Organization of a Technical Communications Team

Overcoming Challenges in Delivering Documentation, Interface Design, Training, Usability and Production

Prepared for

Fluke Networks
Bridgewater, NJ

Brendan Heffernan
Andrew Holz

by Lisa Hauser

6/28/05

Executive Summary

The CSP Engineering area has been able to maintain LoopExpert's solid reputation within the Telecom OSS market since our acquisition in July, 2003. Our Engineering area continues to prides itself with high product quality and customer service. However, recent under-staffing, extremely tight time constraints and limited budgetary resources have made delivering quality products and continued first-rate customer service exceedingly difficult and sometimes downright impossible.

These current circumstances have put tasks and deliverables related to technical communication, such as documentation, user interface design, training, usability and production processes at risk for consistent quality delivery, though they are indeed an important part of the software development process.

Deliverables such as these are often the primary things our customers base their opinion of the FNET brand and quality of our products on. Now more than ever is an important time to consider a better way to manage our resources related to technical communication.

This proposal suggests a plan for bringing together the people who produce technical communication deliverables in response to the challenges our CSP Engineering area is facing. Specifically, this plan focuses on aligning these employees under one collaborative self-directed work team focused on prioritizing and efficiently creating documentation, designing user interfaces, conducting training, performing usability assessments and coordinating product deliveries.

The formation of a Technical Communications team would accomplish the following goals:

- Prioritize Tasks
- Efficiently Utilize and Allocate Human Resources
- Increase Employee Morale
- Increase Productivity
- Improve the Quality of Deliverables
- Ensure Consistency of All Deliverables
- Promote Cross-training of Skills

The proposed formation of a TechComm team consists of a six-phase implementation plan:

Phase One	**Creation of the TechComm Community**
Phase Two	**Creation of Roles, Responsibilities, Standards and Procedures**
Phase Three	**Building of the Skills Matrix**
Phase Four	**Scheduling of Monthly or Bi-monthly Meetings**
Phase Five	**Training**
Phase Six	**Assessment**

This alignment would have little budgetary impact. Minimal funding would be required since the majority of the costs are predicted to come from the purchase of software and training for the members of the proposed group. If this funding were not available, the formation of the team could still go forward. Employees would just share resources and train each other in the use of software.

The organization of a TechComm team will improve efficiency and ensure that we will deliver the best possible product on time and within budget while continuing to exceed our customer's needs and expectations. This is crucial in maintaining our company's reputation with our few current customers.

Contents - cont.

Contents - cont.

1.0 Introduction

Customer Reputation is Crucial

The acquisition of LoopExpert Technologies, Inc. by Fluke Networks (FNET) in July, 2003, the addition of the Camarillo-based Harris Corporation operations in May, 2004 and the recent reorganization of FNET's business units introduced many changes in our organization. Our business unit is now identified as Communications Service Provider (CSP) and fortunately has remained virtually unchanged structurally, maintaining our Marketing, Sales and Engineering areas. These areas have continued work to maintain LoopExpert's solid reputation within the Telecom OSS market. However, we face challenges such as under-staffing, tight deadlines, limited budgets and increased workloads that make keeping our reputation with our customers more and more difficult while the demand for product quality and customer service continues to increase.

First Impressions are difficult to alter and existing reputations are critical to maintain. That's why delivering quality products to our customers is crucial in maintaining our company's reputation. It is especially important considering the limited customer base we currently hold (Qwest, Southwestern Bell, SBC, Verizon, Cincinnati Bell, and Bell Canada). Though there is some possibility of global expansion into Asia in the near future our reputation is determined by the relationships we maintain with those few customers we currently have and the quality of the products that we deliver now.

Unfortunately due to recent under-staffing, extremely tight time constraints and limited budgetary resources, delivering quality products and continued first-rate customer service has become exceedingly difficult and sometimes downright impossible. Due to the current circumstances, tasks and deliverables such as documentation, user interface design, training, usability and production processes tend to be taken for granted, given the least priority, or are completely forgotten, though they are indeed an important part of the software development process. More importantly, deliverables such as these are often the only things our customers base their opinion of the FNET brand and quality of our products on. Now more than ever is an important time to consider a better way to manage our resources, including the heart of our

Engineering area: our human resources. In particular, those people responsible for documentation, interface design, training, usability and production are the key to delivering high quality deliverables that are crucial in maintaining the reputation we have with our customers.

