The Spaminator

Unwanted solicitations via email have become an extremely large problem in today's society. No one wants to be interrupted during dinner time with an unwanted phone call solicitation or a knock on the door by a door to door salesman. There has even been a law passed by the government stating that telemarketers can not call someone if they are on the "No Call List". So how do you feel about unwanted email solicitations? Millions of unwanted emails are sent to electronic mailboxes worldwide each day costing recipients valuable time sorting through the inbox to find needed information. This common occurrence slows down business resources and costs companies valuable man hours. Our system solution to this problem is a database called "The Spaminator".

This database will contain all known email advertisements and unwanted solicitations. The database will then be connected to subscribing companies email server and all incoming email traffic will be compared to this database before being delivered to a client's inbox. All email matching the known spam email will be filtered out of the incoming mail. We are currently considering whether or not the incoming spam email has to match 100%, or if we will be looking for catch phrases and keywords.

Once we have to database information in place and online, we then plan to test the database by setting up an email server and connecting it to our database and start beta testing the system until it is perfected. When we have a success rate of about 80% success rate, we then plan to offer our service to a company for a limited time free of charge. This will allow our system exposure to the business world as well as a live test run. From this live test run we hope to gain valuable feed back and word of mouth advertising.

The feasibility outlook of the spam filtering project, codenamed “The Spaminator” looks very promising. Even though we are in the beginning phases of this project, there are no foreseeable problems, operational, technical or economic that could possibly keep this project from being completed.

Operational analysis has determined that there should be a minimal affect on our organization from our proposed spam elimination solution. Personnel within the organization will be able to adjust with out any type of training being required. This is due to the way that “The Spaminator” will be implemented. There will be no client side software and practices the computer users will have to learn to benefit from our proposed project. All spam filtering is done server side, in which case, personnel should only notice the benefits.

At this phase there is only one major technical feasibility issues. Since we will be filtering e-mails there are the possibilities of false positives. That means legit e-mails being detected as spam. There are certain blocked words that can appear within words that are not blocked. There also is the issue of blocking spam in different languages. Because users would rather receive spam then have legit e-mails being blocked, if any mail is blocked, users also have the option to notify us whether or not the messages are spam.

Economic feasibility should be considered a non-issue. As stated above, all processes are done server side so that eliminates having to develop, and or buy client side software to assist in blocking spam.

Our proposed system also eliminates the following:

- The Purchase of Hardware

- Training Cost
- Software Cost
- Installation Cost
- Conversion and Changeover Cost
- Redundancy Cost
- Operational Cost

This will save money that would otherwise be spent on software development or software licenses per computer system.

The first individual requirement is the ability for the team to create a piece of software capable of determining if two pieces of text e-mail are at or above an 80% body content match. What this means is we will take an unknown e-mail and compare the text body of the e-mail to a database of known SPAM e-mail. When we produce a match of 80% or more of the known SPAM and the unknown e-mail we will then flag the unknown e-mail as SPAM. Once we have flagged the e-mail as SPAM we will be able to several things with this piece of e-mail. We will be able to produce reports for the people who subscribe to our service and say things similar to we stopped X amount of SPAM from getting to you.

The plan for the project is a simple one. First find a building to house the equipment and the employees. Second buy the servers and the development workstations. Third connect the office to the backbone through a T3 connection because this takes about 5 months to do at the same time the internal network will be set-up and all of the computers connected. We will also at this time hire the needed people to complete the project and the people needed for the day to day running of the company.

Once all of the computers are connected to the Intranet development of the software can begin.

On the hardware side of the project the plan is to buy the equipment and then set-up the internal network. The way this will be done is to pick a single room and install a razed floor for the datacenter. Once the floor is done the computers will be installed into the datacenter along with the switches and routers. Then cabling will be installed to connect everything together. Then once the T3 line is installed we will connect the network to the T3 line for connection to the Internet.

