

# Current principles and standards digital fridge computer science essay

[Art & Culture](#), [Music](#)



Digital Fridge movie ( DF ) significance that a electric refrigerator with enhanced characteristics like what is chilling indoors, merchandise deadlines, gross, maintaining record of diets, doing an automatic VOIP calls etc which has now become one of the significant component in place and besides in nutrient infrigidation market and besides thrown batch more challenges to rivals by doing them give invention which largely resulted in failure. Earlier in 98 one of the rivals launched a electric refrigerator with personal computer which resulted in a monolithic failure and most people pointed to the deficiency of user analysis, usage scenarios rating and undertaking analysis for the failure to happen. So to get the better of this failure and to do certain this habit be repeated once more Board of Directors at DF has given me the undermentioned duty

Reviewing current literature and criteria for useable synergistic systems and should give justification for the one I use. User and Usage scenarios should be modelled as per my want. Finding out all the functional and non-functional demands for the user and usage scenarios and giving an justification as how they would be utile in doing the system successful

To supply some screen shootings or sketched drawn samples to show any possible of import useable characteristic of its GUI. My basic duty given here are to give the DF demand applied scientist a elaborate and instantly applicable Usability Guidelines and besides some of the things that agreed already between me and DF is that the synergistic system should n't be holding any keyboard installations non even a practical keyboard and that it should ever run in kiosk mode on a touch screen, and besides the system should hold saloon codification scanners to scan the

point that is to be kept inside electric refrigerator and other simple input devices can besides be used.

## **Current PRINCIPLES AND STANDARDS**

When traveling through the current rules and criteria of useable synergistic systems what I have learned through scholarly research is that everyone gives more emphasis on the fact that user mold and serviceability mold should be promoted in order to acquire the enhanced demand specifications for the successful synergistic merchandise to be designed as stated by Sisira Adikari and Craig McDonald ICiA 2006 in the International Conference that held on 15-17 Dec. 2006 Page ( s ) : 151 – 154.

This paper besides provides a construct that functional specification of human synergistic system are provided to merchandise interior decorators and interior decorator will bring forth user interface design which is so compared and so evaluated with the design that is created utilizing user and usage mold techniques and this procedure is repeated several times with tons of interior decorators as a consequence of which they claim that serviceability can be made much more efficient. Initially to understand what is Usability, Ealier in 1993 jakob nielsen in his book serviceability technology explains what is usability and give in an in-depth cognition of serviceability. Harmonizing to Nielsen, Usability is non a individual, unidimensional belongings of a user-interface and it has multiple constituents, and it depends on five basic properties which are learnability, efficiency, memorability, mistakes and satisfaction. Nielsen besides provided with four techniques for less expensive methodological analysis which is being

referred as Discount Usability Engineering. In 1994 Jakob Nielsen in his paper Usability Inspection Methods tries to measure user interfaces to happen out serviceability jobs through a set of review methods. And some of those review methods that he described are Heuristics Evaluation, Cognitive Walkthroughs, Formal Usability Inspection Methods, Pluralistic Walkthroughs.

Of these Inspection Methods Heuristics Evaluation is the most popular one and what it precisely does is that there are set of recognized rules which will be followed by multiple judges for the serviceability jobs in the user interface. Nielsen maintains explaining about why multiple judges being used because of the fact that what one judge thinks might not be the same as of what other judge think. This is being illustrated by the following graph which shows that when figure of judges rise so the proportion of serviceability jobs found besides rise. Recently on March 7, 2011 in Userfocus.co.uk David Travis argues that many usability trials are worthless and besides Researchers recruit the incorrect sort of participants, test the incorrect sort of undertakings, put excessively much weight on people's sentiments, and expect participants to bring forth design solutions and besides stresses on the fact that people sometimes adopt the gear of serviceability proving, such as the one-way mirror and the picture cameras, but bury the nucleus rules of making user research and conclude by stating that if we Get those nucleus rules right so we can run a great usability trial with merely a pencil and paper. When planning an synergistic system it is really of import to bear in head that user and merchandise demand to be jelled which can merely be done with the aid of cognizing all sort of user demands in order to fulfill

them, so what XianYi Yang [ 1 ] Professor, Director, uhan University of Technology Institute of Art and design, Wu Han City, China in his paper Human-Computer Interaction Design in Product Design says that there are five basic rules that need to be followed when planing an synergistic system, five of them which are visibleness, right and clear feedback, limitation, function and matching, consistence. In the paper Usability of Consumer Electronic Merchandises by Sung H.