This proposal suggests a plan for bringing these people together in response to the challenges our CSP Engineering area is facing. Specifically, this plan focuses on aligning these employees under one collaborative team focused on prioritizing and efficiently creating documentation, designing user interfaces, conducting training, performing usability assessments and coordinating product deliveries.

First, I will review the current situation, what is causing the situation and how these causes are affecting the delivery of documentation, the design of interfaces, the creation of training, the assessment of interfaces for usability and the production process. Secondly, I propose a plan for the organization of a Technical Communications team that will alleviate the challenges of limited resources, increased workload, tight deadlines, and restricted budget our Engineering area is encountering. I will review goals and benefits of the plan, who will be affected by the formation of the team and who will be held accountable for the team after it is created. Then I will discuss the phases of implementation, the time line for implementation, and how the results of the team formation can be measured for effectiveness once created. Finally, I will breakdown the costs and benefits of the plan. The goal here is to show how bringing together the human resources that create such highly perceived customer deliverables can more effectively be managed and coordinated via a team dedicated to those tasks, particularly at a time when time, money, and people are scarce and projects are piling up. Most importantly, I will address how this can be done while maintaining high quality deliverables and meeting and exceeding our customers' expectations.

1.1 Where We Are Now

How current challenges are affecting documentation, interface design, training, usability and production.

In order to understand the suggestions outlined in the plan proposed, it is important to be aware of the factors that cause

technical communication deliverables such as documentation, interface design, training, and production not to be managed as efficiently as they could be.

1.1.1 Current Situation

Our Engineering area, encompassing about 50 employees in all, is composed of four geographically dispersed offices in New Jersey, Ohio, Georgia, and Texas. Currently, these employees are members of project teams that consist of one project manager, database administrators, software engineers, technical writers, trainers, and user interface designers. Each team is unique and may or may not include members rounding out each of those functional areas due to under-staffing. Members may also perform more than one function on a team and may assist other teams when needed. For example, a technical writer may be responsible for interface design or production processes for the team that he/she resides and may also assist another team with the creation of a user guide.

1.1.2 Challenges

The CSP Engineering area has been faced with the following challenges:

- Increased Workload
- Shortened Development Time Frame
- Limited Human Resources
- Limited Budget

An increased workload has resulted partly from the sales team over committing our limited engineering resources. Coupled with this is the fact that these numerous projects all have extremely short development time frames due to signed contract agreements. Another challenge is the fact that the Engineering area is faced with limited employees to develop the projects and little budgetary resources to support such things as hiring new employees, obtaining training for existing employees or the purchasing of software/hardware to create the appropriate development and testing environments.

1.1.3 Effects

As a result of the challenges outlined above, those employees charged with technical communication tasks and the deliverables they create are affected in a number of ways:

- Inefficient Use of Employees' Time
- Decline of Employee Morale
- Decline of Quality Deliverables
- Incomplete Technical Communication Tasks
- Late Release of Deliverables
- Inconsistent Deliverables

The current structure of project teams consists of one project manager that manages not only the technical aspects of the project, but also the employees that make up that team. Due to the recent constraints on time and the increase of work, several managers have been so overwhelmed with the technical aspects of their projects, that they have forgotten to manage the tasks and people that make up their teams.

Through interviews with managers and employees, I have discovered that these managers spend the majority of their time doing development work on their projects and have very little time to manage their team members working on deliverables not directly related to development such as documentation, training, interface design, usability and production processes. As a result, employees sometimes have nothing to do and "fly under the radar" doing nothing until their manager assigns them more tasks. Other employees find additional work themselves, even if it means going outside of their team to find it. This has proven to be an inefficient use of human resources, especially when time is limited and workloads have increased.

Those team members working on technical communication tasks have experienced a decrease in morale and motivation to perform their work due to the low priority they and their tasks receive. If left unchecked productivity will continue to decrease affecting the quality of the work they deliver.

Productivity and quality go hand in hand. As employees become less motivated to perform their work, they may not deliver the caliber of work that they were hired to do. Since the technical communication aspects of our products are so visible, a decrease in the caliber of quality in our products will be immediately noticed by our customers. One incident has already reduced our credibility with quality. An installation guide for one of our products was recently delivered loaded with errors. The customer was irate and escalated their complaint to the director of engineering. Though the problem was acknowledged, problems like these will continue to surface if the cause of the problem isn't addressed. In this case, a tight deadline and lack of follow-up from the manager led to the situation.

