

Vision and Scope Of Online Reservation System

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Revision History

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Josh Lepley	10/03/09	Begin draft of vision & scope	0.1
Justin Farrell	10/06/09	Worked on Section 1, 4 & 8	0.2
Tapiwa Kunonga	10/08/09	Worked on Section 2 & 3	0.3
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1. Business Requirements

Magnificent Marketing is a marketing firm that is looking to replace their current paper audio-visual check out system with a new web based application that will be able to inform the employees what equipment is available for check out, and when equipment is due to be returned.

1.1. Background

Magnificent Marketing currently employs 100 people who may need to utilize several types of audio-visual equipment to complete projects. Some examples of audio visual equipment that are in use at Magnificent Marketing are audio recorders, video cameras, projectors, laptops, and digital cameras. The audio visual equipment is quite expensive and it is too cost prohibitive for Magnificent Marketing to purchase duplicate equipment for each employee when it would not be utilized at all times. Since every employee does not use the same equipment at any given time Magnificent Marketing purchased small quantities of equipment that the employees could check out when they needed to. The current system that is in use requires employees to fill out a form requesting the audio visual equipment that they would like to use and submit it to the inventory clerk. Once the inventory clerk looks through the storage area he will let the requestor know whether or not the equipment they requested is available. If the equipment is available the inventory clerk lets the requestor take the equipment, if the equipment is not available the requestor has to keep checking in until something becomes available.

1.2. Business Opportunity

Magnificent Marketing realizes that an audio-visual equipment check out is needed due the expense of the equipment, but the current system is not efficient which can lead to delays in completing projects for customers and that could result in lost profits if Magnificent Marketing

develops a reputation for not meeting customer deadlines. Magnificent Marketing wants the opposite results in that they want customers to utilize their services because they can complete projects on time. For this goal to be obtained Magnificent Marketing wants to eliminate the lost time and productivity that results when employees have to fill out request forms, have to deliver the forms to the inventory clerk, have to wait for the clerk to see if the equipment is available, or worse yet, wait for the needed piece of equipment to become available for use. The time that is spent completing all of the above tasks must be reduced because the costs associated with the lost productivity will eventually cut into Magnificent Marketing's bottom line. Magnificent Marketing believes that implementing a web based check out application is the first step towards making the business even more efficient and profitable.

1.3. Business Objectives and Success Criteria

The main business objectives are this product will provide a tracking and inventory system for Magnificent Marketing. This product will be reliable, secure and scalable for future growth and business needs. Success of this product will be measured by the:

- Ease of use for employees using the system
- Time spent reserving equipment
- Ease of updating database

After minimal training, employees should be able to use the system efficiently and effectively.

The system will become a longtime investment for Magnificent Marketing reducing the wasted time it took with the paper tracking system, repetitive tasks which added up in the long run especially when the employee finds out the equipment was not available:

- o Clerks time looking for equipment
- o Employees time filling multiple forms

- Employees time going back and forth to the inventory room

1.4. Customer or Market Needs

This product will eliminate confusion and delays in delivering final products to Magnificent Marketing's customers. By effectively tracking and assigning available equipment, projects can be brought to their completion more efficiently, leading to higher customer satisfaction. The product should be able to run on low end workstations for the end users and will require a server to house the database software.

1. Product must be secure due to customer and employee sensitive information
2. Product should be intuitive with minimal training required for use
3. Product should be accessible from any location

1.5. Business Risks

With the introduction of the new system, more security measures have to be placed on the network, because without adding more security features in the network the risks increase. Not only will a database be introduced, but now the database has employee information and users have to sign in to reserve equipment to insure that only authorized users have access to the database.

Risk	Severity	Mitigation
User acceptance	LOW	Provide quality, informative documentation to product users
Implementation	MID	On-site installation and quality testing
Web application might not run on all web browsers	HIGH	Use open-source development packages used on most web browsers
Database might may not run on client's servers	HIGH	Develop a database compatible with the clients server
Database might be too big client's servers	HIGH	Develop a database with the least minimal features
Unauthorized users	HIGH	Include user validation. Add in user sign in to the web forms.

2. Vision of the Solution

The new system will increase efficiency of the business processes and procedures by reducing the time wasted in reserving equipment, and improve the relationship with customers because projects will be completed on schedule. In addition, less equipment will need to be purchased to efficiently use all available equipment.

2.1. Vision Statement

Our vision is **Magnificent Marketing's** new web application system will increase revenue though increased customer satisfaction. Customer projects will be completed on schedule because equipment will be reserved in conjunction with schedules. The new application will be accompanied by an enhanced database management system as well as a secure employee portal.

