Reconnecting New Generations to Charles Dickens through Modern Technology

An Interactive Qualifying Project Report submitted to the Faculty of
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Abstract

The Charles Dickens community required an Information Technology Plan that provided recommendations for improvements. After conducting research with other institutions and examining many different possibilities, we developed feasible goals for the community. Our recommendations included educational tools online, an interactive Turning the Pages exhibit, improvements in the digital catalog, a citywide cellular phone guided tour, and new computerized exhibits in the museum. The strategic plan will enable the community to apply for funding to update its information technology.

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Executive Summary

The aim of this Interactive Qualifying Project included researching feasible goals for improvements in information technology within the Charles Dickens community and then documenting these goals inside an Information Technology Plan. It was then proposed that this document be used in order to apply for any funding needed to reach these goals. This documented was drafted at the Charles Dickens Museum in London. To ensure that these goals are shared with the global Dickens community, the first draft of the plan was sent out to other institutions and members of the community for feedback and approval. Based on this feedback, changes were made to the plan and submitted as the Charles Dickens Community Strategic Information Technology Plan (2008 – 2012).

Research began for this project in March 2008 when Dr. Florian Schweizer, curator for the Charles Dickens Museum, contacted our group. After discussions with Dr. Schweizer, goals for this Interactive Qualifying Project were set. Data was gathered from other museums' websites in order to gain an understanding of existing information technology. Our group also gathered research on the process of writing an Information Technology Plan. An interview with Dr. Eleanor Loiacono, Management Professor at Worcester Polytechnic Institute, created a backbone of how to write the plan. Contact with Dr. Loiacono continued until the termination of our project.

Upon arriving in London, our group quickly got underway in documenting the Information Technology Plan. Research was conducted at local museums in order to aid our group in brainstorming possible ideas for improvements for the Charles Dickens community. Interviews were conducted with Ken Crosby of The Tate, Alice Kershaw of the Benjamin Franklin House, and Dave Patten of the Science Museum of London. These interviews outlined

recommendations for new technologies to possibly implement. Each provided ideas for technologies and procedures that were successful and unsuccessful at each respective museum.

An assessment was then conducted of the current technologies existing within the Charles Dickens community. This assessment, compared with the research already conducted on other museums, was able to provide a list of ideas that would greatly improve information technology within the community in education, heritage interpretation, collection management, and academic research.

It was crucial to narrow down this list of ideas in order to develop a small list of feasible goals for the museum. This list was narrowed down based on the needs of the museum, the cost of each idea, the benefit of each idea, and the impact of each on the four sectors. We decided upon five goals for the community: improvements in educational online tools such as podcasts and blogs, more interactive exhibits with the Turning the Pages exhibit, improving the digital catalog, creating an interactive cellular phone tour, and inserting computerized touch screen exhibits in the museum for education. The reasons and process of implementing each of these are described in the Information Technology Plan.

This plan was submitted to several members of the Charles Dickens community for feedback and approval. Once this feedback was received, the plan was revised and resubmitted as the final Information Technology Plan.

Our group then researched trusts and grants that can provide funding for each of these goals. The Information Technology Plan later will be used in the application process by the Charles Dickens community so these goals can be fulfilled by 2012, the bicentenary of Charles Dickens birth.

1 Introduction

Dickens once commented on his success and fame by saying, "There never was a king or emperor upon the earth so cheered and followed by crowds, and entertained in public at splendid halls and dinners, and waited on by public bodies and deputations of all kinds," (Kalasky). But does this statement still hold true today? It can be said that the measure of a person's success is how long people remember him after he is gone. Charles Dickens has made many enduring contributions to literature, and people of all ages and from all over the world have enjoyed his works. His memory continues many years after his death, as many children enjoy his stories as part of their schools' curriculum. His stories have withstood the test of time.

Image courtesy of Charles Dickens Museum in Holborn

Figure 1: The Charles Dickens Museum is our sponsor for this project.

Growing up poor, many of his works focused on poor children rising up against odds to succeed in their adventures. These usually heartwarming stories have had continued appeal to new generations, both young and old. Many institutions have been implemented since his death in order to ensure that Dickens' works and ideas remain popular as times and technologies change. The Charles Dickens Museum is one of these institutions devoted to promoting the good name of Charles Dickens.

The Charles Dickens Museum, located in the borough of Holborn, London opened in 1925. Dickens lived there for several years, during which time he wrote *The Pickwick Papers, Oliver Twist* and *Nicholas Nickleby*. Since its opening, the museum has paid tribute to Charles Dickens, both by allowing visitors to learn more information about him, but also by promoting his works to

new audiences. As the Dickens bicentenary quickly approaches, the Charles Dickens community prepares to update it in order to accommodate a larger audience.

In 1912, Dickens' fans in the United States officially celebrated the first centenary of Dickens' birth. The Dickens Centenary Committee organized a two-day celebration in New York. In 2012, the world will celebrate the great writer's two hundredth birthday, and the Charles Dickens Museum in London will be the headquarters for it all. There have been many Interactive Qualifying Projects done by Worcester Polytechnic Institute in the past that have focused around preparing the museum for this celebration. In C Term of 2008, a team of students conducted a project entitled "Creating the Backbone for the Dickens 2012 Campaign" in which they created a new website that promotes the celebration in 2012. This website is focused on a younger demographic by using games, trivia, and other multimedia to promote Dickens. We hope to be able to build on this project by assessing the current state of information technology and analyzing how well the museum is able to continue the popularity of this great author.

In response to benchmarks set by other museums, the Charles Dickens Museum as well as the community that surrounds it has established a need to update. With the bicentenary of Charles Dickens birth, a current need exists to connect institutions and members within the Charles Dickens community in order to agree on a plan that will inspire people worldwide to reconnect to Dickens. This plan will outline goals that will reach young children and create feeling for adults rediscovering, or perhaps discovering for the first time, the beautiful literature of Charles Dickens.

This plan addresses a growing problem worldwide, alliteracy. According to the Teachersnetwork.org, alliteracy can be defined as the state of being able to read but being uninterested to do so," (Collison, 2008). As children and adults decrease in interests to read, so does the legacy of Charles Dickens and other important literature. This problem can be

addressed within the community in several different approaches. The Charles Dickens Museum decided that the best way to address this problem was by updating information technology within the Charles Dickens community. By taking advantage of society's growing interest in computers and technology, the museum will be able to inspire people to reconnect to the literature of Charles Dickens. The first step in updating information technology within an institution is creating an Information Technology Plan, outlining a series of events that will need to take place in order to update. With a series of projects, the Charles Dickens community hopes to be prepared to enter the bicentenary with up-to-date technology that will allow anyone interested in Dickens to benefit greatly from these improvements, (Dr. Schweizer, Interview 2008).

The intentions of our project are to formulate a plan using information technology to reach out to newer audiences and also to obtain funding to implement it. This project will be centered in the Charles Dickens Museum and efforts will be coordinated with the museum's curator, Dr. Florian Schweizer. The main objective is to analyze the best means for obtaining better tools in order to promote Charles Dickens; displaying this analysis in an Information Technology Plan. This Information Technology Plan will then be reviewed by peers of Dr. Schweizer and used to assist for funding that will better the museum's information technology. Ultimately, our team hopes to be able to allow for a broader range of people to access and enjoy Dickens.

2 Background

In order to provide an assessment of the current state of the Charles Dickens community and provide a strategic plan for the future, it is important to understand the history of the Charles Dickens Museum and community as well as Charles Dickens. We connected different institutions and scholars within the community in order to gain feedback and seek approval. In order to do this, we needed to understand how the community was established and how it exists today. Once the community is understood, a background in information technology is required in order to reconnect people with Charles Dickens. Therefore, it is also important to have a background in information technology and an Information Technology Plan.

2.1 Charles Dickens and the Development of the Dickens Community

Charles Dickens, son of John and Elizabeth Dickens, was born into a poor family on February 7, 1812. His father spent time in prison for his debt and his family struggled to live comfortably. Dickens was forced to quit school and began working at the Blackening Factory when he was only twelve years old. Dickens would later say that this experience haunted him his entire life. As he continued to grow older, Dickens found odd jobs that contributed to helping him gain experience in writing. When he was fifteen, he obtained a job as a clerk in an attorney's

Photo Courtesy of Getty Images

Figure 2: Charles Dickens and his work.

office. Soon after, he got a job as a journalist for the Doctor's Commons Courts, which would land him a job with the local newspaper. In 1833, Charles published his first story. As his journalism career grew, Dickens adopted the penname "Boz", and published his work *Sketches of Boz,* a series of short stories. Soon after this publication, Dickens was invited to write a series of short stories to accompany drawings by Robert Seymour. These stories were put together to form his first major work, entitled *The Pickwick Papers*.

The Pickwick Papers, opened all sorts of doors for Dickens and his career began to blossom. He made a name for himself and was able to move out of the poor housing complex he once lived in and live at the current spot of the Charles Dickens Museum, 48 Doughty Street in London. He followed up this popular work with *Oliver Twist,* the famous story of an orphaned boy left alone in London. In 1838, Dickens began to write *Nicholas Nickleby* in small series published in the local newspaper. He finished this work the following year. Dickens continued his success with many other major works, including *A Christmas Carol* (1844), *The Chimes* (1844), *The Haunted Man* (1848), *David Copperfield (*1849), and *A Tale of Two Cities* (1859). Many of Dickens' works were a reflection on his childhood, dealing with issues of poor children and families striving to make ends meet through hard times. Dickens enjoyed a long period of fame, touring Europe in order to present public readings of his works. His fame with these readings continued until 1869, when he was forced to stop after suffering a mild stroke while onstage. On June 9, 1870, Dickens suffered a second stroke that took his life. He was buried at Westminster Abbey, and his work *Mystery of Edwin Drood* was left unfinished, (Cody, 2004).

For many of his major works, Dickens lived at 48 Doughty Street in London. He enjoyed times with his family there between April 1837 until December 1839. The house was almost destroyed in 1923, but was saved by the Dickens Fellowship. The house was renovated and opened as a museum in 1925. The Dickens Fellowship was founded in 1902 with the following objectives:

1. To knit together in a common bond of friendship lovers of the great master of humour and pathos, Charles Dickens;
2. To spread the love of humanity;
3. To campaign against those 'social evils' that most concerned Dickens;
4. To assist in the presercation and purchase of building and objects associated with his name or mentioned in his works (The Dickens Fellowship).

The Dickens Fellowship continues to focus its concerns on the Charles Dickens Museum and has continued its work on its preservation and development. The Fellowship publishes *The Dickensian* tri-annually. *The Dickensian* is filled with articles on Dickens' life and works, books and theatre, and the Fellowship's activities.

There are currently five buildings operated by the Fellowship serving as museums devoted to Charles Dickens, including the Charles Dickens Museum in London, the Charles Dickens Museum in Portsmouth, the Charles Dickens Museum Birthplace, the Restoration House in Rochester, and St. James' Church in Kent. There are forty-six branches of the Fellowship on four continents around the world with the main branch centered at the Charles Dickens Museum in London. There are other studies that are currently underway to increase awareness of Charles Dickens with regards to his bicentenary coming up in 2012. The University of Buckingham is working to digitize all of Dickens' weekly magazines and journals by 2012. The aim of this project is to increase interest in Dickens and improve education and scholarly research on the famous author. There is limited information on this topic due to the study being in its beginning stages, (Drew, 2006).

2.2 The Charles Dickens Museum

2.2.1 The Museum

Located at 48 Doughty Street, London, England, the Charles Dickens Museum provided a home for Charles Dickens for two and a half years. The Georgian style house provided an upgrade for Dickens and his family after the success of *The Pickwick Papers*. It was here at this house that Dickens wrote *Oliver Twist* and *Nicholas Nickleby*. As Dickens' family grew with the addition of more children, he was forced to move out of the house to accommodate his family's needs. The house opened up as a museum in 1925, seven years after Dickens' first centenary.

The museum offers exhibits from Dickens' life and his works from both when he lived in the house and after he moved out. It also occasionally features different artifacts of other contemporary authors. The museum is made up of four floors featuring artifacts from Dickens, family portraits, a timeline of Dickens' life, and samples of his work. The museum also offers readings, handling sessions of artifacts, and walking tours through the city, (Dr. Schweizer, 2004).

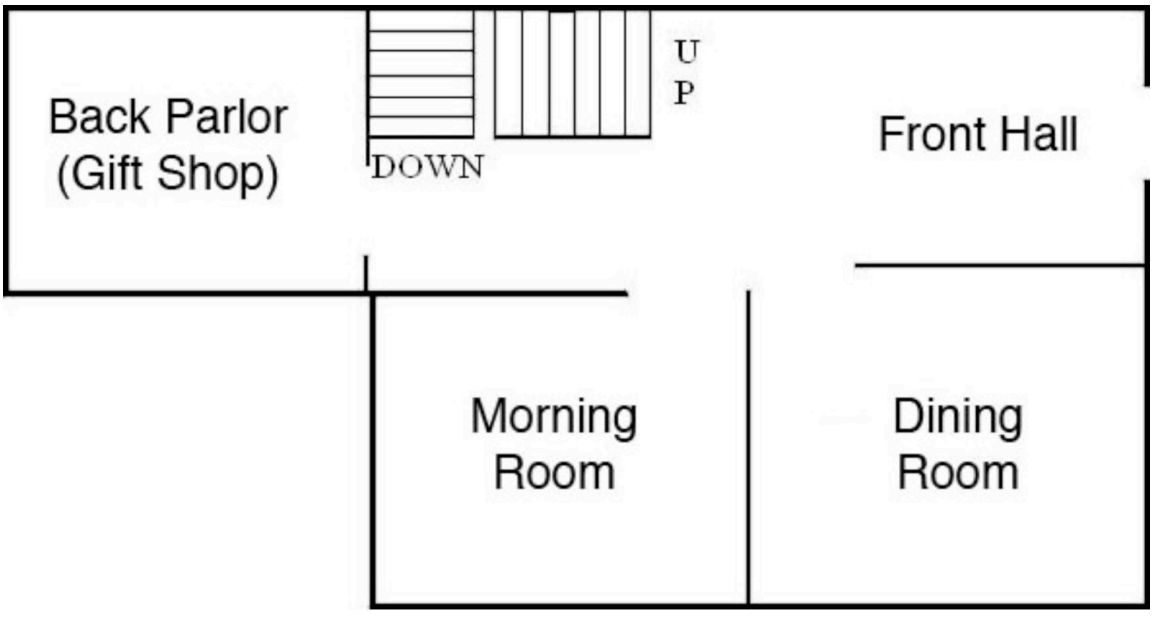

Image Courtesy of Charles Dickens Museum in Holborn

Figure 3: Map of the first floor of the Charles Dickens Museum.

2.2.2 Visitors

In 2007, the Charles Dickens Museum saw 25,000 visitors. The museum sorts visitors into four different categories, charging different admissions for each. An adult ticket is £ 5, a student ticket is £ 4, a child ticket is £ 3, and a family ticket is £ 14, (Dr. Schweizer, 2004). More adults visit the museum than any other category, with 50% of the visitors. Students take up 34 % of the museum's visitors. A breakdown of visitors can be seen in Figure 4. Figure 4 is a pie chart measuring the amount of visitors from each category to visit the museum since May 2006.