With managers so busy actually doing development work on their own projects, situations like described above will continue to happen. Technical communication tasks currently are forgotten or assumed to be taken care. In fact, some teams deliver products without help systems, administrative guides or tested user interfaces because the manager forgot about the deliverable, there was nobody available to do it or the person assigned to it failed to complete it.

When these deliverables fall through the cracks or are not completed due to lack of resources or follow-up from the project manager, they are delivered late. When such things as installation guides, user guides and online help are delivered late, we come across as being less professional or reliable, which can translate into our customers thinking that the products in their entirety are not credible or reliable.

Inconsistency in the format, style, tone, design and feel of our documentation, training, user interfaces and other product release deliverables can reinforce this image of unreliability and lack of professionalism. Since the employees that perform technical communication tasks are currently dispersed, inconsistencies exist between the documents, interfaces, production deliverables, and training delivered by each team. We run the risk of our customers perceiving us as unorganized and incapable of delivering quality products.

In addition, the dispersion of those employees performing technical communication tasks has not only caused inconsistency in the creation of their deliverables, but has also caused these employees to feel isolated. This is especially true when someone runs into a problem and needs help. Currently team members face roadblocks and problems alone, dealing with them in isolation when in fact, there may be someone on another team that has faced similar difficulties.

It is unlikely that factors such as increased workload, shortened project deadlines, budgetary constraints and lack of human resources will change for the CSP Engineering area anytime soon. However, the effects of these circumstances will continue to grow if not addressed. In order to maintain the reputation we have had with our customers in the past, we need a plan to deal with our situation going forward.

2.0 The Plan

Organization of Technical Communications Team

I believe the best way to overcome the challenges that the employees creating technical communication tasks face is to bring them together as one collaborative, self-directed work team (SDWT) that acts as a support mechanism for each project team. Figure 1-1, below depicts what this SDWT structure would look like.

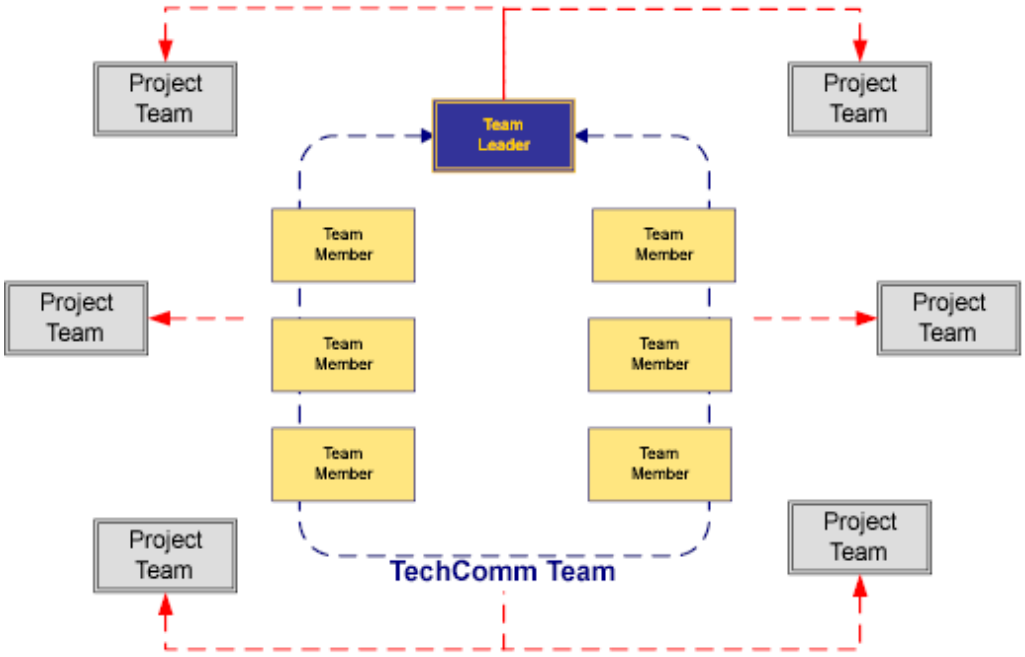

Figure 1-1 Structure of Proposed TechComm Team

A SDWT is a group of employees dedicated and "fully responsible for turning out a well-defined segment of finished work."1 Members of SDWTs typically perform supervisory functions together, often with a team leader acting as the team representative/mentor.