On the software side the plan is to get a program to be able to compare 2 e-mails. Then the next step will be to have the program compare the two e-mails and have a 100% match with a return of a Boolean yes for true. Then the next step will be to have the two e-mails compared with a match of 80% or more. Then once we have a working program we will create the code to allow the program to interact with a mail server and the database of known SPAM mail.

Since this project will be funded by investors, the project will have a committee made up of investors or representatives there of. These investors will be kept in the loop on major decisions and communicate with the Project Liaison. The Project Liaison will be the committee's main source of information about the project. This person will deliver project reports and updates to the committee. The Project Liaison will be a highly skilled negotiator and communicator. This person will also have a background in project management, as well as a finance background.

The project itself will be accomplished with a three pronged approach. The first approach will be handled by an Administrative Project Manager. In the early phase of

the project this person will act as an analyst. This manager will determine the administrative needs of the project. This Project Manager will then communicate with the other two Project Managers, as well as the Project Liaison. The Administrative Project Manager will be a have vast knowledge of finances, marketing, and sales. The Administrative Project Manager will also oversee the human resources department.

The financial department will initially consist of one certified public accountant. This person will be responsible for tracking the spending of the investor's money. The financial department will communicate with the Hardware and Software Project Managers spending and the overall budget. Sales and marketing will consist of two people, as well as the web designer. The sales and marketing team will be responsible for advertisement of the SPAM filtering system. One sales person will concentrate on internet the domestic market and the other sales person will concentrate the foreign market. The human resources department will be responsible for hiring key personnel to fill the other departments and payroll. All of these departments will report to the administrative project manager.

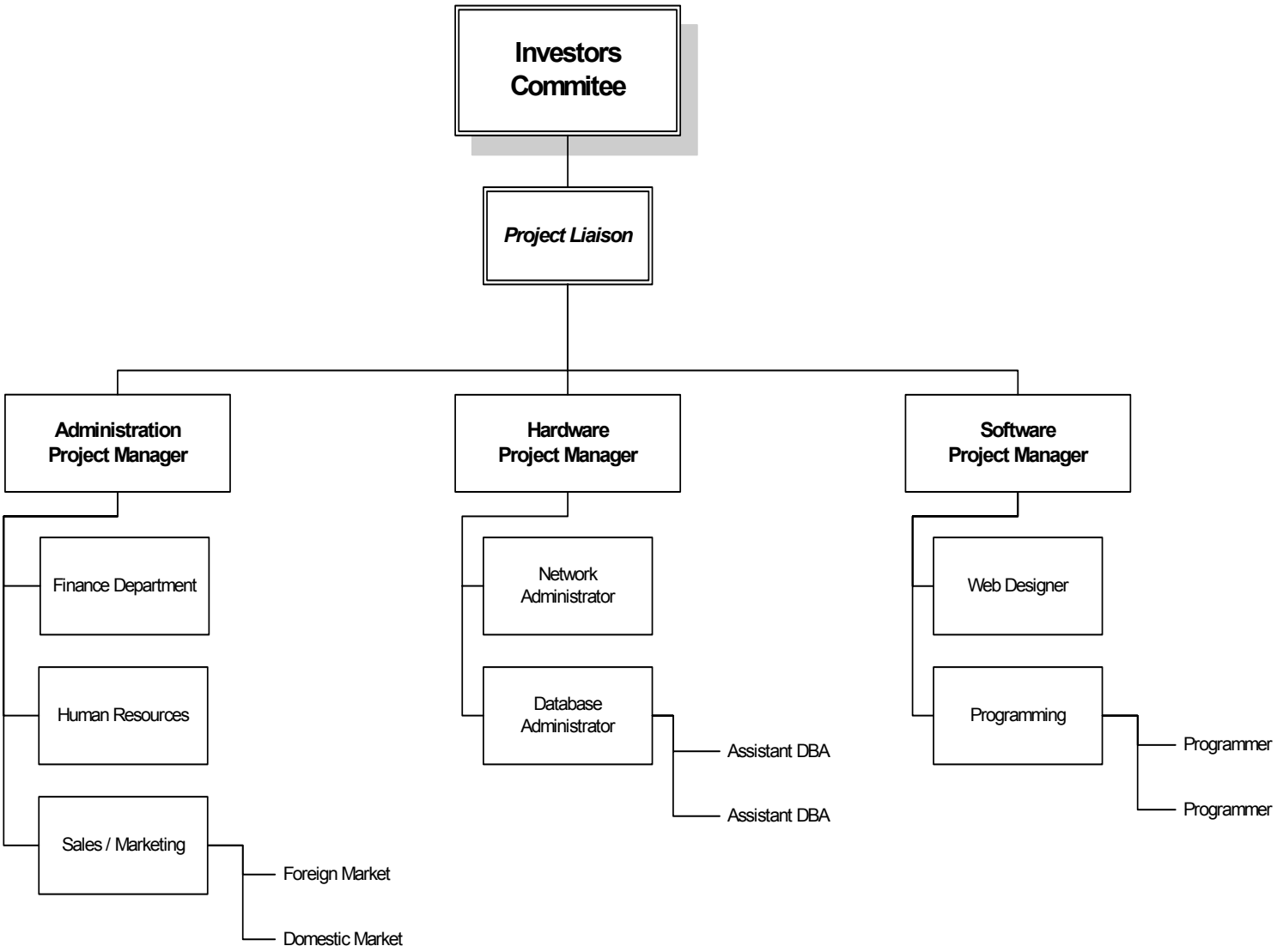
The second of the three pronged approach will be managed by the Hardware Project Manager. In the early phase of the project this person will act as an analyst. This manager will determine the system and hardware needs of the project. The Hardware Project Manager will then oversee the installation and maintenance of the data farm, its servers, and the network. This manger will also oversee the creation of the Virtual Private Networks that will be created to connect to customers. This person will have a background in database and network administration. The Hardware Project Manager will communicate with the Project Liaison and the other two Project Managers.

