

“VIRTUAL MATCHMAKING GATEWAY”

PROJECT BACKGROUND AND RATIONALES

The exploding popularity of the Internet makes it a great tool for meeting people especially singles. Web-based matchmaking service provides an easy-to-use and inexpensive environment that lets you communicate while maintaining your anonymity for as long as you choose. By exchanging e-mail, you can converse with many people and increase your chances of finding the right match, where it's easy to weed out those people with whom you feel incompatible or uncomfortable. And you get to know people who seem promising before meeting them in person.

Due to the convenience of virtual communication and online socializing, online dating has been growing steady fast over the years. In fact, international online dating memberships show that online dating grows 20 percent yearly. Statistics shows that in the United States alone, nearly 40 million Americans are currently subscribed to at least one online dating service. Surveys also show that over \$300 million is spent annually for online dating and with over 800 online dating sites in the Internet today, this figure is expected to grow double in the coming years.

Well, seeing the right person is just a webcam away with virtual dating. This revolutionary technique involves going online at a singles website, logging in, and using a special password to get in your wannabe special friends webcam. There the two of you can talk, share laughter, and best of all-see each other before you decide to take it to the next level and go out on a date.

This project is to introduce 'avatar' that represents human communication, avatars are virtual characters that can be used to represent a personality of a particular person. For example avatars can be modified such as different hair, eyes, body type and even clothes. Each one of the personalized avatars is unique and bizarre. Avatars can express emotion through facial expression and body posture.

The internet wins again in the cutting edge dating arena with this online dating service, and you only have to sign up and log on to find Mr. or Ms. Right. The free online dating sites also allow you to set up a more intimate date at your leisure. Online personals and internet dating leave you wanting to see what the other person looks like, but how to do it without committing to a date? Virtual dating lets you talk and see each other as much as the two of you would like before actually going out.

1.1 Project Objectives

Every project has its own specification and requirements, Project objectives exist as a guide so that all projects are delivered according to customers specifications. In Malaysia, virtual matchmaking using avatar as their second life is not being utilized to the fullest, a small number of online chatting actually implemented Avatar. Examples are Yahoo.com. By implementing Virtual Matchmaking Gateway, users can get animated; can express moods while dating online. With the introduction of the avatar everyday living could be more stylish, like trying on a cool pair of jeans or a different hairstyle is easy and fun to get a new look every day.

With the introduction of the avatar in the virtual space, online users would be able to do a number of things from the comfort of their living room. The system will be linked to various retailers to provide extra services to its customers. The entire house owners would need to do is to surf the automation system and select which service he or she wants to use. However all of this service would need to be integrated with various retailers first before it can be used. If retailers would not want to participate, construction companies could also implement the system by setting up a concierge booth where it will process all house owner needs and requirements.

Project objectives exist to guide the project management. The project objectives are outlined as follows:

- **To improve the performance of the current system**

In present matchmaking system was having an existing system, which ran on a database management system. This system was not effective enough to keep pace with the rapid growth of the users nowadays. The customer's data are not well-organized. Thus, this project aims to improve security of the customer's information.

- **To introduce ‘Avatar’**

Today’s customers are the generation ‘C’ who wants to control information, they customize it. They want to be in control of the environment, the better way for them is ‘Avatar marketing’ which range from simple but personalized characters created by the users.

- **Provide advantages both for website owners and web developers.**

It's an easy to use functional Matchmaking Gateway that lets administer your own business in the field of local matchmaking and international acquaintanceship for website owners. Compelling addition to your service offerings which can easily re-brand, customize and add a personal touch to your matchmaking site including colors, logo, images and layout.

- **Provide full control of customer’s privacy**

Confidential Service does not release customer’s information or photographs to anyone without permission. Full controls of profiles’ data of customers are available from the administration panel.

- **To provide instant and useful information**

This will help to keep the company to be updated in obtaining important and immediate data such as management reports. Reports such as sales and revenue generation can be viewed or printed. Apart from that, even the tour guides will be alerted on the company’s promotions that can be informed every time its carried out and customer pick ups that will create customer satisfaction

1.2 Project Deliverables

Project deliverables are task that must be delivered according to the plan and time which are stated in the Gantt chart. Project deliverables usually start from the first task that must be done till the end of the projects. Project deliverables for the human resource management system are as below:

□ **Project Identification and Selection (23/02/07 – 16/03/07)**

Get supervisor approval upon the request of supervisory. Research and analyze project title and portray the idea to supervisor to determine the feasibility of the project title. Discuss on the project details and the scope of the project. Seek for approval through the submission of project proposal form (PPF).

PPF is a proposal form that must be submitted to the advisor by student. The PPF have information such as title of the system, its objective and also it functions. Supervisor will then approve the proposal form.

□ **Project Initiation and Planning (18/03/07 – 28/03/07)**

Initiate project and plan on project management through Gantt chart, work breakdown and structure and table of contents. Primary research was conducted through the first interview and initial study was done through secondary sources, such as Internet, journals and books. Proceed to project specification proposal Project Specification Form (PSF) preparation.

Once the PPF is approved, the next deliverables will be the PSF which is the project specification form. PSF is a detailed explanation regarding the selected system. Research must be done in order to complete the PSF as the final project must have all the details which is written in the PSF. PSF includes research on project background, objective, resources, business tools and methodology.

