ABSTRACT

REPORT ON A MTSC INTERNSHIP AT THE NORMANDY GROUP
by Jill Elizabeth Zadik

This four-chapter report describes the work I completed as a technical writer/trainer intern at The Normandy Group (TNG). It provides an overview of TNG; an overview of my role and the projects I worked on at TNG; a description of the user guide I created as my major writing project at TNG; and an analysis and application of the Problem Solving Model for Technical Communicators in regards to my major project and an exploration of the internship regarding the expectations I had before the internship began, the reality of the internship, and the hindsight gained from the internship.
REPORT ON A MTSC INTERNSHIP AT THE NORMANDY GROUP

An Internship Report

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Department of English

By
Jill E. Zadik
Miami University
Oxford, Ohio
2008

Advisor
________________________________________
Katherine Durack, Ph.D.

Reader
________________________________________
Jean A. Lutz, Ph.D.

Reader
________________________________________
Rebecca Balish, Ph.D.
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CHAPTER 1 | INTRODUCTION

This chapter introduces the company at which I performed my internship, the company’s environment, its organizational culture, and my role as a technical communicator/trainer. To complete the requirements for the Master of Technical and Scientific Communication (MTSC) degree, I performed an internship from May 4, 2007, to August 10, 2007, as a Technical Communicator/Trainer at The Normandy Group (TNG) in Cincinnati.

The Company

The Normandy Group is a small consulting company (totaling fewer than 20 employees in-house and at client sites), that focuses on business intelligence and business solutions. The company prides itself on using unique approaches to performance management, process improvement, and industry best practices. The Normandy Group seeks to exceed clients’ expectations by using these approaches, and fulfills its vision of supplying solutions that encompass the people, the processes, and the technology to give its clients an advantage over their competitors.

The Normandy Group provides services and products in the banking, insurance, financial, manufacturing, professional, government, and retail industries in 5 key areas:

- *Data warehouse/data management*: designing, building, and implementing systems to manage data.
- *Architecture planning*: designing and/or implementing data or application systems.
- *Application/business integration*: enabling businesses to integrate current systems and new systems to streamline business processes and activities.
- *Content and document management*: maintaining up-to-date content and document management techniques to enable businesses to focus on the quality of documents.
- *Enterprise applications and development*: developing specialized, proprietary applications that focus on meeting each company’s individual needs and goals.

Services include imaging computers, designing data warehouses, and creating software applications for an array of clients. The Normandy Group has recently provided consulting services to DayMark, Frequency Marketing, Drees Homes, GE, Hill-Rom, Michelman, ScanSource, Schneider Electric, Triad, Cintas, Marathon, Western & Southern Financial Group,
and Western-Southern Life. To provide clients like these with high quality services, all TNG consultants have a wide-ranging set of skills and come from a variety of industries so they can cover multiple areas of business planning, management, and analysis through their knowledge of many disciplines. For example, consultants are typically experienced in computer science, database management, networking, and business process management (BPM) applications in addition to the specific professional requirements for their positions.

Because TNG employees have to serve many industries, TNG encourages its associates to stay abreast of cutting-edge technology and to be creative in their work so clients receive the most innovative, original, and efficient solutions available. In addition to encouraging associates to stay updated on technology, TNG connects the best-suited consultants to each client and project by determining the skills necessary for various projects. The Normandy Group couples this strategy with designing business intelligence (BI) and BPM products that in turn enhance its clients’ products and services.

The Normandy Group has knowledgeable and dedicated staff that specialize in seven main areas: integrated strategic planning, business process management, performance management, business intelligence, customer relationship management, information technology strategic planning, and knowledge management. To explain each area in simple terms, the following sections discuss a hypothetical company’s (Company X’s) process of baking a batch of cookies and how TNG could use each specialized area to improve the company’s process of baking cookies.

**Integrated Strategic Planning**

Consultants with specialized knowledge in *integrated strategic planning* focus on analyzing core competencies, market share, goals, and day-to-day activities to develop a strategy for meeting and exceeding defined scope-of-intent by incorporating multiple tools to meet future goals.

In the example of making a batch of cookies, integrated strategic planning may find that Company X’s strengths and core competencies are mixing, sectioning, and quality-checking the cookies, but the company’s weaknesses may be eating the cookies before selling them for a profit, wasting the materials needed to make the cookies, and baking the cookies too long.
thereby ruining profits. Analysis would reveal that Company X covers the sugar-free and fat-free cookie market share and it would set the goals necessary to maintain that market share and possibly take over more market share, depending on the company’s overall business objectives. Analysis would also find areas in the day-to-day activities of the company that could improve Company X’s cookie baking process.

*Business Process Management (BPM)*

Staff that have expertise in *business process management* design a structured and systematic approach to uncover, magnify, and forecast potential systematic problems in business processes, offering companies the opportunity to make their business processes more efficient, effective, and adaptive to change.

Business process management may reveal that Company X consistently orders a surplus of egg substitute but not enough sugar substitute, so the egg substitute reaches its expiration date before it can be used and the sugar substitute runs out, both of which cause production delays. TNG would use BPM to offer Company X the opportunity to redesign how it monitors inventory and orders perishable foods to resolve these issues.

*Performance Management*

Consultants use specialized knowledge to analyze *performance management*, which enables businesses to use their workforce, resources, and assets to improve company performance.

Performance management might find that Company X has employees who know how to make other types of cookies, yet are not given the opportunity to submit their cookie ideas. It may also show that the employees could take more frequent, yet shorter, breaks to improve employee morale and overall productivity.

*Business Intelligence (BI)*

The Normandy Group consultants are also specialized in *business intelligence* which evaluates processes for collecting, maintaining, presenting, and analyzing business information.
A business intelligence analyst might tell Company X that the pencil and paper suggestion box is not yielding a high number of suggestions, and the suggestions that are submitted through this means are of low quality. Business intelligence would offer a new process for gathering this information such as an anonymous suggestion/feedback email address or link off the company’s website.

**Customer Relationship Management (CRM)**

Consultants who specialize in customer relationship management focus on understanding how customers relate to business processes and how companies can improve customer relationships by analyzing company operations.

A CRM analyst might consider how the customers feel about the company’s contributions to the overall well-being of the environment. In this situation, CRM analysts may reveal that the best way to reach the company’s goals through the customers is to use eggs from free range poultry, to order ingredients from “green” companies, and to encourage employees to volunteer to help keep the area litter-free.

**Information Technology Strategic Planning**

Information technology strategic planning involves evaluating the company’s needs for information technology and developing a plan to meet the needs of each company.

Information technology strategic planning may involve designing an email exchange system to facilitate communication among team members who create cookie ideas, an online inventory sheet that is directly linked to a supplier’s order form on the internet, or a computerized clock-in/clock-out system for employees at Company X.

**Knowledge Management**

Finally, TNG consultants specializing in knowledge management gather, store, and develop systems to share information, creating knowledge and valuable resources for a company to use to improve its processes.
Knowledge management experts would use the information gathered from Company X’s experience baking cookies and order it in a meaningful way. For example, it would take the data from Company X’s previous year’s inventory totals and apply them over the next year to help forecast needed finances, inventory, and staff to meet the needs of the company for that week. In this way, knowledge management takes data, turns it into information, and then maintains and organizes the information into knowledge by interpreting the data and information.

The Normandy Group has established relationships with Cognos (BI), DataMirror (data management), Metastorm (business process management), Oracle (database management), SAS (BI), and Veritas (security) to provide clients with expert consultants in the areas listed above. During my internship, TNG was not working closely with any partner to my knowledge; however, expert TNG consultants would occasionally train clients on the applications created by its partners listed above. On a few occasions, SAS would work with our sales force, providing leads and going on calls. Typically, SAS guests and TNG “sales guys” would share information during a morning meeting and then spend the day calling potential clients. Other partners may have been involved with TNG in a way that I was not able to observe on a day-to-day basis.

The Environment

During my internship, I worked at the TNG office in Blue Ash, but I was occasionally sent to a client’s office to work as most consultants do. The client site, ConfidentPlus in Mason, Ohio, was a nice change of scenery because I spent most of my internship in my cubicle at TNG’s office. The client site had fewer amenities than the TNG office, but the atmosphere was relaxed and motivational because employees could have open project discussions in the office. As I worked, I heard how the other employees were progressing or troubleshooting issues, and it encouraged me to continue to do the same. It helped me to stay focused and motivated to hear through office interaction that other employees were experiencing the same issues as I was.

Because the client was a start-up company, the general mood of the company was energetic and helpful. Employees wore casual attire (jeans and a nice shirt), made a little noise, and worked quickly and efficiently. I enjoyed working in the environment at the client site.
The Normandy Group’s office environment was not like the client’s. In fact, the TNG office environment reminded me of a library: quiet, no conversation, and very little employee interaction. The environment at TNG was partly due to the small number of employees who actually worked in-house. On a typical day, I would be in the office with only four other employees, including the owner of the business. It was expected that employees should not be in-house at TNG, but out at client sites working on projects for the client. If an employee was actually in-house at TNG it usually meant that the employee was “on the bench” and not actively billing at a client site, which was considered unfavorable. At the TNG office, the organizational culture was strict and inflexible. The culture required business casual attire, strict working hours, and no option for flex time.

During my internship the company was composed of approximately 65% consultants who had specialty areas that could be combined with other consultants’ skills to create unique solutions for the company’s clients. For example, some consultants specialized in workflow applications and worked with consultants with training in the Visual Basic programming language to create a robust proprietary application. The other 30% of the employees were in sales for TNG. The sales force forged new relationships to provide consultants an opportunity to “get off the bench” and work on a client project at the client’s site. The sales staff also focused on maintaining relationships with current clients through follow-up phone calls and lunch meetings. Additionally, sales staff would contact former clients to ensure the services TNG performed previously were still sufficient. If the prior solution was no longer viable, the sales member would approach a senior consultant to discuss possible solutions to present to the former client.

**The Company Organization**

The company’s organization is relatively simple because the company is small. Because of its small size, all consultants, sales staff, and administrative staff report directly to Chuck Burke, TNG’s managing partner. Although all employees reported to Chuck, we followed project-specific hierarchies while collaborating on projects. The project hierarchy began with the project manager, Chuck Burke, on all projects followed by the project coordinator, and then the necessary consultants (see Figure 1).
Figure 1 – The Normandy Group’s company organization. Because the company is small, the company organization is simple. All employees report directly to Chuck Burke, the managing partner.
Because there was no technical communication group or department at TNG, Chuck, who was not a technical communicator, but who had prior experience managing technical communicators, arranged for me to work with Sean Higgins, an external technical communication mentor. Sean and I met in the TNG office on one occasion, but decided to meet outside of TNG during lunch to avoid disturbing other TNG employees in-house. We decided to meet weekly and I developed a weekly meeting agenda for us to follow. Typically, I would discuss the user documentation I was working on (described in Chapter 3), but occasionally Sean and I would discuss our experiences with general aspects of being a technical communicator in a business that did not have an extensive history of working with technical communicators. Although having an external mentor meant that there would be no day-to-day interaction and observation between us, we were able to focus on and cover a large amount of information in our weekly meetings. Having an external mentor added a fresh view to many aspects of my work during my internship at TNG.

The Internship

During my internship at TNG I learned about the areas the company specializes in: management consulting, technology solutions, and project management. To gain experience with these areas, I was originally hired to complete three projects:

1. Project documentation, system documentation, and end-user documentation for a medical device;
2. Data warehouse project documentation (throughout the 14 weeks); and
3. In-house intellectual processes documentation.

Although I was hired to complete the work above, the needs of TNG and its clients shifted from the time I accepted the internship to the time I began the internship. To better meet the needs of TNG and the clients, I was charged with updating the TNG website and creating user documentation and system documentation for a proprietary application that was near the end of its development cycle. In addition to these major projects, I created timelines, status reports, and checkpoints to stay on track.