Under the Hardware Project Manager there will be a Database and Network Administrator. The Database Administrator will be responsible for the upkeep of the data farm and servers. This department will consist of two Assistant Database Administrators to do back-ups and keep up on the logs. The Network Administrator will be responsible for the connectivity of the network and its performance. The Network Administrator will also connect the data farm to customers via a Virtual Private Network.

The final prong of the approach will be managed by the Software Project Manager. In the early phase of the project this person will act as an analyst. This manager will determine the programming and software needs of the project. This project manager will then work in conjunction with the Administration and Hardware Managers to complete the project and also communicate with the Project Liaison. This manager will be a skilled software programmer and have a web development background as well. The Software Project Manager will oversee the software programming and web development departments.

The programming department will consist of two full-time programmers and they will be responsible for writing the code that will filter unsolicited email advertisements. The programmers will communicate and report to the Software Project Manager. The web developer will work in conjunction with the sales and marketing department but will report to the Software Project Manager. The web developer will be creating the website the will handle customer inquiries. The website will also act as an advertising tool. The organization structure is illustrated in figure number one.

Figure 1



Each member of the project team will have their own tasks and responsibilities to make this project successful. Listed below is a matrix that illustrates the tasks and the project member associated with that task.

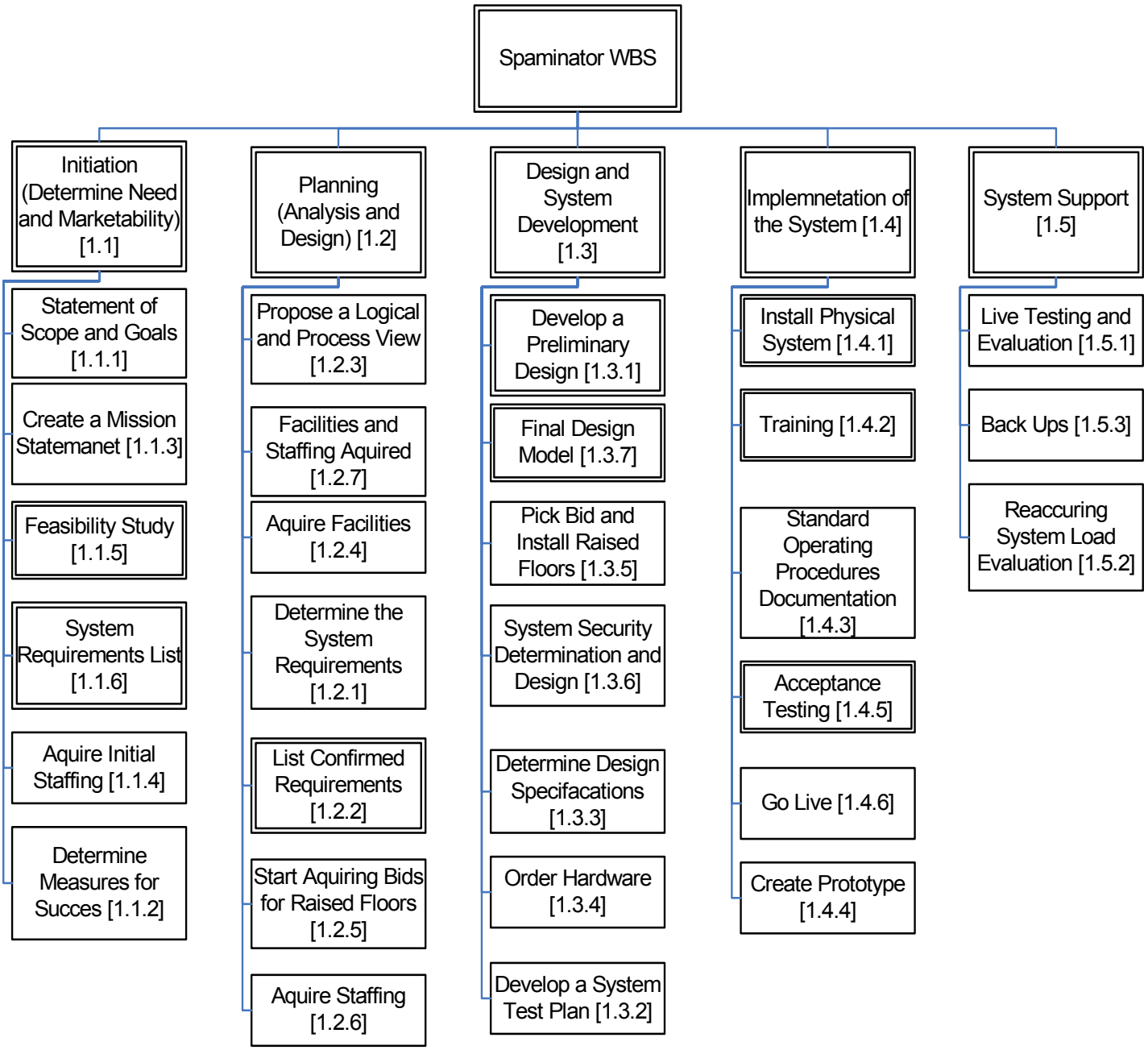
Task/Responsibility Matrix

"R" = Responsible for Tasks "A" = Approves Task" S" = Supports Tasks

Names of Project Team Members	**Ira Nicks** Hardware Project Manager	Network Admin.	Database Admin.	Asst. Database Admin. #1	Asst. Database Admin. #2	**John Healy** Software Project Manager	Programmer #1	Programmer #2	Web Designer	**Matthew Hazel** Administration Project Manager	Finance Department	Human Resources	Sales / Marketing Domestic	Sales / Marketing Foreign
Hardware	R	S	S	S	S									
Setup, management, and maintenance of network	A	R												
Maintain, secure and optimize database	A		R	S	S									
Software						R	S	S	S					
Artificial Intelligent Software that reads E-mail header						A	R	S						
Software to compare e-mail to database						A	S	R						
Plan and Design webpage						A	S	S	R					
Administration										R				
Assigning Resources										A		R		
Project Funding / Produce Financial Statements										A	R			
Advertisements and Sales in Domestic Market										A			R	
Advertisements and Sales in Foreign Market										A				R