Figure 4 is important when creating a plan for an institution in order to define objectives. Half of the museum's visitors are adults and a large portion of the visitors is students. This tells those creating a plan what to focus on. Whereas some of the projects that this Information Technology Plan will focus on will be targeted towards children, it is important

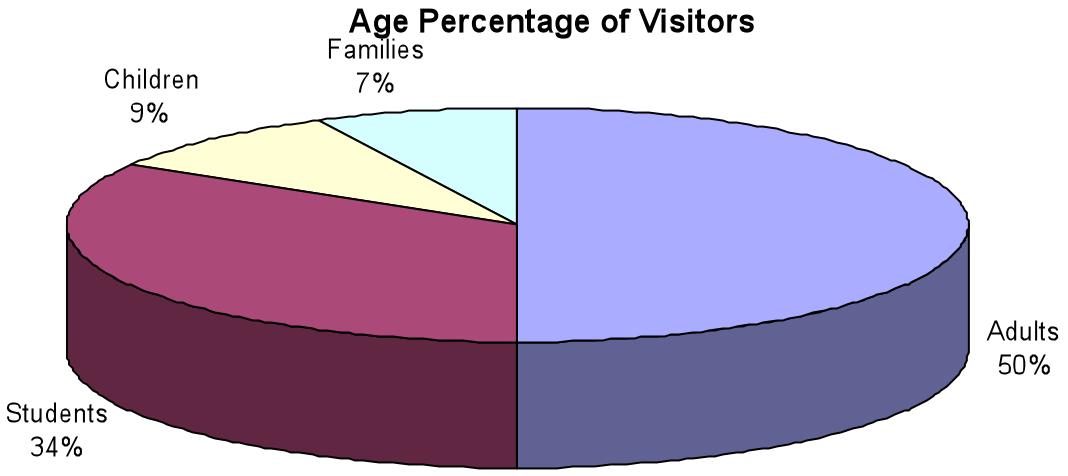

Figure 4: Breakdown of Ages of Visitors to the Museum. Half of the museums visitors are adults. It is important that the Information Technology Plan caters to both children as well as adults.

to understand that a large portion of the Charles Dickens community is adults and that the projects within the plan should be able to incorporate them as well.

2.3 Dickens Bicentenary

2.3.1 Dickens' Centenary

When planning the two hundredth anniversary of a famous writer's birth, it is important to reflect on what happened during the one-hundredth anniversary. The Dickens Centenary Committee of New York held a two-day event that included readings and ceremonies honoring the famous writer. William Watson, a famous poet at the time, topped off the event with a public reading, (New York Times, 20 Jan. 1912).

2.3.2 Dickens' Bicentenary

Charles Dickens Bicentenary will take place in 2012, and the Charles Dickens Museum is going to be the center for the celebration. With regards to this very important event, the Charles Dickens community is looking to hold festivities that will attract large audiences, in addition to the 400,000 people who come to visit for a variety of different events including stage productions, screenings, and exhibitions. The museum is also expecting the first major Dickens' festival to take place in London in 2012. Along with these festivities, the museum is hoping to improve access to Dickens' works online for free. This bicentenary will go hand in hand with the Olympics coming to London in 2012, attracting a huge array of tourists to the area.

This means that the next five years will be very significant for the Charles Dickens community. The community needs to find ways to promote itself and Charles Dickens. In order to do this, the community must develop a business plan and find information technology that can support it, (Dr. Schweizer, 2008).

2.4 Information Technology

According to the Information Technology Association of America, information technology can be defined as "the study, design, development, implementation, support, or management of computer-based information systems, particularly software applications and computer hardware," (Gyerhmeh, 2008). Information technology is a valuable resource in today's world. Managers, investors, employees, and the general public expect to be able to connect to an organization for data and the organization's internal operations. Employees expect the organization to change constantly with the constant growth of information systems. Recent trends in information technology include more user-friendly technology, leading to ubiquitous information technology or communication devices that can touch almost every aspect of our lives. Computer technology is also becoming faster, smaller, and cheaper to manufacture. Computer chips, or microcomputers, were available as early as the 1970's. With the introduction of the first IBM Personal Computer (PC) in 1981, the Information Revolution began. By the mid 1990's, these PC's were available to consumers around the world. These PC's are constantly becoming faster, cheaper, and more easily accessible. The arrival of the Internet allowed communication to become easier, and by the year 2000, company networks that linked employees to the Internet was not only common, but also expected. This growing field of information technology has led companies to formulate new, creative ways to compete with one another, as they now look to mass produce, become more cost efficient, and reach new customers, (Wainright, Brown, DeHayes, Hoffer, Perkins, 2005).

The Charles Dickens community is looking to do just this. They want to become more up to date with their use of information technology through different software applications that

will raise interest and awareness of Charles Dickens and his work. We will be providing an Information Technology Plan to help with this process.

2.4.1 Information Technology Plan

Several steps and procedures go into writing an Information Technology Plan. According to the State of North Dakota's Information Technology Plan (Figure 5), there are six main steps. They are as follows:

1. Assess the current situation;
2. Define objectives;
3. Develop the plan;
4. Document the plan;
5. Implement the plan;
6. Evaluate the results, (State of North Dakota, 2008).

Figure 5: Six Steps for writing an IT Plan. This demostrates the steps our team followed in order to create the Information Technology Plan. We completed the first four steps of this cycle.

Image courtesy of Enterprise Planning of North Dakota

As part of our project, we will be executing steps 1-4. In order to conduct an information resource assessment, one must critically evaluate the resources used by an organization and examine how well these resources meet the business needs. The quality and quantity of the organization's technology must be examined. It must be determined what drives information systems decision making. One must then organize objectives and develop a plan**,** (Wainright, Brown, DeHayes, Hoffer, Perkins, 2005).

This plan comes directly from the business strategy of the company. It is the vision of the business that drives the vision of how the business should use technology. The objectives for the information technology plan can then be developed from the objectives of the business plan, (Professor Loiacono, Interview April 28, 2008).

We will be developing this type of Information Technology Plan for the Charles Dickens community. We will develop a plan for information technology that will compliment the museum's business plan for the future.

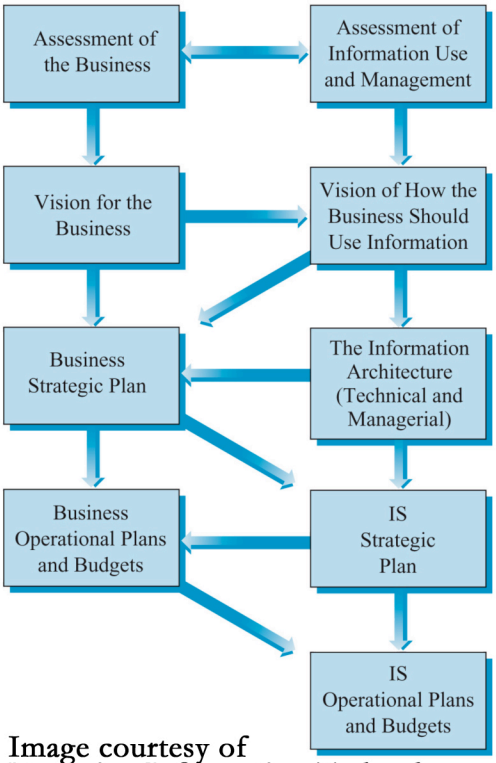

Image courtesy of Managing Information Technology, Wainwright, et al.

Figure 6: The Information Resources Planning Process. This figure demonstrates how business is continuously linked to technology. Technology must support the business plan.

2.4.2 Web 2.0

According to Nina Simon's article, "Discourse in the Blogosphere: What Museums Can Learn From Web 2.0", Web 2.0 is a "term that describes web-based applications on which users generate, share, and curate the content," (Simon, 257). This covers areas such as Wikipedia, YouTube, and blogs. According to Simon, museums can fall into five different levels of interaction (Figure 7). It is the goal of the Charles Dickens community to reach a level of interaction where it is easy for any member of the community, no matter where they are, to participate in a networked or social interaction with other users. According to "Discourse in the Blogosphere", Simon claims that many blogs associated with museums simply try to promote their exhibition and themes at their museums. However, the most successful blogs, such as Science Buzz associated with the Science Museum of Minnesota, allow users to actively contribute alongside staff, (Simon, 260).

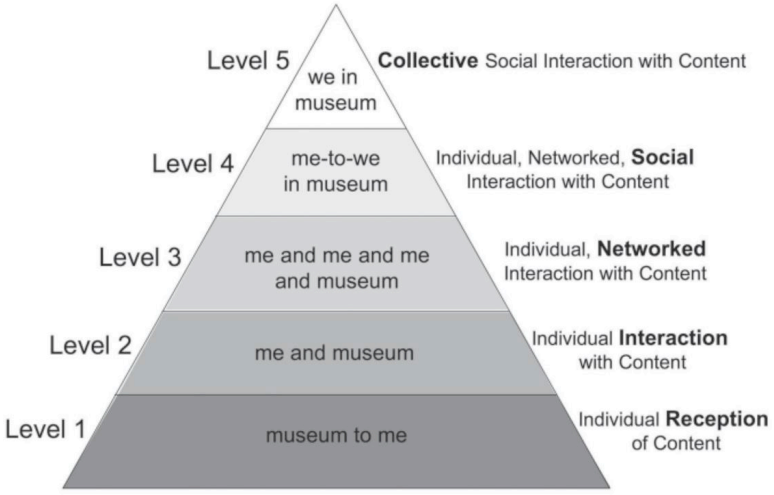

Figure 7: Levels of Interaction. It is important for the Charles Dickens community to reach a level of interaction that will socially network the members within the community.

Blogs, podcasts, and other forms of Web 2.0 are constantly growing worldwide. According to PQ Media, combined spending on blogs, podcasting, and RSS advertising rose by 198% in 2005 to a total of $20.4 million. According to a US report in eMarketer, blog traffic

increased 56% in the United States in 2006 with 58.7 million visitors to blogs, representing 34% of all Internet users in the United States. In a study conducted by Technorati.com, a blog tracking site, almost 25 million blogs existed worldwide. It is important for the Charles Dickens community to take advantage of this growing market.

2.5 Current Information Technology within the Charles Dickens Community

The Charles Dickens community has established several different improvements in information technology over the last six years. Even with these updates, it is still necessary to always be looking to improve.

2.5.1 Video Biography

The video biography is currently about ten years old. In the past it has received many good reviews, some visitors even saying that it was the best part of the tour. The video lasts about forty-five minutes and is located in the library in the basement of 48 Doughty Street.

Future plans for the video are currently under way that will modify the video slightly. The Charles Dickens community wishes to make the video more personal and friendly toward the visitors. Dr. Schweizer wishes to make the video more engaging, making people want to come back, (Dr. Schweizer, 2008).

2.5.2 Cataloging

The Charles Dickens community has had an ongoing process of updating its database into one easy to access catalogue. The process really began in 2002 when students from Worcester Polytechnic Institute completed the first Interactive Qualifying Project at the Charles

Dickens Museum. Students worked with uploading photographs into a database to allow for easy access amongst the community.

The process continued as more students from Worcester Polytechnic Institute completed their Interactive Qualifying Project at the museum in 2004. These students worked to assess the state of the database and to assist in applying for a £ 3,000 grant, which is still in the process of being reviewed.

In February of 2008 a new computer program was installed at the museum. There is currently an ongoing process of cataloguing artifacts into the database. A timetable for the completion of this project is still uncertain, as it will depend upon time that employees and volunteers will have to enter information into the database, (Dr. Schweizer, 2008).

2.5.3 Launch of the Charles Dickens Museum Website

The Charles Dickens Museum launched its new main website in 2004. At the time of the launch, the website was up to date with many of the technological tools that the Internet had to offer.

However, the website has not been updated in four years. According to Dr. Schweizer, it is time to start looking at new ways to improve its use. He claims that it is "a static website in a dynamic world," (Dr. Schweizer, Interview June 3, 2008). Although the Charles Dickens community has planned to make some changes to the museum, most of the focus at the moment is towards improving the new Dickens 2012 Website, the online headquarters for the bicentenary of Charles Dickens, (Dr. Schweizer, 2008).

2.5.4 Virtual Tour Installed on the Website

In early 2005, the final major update was made to the Charles Dickens Museum Website. A virtual tour was added as a link off of the main page. This provides visitors with information

from right inside the museum. The museum has received much feedback on the usefulness of this tool. It is necessary for many presentations, and teachers along with other visitors can use the virtual tour in preparation before visiting the museum.

2.5.5 Accoustiguide Audio Tours

In 2005, the Charles Dickens Museum purchased audio tours from Accoustiguide, a major company that supplies audio tours to institutions such as museums. These tours were then equipped with a script written by Dr. Schweizer and then read by Miriam Margolyes. Although there has been a lot of positive feedback for these tours, they remain unpopular among the visitors to the museum. Figure 8 shows the percentage of visitors using the audio tours since their installment.

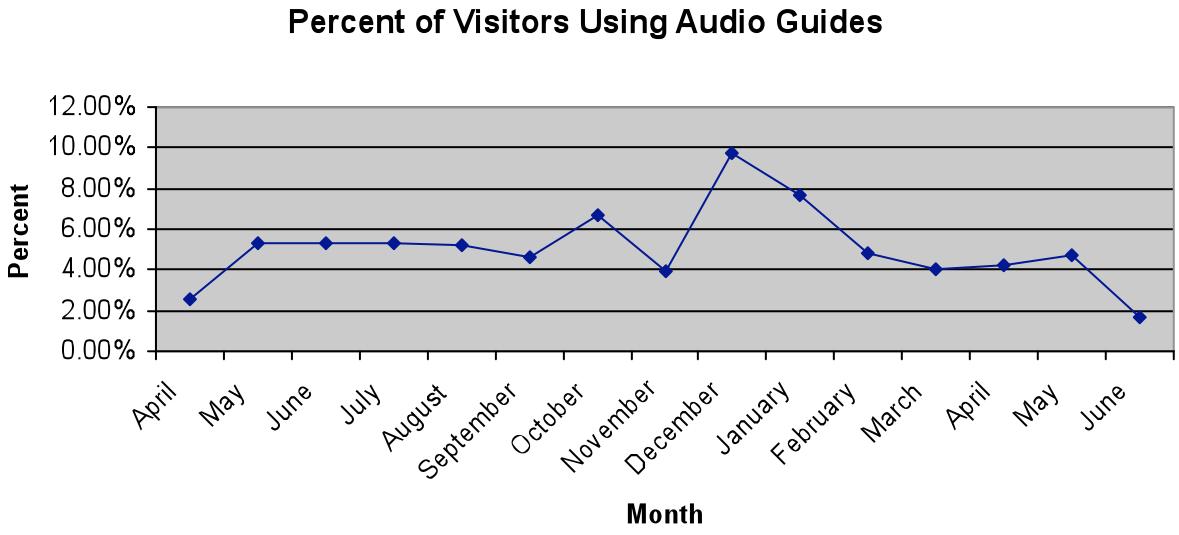

Figure 8: Graph of the Percent of Visitors Using Audio Guides. This graph demonstrates the effect of cost and the idea of change in visitors using a product offered by the museum. As a change was made in price, visitors immediately began to purchase the audio guide service.