Completing these documentation projects contributed to the overall work of the company in tangible and intangible ways. Through my feedback to the programmer, the application’s
marketability to buyers increased because the application was revised to be more user-friendly. Additionally, the accompanying user documentation was professional and user-focused. My work expanded the scope of the application and its potential uses because the system documentation I wrote from the application code made it possible for different facets of the application to be replicated by any coder instead of only the one specific coder who originally created the application. The corporate identity of TNG was enhanced because I updated its website for consistency, quality, persuasiveness, and professionalism. To reach these outcomes, I completed the following activities:

- Created informal project schedules and defined documentation deliverables;
- Set goals and objectives and reviewed the progress of each;
- Created, reviewed, maintained, released product documentation (including user guides, quick reference guides, and administration guides);
- Researched possible audiences and produced documentation that continues to meet each audience’s specific needs;
- Maintained my understanding of software solutions and customer usage with new releases of programs or applications;
- Reviewed, edited, and proofread other materials written by coworkers at TNG; and
- Used Paul Anderson’s problem solving model for technical communicators to create a plan and strategy that would ultimately yield complete and high-quality documents.

Chapter 2 provides an overview of my internship at TNG, including the timelines, the projects, and the daily tasks I was a part of during my internship. In the following chapter, I explain the nature of the proprietary application I was hired to document. The chapter also discusses the agreement I had with TNG and the client to maintain confidentiality about the application and explains how I have modified the descriptions of my work in compliance with this agreement.
CHAPTER 2 | INTERNSHIP OVERVIEW

My work consisted of two major, proprietary projects that I was able to complete during my internship at TNG, namely an extensive user guide with two versions (application user and application administrator) and system documentation. The application I documented is a web-based application that combines genetic data and patient treatments with a database, matching patient information to drug information provided by the drug company. Doctors and nurses using the application can apply the knowledge they get from the application’s database to make informed decisions about patient care quickly. Additionally, as healthcare workers enter patient information over time, the usefulness of the database increases. A secondary project was to update the TNG website for consistency, quality, and persuasiveness. This chapter explains the proprietary nature of my agreement with TNG, the distribution of my time during the internship, the project-related tasks associated with my internship, and the challenges associated with each project.

The Agreement

Because the product I was hired to document is proprietary, I signed a confidentiality agreement at the beginning of my internship requiring that I would not discuss the specifics of the application or the documentation I created, including its name, specific work process, images, or other information until it was finalized. Because of this agreement, I have replaced the name of the client company with “ConfidentPlus,” the name of the application with “TrueNorth,” and the company that created the BPM software to “GreenFall.” The names of key people in this internship report have been changed so the identity of the client company is not inadvertently revealed. The examples of my work in the appendix have been adjusted to fit the terms of the confidentiality agreement.

The Timeline

Overall, I spent approximately 77% of my time creating documentation for TrueNorth, 22% of my time on the TNG website, and 1% of my time completing other administrative tasks (see Figure 2).

I spent the majority of my time working on the user guide because the application development was not complete. Although developing an application and developing the user documentation
often happens in parallel, my internship was specifically designed so that writing would begin after the application had been completed. However, because the application was not finalized, it changed daily and was characterized by those at TNG as a “moving target.” This section describes the project milestones during each month of my internship. The timeline in this section provides a visual representation of how I spent my time at TNG. Because of the consistently recursive nature of the work, for simplicity, I break down the time I spent on each project by each month of my internship (see Figure 2, next page).
Figure 2 – Timeline of major projects and tasks completed throughout entire internship period.
Month 1: Validation & User Testing

During the first month of my internship I worked on validation and user testing the application. In this report, validation and user testing are separate activities. Validation included testing the application and ensuring that it was working properly. The user testing refers to testing the documentation with users as they worked in the application.

There were two distinct audiences that would need specialized documentation: the actual users, who are likely doctors and nurses, and the system administrators, those who are maintaining the application for the actual users. Appendix A shows excerpts of the user guide that was geared toward the actual users of the application, the doctors and nurses. Appendix B displays excerpts of the user guide designed for the system administrators of the application.

I began by creating prototypes for the client so he could decide which format he liked the best based on production costs. Specifically, during the first month of my internship, I spent approximately 75% of my time creating the user guides. To fully understand everything my user would need to know, I spent approximately 25% of my time working with the application to learn how it operated, to validate the application’s functionality (described in more detail in Chapter 3), and to identify the application’s design issues.

Month 2: User Guides & Quick Reference Guides

During the second month, I continued to user test and validate the application. I also focused on identifying the tasks the user would likely want to accomplish with the application and created the user guides based on these tasks. During this time, I created quick reference guides the user could have in addition to the user guide. Examples of the single page, front and back quick reference guides for the user and the administrator are shown in appendices C and D. Because the application experienced major changes as the client adjusted his requirements, I spent approximately the same amount of time during month two on the user guides as I did in month one. I worked on the user guides for the application during my entire internship, although my time on the user guides diminished as major changes to the application diminished.
Month 3: User Guides & System Documentation

During the third month I conducted user testing on the application in conjunction with developing the user guides. As the application slowly quit changing, I tweaked the user guides and prepared them for final printing. I began working on the system documentation and the TNG website while my work on the user guides approached completion. By the third month of my internship, I only spent 25% of my time updating the user guides to account for the minor changes in the application. I spent approximately 50% of my time working on the system documentation for the TrueNorth application, excerpts of which are located in Appendix F. I spent 25% of my time editing and updating TNG’s website. I also spent time on various tasks related to the internship and to TNG.

Project-specific Tasks

I completed the following six project-specific items and tasks during my internship at TNG:

- **Validation testing**: testing and collaborating with the programming consultant to incorporate changes to the GUI, daily.
- **User testing**: testing the GUI, testing the user guides, and testing the user guides’ compatibility with the GUI.
- **User documentation for TrueNorth**: creating an administrative user guide with an administrative quick reference guide and a general user guide with a general quick reference guide for users. These documents provided support for the administrators of TrueNorth and the general users of TrueNorth, respectively.
- **System development kit (SDK or system documentation)**: testing the back-end of TrueNorth, reading and commenting the code, collaborating with the BPM consultant to ensure accuracy of comments in code. The SDK was a deliverable to the client and provided a means for another developer to read and understand what the TNG programming consultant coded to make TrueNorth functional. It could also be used to troubleshoot any back-end issues in the application after release to the client.
- **The Normandy Group website**: editing for grammar, punctuation, mechanics, content, and accuracy using MS FrontPage. Although no changes I made were applied to the actual website during my tenure at TNG, the owner retained the revisions and made plans to incorporate and upload the changes at a later date.
• Administrative tasks: logging time spent on tasks for different projects at TNG, answering the phones, and performing general quality assurance of key documents for TNG coworkers.

Chapter 3 provides an in-depth description of the product and the players involved in completing the TrueNorth application. I include a description of the product I was hired to create user documentation for and a description of how the parties I worked with collaborated to complete projects at TNG.
CHAPTER 3 | IN-DEPTH PROJECT DESCRIPTION

This chapter describes the project that I learned the most from and worked on for the majority of my internship. Specifically, it includes a description of the product I created user documentation for, the people I worked with on the projects, and the additional roles I filled as a result of the project.

The Product

Creating user documentation for ConfidentPlus’ product, TrueNorth, was my major project at TNG. TrueNorth is an extensive application that gathered patient information and drug information and stored it in a database. The application would increase the accuracy of treatment and reduce the time it took for patients to get what they needed from doctors, because the doctors would have a computer-based tool to help them decide what the patients needed, without doing all the research to diagnose patients. I understood that eventually the web-based application would become a stand-alone software package with other add-ons in the future. There were many parties involved in the development of this product.

The Players

This section describes the players involved in the project including the investors, the client, the project manager, the project coordinator, my mentor, and the consultants. Figure 3, on the next page, shows the organization of the project team for the TrueNorth application.
The Investors

The investors were crucial in the development of TrueNorth. Because TrueNorth was ConfidentPlus’ main product in development, ConfidentPlus relied on its investors to keep the company afloat during the application’s development. In many ways the investors were the key players in the project, yet the TNG players never met them.
The Client

The client for this project was Bob Didler at ConfidentPlus in Mason, Ohio. Although I did not meet with Bob until the user guide was halfway completed, working with him was interesting and informative.

Bob was a colorful client because he was both pleased and frustrated with the progress on the application. Before meeting with Bob, I decided that the user guide really had two audiences: system administration and general users. The administrators would be those who maintained the application on servers and updated the database information. The administrators would be responsible for the operation of TrueNorth once it was sold to them. The users would be the nurses, doctors, and other medical professionals who would be using the application in a medical setting. To meet these different needs, I wrote two user guides, one for those who would implement the application and be responsible for supporting it and one for those users who would be using the application on a day-to-day basis (see Appendices A – D).

My Mentor

Because I worked for a small consulting firm, there were no other technical communicators who met MTSC’s requirements for serving as my writing mentor. Although Chuck has managed technical communicators, I needed a mentor with experience and formal training in technical communication, who could offer more in-depth analysis and feedback for the documentation I created at TNG. Chuck selected a technical communicator with whom he had worked for many years, Sean M. Higgins. Sean has over 30 years’ experience working in documentation and managing technical writers/trainers. Sean and I met weekly to discuss and analyze my work, and we communicated via email as needed.

Sean served two purposes in my internship. He provided feedback about my writing at TNG and suggested possible directions I should try to take my documentation. He also helped me learn about successfully functioning in my capacity as a technical communicator in the full-time employment environment that I would soon be transitioning to from full-time student. Sean served as a sounding board for me as I discussed handling clients, coworkers, and job searching
at the end of my internship. He was a wonderful resource who was able to dedicate in-depth analysis and guidance about my duties and the projects I worked on at TNG.

Since Sean had worked with Chuck at a previous company, he knew how Chuck operated. This knowledge proved to be valuable for me because Sean and I could discuss the various ways I might approach Chuck with an idea for, or an issue with the product. Sean offered valuable insight into what would be persuasive and successful with a business person like Chuck: someone with a brusque personality who makes decisions quickly and then deals with the consequences, good or bad. Sean was able to help me adjust my communication style to best meet up with Chuck’s ideals.

My Supervisor

My direct supervisor on the ConfidentPlus project was a four-year employee at TNG, Bill Astor. As a senior consultant, he had worked on numerous software development projects and had worked with ConfidentPlus for two months before I joined the TNG team. In addition to being the project coordinator for the TrueNorth project, Bill managed the Exchange server, the SharePoint server, and the Enterprise Directory.

Bill showed me the original design document, the revisions up to my hire date, and asked me to make revisions to the design document as I saw fit. After reviewing the design document, I saw some elements that needed to be totally reformatted for readability and comprehension. The figure shown below is a reformatted figure from the original design document I revised. The original (not available) had grammatical errors and typos that made the message hard to read. I revised the text to make it more concise so it was easier to skim (see Figure 4, next page).
Initially I met with my supervisor to learn about the needs of the client and how the application was developing. He informed me that since the time I signed my internship contract with TNG to my first day at TNG, the client’s requests for TrueNorth had changed. Bill explained that normally the design document was signed before any work on the project began but that this client was an exception because Chuck, TNG’s managing partner, and the client were old friends. In fact, this point became an issue as the project developed.
TNG and the client thought that they each understood the expectations of the other party based on informal conversations about the project, but the pre-existing friendship between Chuck and Bob also played an important role in the lack of formality with the design document. What started between two friends soon became a point of contention. As the project developed, the scope crept further and further beyond the initial understanding. For example, originally the specific genetic patient information was only supposed to be available to a particular clinic. As the project developed, and without the design document signed, the client decided he wanted the results of the specific genetic patient information entered into the database so it was available for future queries instead of entered once and maintained within the clinic information. And, because the agreement was never signed, the project evolved into a tedious and tenuous arrangement of consultants, clients, and investors, all wishing to meet their own project specifications.