□ **Planning Phase (Research) (16/03/07 – 22/06/07)**

Secondary and academic research was going on. Survey was conducted through questionnaires, and tabulation and analysis was done. Perform business analysis and current system analysis. Secondary and academic research was a going-on process in the project timeline. Project plan is done in order to be able to track the progress of the project and to determine whether it is done according to the time frame planned earlier.

□ **System analysis and design (07/06/07 – 04/07/07)**

System detail specifications, context diagram, DFDs, and first draft system screenshots were drawn out. Collection on hardware and software costs and feasibility study was conducted. Undergo midpoint interview.

□ **System implementation (05/07/07 – 09/09/07)**

The second draft user interface was prepared and coded based on use requirements. Database was developed. Learn the programming language, Microsoft Access and Visual Basic and do the networking plan. Implementation occurs when coding of the system and its database are executed. The codes are written in order to make the system fully functional.

□ **System testing (10/09/07 – 15/09/07)**

Prototype was tested in order to ensure that the system is functioning flawlessly and any faults were corrected. User manual was documented.

❑ **System evaluation (16/09/07 – 22/09/07)**

System training, installation and maintenance were planned and documented.

❑ **Project documentation (23/09/07 – 05/10/07)**

In each phase the analysis and the results were being documented. In this phase, they were being edited and compiled, printed and bound. All the soft copies, including system prototype were burnt into CD.

❑ **Submission of project (17/10/07)**

Project soft copy was submitted.

1.4 Project Methodology

System Development Methodology

1.4.1 System Development Life Cycle (SDLC)

Every project has to follow a methodology so that project are run and conducted smoothly and according to all specifications. In the Final Year Project I will be using the SDLC methodology and the steps are:

