Software Engineering 1, Software Engineering 2

RELEVANT EXPERIENCE

***IT Department Intern,* New York State Department of Motor Vehicles**, 5/05-Present

- Write various applications in Visual Basic 6 and .NET
- User Acceptance Testing

***Saintsoft Team Member*, Software Engineering at Siena College,** 9/05-Present

- Member of a six person software engineering team working on a real project with a real client
- Weekly team and client meetings to discuss the current status of our project
- Throughout the year, we will perform the following design steps to produce our product:
  Software Plan, Analysis, Preliminary Design, Detailed Design, Development and Testing, and Acceptance Testing
- Team Website: http://oraserv.cs.siena.edu/~perm_saintsoft/

***Research Assistant*, Siena College Bioinformatics Research Team**, 11/04-Present

- Assist Dr. Darren Lim by writing numerous scripts, running the scripts on various PDB_Select files, and recording the data
- Present our research at the annual Hudson River Undergraduate Mathematics Conference, 4/05

ADDITIONAL EXPERIENCE

***Supervisor*, Zoom Flume Water Park**, East Durham, NY, 7/02-9/04
***Lifeguard*, Zoom Flume Water Park**, East Durham, NY, 7/00-9/01
***Staff Member*, Zoom Flume Water Park**, East Durham, NY, 7/99-9/99
Referee, Cairo and Catskill Recreational Soccer Leagues, Cairo, NY, Catskill, NY, 1999-2002

AWARDS/HONORS

President's Education Award – Outstanding Achievement Award, May 2002
Scholar Athlete Award, May 2002
Cairo-Durham Teachers Association Scholarship Award, May 2002
Attended American Legion Boys' State of New York, Summer 2001
Attended Central Hudson's Scholarship Program, Summer 2001

ACTIVITIES

Member, Siena College Rugby Club Team, 2005-Present
Midfielder, Capital District Soccer League, 2002-Present

David W. Moore Jr.
SPOB #2768, Siena College
Loudonville, NY 12211
(914) 489-9552; David.Moore@siena.edu

OBJECTIVE

A position in the field of computer science and information technologies

EDUCATION

Siena College, Loudonville, NY
BS in Computer Science, December 2006
Cumulative GPA: 3.04/4.0 Major GPA: 3.46/4.0

RELEVANT COURSES

Intro. to Computer Science, Intro. to Programming, Data Structures, Assembly Language and Computer Architecture, Object-Oriented Design and Programming, Analysis of Algorithm, Web Design, Database Management, Software Engineering

RELEVANT WORK EXPERIENCE

Best Buy Geek Squad, *Computer Technician,* May 2005 – present

- Provided computer support and repair for customers' computers
- Worked closely with co-workers to solve larger more complex projects

Siena College Computer Science Department, *Web Designer,* Spring 2005

- Independent study for Dr. Scott Vandenberg
- Redesigned the online publication of a scientific research paper

Siena College Office of Campus Programs, *Web Master,* Fall 2003 – Fall 2004

- Maintained and updated preexisting pages posted by Campus Programs
- Created and posted any additional pages deemed necessary

ADDITIONAL WORK EXPERINECE

Siena College Computer Science Department, *Tutor*, Fall 2005 – present

- Assisted others with understanding assignments in the study of Computer Science

Hannaford Supermarkets, *Baker,* May 2004 – August 2005

- Worked independently to complete necessary daily tasks

ISK Martial Arts, *Instructor/Office Manager,* May 2001 – January 2004

- Managed all office related activities and aided instructors with running classes

ACTIVITIES

Siena Karate Club, *President,* Siena College, Fall 2005 – present
Siena Karate Club, *Treasurer,* Siena College, Fall 2004 – Fall 2005

Hannah E. Palmer
Phone Number: (518) 524-4882

E-mail address: hannah.palmer@siena.edu

Present Address

SPOB 3387
515 Loudon Rd.
Loudonville, NY 12211

Permanent Address

3243 Broad St.
Suite 3
Port Henry, NY 12974

OBJECTIVE

To obtain a challenging position in the filed of Computer Science that will allow growth and utilization of my education.