According to Michael Piczak and Reuben Z. Hauser, authors of "Self-directed Work Teams: A Guide to Implementation," SDWTs are a crucial part of the continuous improvement process. They

1. Michael Piczak and Reuben Z. Hauser, "Self-Directed Work Teams: A Guide to Implementation"

state that, SDWTs have been found to “improve quality, productivity, flexibility, commitment, and customer satisfaction”.

Ideally, a SDWT works together as a highly trained group that is responsible for planning; prioritizing tasks; managing workloads, schedules, processes and standards; and coordinating with project teams for producing “successful end products.” 2

As you can see, SDWTs are a little different than the typical project-centered teams. Piczak and Hauser state that SDWTs “often have more resources at their disposal, a broader range of cross-functional skills, much greater decision-making authority, and better access to information.” All of which, are keys to helping us work around the constraints we are currently dealing with. They are also characteristics that will help accomplish the goals set for the proposed team.

2.1 Goals

The formation of a Technical Communications (TechComm) team would address the challenges that we face in our current situation. It would accomplish the following goals:

- Prioritize Technical Communication Tasks
- Efficiently Utilize and Allocate Human Resources for Technical Communication Task Completion
- Increase Employee Morale by Building a Technical Communication Community
- Increase Productivity
- Improve the Quality of Technical Communication Deliverables
- Ensure Consistency of All Deliverables Related to Technical Communication
- Promote Cross-training of Technical Communication Skills

2. Angie E. McNeill, “Self-directed Work Teams”

2.2 Benefits

Reorganizing our resources to improve end-user deliverables is a solution that would improve production time and efficiency by bringing these associates together under one collaborative SDWT. We will be better able to manage and allocate our already limited resources while improving quality, consistency and productivity. Most importantly it will build a community for technical communication that will serve as a forum for discussion and a knowledge base, improving morale.

There are many benefits to aligning a SDWT. First, it alleviates the project managers from having to worry about tasks that are not directly related to development. For example, the project manager would no longer have to manage resources for documentation, interface design, training and production in addition to focusing on development.

Another benefit would be that project managers would no longer have to "borrow" resources from other teams when they don't have the resources they need. In fact, the TechComm team would eliminate down-time for associates. Instead of the associate dropping from the product manager's radar and having nothing to do (as often happens now), the TechComm leader would be able to manage the associate's assignments, even pairing associates up on collaborative projects to get a job done faster.

Cross-training of skills would also be an advantage. Team members would be responsible for several focus areas, allowing them to actively participate in several aspects of the technical communication process. Building a skills matrix, utilizing people's strengths and developing their weak areas will grow a solid collaborative team.

These are just a few of the advantages of forming a collaborative, cross-functional, SDWT focused on documentation, interface design, training, usability and production. Outlined below is a breakdown of the purpose and strategy for the proposed alignment of the TechComm team.

2.3 Purpose

To create, communicate and manage high quality information related to:

- Documentation
- User Interface Design
- Usability
- Training
- Production

Outlined in Table 1: TechComm Focus Areas are specific descriptions of each proposed focus area including deliverables, activities and functions performed by each area.

Focus Areas	Activities/Functions	Deliverables
Documentation	• Meet Monthly • Communicate/Update Standards • FrameMaker Training • WebWorks Publisher Training	• User Guides • Installation Guides • Help • Test Plans • Standards/Processes
User Interface Design	• Interface Consistency • Human Computer Interaction Design • Prototype Creation • Match Interfaces to Requirements • Meet Monthly • Communicate/Update Standards	• Graphics • Interface Designs • Style Sheets • Prototypes
Usability	• Usability Testing • Interface Walkthroughs • Meet Monthly • Communicate/Update Standards	• Interview Scripts • Usability Reports
Training	• Create/Communicate Standards • Explore Web-based Training • Meet Bi-monthly	• Lesson Plans • Training Materials • Web-based Training
Production	• Verify Product Names w/Marketing • Create/Communicate Delivery Checklist • Training on CD Label Process • Create/Communicate Delivery Documentation Templates • Create/Communicate Customer Contact List • Create/Communicate Shipping/Packaging Process • Meet Bi-monthly	• Delivery Checklist • CD/Tape Labels • Delivery/Update Documentation • Packaging/Shipping Materials

TABLE 1. **TechComm Focus Areas**

The activities and functions outlined in the table describe what each focus area would be responsible for and the deliverables that would be created by each area.

2.4 Strategy

The plan is to create a cross-functional SDWT with a common vision centered around the Voice of the Customer.