2.2. Major Features

Major features will include:

- A Web form to reserve equipment
- E-mail confirmation upon reserving equipment

- Web portal for employees to manage reservation data
- Enhanced network for hosting and processing information
- Enhanced database to store equipment and employee data

2.3. Assumptions and Dependencies

- **Assumption:** The current paper reservation form is the basis of design of the new online reservations.
 - **Dependency:** When the online reservation system is in place, the paper form will become a backup option for registration.
- **Assumption:** The nature of the online application requires client/server architecture, network hardware and software, server hardware and software, database software, and development software.
 - **Dependency:** Establishing relations with various software and hardware vendors will fulfill the hardware and software requirements of the project.
- **Assumption:** The new system will show the inventory in real-time and show future returns, which will allow users to make reservations accordingly.
 - **Dependency:** This should increase employee productivity, hence increasing revenue through customer satisfaction.
- **Assumption:** Additional training of staff is foreseen for staff to handle new protocols, hardware, and software.
 - **Dependency:** Additional training time allowed for staff.

3. Scope and Limitations

The new system will include an online web reservation form, database to store equipment and employee data, Web portal, and a secure network. The organization already has a Web site

where employees and customers can view the services and products offered, so this project does not involve the web development, but will include online form, database, and Web portal.

3.1. Scope of Initial Release

The initial release of the system will include the online reservation form, database to process and store reservation information, and an employee Web portal. Installation, configuration, and configuration and support documentation will be included with the initial release.

3.2. Scope of Subsequent Releases

As the business grows, future releases will include:

- Online viewing of reservation information
- Online viewing of who has what equipment
- E-mail reminders of upcoming reservations
- Online cancelation capability
 - Allow rescheduling of reservations

3.3. Limitations and Exclusions

With the initial release employees will not be unable to cancel, reschedule or view reservations information online. To accomplish that, employees must notify the inventory clerk by phone, e-mail, or walk-in. In addition, employees will have to remember their reservation schedules and will not be able to see who has what equipment.

4. Business Context

The major customers for this project are all of the employees at **Magnificent Marketing**, and the project should satisfy the organization's priorities and stakeholder profiles. The operation

environment must support an audience through the Web portal from inside or outside of the office building.

4.1. Stakeholder Profiles

Table 4.1

Stakeholder	Major Value	Attitudes	Major Interests	Constraints
Inventory clerks	Quick access to data	See product as avenue for better record keeping	Easy to use, reliable, secure	Must run on low end workstations
Executives	Increased productivity	See product as avenue to increase in productivity for employees	Better, more reliable record keeping	No budget for training
Employees	Easy access to inventory	See product as avenue to increase productivity	Fast reservation method	Unable to cancel reservation or see where or who has certain equipment
Project Team	Build system that helps employees set better schedule	A good working reservation system	A system that meets employees needs	Unable to do On-site installation and quality testing due to geographical location

4.2. Project Priorities

Table 4.2

Dimension	Driver (state objective)	Constraint (state limits)	Degree of Freedom (state allowable range)
Schedule	Release 1.0 to be available by 12/03, release 1.1 available by 12/13	Any unscheduled issue could cause delay	Database should be functional
Features	- Secure online reservation - Employee portal online - Database - Intranet	Database size	All high priority features must be included in release 1.0
Quality	System will reduce time to reserve equipment	Reservation will be hard during Web server downtime	95% of user acceptance tests must pass for release 1.0
Staff	Database developer Web Application developer Systems tester	Maximum team size is 3 members acting as developers and testers	Staffs knowledge covers 90% of requirements need for this project.
Cost	\$8,000.00	New software needed will increase cost	Budget overrun up to 10% acceptable without executive review

4.3. Operating Environment

This system will be used in a small to medium sized office environment. Users are located in the same geographical location, but the system will be available from any location. All data is generated within the company and will be available 24 hours a day, 7 days a week via the internet. Users can tolerate small interruptions of service, but service should be available the majority of the time. Access to data will be limited to employees only and should be password protected.

5. Human Resources

The human resources required for this project includes a team, with identified skills and attributes each member brings to the project. Classification of roles and responsibilities of each individual and the strategies required for successful communication among the team members are understood and acknowledged.

5.1. Team Charter

The team was assembled and organized to meet the requirements of the project, chose a project leader Tapiwa Kunonga, who will guide and assist in the completion of the project and keep records of the project's progression. All communication will be to all team members and project sections will be approved by the team as a whole.

Team communication will be through e-mail, chat or phone at least every other day to keep project goals fresh and get updates of the team members sections. A Franklin Live meeting will be held Sunday nights at 9pm EST.

5.2. Technical Skills and Attributes

Table 5.2 lists the members of the team and their skills and attributes.

Table 5.2

Name	Skills	Attributes
Tapiwa Kunonga	Database designing, project analysis, Web designing	Extroverted, willing to learn, self-started, team player
Josh Lepley	Writing, editing	Detail oriented, organized
Justin Farrell	Networking, SQL programming, HTML programming, writing & communication skills	Introverted, disciplined

5.3. Roles and Responsibilities

Table 5.3 lists each team member and their roles and responsibilities within the scope of the project.

Table 5.3

Name	Role	Responsibilities
Tapiwa Kunonga	Team Leader	Guide application development
Josh Lepley	Quality Tester	Test functionality of check out system
Justin Farrell	Database Developer	Develops SQL database application

5.4. Communication Strategies

Communication will primarily be accomplished by e-mail. A Franklin Live meeting will be held Sunday nights at 9pm EST. Other modes of communication may include phone calls or instant messaging. The acceptable response time for a team communication will be 24 hours unless specified differently in the communication.