I would meet informally with Bill on a weekly basis to show him my progress on the user documentation and to gain his perspective about it based on his knowledge of the client because initially I was not invited to attend the client meetings. As time passed, it became evident that I needed to meet with the client to better understand the needs of ConfidentPlus and the needs of TrueNorth’s audience. Eventually, I approached Bill with my reasons for being invited to the meetings. Luckily, he already understood the importance of permitting the technical communicator to meet directly with the client, and he arranged for me to be invited to almost all additional meetings.

The Consultants

This project involved four consultants with different specialty areas (in addition to me):

- Tyler B.: GUI design using Flex;
- Holly F. and Mark C.: database management;
- Kevin T.: BPM using GreenFall services and functions; and
- Bill A.: server management.

While I worked at TNG on this project, Tyler and Holly were working on the back-end specifications for the application. While Tyler worked on programming for the TrueNorth
application, Holly focused on managing the database and the data that was used with it. Occasionally, as a result of my user testing and validation activities, Kevin would adjust the GreenFall processes where they were “broken” or not functioning properly so they would work with the adjustments made by Tyler and Holly. Mark oversaw most operations and worked closely with Holly and Tyler to make the application work smoothly on the server.

**The Additional Roles**

Although my main role at TNG was being a technical communicator/trainer, I filled additional roles that were important to the success of the project. This section illustrates those roles and describes my processes for managing the recurring activities of validation, communication, user testing, and user advocacy as a technical communicator/trainer at TNG. Throughout this section I refer to terminology that is specific to application development. The “front-end” of the application is the Flex code in the GUI. The “back-end” of the application is the database supplying the information to the application; it can also include the coding, the services, and the functions of the application. The “functionality” of the application is how the application actually works and if it works as planned. The “appearance” of the application is how it looks to the user through the GUI.

**Validation**

Validation was an important niche that I could fill right away. I began each day by testing the application and ensuring that everyone in-house was working in the most recent version of the application. This was especially important for me as I was documenting the application and needed exact screen shots to be the most helpful to my user. It was necessary to create some sort of versioning and naming of the application directly in the graphical user interface (GUI) so I could tell that I was always working in the most recent version. If it was an older version of the application, my changes to the user guide would be ineffective and based on a version that would not be used with the final product.

Because the client was being charged for my time on this project, each hour had to be used wisely. Each activity was important, but some were more important than others. It was important that I fully understood the changes that were made each day so that the changes made to the user guides were efficient. My supervisor and I discussed the current changes on the front-end and the
back-end of the application. It was also very important to try to anticipate where the changes would be made to the application so the user guide would require only minor adjustments rather than major changes.

After about a month and a half into my internship, the application had basic functionality, and many sections of the application could be validated. For example, the application could process the patient information entered by the user and use the data to generate various results. However, because there were still major back-end changes occurring, many times entire sections of the application would lose functionality. In the example provided, a major change in the back-end of the application could cause the patient information that had been entered to “disappear into the application” instead of appearing in the results section as it should have. The time I spent validating the application was important because no one else had the resources to spend on double checking it. More importantly, the quality of my user guide depended on whether the application functioned correctly, and daily validation activities promoted high-quality, consistent documentation.

Although I was only asked by management to complete the user guides at this time, planning what else could be completed at this point in the application’s development helped me use my time efficiently. For example, during any “down” time, I would resume working on the system documentation. However, this project was also difficult to work on while the application was changing because some GUI changes were extensive enough to change the back-end functioning of the application, not just how the GUI looked to the user. The GUI changes could completely change the documentation for the coding of functions and services. Based on the infrequency of changes to certain sections of the application, I worked on areas of the system documentation that I had determined would likely not change from that point forward. Usually I was right, but sometimes I was wrong and I had to re-document the code and revise the user documentation accordingly. If during the day I completed a first draft of all the system documentation that I could, I would work on editing and revising the TNG website during the time I waited for additional changes to the application.
**Communication**

Because the application changed often, communication was important for the success of the project. The main programming consultant worked off-site at another company location, so the changes he made to the application were not common knowledge to the team. He would make changes requested by the client and by Chuck, but many times those changes were not communicated to the rest of the team.

Because Tyler was based off-site, it could be challenging to communicate necessary changes to him in a timely manner. This communication delay was a point of frustration because many times I could not continue working on the user guides until a decision was made about some issue. I would work on system documentation and the TNG website while waiting, but I would later have to re-familiarize myself with the changes in the GUI and then try to get back the momentum I previously had. When my supervisor and Tyler would finally be able to reach each other, they would discuss the challenges of making the changes including the time commitment, the resources, and the overall agreement with the client. After these items were discussed, I would receive instructions to either continue testing and to include the known issue in my documentation as a glitch in the beta version, or I would be informed that the issue would be fixed and that I did not have to include the issue in the documentation. Many times these issues would take an entire day or more to decide, and I would work on my secondary tasks while waiting to get back to work on the user guides.

I communicated issues with the application itself to my supervisor. My supervisor would decide if the issue I identified warranted a meeting to discuss the issue, or if the beta version could allow for the “kinks” I was finding. Many times I found myself advocating for changes because the client’s investors, as users, would not be impressed without the suggested changes, and they could potentially pull their funding from the application. If the investors pulled their funding from the TrueNorth project, ConfidentPlus could potentially collapse because it was a start-up company that relied on its investors for financial support. For this reason, the investors were **the** most important audience for the documentation and for the software. Based on ConfidentPlus’ situation, I had to advocate for what I expected the investors would need to see in the GUI from an information design standpoint to be satisfied with the product and to stay invested.
The communication on this project was very difficult, and many times we all scrambled to explain why something could not be delivered—partly because communication was so slow between off-site consultants. Additionally, the on-site server would sometimes block us from accessing the server inside the office—which proved to be a challenge when the client called with specific questions about the functionality of the application—while we could not see the application. We could not see a live version of the application on the server when we were in-house, so we relied on the programmer to upload recent versions on a continuous basis. While we worked on the version we could see in-house, we were completely unable to work on the application when our internal server was down. It seemed that inevitably the client would call at these times, when we were unable to internally troubleshoot any issues he was having externally with the application. The following figure shows the communication routes and approximate lag times between team members on the project (see Figure 5, next page).
Figure 5 – Typical communication routes on the TrueNorth project. The lag time between consultants increased dramatically when the consultant was located off-site at a client location. The amount of time it took consultants to communicate changed based on many variables throughout the project. The amount of time it took to update the user documentation depended on the scope of the application changes.
**User Testing**

Another self-imposed daily activity was user testing the TrueNorth user guide. This section describes the challenges, the method, the results, and the significance of the testing.

**Challenges**

The challenges to user testing centered around the status of ConfidentPlus as a start-up company, the client’s confidentiality requests, and the limited selection of user testers. Because ConfidentPlus was a start-up company, it did not have the surplus cash to devote to formal user testing and would not until it had some sort of return on its investment in TNG. Additionally, the confidentiality issues I explained in Chapter 1 complicated my ability to find appropriate user testers. So, until ConfidentPlus was able to sell TrueNorth, limited resources and my confidentiality restrictions did not permit for me to find and fund a user group to test the application and the accompanying documentation. I found a solution in creating an in-house user testing group at TNG.

**Method**

I gathered TNG employees who had no working or current knowledge of the application to test the user guide with the most current version of the application. I recruited the receptionist and two sales employees who had limited knowledge of the purpose and the scope of the application. I became too familiar with the application and as a result, the user guide user testing revealed more changes were needed in the application and its user interface—changes that I had could no longer see because I knew how the application was *supposed* to work. It was particularly challenging to ask my testers to assume different roles when using the two user guides—one as an administrator of the application and the other as a user of the application. Although that was a challenge, my user testers were able to assume the different roles and take note of areas they had difficulty with acting as an administrator and as a user. Because I was so close to the application and the user guides, these informal user tests helped me see areas that my users would be challenged with—gaps in the user guide that my users would not be able to move past without more familiarity with the application and its purpose.

The user testing was very informal. I requested help from my coworkers and estimated the time commitment it would take from each of them. After coworkers accepted the request, I would
meet with them at their cubes at a time that was convenient for them. I informed them that they could quit testing at any time if they became uncomfortable. I was careful to only show them the site hosting the application and to give them a brief background about the application’s purpose. Part of the user testing was to test that the application achieved its purpose without the testers having any bias towards making it work to achieve the desired goal.

I requested the user test group to test the documentation or the application no more than two times in a one-month time period to maintain an unbiased user test group. Because the pool of potential user testers was small and limited, I did not want them to become familiar with the user guides or the application. I refrained from explaining how the application was supposed to work or why the developers decided to include or exclude areas in the GUI. I offered them a generic purpose for the application, but I did not go into detail about why it would be helpful to users. For each test, I offered my coworkers the most recent version of the user guide and ensured that they were working in the corresponding version of the application. I created a task sheet that I asked my coworkers to complete using the user guide and the application as they might normally do.

My coworkers were proficient with technology, and I estimated that their level of proficiency was approximately the same as my audience. With this assumption in mind, I took notes while my coworkers worked through the tasks. Because I did not have access to any sort of recording devices, I asked my coworkers to try to talk through each action they were performing, and why they were performing it. When they experienced any sort of difficulty during testing, I asked them to try to note if they were having trouble following the user guide, the TrueNorth application, or a combination of both. I scribbled down notes as they worked, and asked them to return any notes they had taken while testing.

Results
The testing did reveal very helpful information about the user guides and the application. For example, I found that users automatically entered information when they saw basic text fields for demographic information on the “Patient Information” page titled, “Name,” “Age,” “DOB,” “Address,” etc. In these areas the users entered their information, not the patient’s information. The users did not open the user guide to see what information belonged in these areas and
assumed the application was requesting their personal demographic information. I used these results to request changes in the GUI and to clarify what was requested in each area, not just relying on users to read the “Patient Information” title at the top of the page.

**Significance**

The user testing was significant because it helped me provide the necessary information to the client and the project team to create an application that was user-friendly. The user testing helped me create clear, concise, and helpful user guides because it revealed areas where typical users encountered difficulty with the user guides and the GUI. Additionally, the user testing was very persuasive to Chuck and Bob as I showed them important changes to the GUI that would be very beneficial to actually marketing and selling the application. Based on the feedback during user testing, the application and the user documentation were focused on the user and how the user actually worked in the application.

**User Advocacy**

I was a user advocate on a daily basis. When I looked at the application and the user guides each day, I tried to look at them as a user would. I applied my knowledge of technical communication to persuade my supervisor, client, and coworkers that the application would only be successful if we could make it easy for the users to accomplish their tasks efficiently. As an advocate for users, I would approach my coworkers and the client with supporting evidence from texts to show that the changes would help to ensure the users’ success with the application and that they were worth the added effort, time, and money.

After changes were made to the application, I would recheck the application for consistency to make sure the change would help the user navigate the application. I noticed the consistency issues with elements that help users navigate applications effectively, but learned that many times I would be seen by the programmers as “nitpicking” the beta version of the application if I requested changes. However, certain issues, like naming buttons, tabs, and navigation bars consistently, directly affect the usability and effectiveness of the application. It was necessary for me to take a stand for these seemingly “minor” consistency issues.
Sometimes it was difficult to explain to the programmer why certain GUI changes were necessary for the user. It was difficult to explain why the suggested changes were necessary to the overall usability for the application for three reasons: minimal acceptable quality, familiarity with the application, and overall fatigue with the project. First, the programmer was solely looking for the application to function at the bare minimum level requested by the client. Second, since he was the designer of the application, he found it difficult to understand why the user would have difficulty in the defined areas, regardless of my explanation of the issues. He knew how the application was meant to work, and was therefore blind to the issues users may have, similar to my familiarity with the user documentation. Finally, toward the end of the project everyone on the team, including the programmer, wanted to be done with it. They did not want to take the extra time to make seemingly small changes and to prolong the release of the application to the client.