Han\* , Myung Hwan Yun, Jiyoung Kwahk, Sang W. Hong Department of Industrial Engineering, Pohang University of Science and Technology, San 31, Hyoja, Pohang, 790-784, South Korea states that different usability dimensions should be applied for all the different merchandises as each and every merchandises would change harmonizing to user demands and as a consequence of which 48 serviceability dimensions were identified which were grouped in to two classs viz. public presentation and image/impression. Performance dimension focuses chiefly on specific standards that is used to measure the user public presentation and it ever use the subjective facets. Image/Impression Dimension came in to consideration because of the fact that many people are non giving more importance to subjective facets and hence 350 relevant looks being extracted and which were so analysed and synthesized to acquire 25 image/impression dimensions. International Standard Organization proposed tons of criterions for user interface and serviceability such as ISO 9241, ISO 13407, ISO 14915, IEC 61997.

Of these ISO 9241 in its 11th portion precisely gives usability guidelines such as to which extent a merchandise can be used by a specified users so that expected ends can be achieved with efficiency, effectivity and satisfaction.

## **MY PROPOSED Approach**

I will hereby supply some of user and use modeling, user profiling, user typing so that all the outlooks of user can be analysed and do the user interface much more user friendly instead than doing it more complex for user by adding excessively much functionalities and features. Then following these stairss I will supply a scenario which will do usage of the character I have demonstrated and so will execute Heirarchical Task analysis based on the scenarios which will be utile to analyze what are the restraints that the user faces in the interface and besides it will so assist us to name down what are all the undertaking issues and the hereafter developments that can be done in this undertaking which is being explained in the later stage.. Also all the functional and non functional demands are listed down so that it will do the DF demand applied scientists cut down the load of constructing a more complex system.

## **USER AND USAGE MODELLING**

### **User Analysis**

As I have got no limitation of what sort of user I need to analyze about utilizing the electric refrigerator I took two character on my ain want which is being showed below

## **Persona 1: Michael**

Michael is a 32 twelvemonth old adult male who got divorced merely late and been populating entirely for the past 3 months and he is working as bank director in private bank nearby his house. Michael has been enduring from diabetics for the past two old ages and he is been purely advised by physician to take his nutrient and medicine decently at right clip neglecting which will ensue in serious wellness issues. Michael does n't wish passing money on outside nutrient and ever prefer to eat home-made nutrients and he besides loves cookery.

He besides prefer to take batch of fruits and nutrient that has more proteins and saccharides content and non to take nutrients enriched in fat content and besides been seeking to cut down consumption of intoxicant as it will do his wellness status more worse, so Michael seeking to maintain a note of what are all the ingredients being taken and kept inside the electric refrigerator so and at that place so that he can keep his balanced diet and besides can be after diet to keep his good wellness.

## **Persona 2: Sarah**

Sarah is a 28 twelvemonth old miss who merely got married late with surface-to-air missile who is working as a professor in a university. Sarah is a place based telesales executive whose occupation is to name the client and do them purchase the family merchandises.

she used to maintain an up to day of the month information about local intelligence and breaker through cyberspace all the clip and would love chew

the fating with her friends and listening to music and watch Television.

Largely on weekends Sarahs used to travel for partying with her hubby and friends. She does n't wish cookery and ever love to eat in eating house but still because of her hubby would cook merely on forenoon and dark everyday.

## **Use Analysis**

Use analysis which is being given below gives all the properties of use of the interface by the two characters that I have already identified

## **Frequency**

Though both these persona that I have mentioned above are contrasting in character and besides in life manner their frequency of usage would be more or less similar because if u take Sarah for illustration unlike Michael she might non like cooking but still she may utilize the electric refrigerator for listening to vocals, watching television or surfing through cyberspace.

## **Duration**

Duration of usage of the system depends on the type of procedure that this character chooses.

For illustration if sarah want to do a call or breaker through cyberspace or listen to song so so the continuance for the interaction between Sarah and interface may be long but at the same clip if she wishes to maintain some formulas inside it may take barely two to three proceedings.



