Introduction

Scope and Purpose of Document

The purpose of the document is to offer an initial approach to the ScipaNet project, which was proposed by Dr. Lederman. This is a preliminary document meant to formulate a timetable for the remainder of the project. This document also encompasses initial ideas for the final product in the form of several project objectives, functions the finished product should be able to perform, any constraints on the project, and a discussion of proposed resources. The reader will also become familiarized with the members of the Digital Foundry team and their backgrounds.

Project Objectives

The objective of this project is to create an information system to assist Dr. Tim Lederman in organizing and managing the internship program of which he is the chair. We will build the system in a manner consistent with the classic Waterfall Model of software engineering.

- Establish a website with the capability to both receive and submit information
- Produce a database in Oracle 9i which powers the website from underneath
 - Use normalization and indices
 - Create an efficient database
- Eliminate paper and evaluation forms
- Avoid the need to tap into the database and resources of Siena College I&TS

Major Functions

The major functions will be:

- Keep present and prior employer contact information
- Store student resumés, cover letters, and application forms
- Allow the coordinator to login from any place in the country
- Utilize web forms to create a simple and easy method to submit both student and employer evaluations
- Ensure that the website will be viewable and functional, no matter what software is being used to access it (i.e., Netscape vs. Internet Explorer, Windows vs. MacO/S, etc.)
- Formulate reports that will show links between Students and Employees

Performance Issues

There are several performance issues that could have a detrimental effect on the final product. One issue is the reliability of the servers used to house the website, and the

speed at which data can be transferred over the Internet between these servers and end terminals that are viewing the website. To compensate for this uncertainty as much as possible, the website will be constructed in as simple a manner as possible. It will not be overrun with flashy and bandwidth-consuming elements. This will minimize inconvenience to the user.

Management and Technical Constraints

The major constraint that our team will be faced with in successfully completing the project is time. The deadline for the final installment of this system is May 2003, with many other deadlines sandwiched in between now and then. Creating a working product that continually satisfies the client by the deadline dates will be a challenge. An additional constraint on the team is our size. Because there are six of us, all of our schedules have to match in order to have a meeting. Due to this fact, not everyone will be meeting at the most convenient of times, and inevitably there will be occasions where a team member was unable to reconcile his or her schedule. However, these occasions should be few and far in between, and the remaining group members should be temporarily able to pick up the slack. A third constraint is our lack of access to software. Because our team does not own software licenses, we must rely on a third party for whatever hardware and software we do not personally have access to. In this case, that third party will be the Siena College Computer Science Department. A fourth limiting constraint is that, after the system has been completed and installed, maintenance will need to be performed. Our team will be unable to provide maintenance, therefore the client must do the maintenance himself or hire a third party to provide maintenance to him.

Schedule

Time-Line Chart

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			81	Septen					Tuov	venio	er	De	Cent	IEL	-	Janus	ary T	-	repr	uary	-	INIS	run
D	Task Name	Duration	11 18 25	5 1 8	15 22	2 2	9 6 1	3 20 2	7 3	10	17 24	1	8	15 22	2 29	9 5	12	19 26	2	9	16 23	2	9
1	Team Formulation & Organization	5 days																					
2	Team Formulated	1 day		•	9/11																		
3	Meetings with Client;	5.5 days																					
4	Software Plan	11 days																					
5	Software Plan delivered to client	1 day			•	9/2	13																
6	Presentation of Software Plan	1 day				•	9/27																
7	Software Requirements/Specifications	27 days																					
8	Software Requirements/Specifications delivered to client	1 day						•	10/2	28													
9	Software Requirements/Specifications Presentation	1 day			-			4	• 1	1/4													
10	Preliminary Design	28 days																	-				
11	Preliminary Design delivered to client	1 day									•	11/2	5										
12	Preliminary Design Presentation	1 day											12	Æ									

Project work Breakdown Structure

Above is our Gantt chart for the ScipaNet project. It details the major phases of the project that are vital to its completion. This chart also realizes major milestones of the project, such as making presentations or delivering documents to the client. Here is some additional information that may be helpful to the client that complements the Gantt chart:

- Notice how each phase of the project extends past its respective document delivery and presentation dates. This extension of phases allows us to take client suggestions and feedback and work it into our original plans before fully moving on to the next phase of the project.
- Our software team has regularly scheduled meetings with our client for Mondays at 8:30 AM. Our team will be represented by three members each week, the members who attend each meeting will be decided by the topic of discussion for that week and which team member is most knowledgeable in that field. The team leader may also meet separately with the client as necessary.

• Our team holds two official meetings a week. Our usual meeting times are Mondays at 6PM, and Thursdays at 6:30PM. Attendance is required at these meetings by all team members. The team may also meet briefly on an unofficial basis to have quick discussions about the next day's events or other minor issues.

Installation Plan

The client Tim Lederman will be trained and likewise he may train those he sees fit to use the software. If there is an inability for the client to train the user, there will be simplistic menus and labels to walk the user through. Installation for the software will not be required on a per-user basis, as a working Internet browser will be sufficient to access the website. There will be no need to install the underlying database, as we will develop directly in Oracle, and the production version will communicate directly with the server. The website will have to be installed on the designated server. Data conversion will require that all paper-based information be entered manually into the new system. The changeover will occur after the client has converted his data, so that when the system is initiated all requested functions will be operational.