Toward the end of my internship, the client requested an aesthetic modification that Chuck quickly accepted, thinking it would not be a huge renovation to the application. The client requested that the background color of the application be changed from the original green to a blue color. To someone who has limited experience with technical communicators and documentation, this change seemed minor.

When Chuck returned with the notification that TrueNorth had one final change—the color of the GUI—everyone except me was relieved. I voiced my concern that the color change would be a major revision in the user documentation because the user would need screen shots that were an exact replication of the screen they would see while completing the tasks in TrueNorth. I explained that the change would be extensive and would cost the client many additional billable hours.

This increase in cost was because the screen shots were very detailed, and I had added directional tools such as arrows, circles, and text that would be helpful to the user. The screen shots took approximately 1 hour each to complete at the level of quality and consistency required. There were in excess of 40 screen shots, which added 40 hours to be billed to the client.
If the technical communicator had been involved from the beginning of the project, many of these additional hours could have been avoided (discussed in more detail in Chapter 4). For example, had I been present at the final meeting, I could have explained the impact on the documentation that would result from changing the background color of the application. Because I understood that for a start-up company, every dollar spent was an investment and every dollar needed to count for a huge improvement, I would have encouraged the client to wait for the next release to make this change. In the end, we made the changes to incorporate the new screen color and to update all of the user documentation accordingly.

Chapter 4 offers an analysis of the Problem Solving Model for Technical Communicators, including three examples of how I applied the model in different situations for a positive outcome. The chapter also discusses my expectations for the internship, how the reality aligned with my expectations, and how I might manage in the future in light of my internship experience.
CHAPTER 4 | PROJECT ANALYSIS

I gained valuable insight from this major project at TNG that adds another important perspective to my classroom education in technical communication and the problem solving model I used as a result of my coursework. Additionally, my expectations for the entire internship as a technical communicator were different from the reality of being a technical communicator in the business world, complete with challenges and successes. Finally, I examine the effects of ad hoc management and explore how I would apply management techniques I gained from my experience in different working environments and the MTSC management course.

Through my major project, I learned about the process of writing documentation for an amoebic application, the actual process of working on user documentation in a small consulting office, and the technique of persuading the client to provide his users with the most effective documentation for their needs.

I learned two valuable lessons from my participation with the project at TNG: the importance of participation by the technical communicator through the entire cycle of product development and importance of the problem solving model for technical communicators in solving management issues. Because I was able to resolve the problems I experienced in my internship using the problem solving model, I anticipate being able to find solutions to similar problems in the future by applying the lessons I learned on this project. In the future I will know to look closely at the application and offer my expertise on what the user will need at the beginning of the project. This project would have likely been even more successful if I had been involved in the discussions of the deliverables—especially with the documentation aspects, as Karen Schriver recommends:

Learning to use a device quickly and easily depends on both the design of the document and the device. Document designers and product designers should work collaboratively to create products that people can use. This means planning communications as a team from the onset of the development process (see Hackos, 1994). […] Companies need to embrace the idea that good communication starts with good planning. They need to move beyond the antiquated view of ‘documentation as a nuisance activity’ (Glushko &
Bianchi, 1992) and bring their best communicators into the front end of product development (246).

I could have provided valuable insight and had focused direction for my portion from the first day forward had it been possible for me to participate in the project from the beginning.

**The Problem Solving Model for Technical Communicators**

To be successful in this project, I followed Paul Anderson’s problem-solving model for technical communicators (PSM) to stay organized and reach my goals in the absence of explicit direction. Because my specific tasks in the internship were not clearly defined and because TNG did not have a great deal of prior experience working with technical communicators, there were additional problems for which I needed to find solutions in order to successfully complete user documentation for TrueNorth. The PSM outlines the process most technical communicators go through when finding a solution to a problem. The “problem” could be defined as a task, a project, or a request for which the technical communicator would need an approach. It is important to note that this model is not linear in nature; it can be started again at each step in the process until the step is completed successfully. This section analyzes how I used and adhered to the PSM outlined below (see also Figure 6):

- Defining the problem,
- Planning a solution,
- Testing a solution,
- Implementing the solution, and
- Evaluating the solution.

![Figure 6](image_url)

*Figure 6 – A diagram of Paul Anderson’s Problem Solving Model for Technical Communicators. This shows the typical process most technical communicators go through when solving a problem related to technical communication.*

In Anderson’s PSM for technical communicators, defining the problem can be simple or complex, depending on the situation. A problem can be defined through its goal. The goal of a problem could be to increase efficiency and to decrease dependency on the part of the user and the organization. Planning a solution includes smaller steps such as research, prototyping, and planning to find the best solution to meet the goals as defined through the problem. To test the
solution, the technical communicator may conduct user testing documentation or management plans in a smaller subset of appropriate and potential users. In implementing the solution, the technical communicator must integrate the documentation as part of the complete package to create a seamless transition including the solution. If the problem included management issues, the technical communicator would work with the persons affected and persuade them to accept and embrace the changes in operation. Finally, after completing the first four steps of the model, the technical communicator would evaluate the success of the solution and learn how to improve upon the solution for problems or to avoid similar problems in the future. The following sections describe how I applied the PSM in my internship, and each section concludes with a figure illustrating the step within the PSM and the approximate time I spent on each step.

**Define the Problem**

My problem was to create an accompanying guide for an application that was not yet finished and to make it usable to multiple audiences. I also had to become familiar with the application in a short amount of time because my internship was only three months long (see Figure 7).

**Plan a Solution**

After defining the problem, I started researching my audience. I determined that I could best reach my audience by dividing the user guide into two major audiences, administration and general users. Once I decided that there would be two versions of the user guide, I created a few prototypes that would be beneficial to the users without compromising the quality or increasing the time devoted to the project. I created prototypes so the client could participate in making some of the decisions in the creation of the documentation, but he would not have to define the detailed portions of the user guides that focused on what was best for the user. Once I created the basic prototypes, I presented them to the client, and he selected his preferred layout for the guides. The prototypes gave Bob a choice and helped him decide which layout he liked the best while I maintained appropriate information design techniques in each prototype. After he chose the layout, I developed the documentation into a beta version and readied it for user testing. I
planned to conduct informal user testing and revise the guides multiple times because the application had never been used before, and it asked users to complete tasks that were not similar to any other software currently available. Finally, the project manager, Chuck, decided that I would provide the client with one hard copy of all the documentation, electronic copies of the text and the images in the documentation, and instructions for reproducing high quality documentation through a local professional printing service (see Figure 8).

![Figure 8](image-url) – A timeline showing the “Plan Solution” step, where it is located within the PSM, and approximately how long I spent on the step.

**Test a Solution**

Once I created the final beta version of the documentation, I tested it to make sure users could use it as planned. I completed three major releases which were revised based on user testing and minor, daily changes before they met the quality standards to be released with the beta version of the application.

This step took quite a while because the revisions to the application took longer than expected. Since I had also created the quick reference guide to accompany the full version of the user guides, those also had to be updated to maintain consistency. Sometimes the application went through changes that were solely functional in nature, and other times it went through aesthetic changes based on user feedback or client preferences. In either situation, the user documentation had to reflect the exact GUI the user would encounter for the user documentation to be truly helpful to the users. When, toward the end of the development process, some changes were made that were purely preference-based, the revisions to the user documentation became an issue of both usability and economic efficiency. As discussed in an earlier example, changing the GUI from green to blue would result in a complete revision of all the screen shots in the documentation (in excess of 40 cropped and manipulated images, edited and diagrammed) so the user could easily recognize the interface in the user documentation. I discuss my thoughts on the economic efficiency of this process later in this report.
The user testing revealed minor problems with the user guides but major problems with the application itself. The problems the users had in the user guides were based on the issues they were having with the application. Because in its early versions the application was not user-friendly, the user testing results were submitted to the responsible parties for review. Once the developers were aware of the user issues, they corrected them in the application, and I began revising the user documentation with the new changes. To eliminate the source of the problem in the GUI, I would explain why the changes were necessary for the user, so in future GUI design choices the GUI designer could take the information into consideration with future GUI design choices to create a GUI that is intuitive, easy to navigate, and attractive (see Figure 9).

**Figure 9** – A timeline showing the “Test Solution” step, where it is located within the PSM, and approximately how long I spent on the step.

**Implement the Solution**

The solution to the main problem and the additional issues surrounding the development of the application was to retest users with the updated application and user guides and to retain the results to support the design choices the developers made. When the changes were implemented in the application, the user testers would test the application and the user documentation together (see Figure 10).

**Figure 10** – A timeline showing the “Implement Solution” step, where it is located within the PSM, and approximately how long I spent on the step.
Evaluate the Solution

I evaluated effectiveness of the solution throughout my internship with each major documentation release. The user testing results showed that the user guides worked well and the application was very intuitive. The final user testing was very successful, and the application looked very professional because it was user-friendly and based on concrete user feedback from the numerous rounds of user testing. The client was very pleased with the user guides and the fact that he could reproduce them on his own, adjust them as the application changed in the future, and find the best production cost for his company (see Figure 11).

![PSM Timeline]

Figure 11 – A timeline showing the “Evaluate Solution” step, where it is located within the PSM, and approximately how long I spent on the step.

The PSM in Action

This section provides 3 examples of how I used the PSM in my daily interactions at TNG. I found that the PSM applies to small problems as well as large, comprehensive problems.

Example #1 | Overcoming Bias in the Workplace

Bias was one of the problems I encountered in my internship, and until I identified and overcame this problem, I was limited in my ability to perform my work well. In my internship, the problem seemed to be some sort of barrier between me and my male counterparts. For example, many of the males in the office would attend meetings with the client, while I, being the only female, did not attend many meetings. Following the PSM, I developed a plan to request meeting with the client numerous times, citing the importance that I, as the technical communicator, needed to understand the expectations for the documentation for the client. Unfortunately, my requests were often put off. I was concerned about these communication barriers because I thought they could potentially reduce the quality of my work for the client. I planned to persuade my boss to allow communication between the client and me so I could best meet his expectations and help the project’s success.

Eventually the client became dissatisfied with the time it was taking to produce a version of the application for the investors. I met with him during this time to go through the documentation
and discuss his concerns with what I had produced. Because he was unhappy with the project as a whole, he was not as cooperative as I had hoped he would be. He was searching for very minute, personal preference-based issues with the documentation I had created. It seemed as though he had some bias toward me and my ability to produce effective documentation. I took this opportunity to test and apply the theory I had learned in the classroom to overcome his reservations and the bias I experienced in this internship, although it is difficult to say if the bias I felt was gender-based or status-based (i.e., status as a technical communicator/trainer). I expected that the best way to overcome communication barriers and the client’s reservations was to provide the client with facts based in theory about the decisions I made as a technical communicator. After I implemented my solution, Bob gradually came to respect my expertise and my dedication to providing him with high quality documentation. He realized that I had spent a great deal of time researching what his audience would need to successfully use the application, and he again became happy with TNG. I evaluated this solution to be effective and worth noting for situations in the future that I may encounter.

Example #2 | Employing Self-management Techniques

Perhaps because TNG had limited experience with technical communicators, they did not have a defined process or hierarchy explaining where one fits into the company; therefore, I employed self-management techniques to use my time efficiently. The defining problem was that there was no procedure for me to follow in the documentation development process. It would have been easy to do very little work while in my internship by simply “flying under the radar” and not employing a strong work ethic with the skills I had acquired through my courses. Instead, I learned how to manage myself, set my own goals, and plan my objectives as a technical writer/trainer intern at TNG.
To manage my work, I set goals and objectives to meet in various timeframes. For example, I devised a timeline with milestones for the entire length of my internship. I then broke down the 3-month period with goals—contingent upon the project’s development—that were divided into monthly goals with milestones. I continued to chart my objectives based on weekly goals and completed the weekly goals I set by using daily lists (see Figure 12).