EDUCATION

Siena College, Loudonville, NY
B.S. in Computer Science, Minor in Business, Expected May, 2006

- President's List, Dean's List

COURSE WORK

Introduction to Computer Science
Data Structures
Computer Architecture & Assembly Language
Database Management
Computer Graphics
Digital Electronics
Procedural Design & Programming
Object-Oriented Design & Programming
Analysis of Algorithms
Software Engineering I & II
Introductory Electronics

COMPUTER EXPERIENCE

Operating Systems: Microsoft Windows 98/2000/Me/XP, Linux
Software Programming: Programming in Java, Programming in Visual Basic, Programming in C/C++, Assembly Language
Database: Oracle, Microsoft SQL
Software Packages: Microsoft Office, Microsoft Visual C++, BlueJ, POV-Ray

WORK EXPERIENCE

Librarian – Software Engineering Project, **Siena College,** 2005 – Present

- Follow through with a complete software development cycle.
- Work with clients and team members to accomplish our final product.
- Responsible for meeting deadlines and submitting documents.
- Ensure quality of work throughout development process.

Circulation Desk Consultant, **Siena College Library**, Loudonville, NY 2005 – Present

- Assist students, faculty and staff in research materials.
- Provide photocopier and printer technical assistance and maintenance.

- Maintain orderly environment throughout library.

Accounting Laboratory Assistant, **Siena College**, Loudonville, NY 2005 – Present

- Provide students with assistance with labs and homework.
- Provide computer and printer technical assistance and maintenance.
- Maintain an orderly environment throughout the laboratory.

Waitress, **The Westport Hotel**, Westport, NY 2005 – Present

- Provide quality service to customers.
- Assist owners in weekly inventory.
- Oversee the actions and duties of other employees.

ACTIVITIES

- *Member,* **Human Resources Club**, Siena College, 2005 – Present

Luba Mikhailova

400 Brunswick Dr., Bldg. 5, Apt. # 6
Troy, NY 12180
(518)326-5342; la21mikh@siena.edu

OBJECTIVE

To obtain a challenging position in the field of science that will provide opportunities for personal and professional growth. Quick in learning and self-adjustment.

EDUCATION

M. S., Industrial Mathematics emphasis **Computer Science**, 5/2002
University of Wisconsin-Milwaukee, WI

B. S., Mechanical Engineering, 6/1994
St. Petersburg State University Technology and Design, Russia

RELEVANT COURSES

Siena College, Loudonville, NY, 9/2005 - present
Software Engineering (Team web page - http://oraserv.cs.siena.edu/~perm_saintsoft)
Web Design and Programming

LANGUAGES

Russian	Mother tongue
English	Fluent
German	Fluent

COMPUTER SKILLS

Languages	C++, Java, JavaScript, HTML, SQL, Visual Basic, Prolog, Standard ML, Fortran, Assembly
API	OpenGL
Database	Oracle
OS	Unix (Linux), Windows 95/98/2000/NT/XP
Software packages	LaTeX, Matlab, O-Matrix, MS Word, MS Excel, PowerPoint

WORK EXPERIENCE

Lecturer
University of Wisconsin-Milwaukee, WI, 6/2000 - 5/2002
Responsible for the comprehensive preparation and teaching a math course "Contemporary Applications of Mathematics" to undergraduate students. Special topics include: Introduction to Probability and Statistics, Introduction to Graph Theory. Designed and developed a Java applet and a web page for this course**.**

Project Assistant
University of Wisconsin-Milwaukee, WI, 8/1999 - 5/2000
Responsibilities included assisting primary researchers in a grant funded by Rockwell Automation (Milwaukee, WI); design, implemented and debugged test programs using Matlab. Worked in a multidisciplinary team between the Electrical Engineering and Mathematical Sciences departments.