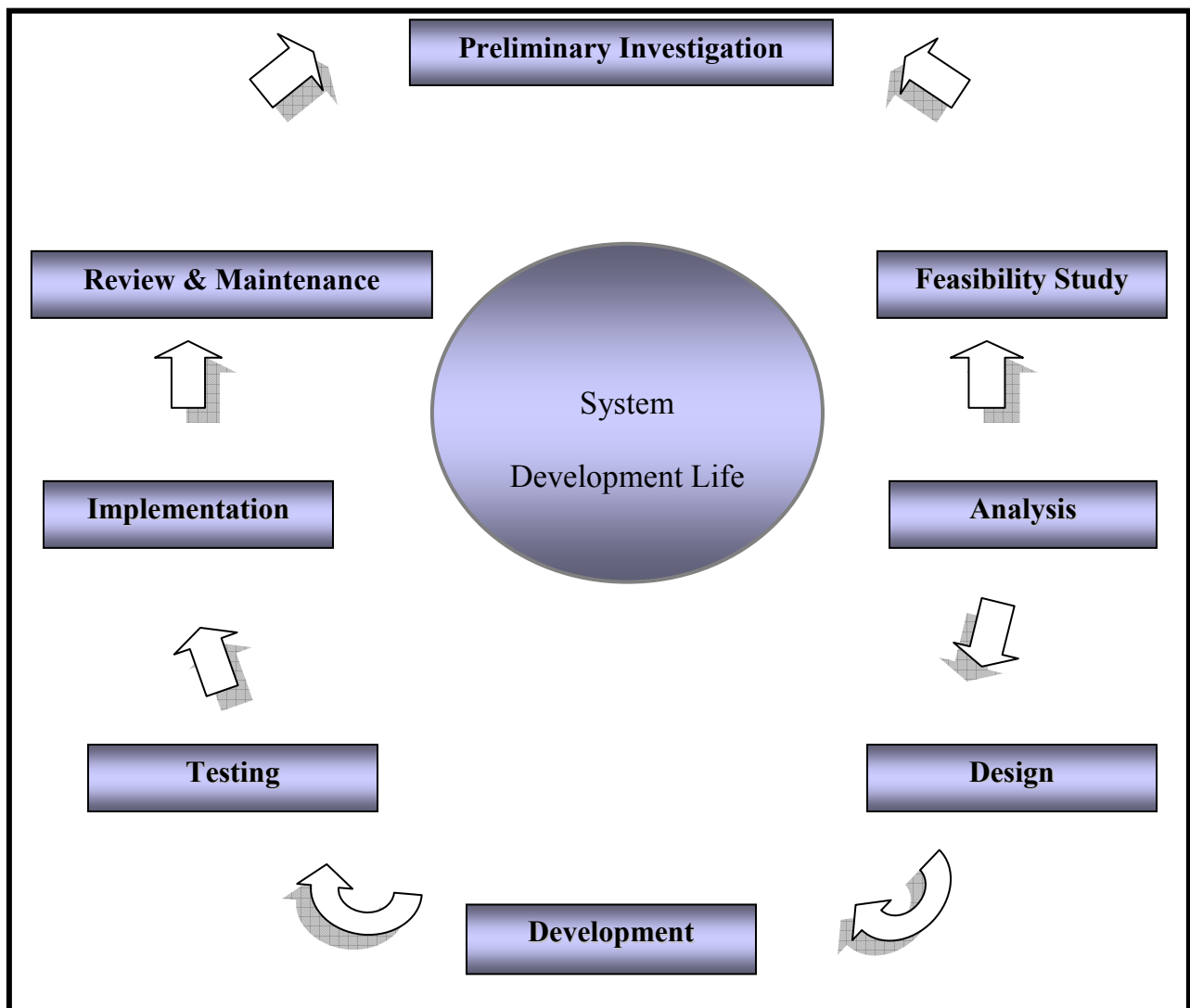


Figure 1: SDLC Model

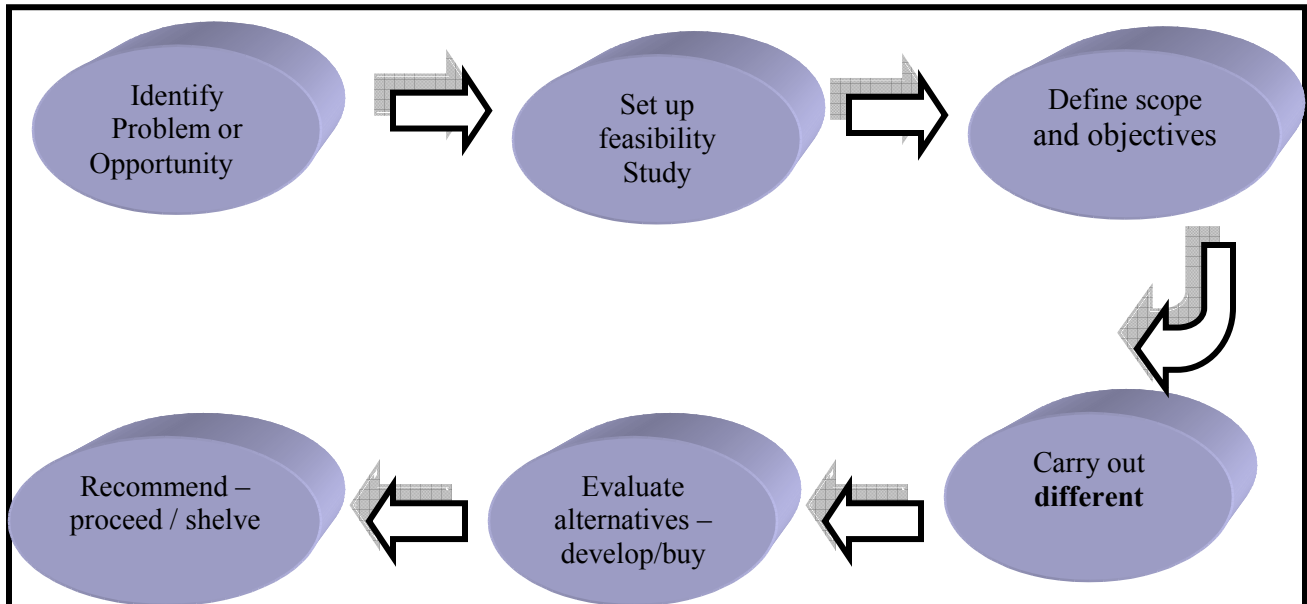
The system development life cycle (SDLC) is a planned set of activities that serves as a guide through the development of a system stage-by-stage. It provides the framework in which the various activities that must be carried out in developing the proposed Virtual Matchmaking Gateway.

The SDLC can be categorized into seven categories which are, Preliminary Investigation Feasibility Study, Analysis, Design, Development, Testing, Implementation and Review and Maintenance. These stages are executed at the same time or in sequence basis after each phase. The time taken for each stage differs from one system to the other. This is because it depends on the complexity of the system which is being developed. For Match.com to come up with an accurate and defined virtual based portal within the specific time period, it is essential to refer and follow each phase of the development cycle.

1.4.1.1 Preliminary Investigation Stage

A preliminary investigation is important to identify Match.com's current business operation processes as well as its problems. Following from that, users' requirements can be identified and the scope and purpose of the proposed system are determined.

1.4.1.2 Feasibility Study Stage



Feasibility study evaluates of the importance and worthiness of developing the proposed system for the organization. The feasibility study can be categorized into operational feasibility, schedule feasibility, technical feasibility and economic feasibility. The operational feasibility concerns about how well the requirements of the system are met through the proposed system. The schedule feasibility is a measure of the time being taken for the completion of the project and essential to be aware of the project deadline. Technical feasibility evaluates the hardware, software, and people required for the project to be executed.

1.4.1.3 Analysis Stage

At this stage, detailed analysis are carried out to have a thorough understanding of the existing system's current business operations, problems and limitations of the current operations and suggest ways that can be used to overcome these problems. Moreover, users requirements for the proposed system are analyzed and alternative solution are recommended to the proposed system

1.4.1.4 Design Stage

The design phase includes interface and database design of the system being developed after understanding the users' requirements. The design phase also includes very fundamental components such as the context diagram, data flow diagrams and data dictionary.

1.4.1.5 Development Stage

The development stage encompasses of creating the prototype system using Macromedia Flash FX, *Swish* and Microsoft Access as the designing tools. Furthermore, in this stage context diagram, data flow diagrams and data dictionary will also be included.

1.4.1.6 Testing stage

Testing is essential to enhancing the proposed system better and able to reduce the resistance among the employees to use the proposed system.

1.4.1.7 Implementation Stage

In the Implementation stage the proposed system is constructed to meet user requirements.

1.4.1.8 Review and Maintenance Stage

The review and maintenance stage refers to providing support as well as continuous assistance to users after implementation as their needs change eventually. Here, errors are identified, systems performance are monitored and future enhancement on the proposed system are carried out due to the changing needs of the system users and business setting

COMPANY BACKGROUND

2.1 Company Background

Match.com is the leading online dating company with the most recognized brand in the industry today. Launched in 1995, Match.com helped pioneer the online personals category and has set the standard for innovative technology, a community of quality people, and a positive and secure member experience. Match.com touches peoples lives, and often in a profound and meaningful way. Just last year, more than 400,000 members told us they found the person they were seeking on the site.