<table>
<thead>
<tr>
<th>Tuesday:</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Check demographics tab for requested changes from meeting today.</td>
</tr>
<tr>
<td>· Adjust user documentation to match newest GUI.</td>
</tr>
<tr>
<td>· Check system documentation for functionality off-site.</td>
</tr>
<tr>
<td>· Email PC to detail changes.</td>
</tr>
<tr>
<td>· Request meeting with client for production requirements.</td>
</tr>
<tr>
<td>· Request review of user documentation from PC.</td>
</tr>
<tr>
<td>· Submit hours.</td>
</tr>
</tbody>
</table>

Figure 12 – An example list I would use to self-manage and to achieve the goals and outcomes I set for myself on a daily basis.

After evaluating the results of using lists to manage myself, I realized they had become a crucial tool in my technical communicator’s toolkit. I eliminated the problem of minimal documentation processes at TNG by creating lists at the end of the day, based on the progress I had made on the tasks I had put on that day’s list and any changes the day brought. My to-do list was also growing at night, when I would create an at-home list that often added detail to my goals for the next day. When I would arrive at work, I would revise the end-of-day list by comparing it with my at-home list, and I would create a finalized “Do Today” list. These lists were based on the goals I wanted to accomplish by the end of the week to meet my monthly goals and objectives.

In addition to daily writing tasks, I completed list-tasks that ranged from validation, to user testing, to designing screen shots and diagrams, to testing the functionality of the application against my user guides. After implementing a self-management solution, I realized my procedural lists for documentation processes reached further than improving a process; I realized that if I did not define my own tasks I would have minimal management. It is important to note that my project coordinator, Bill, supported my approach to informal management, and I would check in with him to ensure I was complying with his coordination efforts. It is also important to
note that because there was minimal communication between the project manager and the project coordinator, Bill was not in a position to devise concrete objectives for my role in the project.

After evaluating my solution, I felt it was important to provide some form of status and progress reporting. It felt strange that the client was paying for my services, yet I never submitted any progress reports for what I completed on his project. Because of this uncomfortable feeling, I began using email as a mode to communicate my status reports to Chuck and Bill. I incorporated information from my lists, weekly and monthly goals and objectives, and the actual documentation I completed in the status reports I sent to Chuck. Although Bill would already know my status because we worked together each day, I sent copies to him on all emails to Chuck as well, to foster efficient communication among team members.

*Example #3 | Working with a Client*

I employed the PSM during my experience of working with a client. I met with Bob, TNG’s client, only a few times while working on the user guides, but the meetings were productive. After Bob accepted me as a professional technical communicator (discussed in example #1), he was very impressed with the user documentation. Although he was irritated with the status of the application itself, he was able to separate the documentation and its progress from the application’s progress. Because TNG is such a small company, it was easy to determine who was blocking or prolonging the release of the application. Bob could see that delays resulted from the programming, and that I was documenting the application as it changed.

Although meeting with Bob on my own was often beneficial, his attitude toward each meeting was never predictable. While I was trying to understand the needs of the audience for the user guides, sometimes he was not happy to meet with me based on his discontent with the progress on the application. I used my skills as a communicator to stay on the topic of the documentation—the part of the project that I was responsible for delivering to him. By the end of the meeting, we were on great grounds for finalizing the user documentation.

Meeting with Bob enabled me to ask questions, to fully understand his needs, and to see how he visualized the user guides. The defining problem was that although he did not have a background
in technical communication, he nevertheless felt he was quite capable at the profession. For this reason, I planned to persuade him to accept my professional assessment of the needs of his users. I persuaded him by backing my choices with concrete evidence from the theories I studied at Miami during the MTSC program. After testing this plan, I found that fortunately, this approach was very persuasive for him, and I only had to explain my rationale for choosing what I chose for the user guides, thus eliminating the defined problem. After eliminating the source of the problem, I was able to implement the solution of his role as the client, and my role as a professional technical communicator.

As part of my solution to the problem, I wanted to be able to discuss what the client envisioned while maintaining my role as the user advocate and technical communication professional on the project. I wanted Bob to be able to offer his ideas to feel like part of the process in developing the user documentation. Bob and I compromised while I was able to maintain my role as a user advocate and professional. Many times he would request something that I knew was not the best idea for his users. Although I would attempt to persuade him away from his requests so I could advocate for user needs, I would work on a way to include his requests by making them more user-friendly.

After evaluating this solution, I found that it worked well in persuading him to accept my ideas for the documentation, especially in crucial areas like usability. For example, after I showed Bob the glossary and the index at the end of the guides, he determined that he wanted to have them combined into one section, to save space. While the initial idea is good, the logistics of combining the two sections was not realistic. The way the document was initially designed, the glossary was a static section that did not update automatically. In contrast, the index was dynamic and linked throughout the documentation via bookmarks and fields to update automatically. The trade-off of making the index automatically update the terms and the page numbers was that doing so would delete any text that was not already in the bookmarked field. The priority of the document was that it could be handed off to Bob to continue to update easily, and combining the two sections would make updating it very exhausting. Additionally, the usability of the index would be reduced dramatically if the user was unable to quickly skim words and locate pages. If the two sections were combined, the user would have to sift through
additional terms, read through the lengthy definitions, and then locate the appropriate page number to find the topic. After I explained the reasoning for keeping the sections separate, he agreed to the original design (see Appendices A and B).
CONCLUSION

To conclude, I learned a great deal from the differences in the expectations and the reality of the internship, the hindsight I gained from reflecting on the internship, and the recommendations I developed based on my experience in the internship.

The Expectations and the Reality

I had many expectations for the project and for the internship as a whole, and those expectations differed from the reality of each. In reality, the internship differed from my expectations in three major areas: feedback and communication, my colleagues, and my role as a technical communicator/trainer. My expectations about the client, the documentation, and my daily tasks for the project also differed from the reality of them. This section describes these differences in the internship and the project.

The Internship

My expectations for the internship included good communication, constructive feedback, interactive colleagues, and a defined scope of my role as a technical communicator/trainer.

Feedback & Communication

As discussed earlier, I expected good communication, feedback, and progress documentation. I was uncomfortable with the lack of communication between team members, feedback, and status reporting and discussed it with my supervisor. He explained the difference between the classroom and the business realms is vast.

My boss was nothing like the instructors I had during the MTSC program. I was used to instructors who were invested in the future of their students, offering feedback, both positive and negative, about performance and improvement. At TNG I realized that my individual performance did not matter as much as the success of the company, or more definitely, pleasing the client. My boss was interested in the documentation I was producing, but did not readily offer feedback. My project coordinator explained that oftentimes no response or feedback was a sign that I was meeting or exceeding his expectations. Similar to “no news is good news,” I learned that no feedback is good feedback. In the beginning of my internship I interpreted the absence of feedback from my boss as his way of telling me he was not pleased with my work. I realize now
that his lack of feedback meant that he was very impressed and relieved he did not have to offer me feedback to produce good, quality work on time.

**Colleagues**

I expected to have around fifteen coworkers in the company. The reality of the office was that I worked with 4 people in the office permanently, and with 2 part-time in-office coworkers.

I was surprised that with only four people in the office that I would be working with a supervisor; that there were enough people in the office to designate one as my supervisor, in addition to reporting to Chuck. When I began working with my supervisor, I expected no feedback and only someone who would give me tasks to complete in a specified time. My supervisor was the project coordinator on my major project. In reality, my supervisor offered guidance and feedback about the client and the project. My supervisor would collaborate with me to find realistic timeframes to submit work to the client that was the level of quality TNG stood for. He understood the importance of a technical communicator and recognized the potential TNG had while retaining a technical communicator.

Additionally, my supervisor served as a secondary mentor for me. He challenged me to apply my education to my work throughout the internship by asking me to support choices I made for the user guides according to the audiences, purpose, and scope of each document. On some occasions he would assume the role of a difficult client asking me, “but why? I like it this way. Why is your way better than mine?” While asking me to support my choices in design and information architecture, he would adjust his “role” while I explained my choices for the documents, understanding that when I advanced past my internship, I could very easily end up with many types of clients. He used my internship as an opportunity to educate me about the possible scenarios I might experience as a technical communicator in the future. Learning from my supervisor’s experience and meeting his challenges in the internship added great value to my internship.

**Role**

My role as a technical communicator was different than what I expected in my internship. During my interview for the position, I was informed that TNG employees wear “many hats” in part because of its small size. In fact, my role varied from receptionist—TNG was filling a
receptionist position during the first month of my internship—to sales staff, as all employees’ roles covered these “hats.” In some situations, I would explain the services a technical communicator/trainer could provide to potential clients so the sales staff could “sell” the additional feature to the potential clients. Other times, I would simply answer a phone call and route it to the appropriate employee. If my internship had been slated to last another three to six months, I would have created training materials for TrueNorth and trained administrators and users. However, TrueNorth was not ready for users to be trained during my internship period.

I also expected my role to be clearly defined as to what my daily tasks would be, and who I would report to. In reality, my role was evolving as my projects became more concrete, and I found that I was my best advocate. I would seek out the areas where my expertise would be valuable—especially looking for those that may have been overlooked by management. For example, I realized the need for a quick reference guide in this project in addition to the user guides (in Appendix A, page 52). I quickly created a prototype of the document and showed my supervisor the additional document. After I persuaded him that the quick reference guide was an important addition to the array of documents we were providing the client, I polished the quick reference guide and showed Chuck a near-final version, ready for display to the client. He was impressed with the ambition, initiative, and creativity I employed to evaluate the clients’ current and future needs and to help the client achieve success with the application.

The Project

My expectations for the project included a clear definition of required documentation and structured daily tasks.

Documentation

The documentation of the project varied from my initial expectation for the project. During my internship interview, I was given relatively vague descriptions of the main project I would be completing. As I understood things during the acceptance discussion nearly a month before my internship began, the application I would be documenting was near completion and ready for roll-out. Although I found this not to be the situation when actually began my internship, I believe TNG truly thought that TrueNorth would be completed, static, and ready for me to document at the beginning of my internship. Evidently, the client requested additional changes
during the month preceding my internship, which led to additional changes during my internship, which led to consistency issues that I caught in the middle of my internship.

The documentation aspect of the project could be very frustrating—especially for a detail-oriented technical communicator—because the application was a “moving target.” Had I known what the reality of the project was going to be, I would have been better prepared to deal with the development issues. Additionally, I would have applied the problem solving model for technical communicators differently from the beginning of my internship to the end of my internship. I would have defined the problem as documenting a moving target, with realistic expectations for the development stages of TrueNorth. Once that was defined, I would plan an approach to tackling a moving target and would have been prepared to deal with minor setbacks in the form of changes to the application or its code. Throughout my internship I would have tested the plan to make sure it was efficient and meeting the goals and objectives defined through the PSM. Finally, through testing the plan I would be able to eliminate the problems throughout the development of the application, implementing a workable and evolving solution throughout the application’s development.

**Daily Tasks**

My daily tasks for the project were different than I expected. I expected to have weekly meetings, a very organized timeline for release, previous measures of success in documentation, status reports, and a general framework to create the documentation. The reality was that in the absence of these previous measures, I defined measures of success for the project. I was not assigned to validation testing or user testing, but because of my training in the MTSC program I knew these elements were crucial for the overall success of the project. Before I began the internship I expected that I would spend each day writing documentation to meet a predefined set of standards, yet I found myself also testing the application, troubleshooting the issues, persuading the team to adopt my suggested changes (as a user advocate), and user testing the application and the documentation.

**The Final Result**

The final result of the project was a workable application and a user guide that matched the most recent version of the application. Although the application was supposed to be completed prior to
the beginning of my internship, the changes I suggested and persuaded the client to adopt helped to create a more usable and user-focused application.

