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**Feasibility Report**

**Wireless Waitress**

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# INFORMATIVE SUMMARY

The feasibility study reports new and innovative solutions for the patrons as well as owners of restaurants with the help of the Wireless Waitress. It helps in increasing the tables turn time, revenue, and stability, while lowering training and maintenance costs. According to the Wireless Waitress, it is possible for a waiter or waitress in a large restaurant to input and transmit one or more menu names ordered by customers using the wireless ordering terminal without needing to handwrite the menu names, so that the menu names transmitted by the waiter or waitress are automatically printed out in the cuisine of the restaurant, thereby reducing the work load of the waiter or waitress so that the work efficiency of the waiter or waitress can be improved, and allowing a manager of the restaurant to confirm and manage the selling status of the restaurant through the Internet, even in a place remote from the restaurant. The survey basically determines the number of patrons who thinks wireless waitress will be useful for them. Based on our conclusions, we recommend the customer should place orders in order to save their time and to turn more and more tables per day. We further recommend the waiter or waitress places order.

# INTRODUCTION

This feasibility analysis relates to develop to develop the software named ***Wireless Waitress.* It is a new and** innovative solution that increase table turn time, revenue, and stability, while lowering training and maintenance costs. This will help the customers as well as the owners of the restaurant

# PROBLEM DESCRIPTION

The following sections explain the current problem and the proposed solution:

## Background/problem

Today,many restaurants are facing a problem, as it is getting nearly impossible for a waiter or waitress to handwrite menu names ordered by different customers without omission and then deliver the order sheets to a counter, which is troublesome and deteriorates the work efficiency.

## Problems for Patrons

First of all, now days, the major problem with the restaurants is the waiting time by the patrons. In my opinion, the cause of the problem is the current system which is being used by the restaurants. For example, usually when you go to any restaurant, it takes a lot of time to wait for the seat to sit. It is because the waitress in restaurants and cafes take handwritten orders and inform the service locations (e.g. kitchen, cashier, and bar) with slips of paper. In this way, the waiting time is long, some orders may be missed out, and control over charges is not efficient.

## Problems for Management

The problem with the current system for the management basically is to keep the orders sequentially in their inventory. Suppose it’s a closing time you still have patrons sitting and waiting for their orders and when you have patrons for more time than you expected. Therefore, you have to have waitresses for them and that leads to increased labor cost. While control over the stock and calculation of the sales per species is problematic. Additionally, in the lack of an automatic way to control, a person, the “check-man”, is usually in charge to control the waiting time and whether the orders have been served and equivalent to the customers. In order to surpass these difficulties, we have proposed the wireless order system.

# OBJECTIVES

These are the following objectives of the proposed system:

To automate the functions associated with ordering   
To improve the services to the clients   
To improve the management of the tavern   
To amend the control of the stock and sales **Credit Card Processing at the Table**

# **SOLUTION**

**The solution to the above problems is wireless waitress. It is a new and** innovative solution that increase table turn time, revenue, and stability, while lowering training and maintenance costs.

# BENEFITS

**Easy to Use  
Complete Back Office System  
Increased Accuracy  
Customers Spend Less Time Waiting  
Credit Card Processing at the Table  
Complete Turnkey System  
Premium Customer Service  
Increased Table Management and Line management  
Real time inventory management  
Reducing labor cost**

# **CRITERIA**

This section lists and explains the different types of waitress systems.

## Work to be done

The work that needs to be done is finding a company for your store and which brand you like best for the Wireless Waitress system. Responsibilities range from paying for the product and selecting a date for installment.

## Cost

The cost of Wireless Waitress is approximately $6,000. The cost includes a couple of central terminals, wireless access, and small devices. Over a substantial amount of time you will save more money with this system. The traditional use of note pad and pen can be costly because every note pad costs $0.50 and have a minimal amount of sheets. On average a waiter or waitress use at least one and half pads a day. After time this adds up to a high cost of supplies.

## Change Over

One of the main reasons you want to change from the traditional style of order taking and business to an electronic system is time. Time is saved by the order going directly to the place where orders need to be dropped off. If the Wireless Waitress system is used the customer’s time spent waiting is decreased and get what they ordered on a timely manner. Another reason why to change over is because you will need a minimal amount of wait staff on hand, which means less work hours to pay for.

## Quality of Devices

Devices such as the hand held touch screen saves time and paper compared to the traditional service. The touch screen sends orders right away to the central terminal instead of the reliance of the wait staff to deliver the order. All the devices are set up with options as to what the customer can choose from. The quality of the product is preferred high because systems that freeze up or are slow can cause delays in a faster service. There are several options that can be selected at your preference such as:

* Hand held touch screens
* Table top devices
* Central Terminals

These products can be selected through the company you use and be sure to ask questions.