Electric Classifieds Inc., branded as Match.com, was founded in the Manchester around 1995 by Sir Rowan Atkinson IX. Match.com is a leading online dating website that has been operating for past 10 years. Match.com's initial strategy since its beginning has been to partner with the most respected internet portals and develop a network of affiliates. Many of its partnerships began in the mid to late 1990's including portals such as AOL, Excite, MSN, Netscape, and Yahoo!

The company has identified that the introduction of avatar in new matchmaking matrimonial could be the key towards the future. Match.com is looking forward in working with top online virtual company to develop Virtual Matchmaking Gateway in their future implementation. With the introduction of this new service, will be higher demand with Virtual Matchmaking Gateway will be in the rise and everybody would want to experience in this virtual world.

In 2001, Match.com featured roughly 1.8 million registered members. More astonishing was that its registrations were growing by 300,000 per month! By December 2002, there were more than 5.7 million members and 653,000 paying subscribers. Continuing into December 2004, it was reported that there were over 15 million registered members and roughly 1 million paying subscribers. The most recent information on registrations states that there are roughly 60,000 new registrations each day and that Match.com is the leading site in terms of registered members worldwide

. With these changes Match.com can improve the quality of their database, convert more registered members into revenue generating subscribers, instill a sense of community with a lessened intimidation factor and a higher level of interaction, and finally reach their users through a new medium that will increase member activity at the site. With these improvements, Match.com's position will strengthen in the industry as the most robust provider of online dating services.

2.2 Company Location

Match.com headquarters is located on the Suite 795, Andover House, George Yard, and High Street, Andover SP10 1PB, United Kingdom.

2.3 Company Mindset

Mission Statement:

“At Match.com our mission is to help people get into successful, emotionally rewarding relationships. But that can’t happen unless there’s another relationship, another connection, that’s built on trust, openness and mutual respect.”

RESEARCH METHODOLOGY

3.1 Research & Investigation

Research Methods

Data or information can be gathered or collected in a variety of ways, in different setting and from different sources. Data collection methods include interviews, questionnaires, observations and many more.

Information needs to be gathered and analyze so it could be use in order to complete the Final Year Project. It is important that research is properly made to ensure all information gathered is accurate. The accuracy of the information is important because it will lead to an effective production of the system for the usage of the end user. For the purposed of gathering information, the methods used are as follow:

- Primary researches
- Secondary researches
- Academic researches

3.2 Primary Research

Primary research is an info or data gathering process where opinion, data or information from individuals, focus groups and experts (in related field) are sought after to help to identify issues related to the project.

Observations

Where as interviews and questionnaires provides responses from participants on the project, it is possible to gather data or information without asking questions from respondents. People or businesses can be observed in their natural work environment and information gathered could be useful to help complete the project.

Apart from the activities or job scope performed by individuals or employees under observation, their movements, work habits, meetings conducted, facial and emotional expression of joy or anger, body language can be observed this information could be an indicator of the issues and problems the employees are facing. This information will then be used to develop a new system.

Questionnaires

According to Grinnell (1990), Questionnaires can be defined as a prepared set of questions designed to generate data necessary for accomplishing the objectives of the research project. Questionnaire can be divided into two types of question which is open ended questions and closed-ended question. Open-ended questions are questions that give the individual an area to comment and provide remarks whereas a close-ended question only gives the individual a certain amount of selection to answer.

Informal Discussion

Discussion were conducted between classmates, supervisors, lectures and other relevant individual to ensure the understanding, requirements and the feasibility of the new proposed system and also to identify all other related issues in this project. Discussions were made between relevant employees of related industry and also advice and opinions of experts are also sought after.

3.3 Secondary Research

Information such as the background details of the company can be obtained through available published records, the internet, companies archive, and other sources. Other types of written information such as company policies, procedures and rules could be obtained from the organizations records and documents. Secondary data could be defined as data that already exist and do not have to be collected again by the researcher.

Secondary data is used to support the primary research. The secondary research was done through media like Internet websites, journals, company's annual report, industry publications, books, digital library, pamphlets and brochures of company.

The followings are the secondary research methodology that has been used:

Internet

The World Wide Web or the Internet is a useful tool a researcher could use in order to gather secondary data or information. The internet provides almost all type of information a researcher would need in order to complete the project. Expert website and use groups could provide beneficial information that could determine the success and failure of the project.

Books and Journal

Although the internet could answer almost all sort of questions, however when it involves academic research purposes not all information could be used. Books and journals is still the preferred choice during information digging or gathering process. This journal or books are usually written by academic expert and the information provided is usually accurate compared to information gathered from the Internet. Research topic includes:

3.4 Academic Research

Literature review

While doing my academic research, some guidelines have been identified and will be used to design the online matchmaking with avatar implementation. I also found out various ways or methods to collect important and knowledgeable information.