Since the tours were installed in April 2007, only 5.2% of visitors to the museum use them. Price seems to play a large part of this unpopularity. When the audio tours were installed in 2005, they were originally rented out for £2. In October 2007, the price was reduced to £1.

This showed a significant increase in usage, 46%, for the month of October 2007 compared to September 2007.

Price may not be the only effect on the usage of audio guides. Although, the 46% increase in October 2007 makes it appear as though price has a strong influence over the visitors, the percentage of use drops back down, and in April reaches 4.2%. This shows that people are also influenced with change. Interest can increase with the establishment of new ideas. We later used this idea when preparing our goals for the Information Technology Plan. By implementing an easy change, even if it is not sustainable for a long-term period, an increase in interest will occur.

2.5.6 Dickens 2012 Website

The Dickens 2012 Website was launched in March of 2008. It was completed by a group of students from Worcester Polytechnic Institute for their Interactive Qualifying Project. This website is the main website for the Charles Dickens Bicentenary in 2012. Currently, it supplies children, students, teachers, scholars, and enthusiasts an online portal to information on Charles Dickens. It is equipped games, trivia, puzzles, and other multimedia.

Although a successful project, the website has received some negative feedback that has been taken into consideration by the Charles Dickens community. Efforts are currently underway to make minor improvements to the website that will allow it to effectively promote this major event.

Criticism has arisen about the non-Dickensian feel of the website. The goal of the website was to create a modern page for children, however, the solid bright colors and sharp graphics have turned some users away. It is now a goal of the Charles Dickens community to fix the site, creating more a Dickensian theme.

2.6 Cost to Benefit Analysis

A cost benefit analysis is crucial in order to determine what goals are feasible and which ones will have a negative result. This can be done by adding all of the positive aspects of the benefits and subtracting all of the negative aspects of the costs. Several problems can come out of performing such an analysis. For example, people can neglect intangible costs, such as time, and benefits, such as education about events. It is important to consider both tangible and intangible costs and benefits in order to perform this successfully.

This analysis is difficult to use when it is not quantified. Whereas most costs are financial, although some are also time and work, some benefits are not monetary. In our case, because we are working with a non-profit organization, almost all of the benefits are not monetary. Instead, we are looking for an increase in interest and members inside the community. This means we must estimate the benefits involved in each goal. This can be done by judging the audience that each goal will apply to and decided how each goal will benefit the community qualitatively as opposed to quantitatively. It is always easy to think that something will look good in a couple years, but it is important to always keep in mind who the audience is and what the gain will be.

3 Methodology

Discussions held with Dr. Schweizer throughout the pre-project preparations help shaped much of the methodology. Dr. Schweizer made clear the goals and expectations that the museum and community had for this project.

The desired outcome of this project is to assist the Charles Dickens community in renewing interest in Dickens and his work by reaching new generations with updated, modern technology both within the Charles Dickens Museum and within the Charles Dickens community. With a network of many institutions within the community, we can work together to implement certain goals to increase interest in literature.

We interactively connected audiences to Dickens by setting up a plan that will update resources that already existed in the Dickens community. We researched and assessed the current state of the Charles Dickens community and analyzed its information technology compared to other modern technologies at other institutions and communities. Using this information and research, we created five goals for the community to implement within the next five years.

It is important to note that we will not be implementing these technologies, but merely providing a five-year plan in order to have these technologies in place by 2012.

We also assisted in applying for funding by identifying appropriate trusts and grants. The Charles Dickens community will then use the Information Technology Plan to apply for these grants in the future. With this funding, the community will be able to improve technologies over the next five years and reach a broader audience of Charles Dickens.

Our research focused in on four different sectors of the community, which include the following: education, heritage interpretation, academic research, and collection management. The importance in using information technology to improve each of these four sectors came from interviews and correspondences with Dr. Schweizer.

The education sector can be described as how the museum caters to young people, both inside the museum and online. Museums are near the top of the list of field trip destinations for schools and it is important to not only educate the children about Dickens, but also to pique their interest in his works, and reading in general. A previous Interactive Qualifying Project dealt with this issue by creating the Dickens2012.org website, but more needs to be done.

Heritage interpretation is a sector whose name does not make its definition obvious. This sector deals with how the museum presents the artifacts, and descriptions of these artifacts. It deals with how information about the topic, is communicated to the user. Technology can play a major role as the medium through which this information can be passed.

The academic research sector is mainly involved with those in higher-level academia. Even though Dickens died some time ago, his life and literature are still a topic of research. His books may cater to younger audiences, but those in the graduate and postgraduate levels of study continue to examine his life. The Charles Dickens community is often the primary source for information of this type and they want to continue to improve how users can research him.

Collection management is a sector in which the average user sees very little of. As a behind-the-scenes sector it focuses on keeping track of the physical objects within the museum. It may seem like a trivial task, but it is actually quite important. The Dickens museum in Holborn alone contains over 10,000 books and many other physical objects. The current catalog system for the museum is in reality three separate card catalogs, which are not current. The need for a unifying catalog system is great and it is a sector, which the community has long overlooked.

Whereas past projects with the Charles Dickens Museum focused in on a younger demographic, our project has focused on the Charles Dickens community as a whole, applying these tools to a wide range of audiences both in London at the museum and across the world.

This project linked several different institutions and communities together worldwide. Although working in London, we linked institutions such as the Charles Dickens Birthplace Museum, the Charles Dickens House Museum in Broadstairs. As our immediate project got underway, we suggested the implementation of tools that can greatly affect the Charles Dickens Museum in Holborn. We made suggestions for improvement on some of their information technology within the museum by providing a plan for the next five years. Based on our research and discussions held with Dr. Schweizer were able to develop three main objectives for this project.

Our objectives for this project were as follows:

- To draft an Information Technology Plan;
- To identify appropriate grant making trusts and to assist in applying for funding;
- To distribute the Information Technology Plan to the Global Dickens community.

With these objectives solidified, we were able complete a series of tasks up until the completion of this project. The Gantt Chart in Figure 9 shows the steps we took for this project.

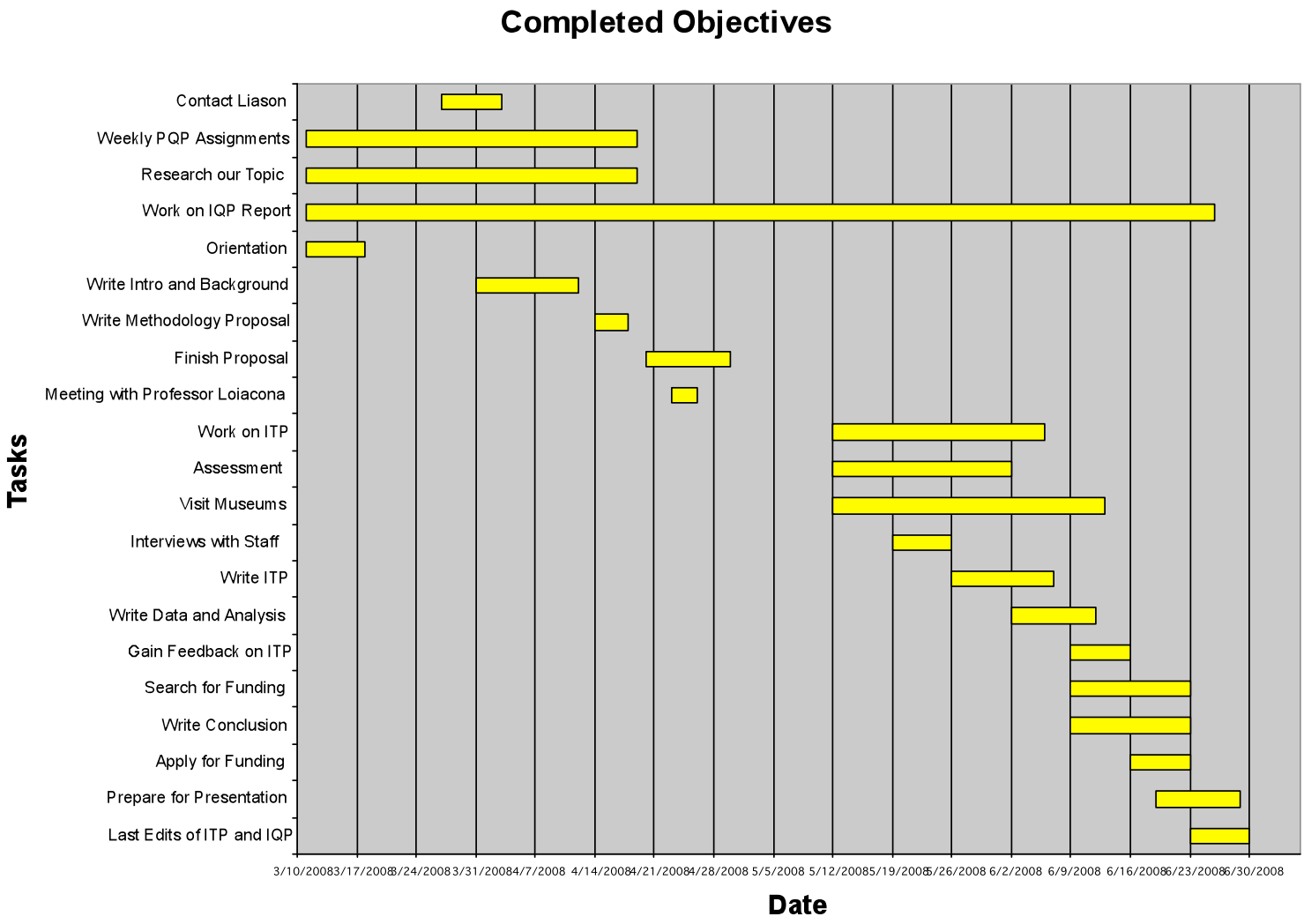

Figure 9: Gannt Chart of Completed Objectives

3.1 Drafting an Information Technology Plan

There are several steps that go into drafting an Information Technology Plan. We first analyzed the information technology at other museums in the London area and gained background on what is successful and what is not. We then assessed the information technology and determined a business strategy for the Charles Dickens community. Based upon this information, we were able to draft our plan. An Information Technology Plan can be very beneficial to a company, outlining not only what to do, but reasons for doing it. It can justify reasons for implementing new technologies to the institution itself, (Dr. Schweizer, Interview 2008). The reason for creating a plan and improving technology is due to the reason visitors like to know what they are looking at, who created it and when. They often want to know why a particular work is heralded as a masterpiece, or whether an abstract painting is supposed to represent an object in reality, (Marriott, 2007).

In order to write the plan, we followed the strategy created by the State of North Dakota when they were preparing their Information Technology Plan. We assessed the current situation, defined objectives, developed the plan, and documented the plan, (State of North Dakota).

3.1.1 Assessing the Current Situation

3.1.1.1 Assessing Other Museums Websites

To assess the current situation of the Charles Dickens Museum and community, it is important to understand the current situations of other museums and institutions both in the area and worldwide. By determining the current situations of other museums and institutions, we are able to rate the Charles Dickens Museum and decide what needs to be improved on.

Otherwise, we would not have any basis for evaluating the museum and our ideas for improvement would be limited.

To begin the assessment of other museums and institutions, we researched in Worcester, MA. We conducted this research over the Internet in order to evaluate other museums and institutions websites and global communities. We focused on websites that have a similar establishment as the Charles Dickens Museum, such as a small house museum focused on a famous writer. We began our search with the Concord Museum in Concord, Massachusetts. This website offered many electronic tools in order to improve education and academic research for the authors associated with the museum. For example, links were provided to a full collection of electronic works by Ralph Waldo Emerson courtesy of the Ralph Waldo Emerson Institution.

We also focused on the Ernest Hemingway Museum in Key West, Florida. Like the Charles Dickens Museum and the Concord Museum, the Ernest Hemingway Museum focuses on the residence of a famous writer. It also looks for ways to promote the famous author over the Internet using interactive tools. For example, the museum displays an interactive virtual tour on the website. We attempted to acquire the Information Technology Plans from each of these museums but were unsuccessful. However, the research done on these websites and others like it is essential in order to develop benchmarks on what other museums are currently doing for information technology. Without the research gathered, we would not have acquired an understanding of what currently exists and what are feasible ideas for the Dickens community to implement.

3.1.1.2 Interviews with Other Museums

Upon arriving in London, we continued our research of other museums. In the first week of our project in London, we researched information technology professionals at different

museums in the area. We sent out a general e-mail to several different museums requesting information and interviews. An interview with the museums' curators or other employees gave us valuable feedback on what other museums have done and are planning to do with changes in technology. We sent out e-mails to eight museums in the area requesting interviews with curators or other staff in charge of information technology. We only heard back from three of these eight museums, which were The Tate, the Benjamin Franklin House, and the Science Museum of London. We conducted these meetings at each of these museums, gaining information on what each museums has done, plans on doing, and the processes that follow to implement new technologies. These questions outline goals that the Charles Dickens community wishes to fulfill after the five-year period of the Information Technology Plan. To view our questions for the interviews, reference Appendix B. With these goals outlined, we compared how other museums have met challenges or are looking to meet them in the future by improvements in information technology.

Interviews were conducted with Ken Crosby, IT Operations Manager at The Tate, Alice Kershaw, House Administrator and Operations Manager at the Benjamin Franklin House, and Dave Patten, Head of New Media at the Science Museum of London. Interviews were also conducted within the Charles Dickens Museum, with Dr. Schweizer, our liaison and curator at the museum and other staff within the museum.

Interviews were conducted in several different ways during our research. There are different approaches we had to examine before conducting an interview. An informal or conversational interview has no predetermined questions before going into the meeting and follows more of a discussion format than a question and answer. This approach was often used for members of staff at the Charles Dickens Museum. After becoming acquainted with the staff within the museum, it was much easier to conduct informal interviews and gain valuable pieces of information relevant to our research. Interviews can also be standardized or have an open-

ended approach. In these types of interviews, questions are asked that are left open ended instead of following a yes or no approach. This allows the interviewee more freedom to discuss what they would like. The same types of open-ended questions are asked at each meeting in order to allow for an easy analysis and comparison of each interview. The final type of interview is a closed, fixed-response interview. In this type of meeting, questions are asked of the interviewee that allows him or her to only answer from a select few answers. It does not give much freedom to the interviewee to answer, forcing them to choose an answer that may not be completely true. We attempted to stay away from this approach when conducting interviews. However, we used these types of questions while creating surveys, allowing visitors to have predetermined answers to choose from. This allows for an easy comparison when there is a large sample to analyze, (McNamara, 2008).

3.1.1.3 Assessment of Other Local Museums

While we waited for a response from IT professionals at local museums, we explored the local museums both inside and online. We looked for electronic tools that they have to offer, in particular, how the museum's exhibits correspond to material on its website. We also examined how the museum attempts to raise interest in the museum and its exhibits through other forms of information technology.