C++ Tutor (Volunteer)
Truman College, Chicago, IL, 1/1998 - 5/1998, 9/1998 - 1/1999
Helped students with various questions and problems related to C++ language. Assisted students in the use of hardware and various software packages.

HONORS

Teaching/Project Assistantship, University of Wisconsin-Milwaukee, 8/1999-5/2002
St. Petersburg State University Technology and Design Fellowship, 1990 – 1992

Tina K. Ting

Present Address	**Permanent Address**
Siena College/ SPOB 2159 515 Loudon Road, Loudonville, NY 12211 (917)-399-7099/ **tina.ting@siena.edu**	140-35 Beech Ave, Apt 2J, Flushing, NY 11355 (718)-445-0543

OBJECTIVE

To obtain a position in the area of computer science or business.

EDUCATION

Siena College**, Loudonville, NY**
BS in Computer Science; minor in Business, May 2006

RELEVANT COURSE WORK

Introduction to Computer Science, Management Information System, Procedural Design and Programming, Data Structures, Computer Architecture and Assembly Language, Object-Oriented Design and Programming, Analysis of Algorithms, Database Management Systems, Software Engineering I, Accounting I & II, Economics, Managerial Finance I, Business Communication, and Organization & Management.

COMPUTER SKILLS

Programming in Pascal, C++, Scheme, Assembly Language, Microsoft Word, Access, Excel, PowerPoint, and Internet.

LANGUAGE SKILLS

Fluent in Cantonese and Mandarin

RELEVANT EXPERIENCE

*Information Technology Consultant***,** Siena College**, Loudonville, NY, Sept. 2003 – present**

- **Manage "Help Desk," and assist students, faculty, and staff with problems relating to technology.**
- **Organize and maintain computer labs for maximum efficiency in terms of student use.**
- **Refer computer-related problems to lead user specialists when necessary.**
- **Answer incoming calls for I&TS main office regarding computer issues.**

*Software Developer***, Software Engineering Group Project, Software Engineering Class, Sept. 2005-Present**

*Shift Leader***,** Hollywood Video**, Rego Park, NY, Summer 2004**

- **Managed and trained ten employees for busy video store.**
- **Updated new video rental data weekly.**
- **Prepared weekly summary reports of sales and inventory.**
- **Set up marketing displays to promote products**
- **Recognized for best regional store**

OTHER EXPERIENCE

*Resident Assistant***,** Siena College**, Loudonville, NY, Spring 2005 - present**

- **Responsible for maintaining safe and positive residence hall environment for students.**
- **Develop and present educational and community building programs**
- **Provide outreach services to community**
- **Counsel, advise, and refer students experiencing adjustment issues.**

*Mentor***,** Siena College Higher Education Opportunity Program (HEOP), **Loudonville, NY, Fall 2003, Fall 2004**

- **Provide structured academic and social support to assist freshmen science majors in HEOP with transition to college life.**
- **Provide problem solving strategies to assist students with their academic success.**

ACTIVITIES

Member, Computer Science Club, **Loudonville, NY, Fall2002-present**

Member, Black and Latino Student Union**, Loudonville, NY, Fall 2002 – present**
Member, Asian Student Association**, Loudonville, NY, Fall 2002 – present**

Appendix B: Glossary of Terms

Gantt Chart: A chart that depicts progress in relation to time, often used in planning and tracking a project.

HTML (Hyper Text Markup Language): A markup language used to structure text and multimedia documents and to set up hypertext links between documents, used extensively on the World Wide Web.

HTTPS (Hyper Text Transfer Protocol Secure): A variant of HTTP that encrypts messages for security.

Internet: An interconnected system of networks that connect computers around the world via TCP/IP protocol.

Linear Sequential Model – Classic Waterfall Model: A systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing and support.

LINUX: A trademark for open-source version of the UNIX operating system.

PHP (Hypertext PreProcessor): A server-side, cross-platform, HTML-embedded scripting language used to create dynamic web pages. PHP is Open Source software.