Macromedia Flash

Macromedia Flash MX, Swish and MS FrontPage would help in capturing all the required functionalities of the prototype system

Microsoft Access

Microsoft Access 2000 is a fully featured database management system (DBMS) that functions in the Windows environment and lets the user to create and process data in a database. It is used as one of the development tool for Virtual Matchmaking Gateway. Access allows data to be stored, edited, deleted and manipulated some of its main features are:

Data entry and update

- Access provides easy mechanism for adding data, changing data, deleting data, including the ability to make mass changes in a single operation.

SQL Queries

- Using Access, it is easy to ask common questions concerning the data in the database and obtain instant answers.

Web Enable

- Access allows the user to save objects (tables) in HTML format so that they can be viewed using browser. It also allows creating data access pages to allow real-time access to data in the database via the Internet.

ANALYSIS ON CURRENT SYSTEM

ANALYSIS ON BUSINESS ENVIRONMENT

Environmental Analysis

In order to complete a project and meeting end users requirement, research, analysis and planning is an important tool that needs to be used to identify all issues or variables that will contribute to the success of the system to the user and organization. With proper planning, all issues could be address and justified thus resulting in confidence by customers.

Business environment analysis is a tool that facilitates a company's understanding of its position relative to other companies that produce similar products or services. Industry analysis enables business owners to identify the threats and opportunities facing their businesses. Besides identifying on all the requirements, business analysis is also important to identify the companies standing against its competitors and through this new business process or strategy would be created in order to maximise revenue for the company and all redundant or business processes that has been identifies as obsolete will be eliminated.

Business Analysis

SWOT Analysis

SWOT analysis, provides a good overview of whether a firm's business position is fundamentally healthy or unhealthy. SWOT analysis is grounded in the basic principle that strategy-making efforts must aim at producing a good fit between a company's resource capability and its external situation (Thompson and Strictland, 1998, pp.105). A clear view of a company's resource capabilities and deficiencies, its market opportunities, and the external threats to the company's future well-being is essential. Otherwise, the task of conceiving a strategy becomes a chancy proposition indeed.

A broader assessment needs to be made of Match.com competitive position and competitive strength and this tool would be used to analyze the internal and external factors of the company. The strength, weakness, opportunities and threats of Match.com could be illustrated as follow:

Internal

Strength

- They have good relationship with the potential customer.
- They provide good packages on their service and offer good price.
- Company's has experience for past 10 years in the industry.
- Company's has experience for past 10 years in the industry.

Weaknesses

- There even other online dating agencies that provide the customization of avatar per individual.
- The company's is not the only company that is doing virtual dating.

External

Opportunities

- To be one of the leading company that provides matrimonial services.
- To venture into any new market that are available.
- To seek if there is any opportunities to do any strategic alliances with the competitors.

Threats

- They have a lot of agencies that offers the same services.
- They might be facing with service wars against the competitors.

Michael Porter's Five Forces Analysis

The Porter's Competitive Model, shown in **Figure 2** has formed part of the Industry and Competitive Analysis (ICA) in Virtual Matchmaking environmental analysis. It is used to understand and evaluate the structure of an industry's business environment and the threats of competition to a specific company. A benefit of its use is that it helps to avoid viewings a company's competitive environment too narrowly. The use of the model duplicates the same logic that an engineer would follow. It breaks an industry into logical parts, analyzes each part and puts the parts back together within the industry's structure (Callon, 1996, pp.37).

The Porter's Five Forces Analysis is used to understand and evaluate the structure of an industry's business environment and the threats of competition to a specific company. Porter suggests that competition in an industry is based on five forces: Intra-industry rivalry, bargaining power of suppliers, bargaining power of buyers, threat of new entrants, and the threat of substitute products or services.

a) Threat of new entrants

Online dating agencies also have to provide service differentiation compared to other online dating such as background-check feature and increase trend towards customization of their avatars, where a number of users may prefer personalized version of avatar. Existing organizations in the industry usually have the advantage over possessing better technology know-how's that discourage potential entrants from the industry. Since Match.com has been in the industry for almost 10 years now, therefore it understands the industry's requirement well through experience.

For this industry, it is easy to gain access to distribution channels. In this case, the distribution channels would be the online matchmaking itself. Match.com is accessible online and convenient for their potential customers get accessed. Therefore, other

competitors can easily access the distribution channel by merely setting up exact online dating service.

In this industry, not all customers would remain loyal or have preference towards a matchmaking portal. Customers could easily switch to another matchmaking that has a virtual touch in it if that particular online matchmaking meets more of their needs and desire of the potential customers. Therefore, if Match.com's competitors offer better service to them, there is possibility that their customers would switch to the competitors. Therefore, it is essential for Match.com to create a unique service where they offer the best service that is preferred by customers to overcome this problem. Thus, it can be concluded that the threat of entrant is moderate from the above mentioned factors.

b) Bargaining power of suppliers

Rather than focusing on the sheer size of their registered member database as being their competitive advantage and core marketing message, Match.com should place greater emphasis on registered members who are actually active. The bargaining power of suppliers is high in this industry. This is because Yahoo.com and eHarmony.com are the suppliers who provide database of customers to Match.com for them to send emails to users who are not aware of Match.com and their service offerings. With only few regular dating and virtual dating being their suppliers, matchmaking agencies such as Match.com are dependent on their services. This will enable Match.com to have more customers to register and become members and increases number of customers.

c) Bargaining power of customers

Customers of online matrimonial are the person who gets accessed into distribution channel for leisure time or looking for dating partner. The bargaining power of these customers is high because customers have various choices in order for them to choose the available virtual matchmaking and other virtual online chatting that provides them quality services before making customers make decision to proceed with the matchmaking agencies.