By the end of the first week of our stay in London, we visited and assessed seven museums in the area. Museums that we visited include the Tate Modern, the Victoria and Albert Museum, the Natural History Museum, the London Science Museum, the Museum of London, The Benjamin Franklin House, and the British Library. The museums were chosen due to the convenience in the area and the fact that most are up-to-date with their technologies offered to visitors. We took tours of these museums, researched their technological tools, and discussed the current state of their information technology with employees. We kept close attention to

different equipment used and the companies that sponsor and create this equipment in order to come up with ideas for our plan. We used the different companies and equipment to continue our research. We contacted these companies and their responses helped us judge the feasibility of reproducing these ideas in the Charles Dickens community.

It was at this point in our project that our objectives and tasks of what needed to be done became clear to us. By examining other institutions and museums and paying close attention to the information technology present to compliment the collections instead of looking at the collections themselves, we were able to develop a strong idea of the direction that our Information Technology Plan should go. With ideas in information technology, we were able to conduct further research on different companies, such as deals offered by Accoustiguide on their website. Although we did not seek out any deals with this company in our Information Technology Plan, it helped us realize what ideas would be feasible to implement in the future. It also helped us realize what other institutions and museums do to reach the same goal as us, find ways to inspire people to become interested in the institution's mission.

3.1.1.4 Assessment of the Charles Dickens Museum and Community

The Charles Dickens Museum currently offers a small variety of technologies in order to further the advancement of Dickens. Some aspects of the new website created for the bicentenary, www.dickens2012.com, offer games and trivia that are directed towards a younger demographic. However, this technology does not offer much in order to compete with other non-profit organizations or connect to a wide range of customers and visitors. Although helpful, it falls short of the technology available at other museums.

We assessed the current state of the Charles Dickens Museums' technology. We then made a list of all the electronic tools that the museum currently implements. We juxtaposed this list with the other museums' lists in the area. The assessment was crucial to determine how

information technology can be improved. We focused on how the museum promotes itself and its exhibitions different updates it has made within the last five years. Refer to Appendix A for a list of questions that we used to evaluate the museum.

Other ways that we could have evaluated the museums could have been to informally judge the museums content on the website and its exhibits inside the museum. However, we feel that this will not give us definite results. Therefore, we created a survey conducted on the museum and compared it with the other museums in the area. We carried this portion of our objectives out during the process of gathering information from the other museums. We self evaluated the museum as we were waiting to hear back from our meeting requests.

Along with our own evaluation, we used the general public to submit an evaluation. When the museum reopened to the general public after the first week of our stay in London, we administered a questionnaire that provided feedback to the current state of information technology at the Charles Dickens Museum. We were able to gain an understanding of how the public views the Charles Dickens Museum; especially compared to other museums they have recently visited. The survey was intended to be short allowing visitors a chance to fill it out as they were leaving the museum. It asked visitors how they felt about the information technology inside the museum and if they felt anything was lacking. Our questionnaire is available in Appendix C. These questions were formulated in this manner because this supplied us with information in terms of what technology the visitor takes note of when he visits the museum. We used this information to analyze what works and what does not work at the museum.

3.1.2 Defining Objectives

According to Dr. Loiacono, in order to prepare an Information Technology Plan, it is important to form a link from an organization's business plan to the information technology that will support it. After much discussion with Dr. Schweizer, it was decided that our research and

assessment should formulate much of the Charles Dickens community's business plan for the coming future. However, he has announced that the business plan should focus on the four sectors discussed earlier, which are education, heritage interpretation, academic research, and collection management. The vision of the Charles Dickens community is to re-ignite an interest in Charles Dickens for members outside of the community and to find ways to attract new audiences in time for 2012. Based on the objectives determined by Dr. Schweizer and ourselves, we came up with goals that distinguish how information technology can compliment these objectives.

3.1.3 Developing the Plan

Based on these discussions with Dr. Schweizer, we brainstormed ideas that would affect several different sectors. Our brainstorming process took place in our office at the Charles Dickens Museum. We outlined the four sectors on a white board and wrote down any ideas that could improve the museum's information technology. These ideas stemmed from visits, interviews, and research that we had gathered since starting the project. Once we came up with each idea, we categorized each one into the sectors. We decided to focus on the ideas that came up in two, three, or all four sectors. We decided that this would be the best method to narrow down our objectives because it would improve several different areas of the museum and the community.

Also during this process, we looked to focus on the needs, benefits, costs, and alternatives to each idea presented. Before trying to implement an idea, we needed to first see if it would be feasible. After this assessment we came up with five main goals. The goals that we decided to focus on and work to implement are as follows: establishing more educational tools online with podcasts and blogs, establish more interactive exhibits at the museum with a Turning the Pages exhibit, become more digitized with a better collection database, create an interactive

city tour for 2012 with a city-wide cellular phone guide, and insert computerized exhibits in the museum with new touch screen monitors.

3.1.4 Documenting the Plan

Once we came up with all of our ideas, the challenge became putting them all together inside one plan. The first task for doing this would be to create a template of an Information Technology Plan. In order to do this, we researched several different companies and institutions Information Technology Plans. In particular, we focused on the National Library of Australia's Information Technology Strategic Plan 2007 – 2010 and the Austin Peay State University Information Technology Plan 2004 – 2005. Using these Information Technology Plans, we came up with own template. Once this template was created we were able to fill in the different chapters with the research we had already gathered. This became our Information Technology Plan, which can be seen in Appendix D.

3.2 Distributing the Information Technology Plan to the Global Dickens Community

As our first draft was nearing completion, it was distributed to several business professionals in order ensure that the plan was written in a professional manner. We asked that these professionals keep in mind that the plan was structured professionally and the diction was correct. Based on this feedback, we were able to finish the first draft of the plan. The plan was originally sent out to Dr. Eleanor Loiacono and Dr. Steven Taylor of Management Department at Worcester Polytechnic Institute and Mr. Bill Burley of the Fiscal Department at Beth Israel Deaconess Medical Center.

After we drafted our Information Technology Plan, it was sent to the global Dickens community for review. This is an important step for us, as this group will help in implementing this plan for the future of the Charles Dickens community. Without distributing the Information Technology Plan, we would not have obtained the general consensus of the Dickens community. This plan outlines updates for the entire community, not just the Charles Dickens Museum, thus it is important to reach an agreement with everyone in the community. Also, by distributing this information, we gained valuable feedback from the community, which helped in applying for financial support from grant-making trusts.

By distributing this plan to the global Dickens community, we were also requesting an approval for the goals that we wish to implement. We needed the entire community to be in agreement of the direction of the community before continuing with the implementation. By establishing this, Dr. Schweizer, as well as other in the community, will be able to find support and aid in order to make these goals realities. A major cost of most of the goals is time management and employees working on each project. By reaching an agreement with the rest of the community, we can find backing for each.

3.3 Identifying Appropriate Grant Making Trusts and Assisting in Applying for Funding

After we identified the objectives that are needed for the vision of the museum, we determined the cost needed to implement each goal. This was an important step because we assisted the Charles Dickens Museum and community in applying for financial support in order to help the museum reach their vision. We did this through our information technology plan. We first identified grant-making trusts both in the United States and the United Kingdom who back non-profit organizations such as the Charles Dickens Museum. Upon our departure from

London, the museum will use this financial support without us present to make their vision a reality.

3.2.1 Finding Relevant Trusts and Foundations

While researching trust and foundations to support our goals in the Information Technology Plan, we sought out particular criteria. We identified trusts and foundations that provided grants to projects that focused on education, museums, literature, and technology, especially information technology. We examined a painstaking amount of grants, making sure the Charles Dickens community fits into the given criteria.

3.2.2 Applying for Funding

After a strong list was complied of trusts and foundations where our goals fit their criteria, they were submitted to Dr. Schweizer. At a later date, the Charles Dickens community will apply for funding from these trusts and foundations using our Information Technology Plan.

4 Data & Analysis

After strictly following the steps in our Methodology, we were able to analyze our results while trying to reconnect people worldwide to literature and Charles Dickens.

4.1 Assessment of the Current Situation

4.1.1 Surveys

The purpose of the surveys created for the Dickens museum was to gain understanding in what a museum visitor likes about their visit with regard to technology. Many surveys ask for a combination of ratings feedback and written feedback. The numerical answers are used to drive the metrics, while the written feedback provides additional perspective that can be used in the metrics analysis. One disadvantage to analyzing surveys is that you will not usually end up with a high percentage of surveys returned. There is a time constraint; sometimes people just do not want to fill out a survey at the end of their visit. Surveys have their place and they are one of the more effective ways of getting perception-based data.

Museum goers to the Charles Dickens Museum who filled out the survey showed a wide range of opinions. There were a lot of people who were all for the enhancement of interactive tools in the museum. There were also a handful of people who thought it would be a good idea to keep the Charles Dickens Museum looking like an 1800's Victorian style house. It was recognized that the people who were for the enhancement of the interactive tools were between the ages of 29 and younger and 30-49. The people who did not want any enhancement of interactive tools were mostly between the ages of 50 and older. This just goes to show that times are changing and the younger generations that are coming into the museum are expecting to see and use interactive tools.

Upon analyzing the surveys, it has become clear that technology only plays one of the many important parts of a good museum. Using technology to get across information is a common practice throughout museums all over the world. It is important to find what kind of technology is suitable for people of all ages. With that being said, the use of interactive tools can enhance the experience of someone who attends a museum whether they are 8 years old to 88 years old, but it should supplement not replace artifacts already in the museum.

4.1.2 Interviews

4.1.2.1 Tate Modern

An interview was conducted with Ken Crosby, Operations Management at The Tate in London, on Friday, May 23, 2008. This interview provided a good framework for the direction the Information Technology should go in. The interview covered several aspects including the museums involvement with blogs and podcasts, development of new technologies, development of content, and information technology maintenance at The Tate.

The Tate is one of the leading museums in the world for information technology. The museum is successful in using podcasts and blogs directly off its website. According to Crosby, these online features are very popular, however there is not exact figure to the number of hits they receive. The Tate collects and stores many recordings of events, lectures, discussions, interviews, and readings related to The Tate or art in general. This database allows the museum to upload video or audio recordings whenever deemed necessary.

Crosby also discussed how the museum implements new technologies at the museum. Although the museum does not have a formal review process for evaluating success, several tests are run in order to survey the appeal of a new idea. The museum will provide a small scale trial and improve an idea from there. During this trial, the museum will watch and listen to visitors using the new idea. An assessment is then carried out that determines what

changes need to be made and whether or not to keep the idea. If the idea passes this stage, it can be implemented full-time at the museum.

An important issue Crosby raised during the interview was content development. The Tate creates all of its content in-house, using its own production company. According to Crosby, technology is only as good as the content that supplements it. Information technology maintenance was also an important issue for Crosby. Technology will not be appealing to visitors if it does not work. He suggested that whatever is implemented needs to have a department to back it up in case it breaks down.

4.1.2.2 Benjamin Franklin House

An interview was conducted with Alice Kershaw, House Administrator and Operations Manager, at the Benjamin Franklin House on Tuesday, May 27, 2008. The discussion with Kershaw was very informative as this provided a standard to measure the Charles Dickens Museum, a house museum just like the Benjamin Franklin House.

Courtesy of the Benjamin Franklin House

Figure 10: Picture of the Benjamin Franklin House. This small house museum is very similar to the Charles Dickens Museum in size.

The Benjamin Franklin House (Figure 10) is a new museum, which opened in 2006. The museum has few physical collections, so it relies on visual aides to guide visitors. It provides visitors with Audio Video (A/V) projections to compliment the tour guides, who are actors portraying 18th century figures. As a new museum, the Benjamin Franklin House has new technologies.

The museum is split into three different sectors, the Student Science Centre, the Scholarship Centre, and the museum itself. The Student Science Centre is equipped with six touch screen monitors created by Dell with software created by Screenhouse. These monitors allow students to actively participate in the science projects done by Benjamin Franklin. The Scholarship Centre is located on the top floor of the house and is dedicated to the study of Benjamin Franklin and his science experiments.

Kershaw and the Benjamin Franklin House have recently launched "The Benjamin Franklin House Kids' Corner", a site dedicated to children between the ages of nine and eleven. The site is filled with activities, puzzles, and games. Kershaw says that future plans for the website will incorporate video for children. Webstats, a program that can measure the amount of hits to particular pages, will heavily monitor the site to help evaluate success.

The museum also has a successful outreach program. Although, according to Kershaw, the outreach program does not use much information technology, there are currently plans to launch online virtual lectures hosted by a Nobel Prize winning chemist.

Kershaw also wished to discuss content management. According to Kershaw, the actors and actresses who work with the museum create all of the Benjamin Franklin House's content in house. Kershaw agrees with Crosby that technology is only as good as the content that is created with it. The museum has found backing from BBC and Media Trust for these projects.

When asked what seems to work for the museum, Kershaw claims that keeping things simple is the best way to have technology be successful. When technology is too complicated from the beginning, problems can easily occur. Kershaw also stressed an information technology maintenance system, even if it just a well documented troubleshooting program that can repair any problems an institution can have.

Funding for the Benjamin Franklin House comes from private donors and independent trusts, much like the Charles Dickens Museum. This means that the museum must make use of

whatever it can get. The Benjamin Franklin House has experimented with blogs, podcasts, Wiki's, and Facebook. These all seemed to be successful, except for the blogs, which Kershaw claimed simply had a lack of interest from the community.

4.1.2.3 Science Museum of London

On Monday, June 9, 2008 the third interview took place with Dave Patten, Head of New Media for the Science Museum of London. Although this meeting took place after the first draft of the Information Technology Plan was sent out, it proved to be the most useful. The vision of the Science Museum was similar to the vision shared with the Charles Dickens community. A discussion was held on the future plans of the Science Museum, including the implementation of a cellular phone guided tour, implementation new exhibitions, evaluations of new ideas, and other future goals.

The Science Museum has recently implemented a cellular phone guided tour inside the museum. Much like our process for the Information Technology Plan, Patten and the Science Museum looked at companies such as Guide by Cell and Accoustiguide. However, the Science Museum settled on X-ON. This service costs £ 300 per month, allowing for forty visitors to use the service at a time. With this service, visitors dial a number, enter a correct code corresponding to which exhibit they are at, and are able to listen to a three-minute audio recording. The evaluation process for this project will begin in July 2008. Patten discussed how the museum as many future plans for this project. Eventually, they hope to be able to move this project outside of the museum. This is possible with the X-ON service because it relies only on existing cellular networks. He also is hopeful that the museum will eventually be able to download video onto cellular phones as well. He said that it is currently an issue of not enough people having technology to view video.

Patten and the Science Museum have also considered using Personal Digital Assistants (PDA) and Bluetooth technology. However, he claims that there is not a large enough audience to use these. Another alternative would be to rent these devices out; however, there is a large risk involved and not a large enough reward. People could possibly steal or break the devices. A cellular phone guided tour is much more feasible.

Patten wished to discuss the evaluation process that the Science Museum uses. For most new ideas, a trial process exists for a six-month period. During this period, the number of users, percent satisfaction, and the ease of use are measured. Also, changes can be made to the idea to ensure that it will work successfully when it is installed into the museum full-time.