# **PROJECT DESCRIPTION**

**This section presents the scope of my project and the methods.**

## **Scope**

**This report seeks to identify some solutions concerning the appropriate frequency of wireless waitress, the best way to use and accessible location for customers.  
We determined these solutions by surveying the people who will be using the wireless waitress.**

## **Methods for obtaining facts**

**I developed a survey designed to determine the number of people who are in favor of this product and aspects they like or dislike about it. Also, if it helps them save time and would they like to recommend this product to others or not. We then distributed the surveys among the people around and in the university.**

**Survey Questions  
The following is a list of questions pertinent to the scope of this report:**

**1. Overall, how favorable or unfavorable is your opinion of the wireless waitress?**

Poor  
    Fair  
 Good  
 Very good  
 Excellent

**2. What do you like most about the wireless waitress?**

**3. What do you like least about the wireless waitress?**

**4. Approximately how many minutes do you wait before you are seated?**

< 10 mins  
 10 – 15 mins  
 16 – 25 mins  
 > 25 mins

5. **The waiting time is:** About what I expect  
 A little longer that I expect  
 Much longer than I expect

6. Do you think wireless waitress will reduce waiting time?  
 Yes No

**7. What would be the advantages in choosing a wireless waitress?** Faster service   
 Broad selection of meals  
 Reduce order errors   
 Easy to use  
 Correct billing   
 Less waiting

8. Would you recommend the wireless waitress to others  
 Yes No

**Facts**

In this Section, below indicates the most commonly chosen responses and Break down of responses to the survey questions:

**Most Commonly Chosen Responses**

Q1. Good  
Q2. It saves time  
Q3. Need of computer know-how   
Q4. 10-15 minutes  
Q5.About what I expect  
Q6.Yes  
Q7.Faster Service  
Q8.Yes

# OVERVIEW OF ALTERNATIVES

This section presents a general overview of the methods you can use in the process of taking orders:

## Wait staff places order

This product will be used by wait staff carrying a device. The waitress or waiter goes to the table with a touch screen hand held device and places the order. After the order is taken place it goes to the central terminal and the data is processes.

## Customer places order

Another option is to have a device on the table for customers to place the order themselves. This option is good for minimal wait staff. After the order is placed it goes to a central terminal and the waiter or waitress check the order. When the order is overlooked it is then printed and sent to the cooks.

## Traditional style

The traditional style of ordering is by the waiter or waitress taking the order on note pad and putting it in a computer. After it is placed in the computer it is printed and sent to the cooks. This method takes the most time and is less efficient.

## Self service

In this patrons go orders at the counter and receive it own their own.

## Orders display on electronic board

When the orders taken by the waitress; patrons have to see their order numbers on the display boards to take the orders.

# EVALUATION

This section compares each of the alternatives based on the criteria

**WAIT STAFF PLACES ORDERS**

**Word to be done**

By having the wait staff taking orders, using a wireless handheld device, the restaurant will benefit greatly in terms of time and service. When ordering all the components for the Wireless Waitress, the first thing you must do is make sure you order hand held devices for all the wait staff. Provide each “waiter” or “waitress” with their own device so they are able to provide quick, friendly, mistake-free service. The restaurant manager, or whoever is in charge of the Wireless Waitress system will need to train the employees on how to use the handheld devices, this way, errors are minimal and customer satisfaction increases.

**Costs Incurred**

Costs of each handheld device will vary, depending on what company each restaurant goes with. The estimated cost of the Wireless Waitress system is $6,000, with each separate component included in the previously stated price.

**Quality of Devices**

When looking for devices, such as the handheld touch screen device, it is highly recommended that you find reliable, durable equipment so replacement costs of devices do not begin to increase. A reliable device does not necessarily mean it must be the most expensive, but cost shouldn’t be too great of a factor, considering the restaurant will save money in the long run, from less labor costs and more customers. You should find high quality devices because the last thing you need is a slow device that refuses to work, or one that freezes up every ten minutes. A slow working device will affect the service speed provided by the restaurant and its workers, which in turn will eventually lead to customer complaints.

**Here are some graphs in relation to how long customers usually wait to be seated at a restaurant not using the Wireless Waitress system:**

This graph represents the number of minutes customers said they wait before being seated at a restaurant not using the Wireless Waitress system.