Maintenance Considerations

The client should appoint a knowledgeable student or staff member to oversee the maintenance of the software once Digital Foundry has dissolved. Another option would be the local system administrator who already possesses knowledge of the local web server and Oracle database. Before our exit, if the client requests us to train appointed personnel, we will do so.

Method and Time of Delivery

ScipaNet is slated to enter Alpha testing in Q1 2003. Beta testing will be skipped due to the limited release of our software. The first release of ScipaNet will occur in Q2 2003. The delivery of ScipaNet is described in the section entitled Installation Plan.

Project Resources

People

Our Staff is comprised of many talented and hard working individuals. Each member of our staff is a key element in developing our software. Resumés will be available for analysis on our web page and will be supplied the client for a more in depth evaluation of our staff.

•	Daniel Hopkins:	Our management expert, with plenty of experience with corporations such as Xerox. Excellent software experience with such packages as OpenGL, Microsoft Office, and Microsoft Project.
•	Matthew Begley:	Well traveled in the realms of computer science and business. Has several programming courses under his belt, also is familiar with graphics, network architectures and topologies, and database administration.
•	Scott Dakers:	Another excellent resource for us. Very good at deciphering, debugging, and writing code. Willing to take charge and share his ideas with the rest of the team.
•	Heather Addison:	Has an exquisite Computer Science background as well as an accomplished business minor. Has a great knowledge of SQL and other popular Database Technologies.
•	Victoria Lee:	Fluent n C++ and Database Design. Victoria also has begun a study of Graphics Design. An excellent public relations expert, she has also studied abroad in Australia. Is also our second financial expert on the team.
•	Brian Rubsha:	Known Programming Languages include: C++, Visual Basic, Java, JavaScript, HTML, COBOL, and Perl. Also has an extensive knowledge with Microsoft products and operation systems.

Hardware

The primary hardware being used will be the Siena College Software Engineering Lab. This lab has workstations equipped with Windows 2000. We also have access to our own personal computers and the other labs of Siena College's Computer Science Department. Eventually we will have to rely on a server to store the website as well as Siena College's network to relay data back and forth.

<u>Software</u>

Our main software packages at this point will be Microsoft Project and the Microsoft Office suite. Project will help to organize and display scheduling information for our project. This will be used for your convenience and ours. Microsoft Office will primarily help us to create adequate presentations of our project and official documents that you request from us. We will be using both Microsoft FrontPage as well as Dreamweaver to create our web pages. We will be using Oracle9i as the master database that powers this system and stores all the information.

Special Resources

Web Resource

Dr. Mary Egan will be our troubleshooting resource for any HTML or other webrelated problems we might have. As a professor at Siena College she has been an active in teaching Web Page Management among other CS courses. She has also designed many web pages herself and has experience using many techniques that may be valuable to us.

Database Resource

Dr. Scott Vandenberg will act as a resource for any database-related obstacles we might come across. He is a database expert with an immense knowledge of SQL, normalization, and many other techniques for optimizing databases. He is also familiar with a wide variety of Database Management Systems, including the Oracle product line.

Staff Organization

Team Structure and Management

Name	Date of Graduation	Position
Hopkins, Daniel	2003	Team Leader
Addison, Heather	2003	Librarian and Webmaster
Begley, Matthew	2003	Resource Manager
Dakers, Scott	2003	NT Administrator
Lee, Victoria	2003	Tester
Rubscha, Brian	2004	Programmer

Management Reporting

Dan Hopkins is our team leader and has many responsibilities. He is in charge of organizing team meetings and making sure our duties are fulfilled. Another responsibility of his is that throughout this semester he will be meeting with the client once a week, acquiring important information that is needed to improve both our team and our project. Heather Addison is our librarian. She is in charge of all documentation and is responsible for all notes that are taken at each team or client meeting. Every person on this team has a unique position to fulfill, and everyone's ideas contribute to the excellent work that this team produces.

Glossary of Terms

Glossary

Alpha testing – an early stage of testing a software program.

Beta testing – a more advanced stage of testing a software program.

Database – a collection of information organized in a way that makes it easier to locate desired pieces.

Debugging – finding and correcting errors in a program.

Digital Foundry – The name of our team, which is developing ScipaNet.

ITS – Information and Technology Services, the branch of Siena College which is in charge of information technology on campus.

NT Administrator – the member of our team who is responsible for controlling user accounts on our Windows NT computer, they are also responsible for security and networking.

Oracle – A particular brand of Database Management Systems, and also the name of the parent company that makes this brand.

ScipaNet – The name given to the software plan which Digital Foundry is developing for Dr. Lederman

SQL – Structured Query Language, a way of requesting specific information from a database.

Waterfall Model – a sequential approach to software development that involves the following steps: Project Definition, Analysis and Requirements, Design of Solutions, Code Programming, Testing, and Installation and Maintenance.

Webmaster – the member of our team that is responsible for making all of our documents accessible through a web page.

Web server – a computer that stores and delivers web pages.

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