According to Johnson, Scholes (1999), the power of buyers will be further increased if the industry consists of a large number of small operators. In this case, the large number of small operators would be the small sized matchmaking agencies. Apart from choosing competitors, these customers may choose to go out with friends or other substitutes. In such cases, their power remains high as their costs of switching to competing brands or substitutes are relatively low. However, the supply of services would depend on its location and the bargaining power of a customer may differ accordingly. In this case, the bargaining power of customers for virtual matchmaking would be higher compared to regular online matchmaking.

d) Threat of substitutes

Recognizing substitutes concerns about looking for products that can perform the same function as the product of the industry. People generally choose use technologies such as Internet chat and web cams to have an online conversation with the other person through personalized avatars for personal activities or leisure purpose. In this case, the threat of substitutes may be considered in threat of a substitute to online dating and secondly, the threat of a substitute for matchmaking companies.

As for the threat of substitute to online matchmaking or dating, there are many activities and types of dating available to people contemplating matchmaking. These substitute products and services are one type of competition. Yahoo Personals and Match Mobile are just a few. Other substitutes include self-planned and traditional method of dating with opposite sex. In addition, customers sometimes feel that they do not have to go through a matchmaking agency to find the perfect match. Instead, they may choose to meet their match themselves or some may believe on first sight love.

e) Competitive Rivalry

This force analyses the level of competition within an industry. The rivalry in the virtual industry continues to intensify as the number of competitors increases; direct or indirect forms. The indirect competition consist of established market leader such as

Friendster.com the leading social networking site and Yahoo Personals with great ability such as distribution channels expansion around the country and large investment in promotion stimulating to their market status. These major socialize agencies are able to offer better product varieties and more distribution channels such as dating services to penetrate into market aggressively.

How the proposed system may affect the 5 forces

a) Threat of new entrants

Co-operation on IS within a sector or industry in infrastructure components such as networking could be used by a set of existing co-operating organizations to "raise the drawbridge" against new entrants to the sector (Daniels, 1998). With that being said, the proposed system could decrease the threat of new entrants in the virtual dating industry. This is because in order to compete, new entrants must have similar system that links them to their suppliers. Moreover, they are required to have similar systems with experienced and qualified matchmaking agents to provide acceptable service for customers. New entrants have to spend more money to invest on the IT infrastructure. By increasing the capital cost of entry, it will restrict new entrants by raising the barriers of entry. (Earl, 1989)

Also, there is now an extended access to distribution channel since the Internet is used to deliver customer service and attract prospective customers towards virtual world. The proposed system will create new opportunities to customers with convenience as they have 24/7 access. If the service given is effective, it would increase customers' satisfactions and this could lead to customers' loyalty. Customers may want to stick with them because they can achieve their dating goals and accessible all the time for them. Moreover, its existence and branding on the Internet could also lead to brand loyalty. Therefore, the end result would be better retention of customers. This would make competition much difficult for new entrants, which cause them hard time coming in.

b) Bargaining Power of Suppliers

Since the suppliers such as customer information, dependent on a big matchmaking agency such as Match.com, the virtual proposed system could help to reduce the bargaining power of suppliers by allowing easier and instant communication relationship with these suppliers to get hold of more customers. Therefore, there is better data flow between the company and their suppliers in order to provide fast customer response and manage supply and demand effectively with the information obtained.

c) Bargaining Power of Buyers

According to Johnson and Scholes (1999), power of buyers will increase if there are alternative sources of supply or little differentiation between the suppliers. Hence, the bargaining power of buyers can be further reduced by differentiating Match.com from dating agencies using IT. The proposed system enables Match.com to be offer an integrated service with just few clicks of the mouse and saving their time with the knowledge that they have to guide customers in their virtual world. Technology does give the industry a chance to improve the quality of the service it offers (Baine, 1998).

Gathering customers' information that provides a way to analyze their behavior, needs and wants can be a weapon to decrease the power of buyers (Earl, J., 1989). The proposed system has the weapon to follow customers' preferences and interests. Therefore, this could help decrease the buyer's bargaining power by studying their behavior. The resulting solution provided by the proposed system improves Match.com's interactions with its customers, enabling them to operate more efficiently and providing better value for the customer.

d) Threat of Substitutes

Earl (1989) mentioned that IT is the innovation source to create new products or add value to current products and services, which would help differentiate a product or services from its rivals. The proposed system adds value to services by providing instant reply to customers regarding their matchmaking according to their needs.

The Internet creates new substitution threats by enabling new approaches to meeting customer needs and performing business functions (Shin, 2001). This system will help the organization to respond more effectively to their customer needs, maintaining a good relationship with them for business profitability. Thus, customers would become more aware of the services offered by Match.com and promotions offered can be targeted at specific customers such as loyal customers to keep coming back to the company.

e) Competitive Rivalry

The level of competition could be decreased in which, with the use of IT, it will enable Match.com to have collaboration to give greater added value to an organization (Johnson, Scholes, 1999). The proposed virtual system enables Match.com to collaborate with other dating agencies to get instant information of customers and service availability that will give customers an integrated service rather than just finding a perfect match. This particular collaboration with its suppliers through IT will provide them with loads of information to meet customer needs faster than its competitors and a high quality of service.