## **Environment**

As you all can presume environment in which electric refrigerator would be kept is kitchen and it involves wet topographic points as sink would be nearby, and besides can see lot more vass and besides it has got lot more ingredients scattered all over the topographic point.

## **Breaks**

There may be breaks like dismay, door bell, telephone call but most of them do n't hold immense impact on the user when interacting with the interface as most of the operations do n't take more than five to ten proceedings.

## **USER Typing**

### **Title**

### **Description**

CookHe/She is the individual who normally keep an oculus on electric refrigerator ever to see if there is adequate ingredients for him/her to cook the favorite formula for them and/or for their household and will allow cognize the individual who would purchase the stocks if there is any stock running out of product. And this cook can be father, mother or anyone who normally cook in a kitchen frequently.

DirectorHe/She is the individual who would pull off things in electric refrigerator like purchasing the merchandises and make fulling it up in the electric refrigerator on monthly footing or on day-to-day footing.

PlundererHe/She is the individual who can be anyone at random apart from

the cook and director who normally uses the electric refrigerator like kids, guest etc

## **USER PROFILE**

### **Application**

Digital Fridge

### **User Class**

Cook

### **Features**

#### **Description about features**

#### **Requirement needed**

User Type Normally focus merely on cookery and wont give much precedence on purchasing any stock or delegate that occupation to director Menu options should be simple and easy apprehensible Age Range Between 25 to 50 Frequency of Use Most frequently will utilize at forenoon and dark daily If interface non used so there should be some power salvaging options so that monthly elecricity measure wont account much because of electric refrigerator Computer Experience Normally individual who is cooking can non be guaranteed that he/she would hold good computing machine cognition but atleast they know how to utilize simple bill of fare options There should be no complex processs to see for the formula and all the words should be kept short and simple Purpose Enjoys cookery and seek out different dishes with the ingredients available and chief purpose is to do certain the nutrient is being done absolutely at right clipl Interface can assist user by exposing

formula for a peculiar dish and besides exposing how much Calories are at that place in each formulas so that they can keep a balanced diet Education Largely everyone would be literate or can atleast read the bill of fare Guidelines on how to run the interface with some illiustrations can be utile Number of user Not more than two Interface should be understood by any user who wants to cook Other Kind of Technologies Used Mobile, Oven, ATM Interface can hold menu options with some diagrammatic representation as in nomadic phones as user feel really easily to utilize it Breaks May happen breaks like acquiring a call, door bell, some dismay beeping etc Interface should hold to wait for atleast 5 to 10 proceedings if user non reacting so should travel back to chief bill of fare

## **Application**

Digital Fridge

## **User category**

Director

## **Characterisitcs**

## **Description about features**

## **Requirement needed**

User Type Main occupation is to do certain any ingredient is non running out of merchandise and replenishing them at right clip so that cook make usage of it to fix dish without any hold Interface should expose all the ingredients that is being stocked up inside electric refrigerator and should give an dismay if there is anything running out of merchandise Age Range Between

25 to 50 Frequency of usage Wont use the interface much as of like cook but will utilize it like hebdomadal footing to do certain adequate merchandises are at that place and if no make an call or do certain automatic call being done for online shopping Should do certain all the ingredients are readily available for cook atleast for a hebdomad Computer Experience Largely director would hold good computing machine cognition Interface should non be holding complex operations Purpose Should maintain an oculus on the stocks being filled inside the electric refrigerator and should re-stock it up whenever necessary All the options for carrying up the electric refrigerator should be easy Education Largely literate or atleast cognize how to read Guidelines on how to run the interface with some illiustrations can be utile Number of user One or maximum two Interface should be easy to understand by any figure of user who wants to pull off the interface Other sort of engineerings used Microwave Oven, Atm, Mobile phone Interface can hold menu options with some diagrammatic representation as in nomadic phones as user feel really easily to utilize it Breaks May happen breaks like acquiring a call, or door bell pealing etc Interface should hold to wait for atleast 5 to 10 proceedings if user non reacting so should travel back to chief bill of fare