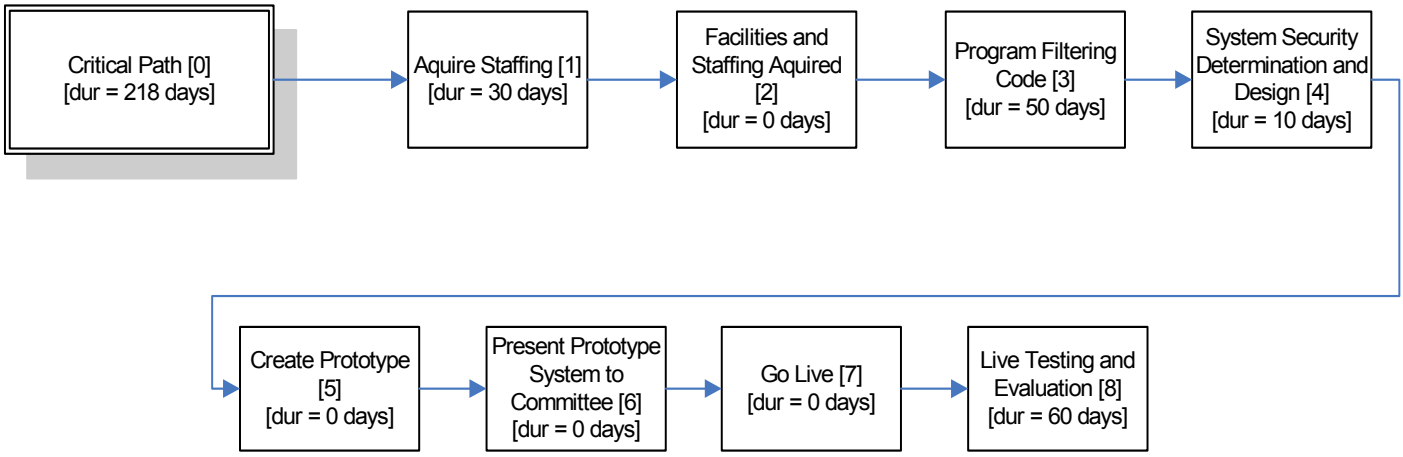
The Work Breakdown Structure for the project Spaminator is as follows. The first level will be the main project. From there the project will be broke down to 5 major tasks. Each of the 5 major tasks are broken down into sub-task as shown in figure 3. The figure 3 is a module of the project in a SDLC format.

Figure 3



When planning a project it is always important to identify the longest tasks within the project. These tasks are critical to the completion of the project on schedule. If these tasks run longer than estimated, then the project will be delayed; therefore, the tasks illustrated in figure four make up the critical path.

Figure 4



The Spaminator project is scheduled to begin on November 19th, 2003, and according to the critical path, end on the estimated date of Sept. 24th, 2004. The overall project is scheduled to take approximately 226 days and also includes a detailed time-line for support once the implementation of the project is completed. Figure five on the next page lists all major tasks and sub-tasks, including the task dependencies. The figure also illustrates whether tasks run parallel, start-to-start, and/or start-to-finish.