Much like the other two interviewees, Patten stressed the importance of information technology maintenance. He claimed that the Science Museum's goal for working technology inside the museum was 98%. Currently, the museum is around 96% operational. He claims that computers and touch screens have been very successful. Their software will never break down, however, a computer must be cleaned or replaced from time to time. Whereas The Tate and the Benjamin Franklin House do not have any definite testing strategies, the Science Museum of London follows a six month testing period before allowing the tool to be used for an eighteen month period, when it will be re-evaluated.

4.1.2.4 Recommendations and Analysis of Interviews

After conducting the three interviews with museum professionals in the information technology field, we were able to gain an understanding of how to successfully create, implement, and manage a new technological idea. This information was crucial in creating our Information Technology Plan. Technological ideas do not mean anything if they are created, tested, implemented, and managed poorly.

All three information technology professionals agreed that everything should be tested before being implemented as a full-time exhibit. This testing period consists of displaying the new idea, allowing visitors to use it, and acquiring feedback from the visitors in order to determine any changes that need to be made. This was figured into the planning process of our Information Technology Plan by allocating a time for testing before full implementation.

All three professionals also agreed that an information technology maintenance plan or department should be created when new technologies are added. Whereas The Tate and the Science Museum of London have full-time employees dedicated to the upkeep of technology, the Benjamin Franklin House created a troubleshooting guide that will allow any employee to fix any problem that may come up at the museum.

Creative ideas are the key to the success of any technological advances inside an institution. Money does not have to be the biggest issue. Although it will dictate some of the plans an institution will have, there are always ways around the issue if a person simply is creative enough. For example, the Science Museum of London and the Tate Modern have a significant budget and are able to spend money on several different initiatives. However, the Benjamin Franklin House does not have a large budget and must make do with what they have. By using A/V projection screens and actors and actresses, they are able to create an 18th Century atmosphere inside the museum.

4.1.3 Assessment from Visiting Other Museums

It was during this portion of our research that our project began to take shape. Although not much quantitative data was used, the data collected was very helpful. After visiting museums in the area, we were able to find several ideas that all had in common. All of the museums that we visited have implemented touch screen monitors for the convenience and the interest of the visitors. All of the museums we visited also offered educational tools online for

visitors to use. These tools include puzzles, quizzes, video, games, and articles. 43% of the museums we visited offered audio tours for visitors to use in order to view different collections. The British Library was the only institution visited that offered the Turning the Pages exhibit.

The first museum visited, the Tate Modern, offered many highly technical devices that helped raise interest and interactiveness. With a partnership with Bloomsburg, Dell, Antenna Audio, the Tate Modern offers the Pocket PC's to guide visitors around the museum. The Tate Modern also offered touch screen computers in their Learning Zone, which offered video biographies, directions around the museum, and e-mail services. The Victoria & Albert Museum offers audio guides for certain exhibitions, which unfortunately were not going on at the time of our visit. Accoustiguide supplies this service. The Natural Science Museum of London only offered touch screen computers, which enabled visitors to locate themselves inside the museum, making navigation much easier. The Museum of London offered many different computers for visitors to read more on a particular exhibit, play games, and answer trivia questions. The Benjamin Franklin House, like the others, offered six touch screen computers in the Student Science Centre. A detailed breakdown of information technology at other museums can be seen in the Benchmarks section in the Information Technology Plan, Appendix D.

4.2 Defining Objectives

By defining the objectives with our liaison, we were able to come up with a list of brainstormed ideas. Based upon the research, there is a myriad of possible technologies that can be implemented both at the museum, and in the Charles Dickens community. As our project got underway in London, we were able to create a large list of ideas that the Charles Dickens community could take advantage of in order to improve information technology. Table 1, shown below, lists the several different ideas we brainstormed before narrowing down our selections. This list was created after research, meetings, interviews, and discussions. It displays

any idea that determined would significantly improve information technology within the community. The different colors illustrate ideas that incorporate more than one sector.

Table 1: List of Brainstormed Ideas

Education	Downloadable Lesson Plans, Classes, etc.
	Interactive Exhibits
	Computerized Quizzes
	Online Discussions, Lectures
	Cell Phone Guides
	Turning the Pages
	Blogs. Book Clubs, Podcasts
Heritage Interpretation	Better Audio Guides
	Online Discussions, Lectures
	Computerized Quizzes
	Separated Wings
	Cell Phone Guides
	Music/Readings During the Tour
	Find Links with other museums
	Turning the Pages
Academic Research	Wikipedia
	Podcasts
	E-books
	2012 Website
	Turning the Pages
Collection Management	Digital Catalogue
	Preservation of books
	Links with other institutions
	Turning the Pages

After creating this list, it was important to determine which ideas were feasible for the Charles Dickens community. The sponsoring agency was looking for three to five ideas to focus on in a detailed plan. We analyzed this list with the cost to benefit approach. We also examined which ones improved multiple sectors.

4.3 Development of the Plan

4.3.1 Cost – Benefit Analysis of Our Ideas

In order to help analyze some of the brainstormed ideas we came up with, we needed to use the cost to benefit analysis. Some brainstormed ideas were immediately removed due to unfeasibility. However, some needed to be examined with this approach.

We eliminated separating wings in the museum to include different themes, such as an education wing and a research wing. The cost to reorganize most of the museum in order to accommodate this would be far too high. The Benjamin Franklin House is able to due this because they are a new museum without many collections. This is not the case for the Charles Dickens Museum.

The idea of improved audio guides, such as the Pocket PC's offered at the Tate Modern, was also removed due to the cost to benefit analysis. The audio guides currently in place at the museum work very well and gives much relevant information. Visitors are given the option of using the audio guides or using a pamphlet to guide them around the museum. This competition between both options may lead to low percentage of visitors using the audio guides.

Placing electronic books online directly off the website was also eliminated using this process. Some electronic books of Charles Dickens already exist on the Internet. Installing these on the Charles Dickens Museum Website would take a lot of a time and people to work on this. This cost does not outweigh the benefit.

This process was analyzed using intangible benefits. The museum is not looking for a profit, therefore the results of this analysis was based on raising people's interest in literature. If the cost outweighed the estimated benefit, the idea was thrown out.

4.3.2 IT Proposals

This list of brainstormed ideas needed to be narrowed down to a set of goals for the Charles Dickens community. In order to establish these goals, forces in current technology needed to be examined. Feasibility, cost, and available space were considered during this process.

Goals were also determined on the success of information technology at other institutions. Research was conducted on studies and surveys that focused on the success of implementing information technology at various other institutions.

	Education	Heritage Interpretation	Collection Management	Academic Research
Turning the Pages	✔	✔	✔	✔
Blogs and Podcasts	✔	✔		✔
Digital Catalog			✔	✔
Cellular Phone Tour	✔	✔		
Touch Screen Enhanced Exhibits	✔	✔		
Online Classes	✔	✔		
Dickens2012.org Update	✔			✔
Electronic Books	✔			✔
Separated Wings		✔		
Wikipedia				✔
Computerized Quizes	✔			

Table 2: Impact of the Ideas on the Four Sectors

As previously stated, this plan covers four sectors, education, heritage interpretation, collection management, and academic research. When determining the different goals, it was important to keep in mind how each idea would affect each sector. This plan focuses on ideas that covered a variety of sectors. Based on this assessment, it was determined that these six goals not only allow for the best opportunity of advancement of the Charles Dickens community, but also provide the most feasible options to implement. The impact of each idea

on the four sectors can be seen in Table 2. The six goals that we decided on are listed in Table 3 below. The table also shows which sectors each goal will improve.

Table 3: Information Technology Plan Six Goals

Blogs and Podcasts	Cellular Phone Guided Tours	Digital Cataloguing	Turning the Pages	Touch Screen Computers
Education	Education	Collection Management	Education	Education
Academic Research	Heritage Interpretation	Academic Research	Collection Management	Heritage Interpretation
			Heritage Interpretation	
			Academic Research	

4.3.1 Podcasts & Blogs

4.3.1.1 Future of Technology with Podcasts and Blogs

Podcasts and Blogs are newly emerging media that are gaining a lot of attention. Although they are two distinctly different things, much of the research and analysis is common to both. As one of the recommendations in the Information Technology Plan, it is one of the more cost effective and easier to implement goals.

A podcast is typically an audio computer file or series of files available for download on the Internet. Data gathered about podcasts comes from interviews, research on websites of museums, and Dr. Florian Schweizer. The iTunes music store is a popular method for delivering podcasts due to the fact that once a user subscribes to content from a particular source, and it automatically downloads in to their library as new podcasts are created. According to Dr. Schweizer, there exist personnel in the Charles Dickens community who have the ability to record and upload podcasts onto the World Wide Web.

Both The Tate and the Science Museum of London use podcasts. According to Alice Kershaw, the Benjamin Franklin Museum also plans to have online lectures in the form of podcasts on their website in the near future. From interviews with Ken Crosby and Dave

Patten, both The Tate and the Science Museum of London use podcasts as a way to let people experience parts of the museum without having to travel. They generate interest in visiting the museum and also act as another means to educate the public about the galleries and exhibits.

Blogs, short for web log, is an editorial style feature in a website. Blogs are commonly written by the average web user and contain anecdotal commentary. A blog can be on a website devoted to hosting many blogs from many different people, such as with www.blogger.com, or it can be just one section of a website for a larger organization, as with The Tate. According to PQ Media, combined spending on blogs, podcasting, and RSS advertising rose by 198% in 2005 to a total of $20.4 million. According to a US report in eMarketer, blog traffic increased 56% in the United States in 2006 with 58.7 million visitors to blogs, representing 34% of all Internet users in the United States. In a study conducted by Technorati.com, a blog tracking site, almost 25 million blogs existed worldwide. This is irrefutable evidence that blogs are gaining in popularity and a strong indication that it will prove to be a successful part of the Information Technology Plan.

The Tate uses blogs to foster discussions between curators, and museum visitors, (Interview with Crosby). Curators can post their general thoughts about a particular exhibit and visitors to the website can respond with feedback and comments. At the Benjamin Franklin Museum, a blog initiated by a staff member proved to be unsuccessful. The content of the blog was largely about the staff member's thoughts relating to running the museum, and not about Benjamin Franklin, (Interview with Kershaw).

4.3.1.2 Blogs and Podcasts in the Charles Dickens Community

Depending on the content available, podcasts and blogs will likely be well received in the Dickens community. Given the proper content, a blog can be an excellent way to stimulate discussion about a particular subject. Ken Crosby and Dave Patten both reiterated the point that

the content is what drives something, and the technology only acts as the means to deliver the message. Blogs, like podcasts are inexpensive and simple to implement tools. As a web publishing tool, blogs can come from a number of different people within the Dickens community and there will be no trouble finding someone to regularly update it (Dr. Schweizer, 2008).

Podcasts have been included in the Information Technology Plan as a recommendation with several strong reasons to back it up. Podcasts are not only inexpensive to create, but staff currently exists at the museum who are capable of recording them. The website of the museum is also a good portal for distribution and it will not incur any additional operating costs. Content for the podcasts will be readings of Dickens, commentary from Dickens scholars, and potentially lectures, (Dr. Schweizer, 2008). This type of content is not currently available online and it will allow all those who wish to hear it the ability to. Currently the only way for someone to hear these would be attend them directly but, with the use of podcasts, someone could listen to a Dickens reading on their iPod during their daily commute. This feature will help to broaden the audience who enjoy Dickens. It will affect the education, and heritage interpretation sectors.

4.3.2 Turning the Pages™

4.3.2.1 Developing Turning the Pages

This technology has been developed in part by the British Library and offers visitors a means to virtually thumb through books that would be too old and fragile to actually do so. The way it works is that the pages of a book are scanned into a computer and then the program makes turning the pages on the computer appear as it would if one were to physically do it. The program can be loaded onto a touch screen computer and used as an exhibit and it can be loaded onto a webpage where it can be accessed through the Internet. Both methods let the user view

an entire book cover to cover, take notes digitally, magnify portions for a clearer view, listen to commentary, and also read translations of the text.

The Wellcome Library located in London currently has a project underway to bring a Turning the Pages exhibit that will digitize The Physician's Handbook to the library. The artifact was acquired in 2002 and the library experimented with installing Turning the Pages between 25th April, 2008 and 31st May, 2008. The Wellcome Library scanned images of The Physician's Handbook onto their website and asked visitors to answer a questionnaire. Based on this information, the library recommended scaling up this project and making more resources available electronically.

In a recent study conducted by the Wellcome Library, of the ninety-four people poled, 53% strongly agreed and 43% agreed that the website was easy to use. The Physician's Handbook met 84% of the visitors' expectations. These statistics show an interest for Turning the Pages from visitors. The poll also showed that 47% of the sample are more likely to visit the library in order to see the original manuscript after seeing the manuscript online. Turning the Pages could benefit the entire Charles Dickens community by attracting new visitors and new generations to the Dickens's work.

The price for implementing this program is quite hefty compared to other recommendations. The Charles Dickens Museum received a quote at £ 12,000 for the academic version of the program, and then each book has to be scanned page by page at additional cost. The Charles Dickens Museum has a vast array of books, and about fifty of which are rare enough to warrant being loaded onto Turning the Pages, (Dr. Schweizer, 2008).

4.3.2.2 Turning the Pages in the Charles Dickens Community

In the Charles Dickens community, this technology can be implemented and influence all four areas that were originally aimed for. First, it will affect heritage interpretation, allowing

for comments by staff of the museum to be added. Secondly, it will affect education, by allowing children who visit the museum and use the touch screen will be able to read and experience works by Dickens that they would not normally. Third, collection management is impacted because the books will be digitally stored and accessible from anywhere. And finally, academic research will be affected since Dickens scholars who wish to view rare books will be able to without having to travel to the museum. Access to the online database of works can be limited to members of the museum's online community at the discretion of Dr. Schweizer. This will encourage people to visit the museum to see the full collection or become a member of the community and get involved with Dickens.

4.3.3 Cellular Phone Tour

The third goal we have set for the Charles Dickens community is a cellular phone tour taking place throughout the city of London. This tour will work to increase activity in heritage interpretation and education within the community.

A timetable has been set for this project to be first implemented in 2010-2011, just in time for the Charles Dickens bicentenary. Visitors will be able to call an 800 number, free of charge when they wish to participate in the tour. A map will be provided on the website to inform visitors of the sites to visit. They will then be able to stop at a site and enter in the code listed at the site. An approximately three minute video recording will then play on the users cell phone. Afterwards, visitors can then continue on to the next site at their convenience.

Possible companies that currently have the capabilities of offering this tour that we examined are Guide by Cell, Accoustiguide, Museum 411, and X-ON. These companies will set up the service for a small charge, and then charge a monthly charge that varies from £200 to £300 per month.