The application was not a polished version ready for release to the general public for sale, but it was a version that had basic, full functionality that was ready to present to the investors. It was important to have a solid version ready to show the investors because they were considering pulling funding because of the release delays. Not only did we have a functioning version of the application ready for the most important audience, but it was accompanied by professional, complete, and current user guides and system documentation to create a complete package for them to consider. When I passed on the user guides to the client I also showed him my style guides, which included information about updating the user guides based on changes to the application. Appendix E contains the transmittal document that contained the manuals’ style guide and additional tips for use. At the point of transfer, the user guides matched the application and its most recent changes perfectly. I also passed on full system documentation in which I documented the source code so other programmers could recreate the application if necessary.

The Successes
My successes on this project resulted from the challenges of this project. I was able to successfully document a moving target while maintaining a positive and understanding attitude.

I learned to work with a client and to turn issues into opportunities to create a positive relationship between TNG and the client: to reinvent TNG to him. Because the project scope continually changed, TNG did not have the tangible results to show for time spent on the project. And, because of informal communication practices, the client could not see the changes and the time devoted to making the changes he requested. For example, one page of the application could be revised 75 times as requested by the client, but the client would only see iterations of the page at 25, 50, and 75. Therefore, he only saw the page change 3 times, when in fact it was changed 75 times. These changes are difficult to document efficiently. At TNG we did not have a procedure to follow to show progress or status reports to deliver our status to the client. The problem was not on either side of the project, but in not signing the contract before any work commenced.
The Hindsight

In hindsight, I realized that I would try to employ different management techniques than those I experienced during my internship. I found that the internship requirement provided valuable insight to help me plan a career path that would be challenging and satisfying.

I learned that the internship requirement for the MTSC program is crucial to helping students find the employment niche that is right for them after they are graduated from the program. This internship helped me understand what kind of work environment I wanted to be in and helped me realize which elements I did not want to be a part of my employment. I realized in this internship that I wanted a relaxed, friendly, and challenging environment, focused on giving employees the tools they need to succeed personally and to help make the company successful. I realized I wanted a company that valued the skills I brought to the company as a technical communicator—in addition to understanding that I was trained to do much more than to write well. The Normandy Group’s culture would fit some people perfectly; however, I found I needed a much more team-based, unified approach in my job. Since my internship, I have learned that corporate culture matters, not the size of the corporation. I also found I had strength in management. I was able to communicate with each party effectively, I had the ability to meet timelines, and I was able to evaluate my performance to try to find ways I could improve my processes to improve the next project.

The Recommendations

Through my internship, I learned valuable lessons that helped me develop recommendations that could help other MTSC students entering their internship or the industry. I have narrowed down my recommendations to five simple, suggestions:

1. Don’t be afraid to ask your potential employer specific questions. It will be helpful to know exactly what your role is within the organization and how you will contribute to the overall goals and objectives of the company.

2. Trust in the education you earned and apply it. Consider feedback from those who do not have formal training in technical communication and apply it as user feedback. Apply the knowledge and experience you gained from class and client projects and use it to support your reasoning.
3. See yourself as a professional who understands that technical communicators at every level are able to improve upon their craft. If you are open to it, you can improve in many areas of technical communication, from thriving in an awkward business setting to streamlining documentation practices. Understand that every moment is one you can learn from and gain valuable insight from.

4. Maintain a working knowledge of the theories and experts you studied in your courses at Miami. They will be valuable tools to support your recommendations to those who do not have formal training in technical communication.

5. Show and don’t tell. Instead of telling others that a list should have parallel sentence structure, show them a list with parallel sentence structure and compare it to an unparallel list.

In the classroom, we learned that the role of technical communicator encompasses exceptional writing skills coupled with specialty area knowledge. We also learned that the role of the technical communicator is for the most-part underappreciated. In the workplace I learned that many people do not know what a technical communicator does or they assume that all technical communicators do is write instructions. I learned that talking about what a technical communicator does is not effective; I had to show them what a technical communicator was capable of and the niche one fills. At TNG I was an editor, a communicator, a printer expert, an MS Office guru, an application whiz, a programmer, a writer, a trainer, a graphic design specialist, an information architect, and an instructional designer to name a few. To explain how I fill all of these roles each day as a technical communicator would never do the field justice. Instead, I was an advocate for the profession through example in the workplace, showing my work and how I could contribute in a way only another technical communicator could. In reflecting on my internship, I am reminded of a story told by Robin Williams because I worked with people who have limited knowledge of information design and are inexperienced working with technical communicators. To summarize the her story, Robin had received a tree identification book as a gift. She liked one type of tree in particular, the Joshua tree. She walked around her neighborhood one afternoon, and she noticed all the Joshua trees that had been around her for years—that she did not even notice until she was educated about what they were (Williams 2004). Those who have little experience with technical communicators do not
consciously see what technical communicators bring to a document, in fact, when communications are done correctly, inexperienced colleagues do not even notice anything out of the ordinary. It is not until they are taught to see the difference, the difference between good information design and wildly typing words in a document that they understand the importance of technical communicators. Until I was employed at TNG and supported my choices with concrete evidence, the employees did not see the Joshua trees although they were surrounded by them. Since my tenure at TNG, the company has developed a greater appreciation for technical communicators.

In the classroom we are taught how important technical communicators are, but in the real world, everyone thinks it is a job they could do until they see a technical communicator do it. Technical communicators see the Joshua tree and appreciate it.
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INTRODUCING TRUENORTH

TRUENORTH is a software application designed to give you the information you need quickly and accurately. With TRUENORTH you will be able to:
+ Find quicker, more accurate results;
+ Create detailed reports about drug interactions and recommendations, recommended dosage, genotyping results, and interpretations; and
+ Enter/track patient information and samples.

THE USERS’ GUIDE
This users’ guide contains information about TRUENORTH by ConfidentialPlus. The information may be used as a training guide or reference manual for general procedures or for step by step instructions for using TRUENORTH.

To help you quickly navigate TRUENORTH, images are labeled with corresponding step numbers (where applicable).

Look for the for helpful hints using TRUENORTH.

SCREEN DESIGN AND TERMS
This manual uses different terms to identify elements in TRUENORTH. Please refer to the image below to become familiar with the terms used throughout this manual. The image below displays the terms used in this user guide and the items they refer to.

![Select image from manual showing terms in TRUENORTH](image-url)
SECTION DESIGN

**TRUENORTH** uses a section design to hide or display different parts of the program. To view a section, click on the bar that relates to your desired task. The page will adjust and the information you chose to view will appear.

![Section Design Example]

TAB DESIGN

The tabs at the top of each page will help you navigate the site to get to the information you need. The tabs that are visible to you depend on your role. Tabs available in **TRUENORTH** are:

- 
- 
- 
- 
- 

The **Order #1237** and **Order #1337** tabs have sections.

The **Order #1237** tab contains 6 sections:

- 
- 
- 
- 
- 

There are 3 tabs under the **Order #1237** tab:

- 
- 
- 

will only be visible to those with the correct role. These tabs will only be seen after clicking **New Order**.

There are 7 tabs under the **Order #1337** tab:

- 
- 
- 
- 
- 

The **Defining Tabs** section describes each tab and section in more detail.
DEFINING TABS

The <tab name> contains 6 sections:

- Section 1
- Section 2
- Section 3
- Section 4
- Section 5
- Section 6

**TAB DESCRIPTION**

The <tab name> contains general announcements and information maintained by the administrator(s). Depending on your role, the following sections may display tasks for you to complete:

- Lists samples that are ready for the action (section)
- Notifies you to expect a task (for section)
- Lists samples that have the demographics and data entered.
- Notifies you that a task is complete and ready to be reviewed.
- Notifies you to expect a notification.
- Notifies you that a step has been saved and should be reviewed.
- Lists samples that have been reviewed.
- Lists samples that have been marked and ready to be entered.
- Notifies you that the samples are ready to be entered.
- Notifies you that the samples are ready to be reviewed.
- Notifies you that the samples are ready to be marked.
- Notifies the administrator that a sample has been created and needs to be added (tab > ALL sections)
- Notifies the administrator that a sample has been modified and is ready to be viewed.

Tab appearances may vary with each user.
There are 3 tabs under the _______ tab:
- Demographics - Instructions begin on page 20.
- _______ - Instructions begin on page 12.
- _______ - Instructions begin on page 16.

These tabs will only be visible to those with the correct role. These tabs will only be seen after clicking New Order.

The _______ tab includes many features that enable TRUENORTH to generate reports that help physicians efficiently treat patients. After selecting "New Order" the following sections are available: Demographics and _______. Only those assigned the _______ role can access this tab.

Depending on your role, certain sections of the _______ tab may not be viewable.

DEMOGRAPHICS
The demographics section contains the patient’s information such as order number, contact information, and date of birth. Only those assigned the _______ role can enter information in this section.

The _______ information section includes information about the _______ the _______ and the _______. Only those assigned the _______ role can enter information in this section.

The _______ tab includes the patient’s _______. Only those assigned the _______ roles can view information in this section.

Tab appearance may vary with each user.
The Defining Roles section defines roles available in TrueNorth. The tables located to the right of each role description show which tabs are visible to that specific role.

**ROLES**

There are 5 roles: **Administrator**, **Sample Collection Coordinator**, **Package**, **Report Approver**, and **Report Viewer**. All roles are assigned by the Administrator or Customer Service roles.

### TAB VISIBILITY

<table>
<thead>
<tr>
<th>ROLE</th>
<th>Tasks</th>
<th>Demographics</th>
<th>Packages</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Collection Coordinator</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Report Approver</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Report Viewer</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Breakdown of tab visibility by each role

### TASKS

<table>
<thead>
<tr>
<th>TASK</th>
<th>Demographics</th>
<th>Sample Collection Coordinator</th>
<th>Packages</th>
<th>Report Generation</th>
<th>Report viewer</th>
<th>Last Tabulanation</th>
<th>Last Extract</th>
<th>Last Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter Patient Info</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Enter Sample Info</td>
<td>X</td>
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<tr>
<td>Confirming Packages</td>
<td></td>
<td>X</td>
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<td></td>
<td></td>
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<tr>
<td>View Reports</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>Print Reports</td>
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<tr>
<td>Enter Status</td>
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<td>X</td>
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<tr>
<td>Verify Documents</td>
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<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Breakdown of tasks in TrueNorth
NO ROLE ASSIGNED
If no role is assigned to a specific user who tries to login, it will only display the TrueNorth background image. Users should logout and contact the ConfidentPlus helpdesk.
The tab contains 5 sections: Demographics, and . Respectively, each section contains patient information (i.e., name, address, telephone number), (i.e., ), and information (please see page 15 in the Administration section of this user guide for instructions on entering these). Visibility of these sections depends on the roles assigned to the user. You may create a new order or select an existing order.

To create an order:

1. Click the tab.
2. Select the appropriate option for the order from the drop-down menu in the left pane.

NOTE: The drop-down menu defaults to your . If you have multiple associated with your username you will have to select the appropriate .

3. Click the button at the bottom left side of the tab (you can also click “” from the right pane.

NOTE: A “” pane appears, and the left pane “whites out” and cannot be edited.

4. Select the appropriate “” for the order.

NOTE: The drop-down menu defaults to your . If you have multiple associated with your username you will have to select the appropriate .

5. Enter the in the available text fields.

CAUTION: The areas outlined in red and marked with an “*” are required areas.

6. To cancel the information you entered, click . Otherwise, click at the bottom center of the screen.

NOTE: The information you entered will disappear from the text fields.

7. Click .

NOTE: If you type in the date of birth you can press the Tab key on your keyboard to move on to the next field.

NOTE: Cycle through the state names by entering the state’s first letter when you’re in the state field. Press the first letter again and you will cycle through the next state beginning with that letter.
GLOSSARY

TAG DESIGN
A design used in TrueNorth to move tabs displaying or hiding information based on your choices.