ID	Task Name	Duration	Start	Finish
1	**Project**	**226 days**	**Wed 11/19/03**	**Wed 9/29/04**
2	**Initiation (Determine Need and Marketability)**	**40 days**	**Wed 11/19/03**	**Tue 1/13/04**
3	Statement of Scope and Goals	5 days	Wed 11/19/03	Tue 11/25/03
4	Determine Measures for Succes	3 days	Wed 11/26/03	Fri 11/28/03
5	Create a Mission Statemanet	1 day	Mon 12/1/03	Mon 12/1/03
6	Aquire Initial Staffing	5 days	Tue 12/2/03	Mon 12/8/03
7	**Feasibility Study**	**20 days**	**Tue 12/9/03**	**Mon 1/5/04**
8	Identify Investors	4 days	Tue 12/9/03	Fri 12/12/03
9	**Research Market need for Product**	**6 days**	**Mon 12/15/03**	**Mon 12/22/03**
10	Send Questionarris	1 day	Mon 12/15/03	Mon 12/15/03
11	Meetings / Information Gathering	5 days	Tue 12/16/03	Mon 12/22/03
12	**Solicate Investors**	**1 day**	**Tue 12/23/03**	**Tue 12/23/03**
13	Show Need for Product	1 day	Tue 12/23/03	Tue 12/23/03
14	Determine Profit Potential	1 day	Wed 12/24/03	Wed 12/24/03
15	Determine Rate for Use	4 days	Wed 12/24/03	Mon 12/29/03
16	Negotiate Funding	5 days	Tue 12/30/03	Mon 1/5/04
17	Sign Contract and Get Funding	0 days	Mon 1/5/04	Mon 1/5/04
18	**System Requirements List**	**6 days**	**Tue 1/6/04**	**Tue 1/13/04**
19	Determine Hardware	3 days	Tue 1/6/04	Thu 1/8/04
20	Determine Software	3 days	Tue 1/6/04	Thu 1/8/04
21	Determine Administrative Structure	2 days	Tue 1/6/04	Wed 1/7/04
22	Create High-Level System Proposal	4 days	Thu 1/8/04	Tue 1/13/04
23	Present High-Level System Proposal	0 days	Tue 1/13/04	Tue 1/13/04
24	**Planning (Analysis and Design)**	**62 days**	**Wed 11/19/03**	**Thu 2/12/04**
25	Determine the System Requirements	2 days	Wed 1/14/04	Thu 1/15/04
26	**List Confirmed Requirements**	**3 days**	**Fri 1/16/04**	**Tue 1/20/04**
27	Staffing Requirements	1 day	Fri 1/16/04	Fri 1/16/04
28	Hardware Requirements	1 day	Mon 1/19/04	Mon 1/19/04
29	Software Requirements	1 day	Tue 1/20/04	Tue 1/20/04
30	Propose a Logical and Process View	2 days	Wed 1/21/04	Thu 1/22/04
31	Aquire Facilities	15 days	Fri 1/23/04	Thu 2/12/04
32	Start Aquiring Bids for Raised Floors	10 days	Fri 1/23/04	Thu 2/5/04
33	Aquire Staffing	30 days	Wed 11/19/03	Tue 12/30/03
34	Facilities and Staffing Aquired	0 days	Tue 12/30/03	Tue 12/30/03