## **Application**

Digital Fridge

## **User Class**

Plunderer

## Features

### Description about features

### Requirement needed

User Type He/She is the individual who randomly comes to the interface and operates it. Should give an cautiousness or warning symbol if the user presses the invalid option. Age Range Buzzword be told as he/she can be of any age. Frequency of usage Not frequently. If the interface being used by individual apart from cook and director so he/she should be logged in every bit invitee so that certain penchant and security can be done in invitee. Computer Experience Depends on the type of user but most of them would cognize atleast to read. Interface should non be holding complex operations. Purpose Raider normally try to entree electric refrigerator merely to acquire any drinks or nutrient from inside electric refrigerator and habit know how to stock it up or fix formulas. There should be log in option as invitee and should hold penchant like demoing what drink or nutrient available. Education Cant warrant that they have good educational cognition as plunderer can be even childs or kids. Diagrammatic representations can assist raider. Number of user Can be of any figure of user. Interface should be easy to understand by any figure of user who uses it. Other sort of engineerings used Microwave Oven, Atm, Mobile phone. Interface can hold menu options with some diagrammatic representation as in nomadic phones as user feel really easily to utilize it. Breaks Buzzword be told Buzzword be told

## **Scenarios: Use Examples**

### **Scenario 1: Checking the Calories of the formula and besides the merchandise deadline ( Michael )**

Michael who is on weekend vacation want to fix onion soup for himself and besides want to see how much Calorie does each ingredient in soup has so that he can keep his balanced diet and besides he desire to look into all the ingredients expiry day of the month so that he can do an online shopping so that merchandises deadline can be analysed and can be thrown in to blow bin if any merchandise meets the deadline. In order to execute this undertaking Michael presses the “ Michael ” login session and the interface inquire what undertaking he want to execute, and he presses hunt for a formula. After this interface would inquire list all the formula with formula name, Once Michael presses on onion soup, the interface will demo the method on how to fix it and besides display the ingredients in it in the side. Michael presses on each ingredient to see how much Calories does it hold and besides cheques on the termination day of the month.

If any peculiar ingredient is about to run into the deadline so there is option for purchase button which will be pressed to make online shopping.

### **Scenario 2: Stocking up the electric refrigerator ( Sarah )**

Sarah who is experiencing bored in place after completing her work privation to see if all the ingredients are available in electric refrigerator and want to name and buy a merchandise if merchandise is running out of stock. Sarah goes in to “ sarah ” as an login session and is pressing on the “ Ingredients

Available " option in the chief bill of fare and so the interface shows a list of all ingredients available inside the electric refrigerator.

Sarah now want to see in item of each and every ingredient and so now she presses on the " Butter " option which is on the list to see the elaborate description of that ingredient. It is now demoing how much butter available now, and the termination day of the month of it and besides gives an option if an online shopping to be done for that peculiar ingredient. Now sarah want to purchase that merchandise so presses the online shopping and now after acquiring the butter Sarah uses the saloon codification scanner to scan that point so that database will add that merchandise and besides keeps an path of its deadline. And besides Sarah can manually add each point by pressing the " Add point Manually " and Suppose if she is non interested in on-line shopping there is an option called " Prepare list for shopping " which will add all the points to be shopped and so it can be printed.

## **HIERARCHICAL TASK ANALYSIS**

### **HTA1: Checking the Calorie of the formula and besides the merchandise deadline**

Checking the Calorie of the formula and besides the merchandise deadline  
 Travel near the Interface  
 Press " Michael " as an log-in session  
 Search for a Recipe  
 Choose a formula from the list  
 Method of how to make?  
 Ingredients Available in this Recipe  
 Choose a ingredient from the list  
 No of point left  
 Termination day of the month  
 Calorie of this ingredient  
 Purchase it?  
 Scan and add this ingredient?  
 Calorie in the Recipe  
 Ingredients Available  
 Choose a ingredient from the list  
 No of point left  
 Termination day of

the month Calorie of this ingredient Purchase it? Scan and add this ingredient?  
 Checking the Calorie of the formula Travel near the interface Imperativeness  
 on Michael as an Log-in session Search Recipe Ingredients Available Choose a  
 formula from the list Method of how to make Ingredients Available on it Calorie  
 of the Recipe Choose a Ingredient No of point left Termination Date Kilogram  
 calorie Purchase it? Scan and Add this Item Choose a ingredient from the  
 list No of point left Termination Date Kilogram calorie Purchase it?