LOGGING IN
Gaining access to TrueNorth by entering your assigned username and password.

LOGGING OUT
Signing your username and password out of TrueNorth.

ORDER NUMBER
Refers to the ID number given to orders after they are entered into TrueNorth.

A role in which users can only enter information for the clinic(s) they are assigned to.

ORDERS
Contains the demographics (patient information) of patients. Distinguished from "samples" because it does not contain sample information. Once sample information is included, "orders" become "samples".

A role that creates tags and prepares them for shipment to the designated user.

PACKAGES
A collection of samples prepared for shipment by the appropriate user.

A role assigned to a user that allows her/him to view, update, and print orders.

A role assigned to a user that allows her/him to view, update, and print packages.

Generated after patient information, order demographics, and other information have been entered into the system. Can only be viewed by those with the appropriate permissions.

ROLE
Refers to the designation given to specific permissions. Roles include: Administrator roles include:

A role that assigns users to the appropriate tab for the order it is assigned to.

A role that assigns users to the appropriate order for a specific order. Distinguished from "create" because it contains the same information.

TAB
TrueNorth is divided into 5 tabs.

A role that assigns users to the appropriate order for a specific order. Distinguished from "create" because it contains the same information.

USER
Those given usernames, passwords, and roles to use in TrueNorth.
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FREQUENTLY ASKED QUESTIONS

Frequently asked questions (FAQs) are assembled on this page.

HOW DO I XXXXXXXXXX?
Refer to page 9 in this manual for instructions about XXXXXXXX.

HOW DO I XXXXXXXXXX?
Refer to page 11 in this manual for instructions about XXXXXXXX.

WHY CAN’T I VIEW ANY TABS?
If you are not assigned any roles you will not be able to view any tabs. Make sure that you have the appropriate role assignment.

WHY WON’T MY PASSWORD WORK?
Be sure you don’t have CAPS lock on. Remember that passwords are case-sensitive.

WHY CAN’T I XXXXXXXXXX?
Only those who have permissions can view XXXXXXXX. Make sure you have the appropriate permissions to XXXXXXXX.

Be sure you have the date range selected in which the XXXXXXXX was created.

WHY CAN’T I XXXXXXXXXX?
Only those who have roles can print reports. Make sure you have the appropriate permissions to XXXXXXXX.

Make sure your computer is connected to a printer that is online and functioning properly.

ADDITIONAL QUESTIONS
The answer would go here.

ADDITIONAL QUESTIONS
The answer would go here.
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08/03/2007 4:23PM
TRUE NORTH

TRUE NORTH is a software application designed to give you the information you need quickly and accurately. With TRUE NORTH you will be able to:

◆ Find quicker, more accurate results;
◆ Create detailed reports about drug interactions and;
◆ Track patient information and samples.

THE ADMINISTRATION GUIDE

This users' guide contains information about TRUE NORTH by ConfidentPlus. The information may be used as a training guide or reference manual for general procedures or for step by step instructions for using TRUE NORTH. This Administrators manual contains procedures for using TRUE NORTH as an Administrator and as an end user.

The first portion of this guide explains TRUE NORTH and includes instructions for administrative tasks. The second portion of the guide includes instructions to complete tasks as a user in TRUE NORTH.

To help you quickly navigate TRUE NORTH, images are labeled with corresponding step numbers (where applicable).

Look for the icon for helpful hints using TRUE NORTH.

The Quick Reference Guide must be updated manually at this time.

For background information about the Tools, Chat, Packages, Reports tabs or about TRUE NORTH, please refer to the accompanying workflow document and system documentation.
**ADMINISTRATION TAB DESCRIPTION**

Background information about the Administration, Users, and Reports tab can be found in the accompanying workflow document.

Instructions for using the Administration tab begin on page 5.

The Administration tab includes 4 tabs to manage:

- Users
- Reports
- Administration
- Help

You may also activate and deactivate users and assign or un-assign roles from users.

**NOTE:** The features found on each tab depend on the users’ assigned roles and the permissions each role is allowed. The Defining Roles section (p. 9) explains the roles found in TrueNorth.
As an Administrator or Customer Service role, you will be... In addition to... you will be... as provided to you by the User.

**CAUTION:** Every user with the... role should be assigned a physician and a clinic.

**USERs IN TRUENORTH**
Adding users is a necessary step in using **TRUENORTH**. Users must be added before they can access **TRUENORTH** in any way. Make sure you have the appropriate role to add users (Administrator or Customer Service roles).

To add users:
1. Login to **TRUENORTH** using your username and password.
2. Click on the *Administration* tab.
3. Click on the **User** section.
   **NOTE:** You may already be in the **User** section.
4. Click **Add**.
5. Enter the user information: username, password, first name, last name, email, and office phone are required fields.
   **NOTE:** **TRUENORTH** will prompt you to the incomplete fields that need to be corrected to add the user.
   **CAUTION:** The areas outlined in red and marked with an * are required areas.
6. If you entered user information incorrectly, click **Cancel** and enter the user information again. Otherwise, click **Save**.
   **NOTE:** The information you entered will not disappear from the text fields.

**RESULT:** The user is added under the drop-down menu.

After adding a user, you should assign her/him a role. Begin with step 3 in the “Assigning Roles” section if you’ve just completed adding a user.
There are 2 types of roles used in TrueNorth, and they will be referred to in this guide as “Administrative roles” and “roles”.
Administrative roles are used to maintain the User’s profile. The tables located to the right of each role description show which tabs are visible to that specific role.

**ADMINISTRATIVE ROLES**

There are 8 Administrative roles:
- Administrator, Customer Service, Lab Manager, Lab Technician, Order Manager, Report
- Viewer, and
- Viewer (General Access)

**TAB**

- Viewer (General Access)
## Administrative Tasks

<table>
<thead>
<tr>
<th>TASKS</th>
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<td></td>
</tr>
<tr>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Breakdown of Administrative tasks in TrueNorth
The tables below show the tasks each role can complete and which tabs each role can see.

### Tasks

<table>
<thead>
<tr>
<th>TASK</th>
<th>Demographics</th>
<th>Contact</th>
<th>Proactive</th>
<th>Journal</th>
<th>Memo</th>
<th>Timeline</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Parent Care</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Chronic Condition</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Family Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Personal Health Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Care Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Breakdown of tasks in TrueNorth

### Tab Visibility

<table>
<thead>
<tr>
<th>ROLE</th>
<th>Demographics</th>
<th>Contact</th>
<th>Proactive</th>
<th>Journal</th>
<th>Memo</th>
<th>Timeline</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housekeeper</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Coin Collector</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse Manager</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Manager</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Owner</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Role</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Breakdown of tab visibility by each role
MANAGING CLINICS

This section explains how to manage new or existing clinics through the Administration tab in TrueNorth. At this time, clinics can only be added and edited.

CAUTION: The information for the lab associated with the clinic you are adding, editing, or deactivating should be entered before you enter clinic information. Without adding the lab information the lab will not appear in the lab drop-down menu.

To add a clinic:

1. Login to TrueNorth using your username and password.
2. Click on the Administration tab.
3. Click on the Clinic Management section.
   **NOTE:** You may already be in the Clinic Management section.
4. Click Add below the "Clinic" pane.
5. Enter the clinic information in spaces provided. The table below lists the field requirements for entering information.
   **NOTE:** TrueNorth will prompt you to the incomplete fields that need to be corrected to add the clinic.
   **CAUTION:** The areas outlined in red and marked with an * are required areas.
6. Click Save at the bottom center of the screen.
   **NOTE:** The information you entered will not disappear from the text fields after you click Save.
7. Click Refresh. 

<table>
<thead>
<tr>
<th>Field</th>
<th># Characters</th>
<th>Digits</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>4</td>
<td></td>
<td>Can include digits</td>
</tr>
<tr>
<td>Address 1</td>
<td>&gt;1</td>
<td></td>
<td>Needs at least 1 character or digit</td>
</tr>
<tr>
<td>City</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zip</td>
<td>5 / 5+4</td>
<td></td>
<td>Must be digits</td>
</tr>
<tr>
<td>Clinic Phone</td>
<td>10</td>
<td></td>
<td>Must be digits</td>
</tr>
<tr>
<td>Contact Last Name</td>
<td>4</td>
<td></td>
<td>Can include digits</td>
</tr>
<tr>
<td>Contact First Name</td>
<td>4</td>
<td></td>
<td>Can include digits</td>
</tr>
<tr>
<td>Contact Email</td>
<td>&gt;1</td>
<td></td>
<td>Must include &quot;@&quot; and end in &quot;domain&quot;</td>
</tr>
<tr>
<td>Contact Phone</td>
<td>10</td>
<td></td>
<td>Can use dashes, periods, or no spaces</td>
</tr>
</tbody>
</table>
## APPENDIX A

The Administration tab has 4 sections used to complete the modification. Each section has required fields to fill in to complete the modification. The tables below show you what each field requires to complete, and include digits | Case-sensitive

### # CHARACTERS | DIGITS | ADDITIONAL NOTES

| Username | 6 | Can include digits |
| Password | 8 | Can include digits | Must include "@" and end in ":domain" |
| Last Name | 20 | Can include digits |
| FirstName | 20 | Must be digits | Can use dashes, periods, or no spaces |
| Email | >1 | Must include "@" and end in ":domain" |
| OfficePhone | 10 | Must be digits | Can use dashes, periods, or no spaces |

### # CHARACTERS | DIGITS | ADDITIONAL NOTES

| Name | 4 | Can include digits |
| Address 1 | >1 | Needs at least 1 character or digit |
| City | 3 | Needs at least 1 character or digit |
| Zip | 5 / 5-4 | Must be digits |
| ClinicPhone | 10 | Must be digits |
| ContactLastName | 4 | Can include digits |
| ContactFirstName | 4 | Can include digits |
| ContactEmail | >1 | Must include "@" and end in ":domain" |
| ContactPhone | 10 | Can use dashes, periods, or no spaces |

### # CHARACTERS | DIGITS | ADDITIONAL NOTES

| LastName | 2 | Can include digits |
| FirstName | 2 | Can include digits |
| Address 1 | >1 | Needs at least 1 character or digit |
| City | 3 | Needs at least 1 character or digit |
| Zip | 5 / 5-4 | Must be digits |
| Phone | 10 | Must be digits | Can use dashes, periods, or no spaces |
| Fax | 10 | Must be digits | Can use dashes, periods, or no spaces |
| Email | >1 | Must include "@" and end in ":domain" |
APPENDIX C

TrueNorth Administration Quick Reference Guide

FIELD ENTRY REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Characters</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>4</td>
<td>Can include digits</td>
</tr>
<tr>
<td>Address 1</td>
<td>1-10</td>
<td>Needs at least 1 character or digit</td>
</tr>
<tr>
<td>City</td>
<td>10</td>
<td>Must be digits</td>
</tr>
<tr>
<td>Clinic Phone</td>
<td>10</td>
<td>Must be digits</td>
</tr>
<tr>
<td>Contact Last Name</td>
<td>4</td>
<td>Can include digits</td>
</tr>
<tr>
<td>Contact First Name</td>
<td>4</td>
<td>Can include digits</td>
</tr>
<tr>
<td>Contact Email</td>
<td>10</td>
<td>Can include &quot;@&quot; and end in &quot;\domain&quot;</td>
</tr>
<tr>
<td>Contact Phone</td>
<td>10</td>
<td>Can include dashes, periods, or no spaces</td>
</tr>
</tbody>
</table>

3. Select the appropriate option from the left pane.
4. After viewing the information for accuracy and completion.

To enter comments:
1. Click "comment".
2. Select the appropriate context for your comment from the "Comment Context" drop-down menu.
1. Login to ConfidentialPlus using your username and password.
2. Click on the "User Management" section.
3. Click the "Roles" tab and select the appropriate role from the drop-down menu in the left pane.
4. Click add.
5. Enter the user information: username, password, first name, last name, email, and office phone are required fields.
6. If you entered user information wrong, click cancel and enter the user information again. Otherwise, click save.
7. Highlight the user account you want to edit, then click the delete button.