35	**Design and System Development**	**62 days**	**Wed 12/31/03**	**Thu 3/25/04**
36	**Develop a Preliminary Design**	**50 days**	**Wed 12/31/03**	**Tue 3/9/04**
37	Program Filtering Code	50 days	Wed 12/31/03	Tue 3/9/04
38	Develop a System Test Plan	5 days	Wed 12/31/03	Tue 1/6/04
39	Determine Design Specifacations	10 days	Wed 1/7/04	Tue 1/20/04
40	Order Hardware	1 day	Wed 12/31/03	Wed 12/31/03
41	Pick Bid and Install Raised Floors	1 day	Fri 2/13/04	Fri 2/13/04
42	System Security Determination and Design	10 days	Wed 3/10/04	Tue 3/23/04
43	**Final Design Model**	**2 days**	**Wed 3/24/04**	**Thu 3/25/04**
44	Make Sure Design Meets Goals	1 day	Wed 3/24/04	Wed 3/24/04
45	Verify Requirements Traceability	1 day	Thu 3/25/04	Thu 3/25/04
46	Present Design to Committee	0 days	Thu 3/25/04	Thu 3/25/04
47	**Implemnetation of the System**	**136 days**	**Wed 12/31/03**	**Thu 7/8/04**
48	**Install Physical System**	**59 days**	**Wed 12/31/03**	**Mon 3/22/04**
49	Receive Hardware Order	1 day	Mon 2/16/04	Mon 2/16/04
50	Install Hardware	5 days	Tue 2/17/04	Mon 2/23/04
51	Wire Network	5 days	Tue 2/24/04	Mon 3/1/04
52	Install Software on Main System	5 days	Tue 3/2/04	Mon 3/8/04
53	Aquire Data For Data Farm	10 days	Tue 3/9/04	Mon 3/22/04
54	Create Website	10 days	Wed 12/31/03	Tue 1/13/04
55	Create Trouble Ticket Database	2.5 days	Wed 1/14/04	Fri 1/16/04
56	**Training**	**40 days**	**Wed 12/31/03**	**Tue 2/24/04**
57	Training of Techinicians	36 days	Wed 12/31/03	Wed 2/18/04
58	Train Helpdesk Personnel	4 days	Thu 2/19/04	Tue 2/24/04
59	Standard Operating Procedures Documentation	1 day	Wed 12/31/03	Wed 12/31/03
60	Create Prototype	2 days	Wed 3/24/04	Thu 3/25/04
61	**Acceptance Testing**	**74 days**	**Thu 3/25/04**	**Thu 7/8/04**
62	Present Prototype System to Committee	0 days	Thu 3/25/04	Thu 3/25/04
63	Present Prototye to Prospective Customers	0 days	Thu 7/8/04	Thu 7/8/04
64	Go Live	0 days	Thu 7/8/04	Thu 7/8/04
65	**System Support**	**60 days**	**Thu 7/8/04**	**Wed 9/29/04**
66	Live Testing and Evaluation	60 days	Thu 7/8/04	Wed 9/29/04
67	Reaccuring System Load Evaluation	10 days	Thu 7/8/04	Wed 7/21/04
68	Back Ups	5 days	Thu 7/8/04	Wed 7/14/04