## **HTA 2: Stocking up the electric refrigerator**

Checking the Calorie of the formula and besides the merchandise  
 deadline Travel near the Interface Press “ Michael ” as an log-in session Search  
 for a Recipe Choose a formula from the list Method of how to make?  
 Ingredients Available in this Recipe Choose a ingredient from the list No of  
 point left Termination day of the month Calorie of this ingredient Purchase it?  
 Online Shopping? Browse cyberspace and order Scan and add point Print the  
 point for shopping Scan and add this ingredient? Calorie in the  
 Recipe Ingredients Available Choose a ingredient from the list No of point  
 left Termination day of the month Calorie of this ingredient Purchase it? Online  
 Shopping? Browse cyberspace and order Scan and add this point 4.

5. 2 Print the point for shopping Scan and add this ingredient? Stocking up  
 the electric refrigerator Travel near the interface Imperativeness on Sarah as  
 an Log-in session Search Recipe Ingredients Available Choose a formula from  
 the list Method of how to make Ingredients Available on it Calorie of the  
 Recipe Choose a Ingredient No of point left Termination Date Kilogram  
 calorie Purchase it? Online Shopping? Scan and Add this Item Browse



cyberspace and orderScan and add the pointChoose a ingredient from the listNo of point leftTermination DateKilogram caloriePurchase it? Print this point for shoppingOnline ShoppingPrint the Item name for shoppingBrowse cyberspace and orderScan and add the point

## **REQUIREMENT SPECIFICATION**

### **Undertaking Drivers**

In general Undertaking Drivers are the 1 who make up whole of the undertaking or the one who drives the undertaking to be successful without any mistake.

### **Undertaking Drivers**

#### **Description**

CustomersThey are the people who is responsible for doing the merchandise successful and therefore it is really of import to do certain that they are good satisfied with the merchandiseDevelopment squad for the merchandiseThis squad has got certain procedure to make to do certain that a merchandise is been developed without any mistake and besides will document each and every phases or stairss in that procedureTesting Team for the MerchandiseThis squad accounts a big impact on the success of merchandise as the merchandise been tested several times with assorted inputs and look intoing if they are bring forthing the desired end productInstallation and constellation applied scientistsAfter the merchandise been developed installing and constellation applied scientists will repair it decently as per the client wantsGross saless TeamIf the gross revenues squad is non good recognized one among the people so even if the merchandise is a really

good one it would travel unnoticed in the market. Ad bureaus should have adequate advertisement on the merchandise to do it make to the people so even publicizing bureaus should hold gained good image over the market.

## **Undertaking CONSTRAINTS**

### **Given Constraints**

System non supposed to utilize keyboard non even practical

keyboard. System should run in booth manner. When carrying up the electric refrigerator or add an point in to the electric refrigerator it is necessary to utilize input devices like barcode scanners and besides other desirable input devices.

### **Impacts on user because of this Constraints**

User buzzword usage remote or anyother wireless device to run the system so handicapped individual cant operate this and so particular characteristics need to be added to get the better of this. As there is no computer keyboard, user habit be able to type any character and so it takes more clip to press each and every character to execute some action, and so to get the better of this, some alternative demand to be found out to do all the operations easy and fast to utilize by the user.

## **FUNCTIONAL Requirement**

### **Mandatory Hardware**

All the interactions between user and system must be in touch screen manner and remote controls or any other radio devices are purely restricted. System must run in booth manner.

## **Mandatory Software**

System should hold proviso to give away the informations of all the formulas and ingredients that is been unbroken indoors System should let the user to maintain an path of the merchandises deadlines System should do an automatic call if any merchandise running out of stock

## **Recommended Hardware**

Bar-code scanners can be used to add the point name and besides its deadline in to database CCTV camera can be fixed inside the electric refrigerator so that it will assist the user to maintain an oculus on all the nutrient merchandises that is been unbroken indoors Alarm can be fixed so that if any merchandise deadline is met or any other hardware failure occur dismay will allow the user know about it Water-repellent LCD proctors can be used.

## **Recommended Software**

There can be package for doing an automatic VOIP calls for online shopping Provision for accessing cyberspace and doing a call to friends and speak through mic and speaker units. Software for automatically publish the ingredients that is running out of stock

## **NON-FUNCTIONAL REQUIREMENTS**

### **Basic Guidelines for putting up the interface**

Fonts in the interface should be ever Arial Number of colorss should n't transcend more than three. All warnings and mistake in ruddy, general

screen in black and white and highlighted countries in blue  
Minimum screen size – 15mm\*15mm  
Minimum Font size – 14pt

## **Serviceability demands**

### **Navigation**

Favourite and most frequently used formula should be displayed at the top  
Every screen should hold old and Main Menu option  
Each and every button should hold their fonts clearly seeable by stipulating their maps decently  
All pilotage should be with the aid of buttons and non with the aid of text box, look into box or anything else.