4.3.3.1 Convenience of Cellular Phones in the Next Five Years

While outlining our Information Technology Plan, we needed to keep in mind that the plan covers a five-year span, in which many technologies will change and improve. With this in mind, we predicted that most cellular phones will be equipped with video players. Whereas a high percentage of people around the world currently own a cellular phone, we decided that a cellular phone guided tour would be a great investment. According to Neowin.net, cellular telephone subscriptions have reached 3.3 billion people, 50% of the world's population. With this in mind, it is clear that cellular phone use will continue to rise in the next five years, allowing for a large audience for this tour to appeal to.

Other options were also considered other than a cellular phone tour. PDA's and Bluetooth technology have been examined as well. However, these are not popular enough for visitors to use and there are compatibility issues with other phones. Between 2006 and 2007, the sales of PDA's dropped by 43.5%, (Anderson, 2007). This is a substantial drop-off, displaying a trend of people finding other methods of communication other than PDA's. If a tour were implemented with one of these devices, the devices would need to be rented out, where the risk would outweigh the reward. There would be a large chance for these devices to be stolen or broken.

4.3.3.2 The Science Museum of London's Cellular Phone Tours

As aforementioned, the Science Museum of London has recently established a cellular phone tour for its museum. The museum's curators created the content in house and the software for the tour was created by X-ON. Tests for this tour will begin in July 2008. Patten from the Science Museum recommends setting up the tour with X-ON, but the other alternatives examined could potentially work just as well.

4.3.4 Digital Catalog

After analyzing what a digital catalog could do for a museum it is very evident that this is a significant advancement in technology for a museum. The desired outcome for digitizing and creating links with other institutions is to increase the range and quantity of digitized works and collections associated with Charles Dickens and link these in a database with other institution worldwide. What a digital catalogue can do is make it easier to gain access to Dickens works for people not only in the Charles Dickens Museum but also for all of the people in the Dickens community. Currently the Dickens Museum uses PastPerfect as a system for cataloging their collections. Work is continually being done by staff to update these files.

4.4 Final Documentation of Our Plan

4.4.1 Feedback from the Wider Dickens Community

The Information Technology Plan was sent out to the wider Dickens community for evaluation and feedback on the plan. Feedback was received by only two members of the Dickens community, Derek Mortimer. We were able to edit the Information Technology Plan based on Mr. Mortimer and Mr. Gorme-Obien's feedback.

Mr. Mortimer's feedback focused on a cost analysis of every goal. He felt as though the original Information Technology Plan undervalued the cost of time and personnel to work on these projects. He especially focused on the blogs and podcasts. Whereas the Turning the Pages exhibit has one original cost, the blogs and podcasts needs to be continuously updated. This can lead to a large cost if it is not done by volunteers. Although it is not an unreasonable goal, the cost needed to be emphasized more. The full details of the feedback can be received in Appendix E.

The second feedback from the Dickens community came from Rodney Gorme-Obien, Curator of Special Collections and Archives at the George C. Gordon Library, Worcester Polytechnic Institute. His general impression was that the plan was very thorough in its approach. He had a suggestion, which was to develop more upon the use of Facebook as a social networking tool for people interested in Dickens. As this feedback came in very late in the project, Dr. Schweizer took responsibility for incorporating it into the Information Technology Plan at his discretion. Mr. Gorme-Obien's full response to Dr. Schweizer can be read in Appendix F.

4.4.2 Editing our Information Technology Plan

Our Information Technology Plan was edited based on Mr. Mortimer's feedback and resubmitted to the Charles Dickens community. Our team fully agreed with Mr. Mortimer's feedback and made the appropriate changes. This plan will now be saved as a document used for applying to trusts.

Edits to the Information Technology Plan based on the comments made by Mr. Gorme-Obien will be made Dr. Schweizer due to the tardiness of the feedback.

4.5 Funding the Initiatives

Our group is currently under way researching different foundations that support our goals and the mission of the Charles Dickens community. Examples of foundations that we are concentrating on are the Microsoft Foundation and the IBM Foundation. The Microsoft Foundation focuses on non-profit organizations that hold charitable status in their country and non-profit organizations that provide services to the community outside of normal school hours. IBM Foundation's main focus is "K-12 and higher education. They also provide smaller grants in the areas of Adult Education and Workforce Development, Arts and Culture, Communities in

Need, and the Environment. They also have an Employee Giving Program and give to international organizations," (IBM, 2008). By trying to apply and receive capacity building money, the Charles Dickens community can increase its capacity, serving more visitors in ways that can fit into categories specified by different foundations and trusts.

Our Information Technology Plan will be used to apply for these grants. In order to apply for funding, we must submit a two-page outline of why we are requesting funding. In this report, the Charles Dickens community should include a description of our organization and mission, a description of the projects we wish to implement, the estimated cost of each project, and a timeline for each project. All of these guidelines are outlined in our Information Technology Plan. If the first application is approved, the community can then continue the process by submitting a formal application, in which they will be able to submit the Information Technology Plan as an attachment.

5 Conclusion

Our Interactive Qualifying Project group successfully researched and produced a working Information Technology Plan, allowing the Charles Dickens Museum and the Charles Dickens community to apply for funding in order to meet the goals we outlined. This five-year strategic plan will update and enhance information technology within the community, attracting new audiences to the museum, to the community, and to literature in general. With this plan, we were able to address a major problem affecting the Charles Dickens community, which was increasing interest in literature, especially Charles Dickens, in a time when children and adults seem to be plagued by alliteracy. This problem seems clear in today's world and is something that needs to be addressed. First Lady Laura Bush (Figure 11) has always been a strong advocate of increasing not only literacy but also the number of people participating in reading. When she visited the Charles Dickens Museum on June 16, 2008, she felt the work that our group has done with the help of the Charles Dickens community

Figure 11: Frist Lady Laura Bush Visists the Chrles Dickens Museum. From left to right: Andrew Xavier (director of the museum), Laura Bush, Maria Tuttle (wife of US Ambassador Tuttle), and Lucinda Dickens-Hawksley (great-great-great grandaughter of Charles Dickens).

is crucial for encouraging new audiences to gain affection for literature. Bush said that it is important for "English-speaking people to be aware of our literature." She told on-lookers that too many people in the United States choose not to read in favor of spending time in front of computer screens. This is not only a problem in the United States, but also a problem worldwide.

There is much evidence to support her claim. Internet usage continues to rise, especially among a younger generation. Cellular phone subscriptions worldwide continue to rise as well. 3.3 billion people currently have a cellular phone subscription. That is half of the world's population. With guidance from our sponsor, we looked to address this problem in our project.

We did this by taking advantage of people's interest in technology. Whereas other museums in the area have already attempted to do so, it is now time for the Charles Dickens community to update as well. By creating our Information Technology Plan, the Charles Dickens community will be prepared for the next five years to address this problem.

This project was completed in two seven-week segments. Within the first seven weeks, our group researched how to write an Information Technology Plan, current uses of information technology within museums and institutions, and brainstormed feasible ideas for the Charles Dickens community. The last seven weeks consisted of interviews with information technology professionals at other museums, writing the Information Technology Plan, revising the plan, and researching grants in order to applying for funding. This group not only provided the Charles Dickens community with a strategic plan, but also created several contacts with other museums and institutions in the London area offering help in implementing goals for the future.

There were many factors that affected the outcome of our project. Communication was always a difficult problem, such as trying to contact other museums and institutions. Although we were able to hold three interviews, we requested interviews from eight different museums and institutions. We also sent numerous e-mails requesting information from past studies and future plans from institutions. Very few were actually able to supply their studies with us.

Based on our research, we are able to give the Charles Dickens Museum and community several recommendations for the future. The Charles Dickens community should implement the five goals outlined in this plan, installing blogs and podcasts onto the website, adding Turning the Pages into the museum and online, developing its digital catalog, creating a cellular phone guided tour, and adding touch screen monitors into the museum.

The impact of this project is still yet to be determined. All of the work for this project is leading up to the bicentenary of Charles Dickens in 2012. These recommendations should improve the Charles Dickens community in time for the enormous celebration. It will have a monumental affect on people all over the world. The Charles Dickens community along with our group has addressed this problem through our Information Technology Plan. By updating information technology, we can attract new audiences to Charles Dickens and literature. At the conclusion of her visit, Bush continued to add, "It's really important for us all to continue to read literature. It's a huge loss if we don't read. That is how our ideas and values are transmitted." With the support of the Charles Dickens community, Laura Bush, and advisors from Worcester Polytechnic Institute, we were able to successfully address this problem by creating a plan that will increase interest in literature for the future.

Works Cited

"Blogs, Blogs, and More Blogs." eMarketer 18 Jul 2006 5 Jun 2008 <http://www.emarketer.com/Article.aspx?id=1004072>.

"Building the Online Library." Turning the Pages. 2008. Turning the Pages. 5 Jun 2008 <http://www.armadillosystems.com/ttp_commercial/>.

"City of Rebels and Dreamers." Talking Street. 2008. Candide Media Works, Inc.. 5 Jun 2008 <http://talkingstreet.com/tours.php?tourid=bos>.

"Connecting Museum Visitors with Audio Tours via their Cell Phones ." Museum 411: Dial. Listen. Learn. 2008. Museum 411. 5 Jun 2008 <http://www.museum411.com/>.

"Create Cell Phone Audio Tours with Guide by Cell." Guide By Cell Audio Tours. 2008. Guide by Cell. 5 Jun 2008 <http://www.guidebycell.com/gbc/howitworks.html>.

"History of the Fellowship." The Charles Dickens Fellowship. The Dickens Fellowship. 26 Apr 2008 <http://www.dickensfellowship.org/History.htm>.

"Tate Modern Multimedia Tour Pilots." mLearn Conference, May 19-20, 2003 2003 5 Jun 2008 <http://www.tate.org.uk/modern/multimediatour/phase1_keyfindings.pdf>.

"Poet Watson Coming With Dickens Poem." The New York Times. 20 Jan 1912. Accessed on 10 May 2008. <http://query.nytimes.com/mem/archive-free/pdf?_r=1&res=9A01E2DE173CE633A25753C2A9679C946396D6CF&oref=slogin>.

Anderson, Nate. "PDA Sales Drop by 40 Percent in a Single Year." The Art of Technology 13 Aug 2007 18 Jun 2008 <http://arstechnica.com/news.ars/post/20070813-pda-sales-drop-by-40-percent-in-a-single-year-vendors-bolt-for-exit.html>.

Cody, David. "Dickens: A Brief Biography." The Victorian Web. March 2004. Hartwick College. 26 Apr 2008 <http://www.victorianweb.org/authors/dickens/dickensbio1.html>.

Dickens, Charles: Introduction." Short Story Criticism. Ed. Drew Kalasky. Vol. 17. Gale Group, Inc., 1995. eNotes.com. 2006. 26 Apr, 2008 <http://www.enotes.com/short-story-criticism/dickens-charles>.

Drew, John. "Dickens Journals Online." The University of Buckingham. 25 May 2006. The University of Buckingham. 26 Apr 2008 <http://www.buckingham.ac.uk/djo/>.

Kiley, Robert. "Digitising MS 8004 - The Physician's Handbook." Jul 2003 5 Jun 2008 <Digitising MS 8004 - The Physician's Handbook>.

Lagadinos, Zach; Lindenfelzer, Paul; Rasmussen, Ryan; Scheid, Eric. Interactive Qualifying Project. "Creating the Backbone for the Dickens 2012 Campaign". 2008.

Martin, E. Wainright, and Carol Brown, Daniel DeHayes, Jefferey Hoffer, William Perkins. Managing Information Technology. Fifth ed. Upper Saddle River, New Jersey: Prentice Hall, 2005.

Merriman, C.D.. "Charles Dickens." The Literature Network. 2006. Jalic Inc. . 26 Apr 2008 <http://www.online-literature.com/dickens/>.

Schweizer, Dr. Florian. "Campaign." Charles Dickens 2012. 2008. The Charles Dickens Museum. 26 Apr 2008 <http://www.dickens2012.org/Homepage%20Images/Campaign.html>.

Schweizer, Dr. Florian. "History." The Charles Dickens Museum London. 2005. The Charles Dickens Museum. 26 Apr 2008 <http://www.dickensmuseum.com/history.htm>.

Simon, Nina. "Discourse in the Blogosphere: What Museums Can Learn from Web 2.0." Museums & Social Issues 2(2007): 257-274.

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Ms. Joanne Beller, Worcester Polytechnic Institute

Dr. Paul Davis, Worcester Polytechnic Institute

Mr. Ken Crosby, The Tate

Ms. Alice Kershaw, The Benjamin Franklin House

Mr. Dave Patten, The Science Museum of London

Mr. Derek Mortimer, The Charles Dickens Fellowship

Mr. Rodney Gorme-Obien, Worcester Polytechnic Institute

The Wellcome Library, London, UK

The House of Seven Gables, Concord, MA, USA

Appendix A

Survey to assess information technology at museums

How does the museum promote itself?

Does the museum provide links to electronic works?

Does the museum have links to online exhibits?

How does rate itself on terms of its current IT? Scale from 1-10

How much of the resources does the museum devote to developing its IT?

What have been the significant updates in the past 5 years?

How does the museum justify using IT? How does the IT affect the state of the museum?

Does the museum have an in house department or do they use an outside source?

How easy is it to navigate throughout the website? Scale from 1-10

How informative is the website for the general public? Scale from 1-10

What are the museums' current statistics for visitors?

Appendix B

Questions for curators at other museums in London

1.) What do you do to promote your museum?

2.) How important is using technology as a way for improving your…

- Collection Management?
- Heritage Interpretation?
- Education?
- Academic Research?

3.) How do you rate yourself in terms of effectiveness of the technology currently in place?

4.) What significant updates have you made in the past five years?

5.) Are there any plans you have for the museum in the near future?

6.) How many visitors does the museums see, yearly, monthly, daily, etc..?

Appendix C

Survey for visitors of the Charles Dickens Museum

1.) Where did you hear about this museum?

a.) Word of mouth.

b.) Newspaper / magazine.

c.) Travel Guide.

d.) Website.

e.) Other_____

2.) How did you feel about the technology that currently exists in this museum?

a.) Satisfied.

b.) Average.

c.) Dissatisfied.

d.) Strongly Dissatisfied.

3.) Have you visited any other museums recently? Yes / No

If No…Go to Question 5.

If Yes… Which ones?

4.)

a.) What technological features that other museums use did you find helpful and interesting?

b.) What technological features did you find not find interesting and irrelevant?

5.) What technological improvements can you recommend for this museum?

Appendix D

Information Technology Plan

Strategic Information Technology Plan

2008-2012

The Charles Dickens Museum

48 Doughty Street

London WC1N 2LX

England

+44 (0)20 7405 2127

Registered charity no. 212172K

Dr. Florian Schweizer, Curator

Overview

Information Technology Plan Process

An Information Technology Plan helps to develop a systematic approach to address the rapidly changing technological needs of visitors, staff, and scholars of the Charles Dickens community. This document is linked to the Charles Dickens community's strategic plan as well as the budget process and grant application process and is submitted to the global Dickens community.

The Charles Dickens community is the loosely defined network of Dickens-related institutions, museums, fellowships, and scholars.

Students from Worcester Polytechnic Institute in Worcester, Massachusetts, USA developed this Information Technology Plan with input from Dr. Florian Schweizer, curator for the Charles Dickens Museum, and staff from the museum.