Ideally we would field the best team via:

- Common Vision
- Communication
- Processes/Standardization
- Training/Education
- Resource Allocation

The cross-functional SDWT based on focus areas, would utilize the strengths of every team member and build-up areas of weakness. Eventually a solid team capable of delivering products that are of high quality, on-time, within budget and meet the needs of our customers would be created.

2.5 Who

The team would consist of current associates already involved with documentation, interface design, usability, training and production activities. TechComm as a whole, would be comprised of static and revolving members performing many activities . A core team of static members supported by revolving team members would make up the group. The cross-trained static members would perform most of the core functions on a full-time basis. The revolving team members would move in and out on an “as needed” basis performing specialized tasks while their primary responsibilities would remain with their main teams.

2.6 Accountability

The leader or facilitator of the proposed TechComm team would report to the director of engineering in New Jersey and the TechComm team members would report to or work closely with the team leader. Ideally, the TechComm leader would meet once a month with the engineering directors and project managers to

communicate project plan statuses and projects coming down the pipe-line. The inclusion of the TechComm leader at these meetings will guarantee that the time lines and tasks of current and upcoming projects are fully communicated well in advance of the due dates. This will allow the TechComm leader to plan for resource allocation and a deliverables time line.

3.0 Implementation

The formation of the TechComm team will be conducted via a phased implementation. First, a TechComm community will be created to serve as a communications portal and document repository. Then roles, responsibilities, standards and processes will be finalized and created for each focus area of the team. Third a skills matrix of the technical communication employees will be created. Fourth, monthly or bi-monthly meetings will be held. Finally, training will be scheduled on an ongoing basis to cross-train and educate employees on new software and standards.

3.1 Phase One: Creation of the TechComm Community

In order to support the TechComm team, a collaborative website will be created. This site will be developed using SharePoint Services, a server and software package that FNET already owns. The TechComm team site will be a password protected site that will serve several functions. It will be the central communication channel for the TechComm team. The site will contain an area for threaded discussions, a calendar of events for posting project due dates and a task list to outline who's working on what. It will also serve as a version controlled repository for each of the focus areas.

The site will be divided into four sections, dedicated to the focus areas (user interface design and usability will be combined). Each section will contain its own repository, events calendar, task list and supporting documents and procedures. A knowledge base in the form of a threaded discussion area will also reside in each section.

The goal of the site is to promote team collaboration and community. It will also serve as the main document/graphics repository as well as a forum for solving problems.

3.2 Phase Two: Creation of Roles, Responsibilities, Standards and Procedures

Phase two of the implementation will involve the creation of the specific roles and responsibilities for the TechComm Team. In addition, the standards and processes for each area will be reviewed and revised as needed. As indicated in the table on page 9 titled TechComm Focus Areas, some standards/procedures will

be updated while others will be created because they currently do not exist.

This phase will serve to create the foundation for the team so that each member will know exactly what is expected and the process that should be followed for each focus area.

Once finalized, this information will be rolled out at the first TechComm team meeting (held in Phase Four: Scheduling of Monthly or Bi-monthly Meetings) along with the teams's vision/purpose and the location of the TechComm team website.

3.3 Phase Three: Building of the Skills Matrix

To better gauge the each employee's strengths and areas in need of improvement, a skills inventory will be conducted as part of phase three. This will be conducted in the form of a short questionnaire asking each employee to list areas of technical communication that they feel strong in and areas that they feel they need more training/experience in. The results will be compiled into a skills matrix which will be used to determine need for training and as a reference for resource allocation.

The skills matrix will consist of a listing of every member of the TechComm team, cross-referenced with the level of skills, software and knowledge areas that each member is proficient in.

It is important to note, that this skills matrix is in no way related to the performance appraisal process. It will be used to begin the cross-training process and determine training interests/needs. It will also serve as a quick reference guide for resource allocation.

3.4 Phase Four: Scheduling of Monthly or Bi-monthly Meetings

Face-to-face meetings are an important part of maintaining and building community. Therefore, each focus area will meet either monthly or bi-monthly according to the table on page 9 titled TechComm Focus Areas. New projects, existing due dates and updated standards/processes will be discussed. These meetings will also serve as forums for problem-solving and knowledge exchange.

3.5 Phase Five: Training

In order to build a cross-functional team, internal training sessions will be held on a regular basis. The skills matrix created in Phase Three: Building of the Skills Matrix will help determine what topics will be selected for cross-training sessions and who will lead them.

The goal is to make sure that every member of the team has the knowledge and skills necessary to perform the functions of each focus area with the realization that there will be experts representing each area.