### **Feedback**

If the user made to wait for some operation so the ground for it should be displayed on the screen with valid ground  
All the screen should hold larning guidelines for each and every button  
If any operation done successfully so recognition for that operation should be in the signifier of sound and besides through the interface screen.

## **Operational Requirements**

Multi tasking should be supported by interface such as when user want to fix formula and besides to listen to music at the same time  
All the operations should be through touch screen

## **Maintainability and portability Requirements**

System need to maintain path of all the merchandises and figure of points available decently  
If there is any conflictions with the user input and the

system memory so the interface should be in a province to get the better of it by efficient mathematical computation or through efficient functionality

## **Security Requirements**

Log in session should be provided for each user so that security penchants can be done for each user Merely Trusted web site should be opened for on-line minutess for purchasing any merchandise.

## **Performance Requirements**

Processor and built-in memory should be in such a manner that it should do the system more fast and dependable to user Even if the user making two or more operations at the same time system public presentation should n't acquire affected

## **Cultural and political Requirements**

All the information in the interface should non be in a province to oppose the cultural facets of the state Every word used in the interface should be of English

## **Undertaking ISSUES**

As the system can non do usage of keyboards or any distant controls to run it, disabled happen it hard to entree the interface How to get the better of? Particular characteristics need to be included in the interface to back up the handicapped in accessing them like voice acknowledgment system. As the electric refrigerator is kept in kitchen it is really likely to acquire affected by H2O so the interface demand to be like water-repellent As the system is confined to English it may be hard for people from other states who does n't

cognize English to entree them so interface need to supply the linguistic communications list from which peculiar linguistic communication can be selected

## **POSSIBLE EXTENSIONS**

System can be given proviso of utilizing wireless devices to entree themFacilities like repairing CCTV cameras inside electric refrigerator should be providedElectronic pen or other input devices can be made available for accessing the interfaceVoice Messaging can be made as an option in the interface.

## **Designs**

### **Narrative BOARDS**

#### **Checking the Calorie Of the Recipe and besides the merchandise Deadline**

Traveling near the interface

•

Imperativeness Michael as an log-in session

## **LOGIN**

1 ) Michael2 ) Guest

## **Main bill of fare**

Hi Michael, Choose the option1 ) Search for a formula2 ) Ingredients

Available

## Previous MainMenu

Choose the Recipe

a^|..

Onion Soup

a^|..

2 )

## Previous Main Menu

### Onion Soup

#### Method: Ingredients on this Recipe

Take a glass of H2O a^|a^|a^|a^|a^|a^| 1 ) a^|a^| .

... ..

... .. .

. . . . .

...

... .. .

. . .

. . . . .

... .. .

.. ...

...

. 2 ) a^|a^|a^|

a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|a^|

## Stocking up the electric refrigerator

### LOGIN

1 ) Sarah 2 ) Guest

### Main bill of fare

Hi Sarah, Choose the option 1 ) Search for a formula 2 ) Ingredients Available 3

) a^|a^|a^|

### Previous Main Menu

List Of Ingredients

a^|..

a^|..

Egg

### Previous Main Menu

No Of Egg left - 10 Termination Date - 22/ 01/11 Calorie -Purchase it? Scan and Add this Item Previous Main Menu Online Shopping? Print this Item For Shopping Egg Am traveling to scan it I heard the sound of recognition



## **Prototype**

**To exemplify that the demands that I mentioned supra have been used in the system, I will supply some of the screen shootings below**

Log-in Screen

### **Log in as**

User 1 User 2 Guest Main-Menu Screen

### **Welcome User1**

Choose the option you want Search for a formula Ingredients Available Make a call Browse through cyberspace Watch Television and listen to music

### **Previous Main Menu Help**

Main Menu i? Search for a Recipe i? List of Recipe i? Onion Soup

### **Onion Soup**

#### **Method: Ingredients Available:**

Take a glass of H2O a^|a^|a^|.. Favourite Recipe

**Istockphoto. com**

**Hrimtraining. org**

**Pbx-phone. net**

**Eyeonspain. com**