6. Project Management

As the project begins information will need to be gathered to determine what must be into the database so that it will function according to the customer's requirements. The database can be created once a decision has been made as to what data will be input into the database. The next step will be to determine what additional equipment if any will need to be purchased to make the checkout system functional. Once equipment is purchased and the database is complete the checkout system must be checked to find any problems before it is made available to the customer. After the checkout system is deemed suitable for use the customer can then preview the checkout system to see if it will meet their needs. Once customer approval is received training can begin and the checkout system will be installed.

The project management section will highlight deliverable formats and database for the system as well as the starting equipment. Project management will also include training on using the check-out system as well as the customer support service. Lastly, project management will cover the project development schedule.

6.1. Deliverables

One of the deliverables to the customer is a web based audio-visual check out system that meets the customer's specifications. The system is a database which tracks all of the equipment that is available for employees to check out. Another deliverable to the customer is the actual

equipment needed create and maintain the electronic check out system. Team Check-Out will also provide training to the customer on how to use the electronic check out system. Once the check out system goes into use Team-Check Out will provide customer support for one year at no charge with the option to renew support annually with the payment of a yearly fee.

Items deliverable to the professor include: The Project Vision and Scope Document, The Project Whitepaper and The Project Write Up. Status reports will also be delivered to the professor throughout the course of the term.

6.2. Dependencies

Successful completion of the project will depend on the completion of the database and ensuring all of the information that is needed to help the database execute queries is input into the database. Once the database is completed, testing must be done to ensure that the database updates accordingly as equipment is checked out and checked in. Users must be able to access the database through the web portal to checkout equipment. The database must also be automatically backed up on a regular basis in case of an incident or disaster that could cause data to be lost. If the data cannot be retrieved from backups then the entire system would have to be rebuilt again.

6.3. Schedule

Table 6.3

Current Week	9/28-10/4	10/5-10/11	10/12-10/18	10/19-10/25	10/26-11/1	11/2-11/8	11/9-11/15	11/16-11/22	11/23-11/29	11/30-12/6	12/7-12/13
Develop Project Plan	█										
Gather information for database			█								
Begin creating the database				█							
Assign ID numbers to equip.				█							
Purchase equip. to complete project.			█								
Input customer data to database					█						
Test database functionality						█					
Establish web portal							█				
Present to customer for approval									█		
Address customer concerns										█	
Deliver to customer											█
Begin training users											█
Tasks											
Weeks	9/28-10/4	10/5-10/11	10/12-10/18	10/19-10/25	10/26-11/1	11/2-11/8	11/9-11/15	11/16-11/22	11/23-11/29	11/30-12/6	12/7-12/13

7. Educational/Program Outcomes

The goal of this project is to help improve Magnificent Marketing’s current audio visual equipment checkout system. Magnificent Marketing wants the system to be as “paperless” as possible and the new web based checkout system will accomplish that goal. **Magnificent Marketing** will no longer have to keep track of forms requesting equipment because the new system will allow all information to be stored electronically thereby eliminating the problems that come with trying to keep track of paper files. The new system should also meet the needs of the employees by providing them with real time updates about the availability of equipment they want to check out and when checked out equipment is due to be returned.

7.1. General Education

1. Due to the size & scope of this project each team member must be an active participant in contributing to the completion of the project. The challenges that will be faced in this project will prepare each team member for challenges that can be faced in the workplace. Some of these challenges could include working with others to complete a project, learning how to communicate effectively with people who may have different personalities, and completing research that is important to solving a business problem and presenting the findings. The project will also show how working as a team is more effective than working as an individual because each team member brings their own strengths and opinions that can be used to find a solution to a problem.
2. This project covers a realistic problem faced by businesses, especially small and medium sized businesses which usually do not have the capital to convert from a paper filing system to an electronic filing system.
3. Solving the problems in this project will enable our team to have a better understanding of how organizations can work to introduce technology into a system as well as give our team a realistic look at the various technologies that can help organization.

7.2. Information Technology

1. The project will help **Magnificent Marketing** cut the time it takes to reserve equipment. The database will allow all information to be stored electronically thereby eliminating the problems that come with trying to keep track of paper files. In addition, it will give the employees a real-time inventory list, thus efficiently scheduling reservations and not having to wait aimlessly.

2. The Web form will enable employees to make accurate reservations and the inventory clerk will not mistakenly reserve/hold the wrong equipment due to illegible handwriting of some of the employees. The web form will give the employee set options for the equipment stored in the database.

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This article provides several functions for web-based database management, for instance, user accounting, web page designing and data backup.

Wise, B. (n.d.). Database Normalization and Design Techniques. Retrieved October 4, 2009 from <http://www.phpbuilder.com/columns/barry20000731.php3>

This peer-reviewed article was used to understand how Rules of Normalization are enforced by eliminating redundancy and inconsistent dependency in database table designs. This article was used to help make PHP code easier to understand, easier to expand upon, and in some cases, actually speed up the application.