This graph represents the customers’ response when asked if they believed the Wireless Waitress would reduce waiting time.

**CUSTOMERS PLACE ORDERS**

**Work to Be Done**

By having the customers themselves take orders, using the table device, which would need to be installed at each table, the wait staff would be able to provide friendlier, mistake-free service to each customer in the restaurant. Like the handheld device, when ordering your components for the Wireless Waitress system, you must make sure you order table devices. You must also find a day out of the week to hire someone who can install the devices at the tables. Learn to use each device, so you will be able to show anyone who is required to learn. Also, make sure there are simple, easy-to-learn instructions for customers who want to order via table device.

**Costs Incurred**

Costs of each table device will vary, depending on what company each restaurant goes with, just like the handheld device. As stated in a previous section, the estimated cost will be $6,000. That amount may seem a little too high for you, right now, but the amount you pay for the Wireless Waitress will be covered by the profits made in the future.

**Quality of Devices**

In your search to find table devices suitable to your standards, make sure you pay attention to the costs and expenses of each device. You will want to purchase high quality table devices, so customers do not experience any system failures, screen freeze ups, or slow devices. Like the handheld devices, expensive table devices do not necessarily need to be immediately thrown out the window. This meaning you will, yes, WILL, save money due to less labor costs and more customers, just like the handheld devices. Not only will you benefit from these high, technological devices, but your customers will be highly satisfied, while experiencing something new.   
**Here are two graphs in relation to customers’ opinions when using the Wireless Waitress system:**

This graph represents the overall customer opinion of the Wireless Waitress.

This graph represents the customers’ response when asked if they would recommend the Wireless Waitress to other people.

**TRADITIONAL STYLE OF ORDERING**

**Work to Be Done**

Basically, if you are not using the Wireless Waitress system in your restaurant, you are using the traditional style of ordering. For this, you must: hire waiters and/or waitresses, and buy a large number of notepads. Also, find credit/debit card processing machines, and central devices to enter food orders. Not much work is needed for the “traditional” style of ordering.

**Costs Incurred**

The costs of using the traditional style of ordering will vary on the restaurant, and restaurant owner. Costs include wages for waitresses and waiters and notepads, used by waiters and waitresses. The notepads will cost an estimated $0.50, and central devices, used to enter the customer’s food orders, will vary as well, depending on which company you buy from.

**Quality of Devices**

For the traditional style of ordering, you want to make sure you have high quality receipt machines, debit/credit card machines, and central devices. Make sure to find good working equipment, because the last thing you want is poor customer service, and satisfaction. The quality, like the cost, depends on the company from which you purchase the equipment.

# CONCLUSION

When weighing the pros and cons of the wireless waitress system one cannot overlook the most important aspect of the dining experience, customer satisfaction. Customer satisfaction will always dictate the direction a particular establishment will take on the road to becoming successful.  
 The wireless waitress system, when used correctly, can greatly benefit a business from various different aspects; these aspects include, but are not limited to:

* Customer wait time
* Mistakes made based on a traditional ticket book system
* Overhead generated by costs incurred from supplies
* Using technology to generate more sales and customer satisfaction.

# RECOMMENDATION

Given all of the facts shown in this report, it is undeniably a great choice to put the wireless waitress system to use in any establishment wanting to improve in the areas mentioned above. The data shows that although there is an initial cost, the increased customer base and lower overhead will generate more cash flow and productivity. The data also shows that the majority of people are willing to use such a system. The various configurations show that the best way to implement the system is to have it at the table where the customer can order themselves, or to have the wait staff use a portable device to enter orders. One can draw a conclusion then that it would be best to have a system where the customer can choose to enter the order themselves, and to also have an option, should the customer choose, to have the wait staff enter it for them using their own portable device. By allowing this type of flexibility, a restaurant can cater to those with more technological knowhow, as well as to those who are less apt to adopt such a system. By combining the two alternatives, the establishment will stand to benefit regardless if the customer is technologically educated or not.

# REFERENCES

<http://www.barsnstripes.com/docs/pos4beginners.pdf>

<http://www.patentstorm.us/patents/6636835-description.html>

<http://www.freepatentsonline.com/4701849.html>

<http://www.wipo.int/pctdb/en/wo.jsp?wo=2006057506&IA=WO2006057506&DISPLAY=STATUS>

<http://www.revolutioncomputer.com/restaurant.htm>

<http://www.futurevision.com.ua/portfolio/cool_flash_intro.htm>

<http://www.hud.gov/offices/cio/sdm/devlife/tempchecks/fstemplate.doc>