The project reporting will be done with the report template see figure six. This report will be filled out by everyone on the project. The reports will be gathered every week and the information will be added to the project to show the current status of the project. It will be the responsibility of the project leaders to add the information from the reports of the people under them into the project documentation.

Figure 6

JIM inc.

JIM inc.
12345 Main Street
Sacramento, CA 12345

Phone 123 456 7890
Telex 123 456 7890
Fax 123 456 7890

Date:	Time:
Project:	Page:
Version #:	Tracking #:

Status:

Notes:

One of the most critical aspects of the project will be showing the investors the allocation of funds. The investors will want to know exactly were their money is being spent and way. The next page will illustrate the budget for each task in figure 5. This budget will be presented to the investors via the Project Liaison.

The milestones in figure 5 will be used as a performance measurement for the Spaminator Project. Each of the milestones listed below will be measured by time and funds. The accomplishment of the milestones within the time and funds allocated will be considered a success.

- Acquire investors and funding
- Present a High-Level System Proposal to the investors
- Acquire staffing and facilities
- Present a Detailed Design to investors
- Present prototype to investors and prospective customers
- System goes online

Figure 5 illustrates the amount of time allocated to each task leading up to the milestones. Figure 7 shows the budget allocated to each task.

The project reporting and tracking is one of the key elements in ensuring that the project budget and schedule will be maintained to the maximum extent possible with the highest degree of quality. Regular progress reporting creates a valuable written record of the projects life. This can be used later to look back and decide how the running of future projects can be improved. It is important for the project manager to report project performance to management and customers and this is done in the form of progress reports (illustrated in figure 6) and a final report.