1. Login to ConfidentialPlus using your username and password.
2. Click on the "User Management" section.
3. Click the "Roles" tab and select the appropriate role from the drop-down menu in the left pane.
4. Click add.
5. Add the user data provided. The table below lists the field requirements for entering information.
6. Click save at the bottom center of the screen.

1. Login to ConfidentialPlus using your username and password.
2. Click on the "User Management" section.
3. Click the "Roles" tab and select the appropriate role from the drop-down menu in the left pane.
4. Enter the user information in spaces provided.
5. Click save at the bottom center of the screen.

1. Login to ConfidentialPlus using your username and password.
2. Click on the "User Management" section.
3. Click the "Roles" tab and select the appropriate role from the drop-down menu in the left pane.
4. Click add.
5. Enter the user information in spaces provided. The table below lists the field requirements for entering information.
6. Click save at the bottom center of the screen.

1. Login to ConfidentialPlus using your username and password.
2. Click on the "User Management" section.
3. Click the "Roles" tab and select the appropriate role from the drop-down menu in the left pane.
4. Click add.
5. Enter the user information in spaces provided. The table below lists the field requirements for entering information.
APPENDIX D

TrueNorth User Quick Reference Guide

FIELD ENTRY REQUIREMENTS

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th>SAMPLE INFORMATION</th>
<th># CHARACTERS</th>
<th>DIGITS</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Name</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Name</td>
<td></td>
<td>10</td>
<td></td>
<td>Must be digits</td>
</tr>
<tr>
<td>Date of Birth</td>
<td></td>
<td>10</td>
<td></td>
<td>Can use &quot;-&quot; and &quot;-&quot; between numbers</td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td>3</td>
<td></td>
<td>May be characters and digits</td>
</tr>
<tr>
<td>City</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zip Code</td>
<td></td>
<td>5 to 4</td>
<td>5</td>
<td>Must be digits</td>
</tr>
<tr>
<td>Phone Number</td>
<td></td>
<td>10</td>
<td></td>
<td>Can use dashes, periods, or no spaces</td>
</tr>
<tr>
<td>Sample ID</td>
<td></td>
<td>&gt;1</td>
<td></td>
<td>Must be digits</td>
</tr>
</tbody>
</table>

Demographics | Sample Information field requirements

COMPLETING TASKS IN TRUENORTH

To log into TRUENORTH:
1. Open the TrueNorth site (www.compass.confidentplus.net)
2. Enter the username and password provided to you.
3. Click the login button.
4. To log out, click the logout button at the top-right of any screen.

To change the order:
1. Click the Orders tab.
2. Click the Demographics section.
3. Select the appropriate clinic for the order from the drop-down menu in the left pane.
4. Click the new button at the bottom left side of the.
5. Select the appropriate for the order.
6. Enter the patient information.
7. To cancel the information you entered, click cancel. Otherwise, click save at the bottom center of the screen.

To cancel the information in the order:
1. Click the Orders tab.
2. Click the Demographics section.
3. Click an existing order in the.
4. Click the appropriate patient information.
5. To cancel the information you entered, click cancel. Otherwise, click save at the bottom center of the screen.
1. Click the **tab**.
2. Select the appropriate clinic from the drop-down menu in the left pane.
3. Select "not shipped" from the menu.
4. Click the **tab**.
5. Highlight the appropriate patient in the left pane.
6. Enter the sample information in the space provided.
7. To cancel the information you entered, click cancel. Otherwise, click save at the bottom center of the screen.

---

1. Click the **tab**.
2. Select the appropriate clinic from the drop-down menu in the left pane.
3. Select not shipped from the drop-down menu.
4. Click the **tab**.
5. Enter the information provided on the "shipping materials." To save the package, click save.

---

1. Click and drag the sample from the "Samples" pane to the "samples in package" field.
2. To cancel the information you entered, click cancel. Otherwise, click save at the bottom center of the screen.

---

1. Click the **tab**.
2. Select the appropriate clinic for the sample from the drop-down menu in the left pane.
3. Select not shipped in the drop-down menu.
4. Click the appropriate existing package in the top pane on the left side of the **tab**.
5. Click and drag the sample from the "Samples" pane to the "samples in package" field.
6. To cancel the information you entered, click cancel. Otherwise, click save at the bottom center of the screen.

---

1. Click the **tab**.
2. Select the appropriate clinic for the sample from the drop-down menu in the left pane.
3. Select not shipped in the drop-down menu.
4. Click the appropriate existing package in the top pane on the left side of the **tab**.
5. Click the **tab**.
6. Click **tab**.
7. Select the appropriate options for the example you would like to print.
8. Select not shipped depending on which you’d like to print.
9. Select the appropriate clinic from the left pane.
10. Click print.

To print directly to your printer:
1. In the print dialogue box, select the printer you would like to use to print the report.
2. To print:
   - Current page: select the "Selection" radio button.
   - Entire report: select the "All" radio button.
   - Multiple copies: enter the number of copies you would like in the "Number of copies" field.
3. Click print.

To enter comments:
1. Click comment.
2. Select the appropriate context for your comment from the "Comment Context" drop-down menu.
3. Select the appropriate comment type from the "Comment Type" drop-down menu.
4. Type your comment in the "Comment" field.
5. Click make comment.
APPENDIX E

Manual Update Information and Style Guide

**User Manual Update Information**
This document contains information about the User Guides.

**To update fields:**
1. Place cursor in update field.

*Updateable fields are:*
1. TOC
2. Index
3. Footer
4. Tab description
5. Tab description
6. Tab description
7. Tab description (2)
8. Tab description (2)
9. Tab description (2)
10. FAQs (2)

**General notes:**
You will have to manually update the Quick Reference Guides (page numbers, content).

It will be easiest to update fields from the end of the document toward the beginning of the document (if any pages are “off” you can fix them as you go without having to change each one again).

Be sure to continue using the established styles to make updating the TOC and index easy. They are connected to the established styles.
APPENDIX F

System Documentation | System Development Kit (SDK)

Service1.GS_ACTIVATE_USER

- Changes user flag from "No" to "Yes"
- Invoked by clicking Activate button
- Administration ➔ User Management ➔ Activate button
- Called by Flex

Calls
GF_VALIDATE_WEB_TOKEN
GF_ACTIVATE_USER

[Visual Basic .NET]
<WebMethod()> Public Function GS_ACTIVATE_USER(ByVal sServiceToken As String, ByVal sUserName As String) As String

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sServiceToken</td>
<td>String</td>
<td>A string of characters and digits combined with the session GUID, uniquely assigned to a user with each successful login.</td>
</tr>
<tr>
<td>sUserName</td>
<td>String</td>
<td>The USER_NAME to be added to the database (DB).</td>
</tr>
</tbody>
</table>

Returns (2)

1
<?xml version="1.0" encoding="utf-8" ?>
<string xmlns="http://tempuri.org/" service="Service1">USER_ACTIVATED</string>

2
<?xml version="1.0" encoding="utf-8" ?>
<string xmlns="http://tempuri.org/" service="Service1">INVALID</string>
Service1.GS_ADD_GROUP

Calls
GF_VALIDATE WEB_TOKEN
GF_\_ADD\_GROUP

[Visual Basic .NET]
Public Function GS_ACTIVATE_USER(ByVal sServiceToken As String, ByVal sGroup As String) As String

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sServiceToken</td>
<td>String</td>
<td>A string of characters and digits combined with the session GUID, uniquely assigned to a user with each successful login.</td>
</tr>
<tr>
<td>sGroup</td>
<td>String</td>
<td>The GROUP (role name) to be added to the DB.</td>
</tr>
</tbody>
</table>

Returns (2)

1

<?xml version="1.0" encoding="utf-8" ?>
<string xmlns="http://tempuri.org/\services\Service1">ROLE_CREATED</string>

2

<?xml version="1.0" encoding="utf-8" ?>
<string xmlns="http://tempuri.org/\services\Service1">INVALID</string>
Service1.GS_ADD_ROLE_TO_USER

- Adds a role to a USER_NAME
- Need to add object
- Called by Flex

Calls
GF_VALIDATE_WEB_TOKEN
GF_ADD_ROLE_TO_USER

[Visual Basic .NET]
<WebMethod()> Public Function GS_ADD_ROLE_TO_USER(ByVal sServiceToken As String, ByVal sUsername As String, ByVal sRoleName As String) As String

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sServiceToken</td>
<td>String</td>
<td>A string of characters and digits combined with the session GUID, uniquely assigned to a user with each successful login.</td>
</tr>
<tr>
<td>sUsername</td>
<td>String</td>
<td>The USER_NAME being assigned the ROLE_NAME.</td>
</tr>
<tr>
<td>sRoleName</td>
<td>String</td>
<td>The ROLE_NAME to be added to the USER_NAME.</td>
</tr>
</tbody>
</table>

Returns (2)

1
<XML version="1.0" encoding="utf-8" ?><string xmlns="http://tempuri.org/Service1">USER_ROLE CREATED</string>

2
<XML version="1.0" encoding="utf-8" ?><string xmlns="http://tempuri.org/Service1">Invalid Session</string>
Global Service Calls
Service1.GS_ACTIVATE_USER
  CALLS → GF_ACTIVATE_USER

Service1.GS_ADD_GROUP
  CALLS → GF_ADD_GROUP

Service1.GS_ADD_USER
  CALLS → GF_ADD_USER

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS_ADD_ROLE_TO_USER
  CALLS → GF_ADD_ROLE_TO_USER

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS
  CALLS → GF_VALIDATE_WEB_TOKEN

Service1.GS_DEACTIVATE_USER
  CALLS → GF_DEACTIVATE_USER

Service1.GS_GET_
  CALLS → GF_GET_

Service1.GS_GET_ALL_USERS
  CALLS → GF_GET_ALL_USERS

Service1.GS_GET_ALL_ROLES
  CALLS → GF_GET_ALL_ROLES

Service1.GS_GET_ALL_USER_ROLES
  CALLS → GF_GET_ALL_USER_ROLES

Service1.GS_GET_
  CALLS → GF_GET_
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- Service1.GS_GET... 48, 83, 87
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Confidential

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SDK

8/10/2007 3:34:00 PM
Global Functions Called By

GF_ACTIVATE_USER
   CALLED BY ➔ Service1.GS_UPDATE_USER

GF_ADD_GROUP
   CALLED BY ➔ Service1.GS_SET_SYSTEM_COMMENTS

GF_ADD_USER
   CALLED BY ➔ Service1.GS_

GF_VALIDATE_WEB_TOKEN
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_
   CALLED BY ➔ Service1.GS_

GF_DEACTIVATE_USER
   CALLED BY ➔ Service1.GS_DEACTIVATE_USER

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_ALL_USERS
   CALLED BY ➔ Service1.GS_GET_ALL_USERS

GF_GET_ALL_ROLES
   CALLED BY ➔ Service1.GS_GET_ALL_ROLES

GF_GET_ALL_USER_ROLES
   CALLED BY ➔ Service1.GS_GET_ALL_USER_ROLES

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_

GF_GET_
   CALLED BY ➔ Service1.GS_GET_
Processes

GF_REMOVE_ROLE_FROM_USER
  CALLS→ GS

GF_VALIDATE_WEB_TOKEN
  CALLS→ GF

GF_ADD_USER
  CALLS→ GS

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

GS
  CALLS→ GF_VALIDATE_WEB_TOKEN

** Can Call **

GS_SET
  CALLS→ GS

GS_SET
  CALLS→ GS

GS_SET
  CALLS→ GS

GS_SET
  CALLS→ GS

GS_SET
  CALLS→ GS

GS_PROCESS
  CALLS→ GS

GS_SET
  CALLS→ GS