If a new technology is adopted by the team, then outside training will be provided as the budget allows.

3.6 Assessment

The success of the team will be measured on the following:

- Prioritization of TechComm Tasks
- Efficiency of Human Resource Allocation
- Level of Employee Morale
- Level of Productivity
- Quality of Technical Communication Deliverables
- Consistency of Deliverables

Initially feedback from the TechComm team members themselves will reveal how successful the team is performing. The monthly meetings will serve as a forum for gathering feedback for things that are working and not working. The first few months will most likely be full of adjustments as the team settles in. As time goes on,

evaluation will take on a more formalized process as outlined in Table 2: Assessment Goals, below.

Assessment Goals	Metrics
Task Management	• Employee Survey • Employee Interview (every 6 months) • Feedback from Meetings • Tracking of Completed Tasks Delivered/Project • Tracking of Tasks Completed/Member
Human Resource Allocation	• Employee Survey • Employee Interview (every 6 months) • Tracking of Tasks Completed/Member
Employee Morale	• Employee Survey • Employee Interview (every 6 months) • Feedback from Meetings
Productivity	• Tracking of Projects Completed by Team/ Project or Quarter • Employee Survey
Quality	• Number of Change Requests • Feedback via Customer Surveys
Consistency	• Reviews of Deliverables • Tracking Through Collaborative Writing/Editing

TABLE 2. **Assessment Goals**

Working with the Process Improvement Team, I will design and implement a metric for determining specific performance indicators such as increased production, time saved, and number of projects that are delivering appropriate and completed technical communication deliverables. These results will then be compared to past deliverables to gauge performance.

3.7 Personnel

Due to the circumstances of limited resources, budget and time that the CSP Engineering area is currently facing, I would be the main person responsible for driving the implementation of a Tech-Comm team.

To gain a better understanding of organizations and team structure, I enrolled in an organizational behavior class and have vol-

untarily taken three management training classes offered through FNET to gain valuable management skills.

I recently attended a continuous improvement event (kaizen) focusing on improving our overall software development process. I also sit on the CSP Process Improvement Team and am a member of the CSP Change Control Board.

To gain more knowledge specific to technical communication, I attended the 2005 Society for Technical Communication (STC) conference in Seattle. There, I participated in sessions on managing documentation teams, creating virtual collaborative team workspaces, and how to implement quantitative measurement techniques for improving documentation processes.

In addition, I researched usability and Human Computer Interaction (HCI) processes and recently attended Usability Week 2005 offered by the Nielsen Norman Group. I attended HCI classes and a three-day usability camp that reviewed usability processes, team organization and how to create company support for HCI and usability.

I have also networked with the hardware business unit of FNET and met with the technical writers, software engineers, and user interaction designers when I was in Seattle for the STC conference. I reviewed their processes for hardware development and compared them with our current software processes.

All of these actions have helped me gain skills and knowledge that helps me better understand and make informed decisions about team structure and technical communication in general.

3.8 Schedule of Implementation/Deliverables

Phase One: **Creation of the TechComm Community**	**08/30/2005**	**TechComm Site Completed**
Phase Two: **Creation of Roles, Responsibilities, Standards and Procedures**	**09/15/2005**	**Process Flow/Standards/Roles Approved by Process Improvement Team**
Phase Three: **Building of the Skills Matrix**	**10/01/2005** **10/07/2005**	**Skills Questionnaire Completed and Distributed** **Questionnaires Compiled into Matrix and Analyzed for Training Needs**
Phase Four: **Scheduling of Monthly or Bimonthly Meetings**	**10/15/2005**	**First Official Meeting**
Phase Five: **Training**	**10/20/2005**	**First Internal Training Session Conducted f/Results of Skills Matrix**
Phase Six: **Assessment**	**09/30/2005** **01/15/2005**	**Evaluation Metrics Completed** **First Assessment Begins**

4.0 Budget

4.1 Cost

Initial implementation of the reorganization is estimated to cost $26,600 as indicated in Table 2 below. This includes $8,600 that will go towards software and training. Software licenses for members of the team are estimated at $4,600 and training on that software will cost $4,000 (marked in yellow in Table 2 below). The majority of the cost predicted to be incurred by the proposed reorganization will be employee labor hours worked. Total estimated labor for implementation is $18,000. Though this amount is significant, it is not directly associated with the budgetary funding request, but will be associated with allocation of resources and project planning.