The purpose of this project is to develop and implement a four-year comprehensive strategic plan and implement new technologies into the community to compliment this plan. This Information Technology Plan covers the time period from 2008 up to the bicentenary of Charles Dickens's birth in 2012. It will focus on improvements in four main sectors: education, heritage interpretation, collection management, and academic research. This project focuses on the current needs of the Charles Dickens community as well as taking into consideration the growing opportunities in technology. It will continue to be revised due to changes in the community's strategies as well as changes in technologies.

This Information Technology Plan is being written for several reasons, which include the following:

- To support and enhance the delivery of services to clients;
- To improve and enhance the efficiency of collection management;
- To improve access to literacy, literature and storytelling;
- To establish new technologies in the Dickens heritage sector to improve access to education and interpretation; and
- To achieve social and learning benefits through IT-related activities and schemes.

The Charles Dickens Community Statement of Vision and Mission

Vision

The technology world is an ever changing, ever growing one, and audiences change with it. For those involved in promoting and teaching Dickens, it is important to continue to re-interpret his ideals, beliefs and writings in new technological contexts, so that new audiences are engaged.

To be in the best position to celebrate Dickens's 200th anniversary, organisations of the Dickens community should take into consideration the use of technology as one of the main tools to educate and excite people about Dickens. Information Technology offers much more than simple websites and email, and by 2012 the Dickens community should be using it to its fullest advantage.

Mission Statement

The goal of this plan is to improve access to Dickens through the use of information technology. The use of information technology will serve the global Charles Dickens community and allow a more fluid exchange of information and resources, while also providing a service to the general public in their quest to discover more about Dickens.

Forces in the Environment Impacting Implementation of Technology Plan

Along with many other institutions, Dickens-related organisations, collections, fellowships and research consortia face a number of challenges related to the implementation of its information technology initiatives. These major factors from the environment contributing to these challenges are described below:

Nature of Technology

Technological initiatives are typically expensive and have a rather short life span due to constant changes, updates, and improvements in technology. It is not unusual for a new information technology initiative to become outdated soon after it is implemented. There is the potential that this could occur even when it is still in the process of being implemented. Although new technologies lead to more possibilities for the community, it will also increase cost for spending in order to stay updated.

Available Funds

As is the case for many non-profit organisations, the Charles Dickens community does not have sufficient funds to address all of its needs. Technology competes for the available funds along with all other needs such as salary equity, increased utility costs, and the desire to expand programs. The institutions within the Charles Dickens community must apply for grants in order to address some of these technological needs.

Strengths and Weaknesses of Information Technology

Strengths of Information Technology

Information technology is a critical part of the day-to-day operations in the Charles Dickens community. It is used to enhance student learning; support the preservation, creation, and transmission of knowledge; and support the community's management functions.

The purpose of an Information Technology Plan is to guide the ongoing development and evolution of technology in support of the Charles Dickens community's mission and strategic initiatives. An Information Technology Plan should be aligned with the community's strategic directions. When new technologies are considered they must be evaluated relative to how they support the community's mission and strategic initiatives.

Weaknesses of Information Technology

There are many weaknesses of information technology that must be examined before implementing it. Technology can easily become very disorganised. There are 3 billion pages on the World Wide Web and these sites can be very disorganised and irrelevant. It is difficult to get all of this metadata to be clear with one another, allowing for information to easily pass through each site.

Information technology is a continuously growing field. Although positive for the industry, it also means difficulties in keeping systems up to date. As information technology continues to change, so too does the Charles Dickens community.

There are several weaknesses in technology itself. Upkeep of technology can be very difficult. With so much of equipment relying on computerized cooperation, one error in a system can

result in a problem for an entire infrastructure. Maintenance of the technology implemented in the Charles Dickens community is very important.

Benchmarks in Museum Technology

Tate Modern

The Tate Modern, in London, offers one of the most technologically advanced experiences for visitors, both to the museum itself, and to the website. Before going to the museum, visitors who browse the website <www.tate.org.uk/modern/> will find a plethora of media about art, artists, and the exhibits in the museum. Tate also has their own section in the iTunes online store where users can subscribe to podcasts. New releases automatically download to their iTunes library where they can listen, or in the case of video, watch on their computer, or on an iPod. The Tate has a collection of audio and video stemming back several years.

In addition to this, the Tate website also has blogs and online discussions. Visitors can post up their thoughts or ideas and get feedback from curators, and staff. The discussions allow art enthusiasts a place to go and talk with other people who share a common interest.

Another online feature that the museum offers, is a virtual tour. Those who are not able to travel to the museum can still experience it with pictures from inside the museum and accompanying descriptions of the art.

Inside the Tate Modern, technology plays an integral part in the experience. Visitors who wish to, may tour the museum using a handheld Pocket PC. The tour was developed by Antenna Audio and it allows the user to walk through the museum listening to commentary via

headphones. They can also watch video on the screen, about a particular artist, or exhibit. The amount and quality of information that is delivered through the Pocket PC is superior to the traditional placards on the wall. In addition to this, there is also the Learning Zone, an exhibit created in partnership with Bloomberg. It consists of an array of touch screen monitors which lets visitors pick which person they want to learn more about, and see a short video biography on them.

The British Library

The British Library offers a collection database that allows visitors to search for books, artifacts, collections, journals, or articles both inside and outside the library. The collection database can be accessed on their website at www.bl.uk/.

With a partnership with Armadillo Systems, the British Library now offers a Turning the Pages exhibit inside their library. Turning the Pages digitises old books and manuscripts, allowing visitors to access what would normally not be accessible. These are interactive exhibits that are equipped with translations, video and audio commentary, curator interpretations, the ability to take and save notes, and the ability to magnify any portion for a clearer view.

The Benjamin Franklin House

The Benjamin Franklin House is a two year old museum that is still working on establishing itself as a significant museum. The museum is split into three different sections: the museum itself, the Student Science Center, and the Scholarship Center. The Student Science Center offers the most information technology. In the Student Science Center, the museum offers several interactive touch screen monitors. Dell created the computers with the software designed by Screenhouse. According to Alice Kershaw, head of the IT Department at the museum, the touch screen monitors work very well with the students who come in to visit. The only

significant problem is up-keeping them as she claims they break down often due to overuse and misuse.

The museum recently added a Kid's Website that is still under construction. According to Kershaw, the museum is planning on adding a wide variety of visual aid and films to the website. The museum's main website is planning on featuring online virtual lectures by a Nobel Prize winning chemist. The website also attempted to implement a blog, which was unsuccessful. There was not a large enough interest in the blog. The websites are monitored by Webstats, (Kershaw, The Benjamin Franklin House) which allows the museum to track usage.

Museum of London

The Museum of London offered several similar forms of information technology as other museums. The museum's rooms were separated by themes. For example, one room is dedicated to mediaeval times whereas another room is dedicated to the Victorian Era. The museum offered several film rooms that displayed short, eight-minute movies on topics specific to each room. These short films allowed visitors to watch only movies on topics they were interested in.

The Museum of London also offers computers in each topic room. These computers offer additional information on each topic. They also incorporated games and quizzes that varied in difficulty depending on the visitors' ages.

Charles Dickens Community's Current Technologies

In the Dickens community, there is a disconnect in technology between what exists, and what is possible. Currently, most Dickens institutions have a website which is effective at conveying basic information, but not on par with the rest of the Internet. Email is also used, as a means for communicating between individuals, and groups with large email lists. Little more than these are used, but much more is available.

Goals for the Charles Dickens Community

The Charles Dickens community has a set of goals that will result in the improvement of information technology throughout the museum and the community. The goals are necessary to continue to reach new audiences of Charles Dickens and remain a successful community as technology continues to change.

The goals were created in a four-week period after a long process of brainstorming new ideas. After researching other institutions and discussing different plans, a large list of possible opportunities for the Charles Dickens community was created.

This list consisted of the following:

- Online discussions and lectures
- Online Book Clubs
- Downloadable lessons plans
- Blogs and podcasts
- Video and content updates both in the museum and on the Internet
- Cellular phone guided tours around London
- Computerised quizzes and games
- Improvements in the audio guides inside the museum
- Digitising Dickens' novels and making them available for download
- Improvements in Wikipedia
- A Turning the Pages exhibit
- Becoming established on Second Life
- An organised digital catalogue

- Interactive touch screen exhibits
- Pocket PC's for guided tours
- Digital links with other institutions
- Improvements to the 2012 Website

This list of ideas needed to be narrowed down to a set of goals for the Charles Dickens community. In order to establish these goals, forces in current technology needed to be examined. Feasibility, cost, and available space were considered during this process.

Goals were also determined on the success of information technology at other institutions. Research was conducted on studies and surveys that focused on the success of implementing information technology at various other institutions.

As previously stated, this plan covers four sectors, education, heritage interpretation, collection management, and academic research. When determining the different goals, it was important to keep in mind how each idea would affect each sector. This plan focuses on ideas that covered a variety of sectors. Based on this assessment, it was determined that these six goals not only allow for the best opportunity of advancement of the Charles Dickens community, but also provide the most feasible options to implement.

Goal 1: Establish More Educational Tools Online

Currently, the Charles Dickens community does not offer many educational tools online for the public to make use of. Whereas most museums offer blogs, podcasts, online courses,

downloadable lesson plans, and virtual lectures, the Charles Dickens community does not make use of any of these. The key IT strategy to support this desired outcome is to strengthen the technology in education, academic research, and collection management.

Updates to the Charles Dickens community's online tools were made in 2008, creating a link to the Charles Dickens 2012 Wepage, which offered games and discussion for teachers and students on the website. However, upgrades must still be made in order to allow the Charles Dickens Museum Website to continue to stay up-to-date.

It is time for the Charles Dickens community to get involved in Web 2.0. According to "Discourse in the Blogosphere: What Museums Can Learn From Web 2.0" Web 2.0 is "term that describes web-based applications on which users generate, share, and curate the content," (Simon). This covers areas such as Wikipedia, YouTube, and blogs. According to Simon, museums can fall into five different levels of interaction. It is the goal of the Charles Dickens Museum to reach a level of interaction where it is easy for any member of the community, no matter where they are, to participate in a networked or social interaction with other users.

The website must be improved by filling the need to:

- Add online lectures and discussions
- Record and install podcasts onto the website
- Begin writing a blog pertaining to Charles Dickens that would stimulate discussions

The Charles Dickens community will continue to evaluate opportunities to add new technologies to the website as the technology advances and becomes more prevalent.

This benefits Dickens's fans and others in the community who wish to obtain access to Dickens and others within the community. It can introduce people to the community by allowing them to listen to lectures and get involved in discussions.

Blogs and podcasts are an immediate answer to a problem of lagging interest for the Charles Dickens community. It continues to be an ever-growing market. According to PQ Media, combined spending on blogs, podcasting, and RSS advertising rose by 198% in 2005 to a total of $20.4 million. According to a US report in eMarketer, blog traffic increased 56% in the United States in 2006 with 58.7 million visitors to blogs, representing 34% of all Internet users in the United States. In a study conducted by Technorati.com, a blog tracking site, almost 25 million blogs existed worldwide. This is clearly a growing field that must be explored. It can create an inexpensive marketing opportunity for the Charles Dickens community, benefiting all the members in the community by displaying a forum for fans to listen to lectures and hold discussions. It allows for collaborative working and learning with its members.

According to "Discourse in the Blogosphere", Simon claims that many blogs associated with museums simply try to promote their exhibition and themes at their museums. However, the most successful blogs, such as Science Buzz associated with the Science Museum of Minnesota, allows users to actively contribute alongside with staff.

Another new trend being displayed on the web is podcasting. Podcasting allows organisations or institutions to post archived lectures, programs, shows, or events online. Like the blog, this would be a free service to visitors and members of the Charles Dickens community. This allows

for visitors to view events even when they are unable to attend. For example, a lecture or interview that is held in London would be recorded, posted, and viewed all over the world.

Although this goal has low operating costs, it is important to understand the amount of time (which can be expensive, if not done by volunteers) involved. A blog needs to be consistently updated by a person with strong communication skills, and knowledge of Dickens. This may be more difficult to do in practice than it appears on paper.

Goal 2: Establish More Interactive Exhibits at the Museum and Online

The desired outcome for Goal 2 is to increase interactivity within the Charles Dickens heritage sector, raising interest in Charles Dickens and the Charles Dickens community by making his original manuscripts readily available. Goal 2 is concerned with meeting the needs of users to have easy access to original manuscripts by Charles Dickens that would otherwise not be accessible. It identifies the need to display these manuscripts on exhibition and allow visitors to experience what these are like first hand. The key IT strategy to support this desired outcome is to strengthen the technology in education, heritage interpretation, academic research, and collection management. It will improve all four sectors that this Information Technology Plan is focusing on.

Goal 2 can be met by implementing Turning the Pages computerised exhibit both in museums and on websites. This service was originally designed in partnership with the British Library in London to display their original manuscripts, such as the Magna Carta. It allows libraries and museums to put entire collections of books online in a three dimensional environment with other tools to aid in understanding, education, and research. Currently, Turning the Pages has

been installed in several museums, including the British Library, the National Archives, the Royal Society, the National Library of Ireland, the Henry Moore Institute, the Zoological Society of London, the University of London, Aberdeen University, and Newcastle Public Library.

The Wellcome Library located in London is currently underway in a project to bring a Turning the Pages exhibit that will digitize *The Physician's Handbook* to the library. The artifact was acquired in 2002 and the library experimented with installing Turning the Pages between 25th April, 2008 through to the 31st May, 2008. The Wellcome Library scanned images of *The Physician's Handbook* onto their website and asked visitors to answer a questionnaire. Based on this information, the library made recommendations to scale up this project and make more resources available electronically.

In the study, of the 94 people poled, 53% strongly agreed and 43% agreed that the website was easy to use. The *Physician's Handbook* met 84% of the visitors' expectations. These statistics show an interest for Turning the Pages from visitors. The poll also showed that 47% of the sample are more likely to visit the library in order to see the original manuscript after seeing the manuscript online. This shows how the Turning the Pages would benefit the entire Charles Dickens community by attracting new visitors and new generations to the community.

The Charles Dickens community would purchase the Turning the Pages: Academic Version, which would allow for a large array of content to be placed on the computer. This provides a much needed interactive exhibit in museums and other institutions by inserting touch screen computer that allow visitors to physically turn the pages on the computer with the touch of a finger. It also allows for visitors to view manuscripts, listen to commentary, take and save notes, view interpretation, and magnify certain passages.

This machine can be adapted and put online, allowing members of the Charles Dickens community from around the world to view this tool.

Goal 2 is focused towards school children reading stories written by Dickens. Students can use the touch screen monitors to view original manuscripts by Charles Dickens. They can listen to commentary and understand what the writing is about. Teachers can then test the students' knowledge by having the students take and save notes and answer questions right on the computer.

This tool is not only centered on school children. Adults can easily spend a long period of time viewing all of the computers content. This tool can be used for academic research as well. By displaying rare manuscripts, scholars have access to documents that they otherwise would not. This allows for discussion and interpretation of the documents.