Progress reporting is a key element of project management. Reports will be issued by the Project Manager and circulated to the stakeholders on a regular basis. The following people will be included on the circulation list:

- Project Liaison

- Accountant
- Prospective Customers
- Project Team Members

The Overall Progress report will include the following generic format. This information is required for the project manager to come up with the various reports that will me sent out to stakeholders.

- Report Date
- Project Status
- Project Summary
- Key Issues
- Identified Risks
- Tasks and Next Steps
- Decisions Required
- Key Future Dates
- Budgeted Amount
- Spend to Date

Certain information will be included in a report depending on who the audience is. Team members and the project sponsor would require different reports with various degrees of detail.

For example, management reports are the main vehicles for providing management with the up-to-date information of an on-going project. It is a way to keep all people involved with project, directly or in-directly, informed about the current state of the project. It is not as important to provide the most detailed information for

management but to provide the key elements that management are looking for which includes schedule and cost reports.

For the Spaminator project, the following are the key areas for management Reporting:

- Schedule: start date, scheduled completion date, and expected completion date
- Tasks completed and tasks remaining Brief statement of resources used
- Milestones
- List of results and deliverables completed (with their status);
- Problems encountered and proposals for their resolution or recovery.
- Outline schedule of work for the next reporting period, including any revisions to the timetable arising out of problems encountered that are not recoverable.

Once the Spaminator software is performing to the 80% goal, the project team will then create a network of three servers, a router, and a T1 line. The system will then be load tested to make sure the capacity of the system can stand up to a real life environment. The goal of this phase of testing is for the system to be able to handle 60000 emails per minute. Once this goal is achieved the system will go through a live test. The Spaminator's services will be advertised free of charge for a limited time to select companies interested in filtering their email. This part of the process will not only give the system a real live test, it will also give the system credibility in the business world as the system of choice for filtering out undesirable email.

The network speed at the start of the project will only be a 1Gig network. As the system gets more of a load and the network traffic gets grater then 80% it will be time to

upgrade. One idea for the final upgrade is to connect all the servers and switches with fiber optic wire.

When we first start this project we will have a cluster of small servers and a T1 line. As the project gets known and we get more companies requiring our services well will move to bigger and better things. The mark now is when the T1 line gets to about 80% capacity we will install a T3 line and when the servers are running at 80% usages over a set time we will move to more servers. The long term idea is to have a T5 line and a Cray X1 computer system.

The following conditions will need to be satisfied for completion and termination of the Spaminator Project.

- 80% filtering accuracy achieved on live test run
- Web site is up and operating
- Reallocate human resources from a implementation role to a support role
- Forecast return on investment

The support plan for the project is a simple but complex system. The daily maintenance is normal monitoring of the servers and data-farm to determine how well the system is performing. With the data-farm we will keep time stamps on each record and when a record has not had a match is 60 days we will delete those records. This method will allow us to have a data-farm of a manageable size and the smaller database is the faster we can check incoming e-mail against the database of known SPAM.

On the servers we will have a daily, monthly, and yearly maintenance plan. The daily maintenance plan will be just checking the system log files and looking for any errors. The monthly maintenance plan will include a cycling of the power on each server.

A look at the overall performance and messages in the log files over the past month which includes looking for any specific error messages and a look for a performance trend. The installation of any new server patches for the servers which have been released over the past month will be done at this time. The yearly maintenance will include cleaning out the dust in the server and a performance check of the log files over the past year. At this point you are looking for trends in performance rather then a specific error message.

The project team will also check the software and hardware to determine if the scope of the network needs to be expanded or if the initial network will be able to handle the workload for the time being. A secondary database will also be created to log trouble tickets to further the uptime of the system. Every 15 days the system load will be evaluated. If the load of the system reaches 80%, the project team will expand the existing network and or bandwidth to accommodate growth of the system, the business, and profits.