	Year 1
Labor (in Hours)	
Planning	100
Implementation	200
Total Hours	300
Total Labor Cost	**$18,000**
Expenses (in Dollars)	
Software Licenses	$4,600
Training	$4,000
Total Expenses	**$8,600**
Total	**$26,600**

TABLE 3. **Implementation Costs**

Ongoing costs are predicted to be about $13,000 for every year after implementation as indicated in Table 3 below. This figure includes a $2,500 estimate for software/training with $1,000 for software license and maintenance fees, $500 for new software tools and $1000 for training. Employee labor hours worked will cost $10,500. This includes administrative tasks, meeting time, and additional overhead that are not included in the funding request.

	Year 1	Year 2	Year 3	Year 4	Year 5
Labor (in Hours)					
Maintenance	12.5	12.5	12.5	12.5	12.5
Meetings	25	112.5	112.5	112.5	112.5
Additional Overhead	100	50	50	50	50
Total Hours	137.5	175	175	175	175
Total Labor Cost	**$8,250**	**$10,500**	**$10,500**	**$10,500**	**$10,500**
Expenses (in Dollars)					
Software Maintenance/License Fees		$1,000	$1,000	$1,000	$1,000
New Tools		$500	$500	$500	$500
Ongoing Training		$1,000	$1,000	$1,000	$1,000
Total Expenses	**$0**	**$2,500**	**$2,500**	**$2,500**	**$2,500**
Total	**$8,250**	**$13,000**	**$13,000**	**$13,000**	**$13,000**

TABLE 4. **Ongoing Costs**

4.2 Funding

Budgetary impacts for this proposed reorganization would be minimal in actual funding being requested. The formation of the TechComm team itself should not incur significant costs outside of employee labor hours which as stated before are not part of the funding request. The majority of the costs are predicted to come from the purchase of software and training on that software for the members of the proposed group. This is estimated to cost $8,600 initially and $2,500 every year after that as seen in Table 4 below.

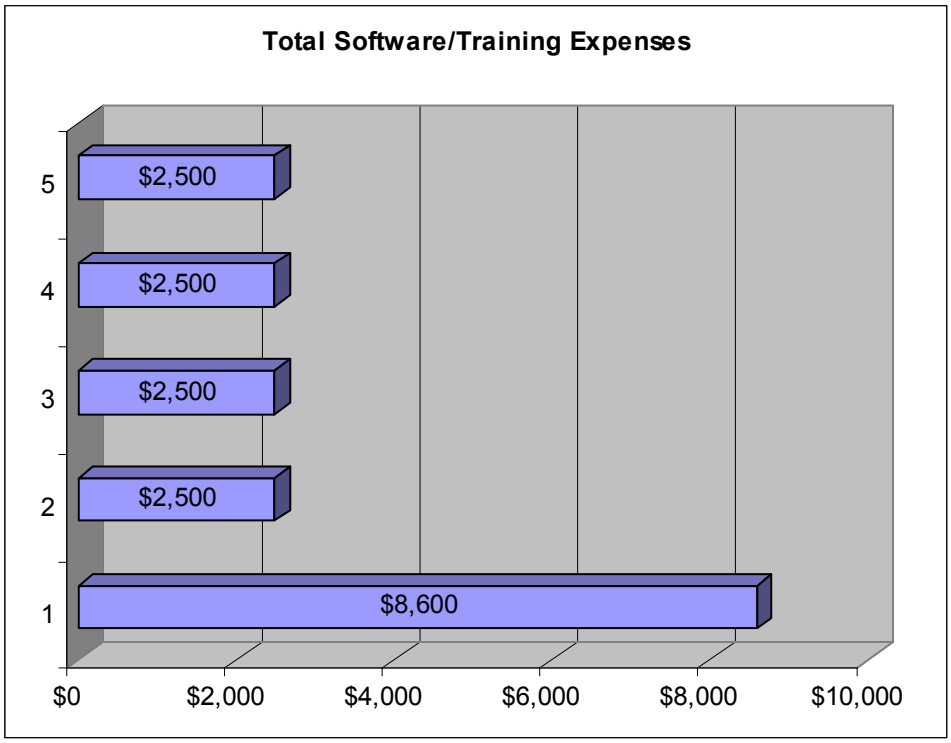

TABLE 5. **Funding Requested for Implementation**

Though funding is being requested for software and training, the formation of the TechComm team could still go forward if the money were unavailable. Employees would share resources and train each other in the use of the software as needed. If funding were needed for licensing agreements, it would cost no more than an estimated $2,000 to maintain legal licensing of our core publishing software.