The Turning the Pages exhibit will greatly improve all four sectors that this project is focusing on, education, heritage interpretation, collection management, and academic research. This goal, once established, is inexpensive to maintain since all of the work will be done, and one simply has to maintain the server that it runs from.

Goal 3: Become More Digitised and Create Links Between Institutions

The desired outcome for Goal 3 is to increase the range and quantity of digitised works and collections associated with Charles Dickens and link these in a database between institutions

worldwide. The key information technology strategy to support this desired outcome is to strengthen technology in collection management.

There is a need to digitally catalogue Dickens's works and collections, in the interest of preserving his works and allowing researchers to identify the location of certain books and artefacts.

The Charles Dickens Museum and the Robert D. Fellman Dickens Collection at WPI currently use PastPerfect, a computer programme for digitally cataloguing collections. Updates on this programme will help organise collection and create links with other institutions.

Goal 4: Create an Interactive City Tour for 2012

The desired outcome for Goal 4 is to increase the range of exhibits in the Charles Dickens community into the greater London area. This goal can be met by creating a convenient cellular phone tour that puts the entire city of London on display for visitors. The key IT strategy to support this desired outcome is to strengthen technology in education and heritage interpretation.

There is currently a need for a major attraction in the city of London for the bicentenary of Charles Dickens. London will be the centre of the bicentenary celebration, and it is essential that the Charles Dickens Museum in London be involved. There is also a need to strengthen education and heritage interpretation in the Charles Dickens community. Creating a citywide cellular pone tour for Charles Dickens can fill this void.

This would be a convenient tour as nowadays the majority of the general public has their own cellular phone. With this option the cellular phone becomes the tour guide allowing visitors to use it at their convenience. In the event that out of country cellular phones do not work due to network complications, mp3 files can be available for download. This would still allow those who which to use the tour, an option that would employ an mp3 player.

Museum 411 has developed a cellular phone guided tour that services both inside and outside of museums. The Charles Dickens community will work in partnership with Museum 411 to record an audio and visual guided tour that will allow visitors to walk through the streets of London and be provided with information on Charles Dickens.

The tour will work as follows:

- Visitors will be provided with an online map of points to visit on the tour
- Visitors will call an 800 number that is set up by Museum 411 when they wish to take the tour
- When the visitors reach a point on the map, they can key in the number of the site and be provided with audio and visual information on Charles Dickens
- Visitors can take the tour whenever they would like, and see which ever sites they wish
- For an example of a cellular phone guided tour, reference www.candidemedia.com

A trial of the cellular phone guided tours can possibly be established. The Charles Dickens community can purchase a one-year lease for the tour from Museum 411. This will result in a much smaller risk with a potential for a large reward. Due to the ability to cancel the contract

after one year, this is not a huge expense. If the trial is successful, the programme can be installed for a much longer time period. Although there is a cost to install the programme and a monthly cost to operate it, the benefit outweighs the cost.

The cellular phone guided tour will benefit the greater Dickens community and visitors by providing interactive education and stimulating interest in Charles Dickens for the Dickens Bicentenary in 2012.

Goal 5: Insert Computerised Exhibits in the Museum for Education

With the desired outcome for Goal 2 being "to increase interactivity within the Charles Dickens Museum, raising interest in Charles Dickens and the Charles Dickens community by making his original manuscripts readily available," then the desired outcome for Goal 5 is to increase interactivity inside the Charles Dickens Museum specifically for educational and heritage interpretation purposes.

Research shows that by 2008, most museums have incorporated touch screen computers into their exhibits. After a discussion held with Ken Crosby, IT Operations Manager for the Tate, it was determined that the Tate Modern includes touch screen monitors for every new exhibition that is held inside the museum. This discussion was compared with a discussion held with Alice Kershaw, Director of IT for the Benjamin Franklin House in London. The Benjamin Franklin House, being relatively small (approximately 16,000 visitors per year), also incorporates touch screen computers inside their museum, using 6 different screens with the same program.

There is a current need for the Charles Dickens Museum to update its exhibits inside the museum. Interest in reading is continuously dropping while an interest in the Internet and other interactive means in rising significantly. Visitors now expect more interactive exhibits as opposed to reading descriptions of the collections.

With the installation of touch screen monitors and a PC from ProTouch Ltd., the Charles Dickens Museum can greatly improve its education and heritage interpretation sectors.

A cheaper alternative to this option would be displaying text and slide shows on a digital picture frame, similar to ones available to consumers. Although not an advanced option, it provides a cheaper, more feasible display.

Goal 6: Manage All Installed Information Technology

As aforementioned in the Weaknesses of Information Technology section, there is a need for the systems to be well maintained in order to function properly. Electronic devices are far from being 100% trouble free and autonomous. This weakness means that at some point, a problem with equipment will arise and it will require attention to be put back into working condition.

After interviewing Ken Crosby, and Alice Kershaw, both of whom work closely with information technology at their respective museums, it became clear how important the need for a working knowledge of the equipment, and how to troubleshoot it, is.

Even though a large museum organisation such as the Tate has a well-staffed information technology department, there are still many times that the museum is open while the information technology department has closed. When equipment starts malfunctioning it is of great value to have staff at the museum that can do basic trouble shooting and possibly fix the problem immediately. At the Tate, museum staff is trained on how to perform simple maintenance on the equipment, in the event of a malfunction.

Regardless of which of the above Goals are implemented, it is essential that a written document be created which outlines, for each system, the basic troubleshooting procedures that a non-IT person would be able to implement. This document, will not only reduce the amount of downtime of equipment, but also prevents the need to hire a professional to come in to fix otherwise minor problems.

Alice Kershaw, at the Benjamin Franklin Museum, reiterated that this document should be well detailed, and written with a good, step by step troubleshooting section. It should also have contact information for the company who set it up, so that difficult issues may be brought to the proper person for attention.

Implementation

To achieve the strategic goals identified above the following objectives that must be met are planned as follows:

Goal 1: Establish More Educational Tools Online

Objective	Action	Timeframe
Designing Links for Podcasts and Blogs	Dr. Florian Schweizer created the original design of the website. Dr. Schweizer will be able to design links off of the main website in order to provide for the podcasts and blogs. There will be no cost for the extra webspace.	2008 – 2009
Storing Recordings for Podcasts	Starting immediately, lectures, events, and readings from the Dickens community should be recorded and stored on a database. These MP3 and RSS files can then be implemented onto the website by uploading them onto a server using a File Transfer Protocol Program.	Ongoing Process
Launching Recordings for Podcasts	After the files have been recorded and stored, they are available to be launched at any time, depending on the curator and community's discretion.	2009
Creating Limited Access Pages	Limited access pages will be created for podcasts to allow for the full amount of podcasts to be viewed by community members online. Dr. Schweizer has already created a limited access page for the main website and will be available to create another one for the podcasts.	2009
Establishing and Maintaining the Blog	A prominent scholar within the community will be assigned to update the blog, allowing for discussion among community members. Comments will need to be monitored before being entered on the blog. There may be a cost to pay for the leader of the blog.	2008 – 2009

Goal 2: Establish More Interactive Exhibits at the Museum and Online

Objective	Action	Timeframe
Determining the Material for Turning the Pages	The museum's curator and the Dickens community will determine the material for the manuscript. Letters by Dickens, original manuscripts, such as Nicholas Nickleby, and first editions will by used for Turning the Pages.	2009
Writing Commentary	The museum's curator will provide commentary for the Turning the Pages exhibit.	2009 – 2010
Purchasing Turning the Pages	Turning the Pages has supplied an estimate for the Academic Version of the exhibit at £ 12,000.	2010
Creating a Link	A link will need to be created connecting the Turning the Pages Exhibit to the main Charles Dickens museum website. Dr. Schweizer will provide a link to the Turning the Page exhibit online.	2010

Goal 3: Become More Digitised and Create Links between Institutions

Objective	Action	Timeframe
Entering Data in the Database	There is a significant amount of information on the collections in the museum that need to be entered into the database. Staff and volunteers will enter this data.	Ongoing Process
Create Links between Institutions	By adding all of the data into the database, the Charles Dickens community will then be able to easily share information about its collections. A link will need to be created between institutions.	2008-2009

Goal 4: Create an Interactive City Tour for 2012

Objective	Action	Timeframe
Deciding on a Service	Museum 411 appears to offer the best deal for the Charles Dickens city tour. Prices for leasing the guided tour start at around £100 per month, depending on the service requested, with an initial start up fee. This service can be leased for a year in order to have a trial period. Guide by Cell also offers this service. The rates are approximately £100 per month with an initial start up fee. Both services assist in creating content for the cellular phone guided tour.	2010
Creating Sites to Visit	The Charles Dickens Museum will head the project management for this goal. Along with the selected members of the community, the Charles Dickens Museum will decide on sites to visit for the tour.	2010-2011
Writing the Tour	The tour's narration and commentary will be written by the Charles Dickens Museum's curator and selected members of the community.	2010-2011
Implementing and Testing the Tour	Once the steps listed above are completed, the tour can then be implemented for guests and visitors to use. The tour will go through a short trial period where surveys and studies will be conducted to determine the success of the tour. These studies will also incorporate suggestions to any changes that need to be made. Once the tour passes this trial period, it can then be implemented as a full time tour.	2011

Goal 5: Insert Computerised Exhibits in the Museum for Education

Objective	Action	Timeframe
Deciding on Material to Use	Before purchasing the touch screen computers and monitors, material to go on the computers needs to be decided upon first. Material can include facts about Charles Dickens and his time in 48 Doughty Street, the time period in which Dickens lived, and other relevant information. The computers can be set up with text, videos, games, or trivia that will be suitable for all ages to partake in.	2009
Purchasing the touch screen monitors	Determine a company that will supply the best service	2009-2010
Placing new touch screens into the museum	Allocate places in the museum for these to be installed.	2009-2010

References

"Blogs, Blogs, and More Blogs." eMarketer 18 Jul 2006 5 Jun 2008 <http://www.emarketer.com/Article.aspx?id=1004072>.

"Building the Online Library." Turning the Pages. 2008. Turning the Pages. 5 Jun 2008 <http://www.armadillosystems.com/ttp_commercial/>.

Kiley, Robert. "Digitising MS 8004 - The Physician's Handbook." Jul 2003 5 Jun 2008 <Digitising MS 8004 - The Physician's Handbook>.

"Tate Modern Multimedia Tour Pilots." mLearn Conference, May 19-20, 2003 2003 5 Jun 2008 <http://www.tate.org.uk/modern/multimediatour/phase1_keyfindings.pdf>.

"City of Rebels and Dreamers." Talking Street. 2008. Candide Media Works, Inc.. 5 Jun 2008 <http://talkingstreet.com/tours.php?tourid=bos>.

"Connecting Museum Visitors with Audio Tours via their Cell Phones ." Museum 411: Dial. Listen. Learn. 2008. Museum 411. 5 Jun 2008 <http://www.museum411.com/>.

"Create Cell Phone Audio Tours with Guide by Cell." Guide By Cell Audio Tours. 2008. Guide by Cell. 5 Jun 2008 <http://www.guidebycell.com/gbc/howitworks.html>.

Simon, Nina. "Discourse in the Blogosphere: What Museums Can Learn from Web 2.0." Museums & Social Issues 2(2007): 257-274.

Appendix E

Feedback from Derek Mortimer

Dear Florian,

Here are the promised comments on the IT plan. I have not given much attention to the details of the plan, thinking that I might best help by suggesting how we might see things more sharply in perspective. It is all to easy for the necessary management-speak of the document, the hype and the plethora of detail to obscure the underlying realities of resource allocation.

We tend to think that IT enables us to make more of our limited resources. Generally, this is true, but it can be a misleading generalisation. Some applications are much more cost-effective than others. To avoid being misled, I think it would be useful to categorise applications of the technology as follows (not necessarily in the plan, but perhaps in a guide note for assessing projects).

'Set up and leave' applications

The most cost-effective use of IT tends to be of this kind. Typically, the technology simply provides access to material that rarely needs to be updated. Interaction with the user is automatic. Most of the costs are up-front, running costs being primarily to do with technical maintenance.

The CDM collection database, Turning the Pages and putting Dickens's works online are amongst the applications, which fall into this category.

'Set up and feed' applications

For some applications in which content has to be updated regularly, the updating does not call for any special skills beyond those needed to use the software and to communicate clearly. The time needed for this, often underestimated, can represent a substantial maintenance cost. Very often, as one can discover throughout cyberspace, the maintenance is neglected. Obvious neglect of a website can actually harm the reputation of the owner.

The posting of news items and provision of podcasts on a website fall into this category.

'Set up and trade' applications

Selling goods and services online adds another form of maintenance cost, which **ought** to be covered by income from the sales. Although it is doubtful whether the true costs of small-scale online trading can be wholly recovered, they are at least counterbalanced to some extent. Any residual cost could be justified by treating transactions as PR/Marketing opportunities.

Since the people who buy from the CDM shop, say, are likely to be predisposed to take an interest in the CD Community, they are likely to be receptive to publicity about it. E-mail messages in particular could be used for this purpose. It would be an interactive link with members and potential members potentially much more cost-effective than options in the next category.

Unprogrammed interactive applications

The economic realities of blogs and similar interactive applications are of a different nature to those of the above categories. Talented and knowledgeable people are required to

initiate and sustain them. Consequently, the blogosphere only provides an 'inexpensive marketing opportunity' for a tiny organisation like the CDM if those involved are paid little or nothing for their contributions.

The plan suggests that 'a prominent scholar' should be asked to run a blog. That could be ideal for a blog designed to attract academics and others of a similar disposition, but the person would have to be extraordinarily talented to make the blog attractive to other constituencies as well - adult enthusiasts turned off by academic niceties and children approaching the end of their school years, for example. Accordingly, in my view, a number of blogs would be required to sustain relationships with various constituencies within the CD Community and draw in new members from outside.

Bloggers have to employ the skills of the journalist to arouse and maintain interest, tailoring their contributions and language to the target population. One way of initiating a Dickens blog for schoolchildren might be to enter into partnership with a school, using teachers - familiar with the language and interests of their charges, and with the national curriculum - to sustain it as part of their role. There might be a similar arrangement with a university department for undergraduates.

In any event, this category is concerned primarily with using people, whether paid or unpaid. The technology simply enables them to do their work in cyberspace.

With kindest regards,

Derek

Appendix F

Feedback from Rodney Gorme-Obien

Hi Florian-

The plan seems very thorough in its approach. Our collaborative should help set a cornerstone for offering and centralizing -- online -- the catalogued works of Dickens.

One area that I may have suggestions is in social networking. The focus of Web 2.0 is the advent of social networking sites like MySpace and Facebook. There maybe a more popular SN in the UK. I would suggest establishing a Facebook presence that help central your efforts to connect all individuals and organizations interested in Dickens and Dickens Museum. There is already a Facebook page for Charles Dickens with over 2000+ "fans"-

http://www.facebook.com/pages/Charles-Dickens/11740030481?ref=s

You can run your blog off the Facebook if desired. The Facebook page would be a good parallel to a SecondLife presence.

Chiste-

Rodney