4.3 Savings

After doing a preliminary calculation as seen in Table 5 on the next page, it is estimated that $46,500 can be saved in work hours if a team dedicated to Technical Communication is formed. This is a savings of three hours a week per employee and half an hour a week per manager the first year. As time goes on, project manag-

ers could save up to two hours a week resulting in $51,000 being saved in ongoing years.

On average, it is estimated that 100 hours a year could be saved if the project managers are no longer responsible for planning and scheduling tasks such as documentation, training, usability testing, and user interface design. In addition, the employees that would become part of the TechComm team would potentially save 750 hours a year as a result of the reorganization. This would be a result of more efficient allocation of resources, collaboration on projects and an improved communication channel.

	Year 1	Year 2	Year 3	Year 4	Year 5
Hours Saved					
Total Employee Hours	750	750	750	750	750
Total Manager Hours	25	100	100	100	100
Total Hours Saved	775	850	850	850	850
Total Cost Savings	**$46,500**	**$51,000**	**$51,000**	**$51,000**	**$51,000**
Hours Saved					
Hours / week / employee	3	3	3	3	3
Hours / week / manager	0.5	2	2	2	2

TABLE 6. **Cost Savings and Hours Saved Ongoing from Year of Implementation**

5.0 Conclusion

Documentation, user interfaces, training, usability and production processes, all have a direct impact on how our customers perceive FNET and the quality of our products. Unfortunately the CSP Engineering area currently has limited customers and the reputation we maintain with those customers is crucial.

With customer perception and first impressions being so persuasive, it is crucial that we value the Voice of the Customer. This proposal outlined causes of our current situation and how they affect our technical communication processes. If we take the steps described to form a TechComm team, then our overall technical communication deliverables will improve.

This document should spark thought and discussion regarding the reason a self-directed TechComm team dedicated to the improvement and roles related to documentation, user interfaces, training, usability and production is so critically needed in a time when we are faced with challenges such as under-staffing, tight deadlines, limited budgets and increased workloads that make keeping our reputation with our customers difficult, while the demand for product quality and customer service continues to increase.

This team alignment is just a small part of the software development process. However, it is a crucial part with highly visible deliverables which have a direct impact on how our customers perceive FNET and the quality of our products.

With continued communication and coordination, we can work toward slowly building a stronger overall software development process.

Focusing on reorganizing our human resource efforts to include a TechComm team will incur limited costs but will improve efficiency and ensure that we will deliver the best possible product on time and within budget while continuing to exceed our customer's needs and expectations.

6.0 Works Cited

Armstrong, Ron. "Overcoming Objections to Team-Based Organization." R.V. Armstrong & Associates. 2001. 7 Jun. 2005. <http://www.rvarmstrong.com/OvercomingObjectionsToTeamBasedOrganization.htm>.

D'Larenti, Chantal, Connie Davis, Alan Cross, Everett Puckett. "Whose Team? Managing and Participating in Non-Traditional Work Teams." Proceedings, 50th STC Conference, 2003.

Femia, Jean W. "Serving Two Masters: Working with Matrix Management." Proceedings, 45th STC Conference, 1998.

Harkness, Holly. "Strategies for Winning Recognition: Building a Visible, Viable, and Valuable Documentation Team." Proceedings, 50th STC Conference, 2003.

Hughes, Michael, A. "Managers: Move from Silos to Channels." Intercom (March 2003): 9-11.

McNeill, Angie E. "Self-Directed Work Teams." Intercom (September/October 2000):15-17.

Pauls, Janice L. "Technical Writing on Self-Directed Teams." IPCC '94 Proceedings, Professional Communication Conference, 1994.

Piczak, Michael W. and Reuben Z. Hauser. “Self-Directed Work Teams: A Guide to Implementation.” Quality Progress 29 (May 1996):81-87.

Postava-Davignon, Christi-anne, Candice Kamachi, Cory Clarke, Gregory Kushmerek, Mary Beth Rettger, Pete Monchamp, and Rich Ellis. “Incorporating Usability Testing into the Documentation Process.” Technical Communication 51 (February 2004):36-44.

Robbins, Stephen P. Organizational Behavior. 11th Edition. New Jersey: Pearson Prentice Hall, 2005

Wick, Corey. “Knowledge Management and Leadership Opportunities for Technical Communicators.” Technical Communication 47 (November 2000): 515-529