Shin also mentioned that the Internet changes the basis of competition by radically altering product/service offerings and the cost structure of firms (e.g., cost reductions in production, distribution, and transaction). Through the proposed system, Match.com can create service bundling such as hotels, tour guides and ticket booking which most small matchmaking agencies lack in and lower their costs of carrying out their transactions with suppliers such as reduced communication cost.

McFarland Strategic IS/IT Grid

This business model provides fundamental understanding of the use of Information Technology within the organization and at the same time to measure the comparison between the use of IT in the current and proposed system. This model suggests how IT can either enhance or limit the five competitive forces in the organization.

Value Chain analysis

This analytical tool encompasses the entire activities that work within the organization that is divided into technologically and economically distinct activities. The value chain engages nine fundamental activities which consist of the primary activities; *Inbound Logistics, Operations, Outbound Logistics, marketing and Sales Service*. On the other hand, there are also Support activities comprising of Firm Infrastructure, Human Resource Management, Technology Development and Procurement.

These activities are essential and add value to processes for which customers are willing to pay when they purchase the final output. The value chain analysis will assist in identifying the relevant activities of the matchmaking portal that create value and cost for its business. It will also provide an understanding of how employees can help the company to achieve its mission and objectives.

Pareto and Fishbone diagram

The Pareto analysis is useful in identifying the main causes of observed outcomes. This technique often shows that approximately 80 percent of the value of one variable (in this instance, the number of service failures) is accounted for by only 20 percent of the casual variables. This phenomenon is often referred to as the 80/20 rule (Lovelock and Wright, 1999, pp.97).

The Fishbone diagram (cause-and-effect diagram) is important to recognize, of course, that failures are often sequential, with one problem leading to another in different category (Lovelock and Wright, 1999, pp.96). To produce a fishbone diagram, groups of

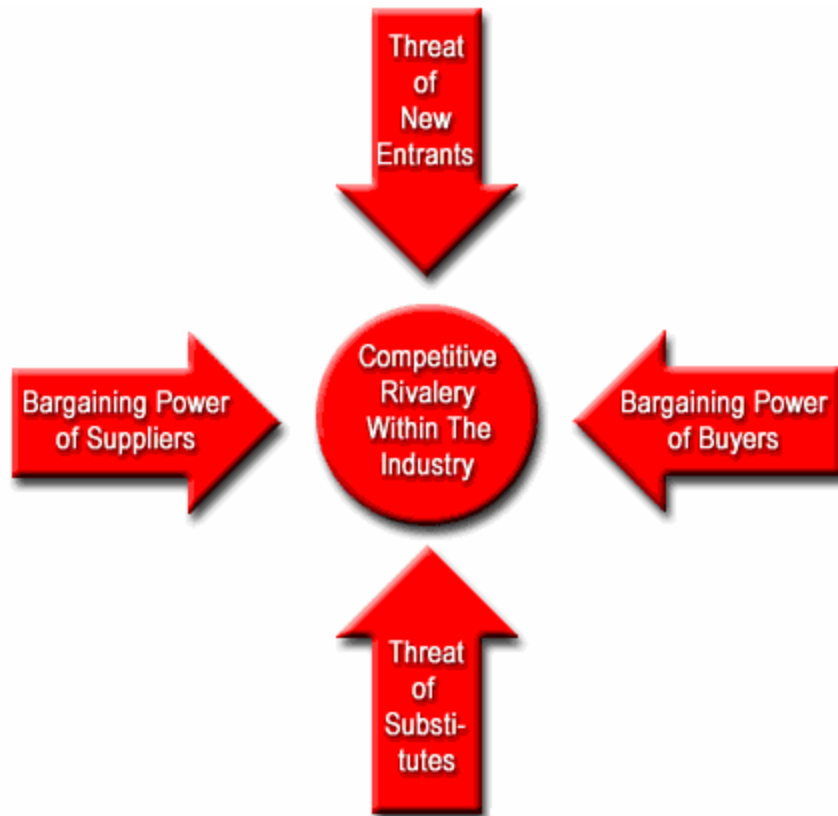
managers and employees brainstorm factors that might be causing a specific problem. The resulting factors are then categorized into one of five grouping: equipment, people, materials, procedures and other.

Human Computer Interaction

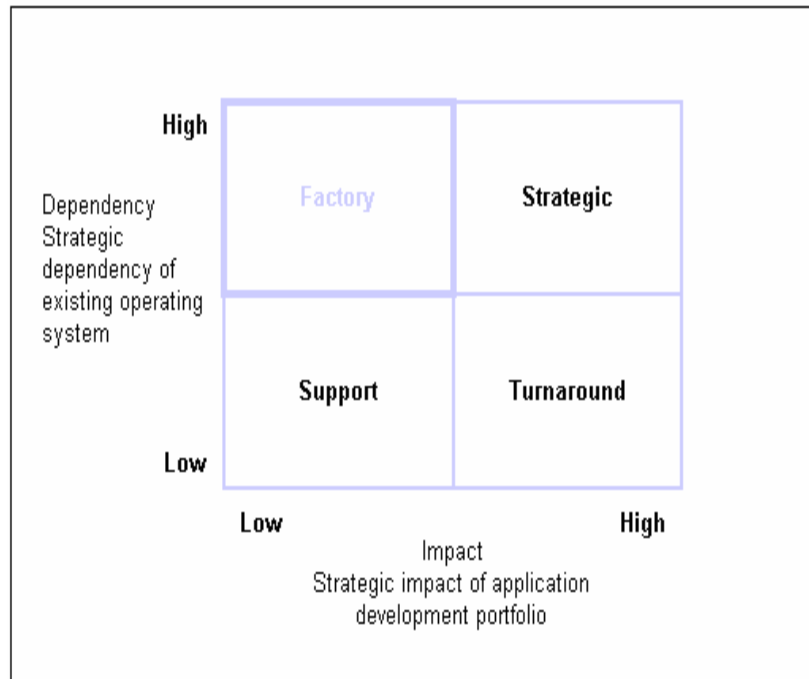
Human-Computer Interaction (HCI) concerns with the design, evaluation, and implementation of computing interactivity between human and computer. The goal of HCI is to improve in the area of safety, utility/functionality, effectiveness, efficiency, usability, and simplicity. In this project, HCI is mostly used in the design stage of systems development life cycle. Three general principles must be applied to the design of an interactive system. They are:

- Learnability is where new users can begin using the system interactivity and achieve maximal performance without any hassle or problems.
- Flexibility is the multiplicity of ways the user and system exchange information.
- Robustness is the level of support provided to the user in determining successful achievement and assessment of goals.

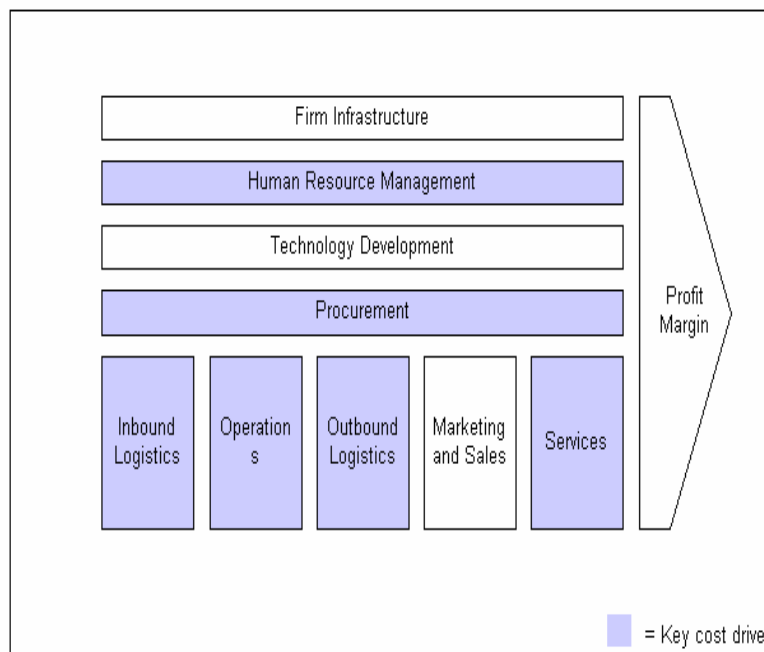
Figure 2: Porter's Five Forces, Pareto Chart, Value Chain Analysis, McFarland Strategic Grid, and Cause-and-effect Diagram.



Porter's Five Forces

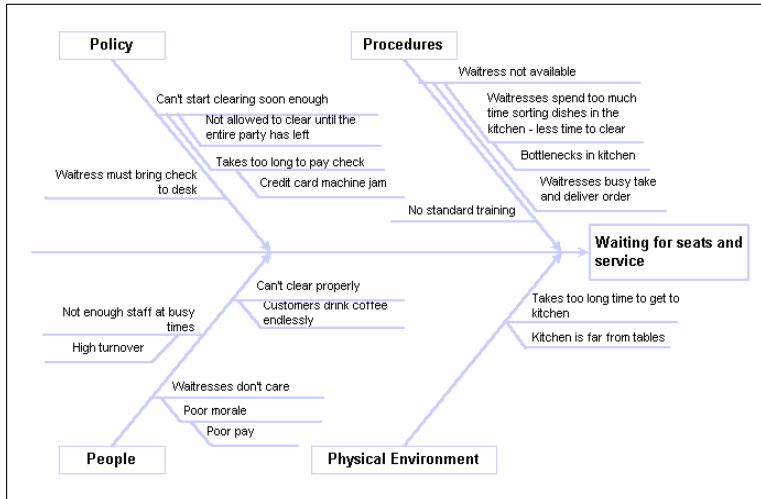


McFarland Strategic Grid



Value Chain Analysis

Cause-and-Effect Diagram Describing Why Tables are Not Cleared Quickly



Cause-and-effect Diagram



QUESTIONNAIRES

Research objectives

Here you have the chance to give us your opinion about Match.com. The development department is continuously working on improving the service, which means that all feedback is highly appreciated.

1. Age

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-84
- 85 and over

2. Gender

- Male
- Female

3. Occupation

- Executive, senior management
- Business, commerce, finance
- Education, training
- Engineering and technology
- Retail, hospitality, tourism
- Sports, leisure, and recreation
- Self-employed, owner
- Professional (medical, legal, etc)
- Government, community services
- Homemaker, retired, unemployed
- Student
- Other

4. Your highest level of education completed is (please check one):

- Primary
- High school
- College
- University

5. Are you a new user for this online matchmaking?

- Yes
- No

6. When did you first use the matchmaking website?

- Today
- Last week
- 2-4 Weeks
- More than 4 weeks

7. How often do you visit this matchmaking Web site?

- First visit
- Several times a week
- Several times a month
- Once a month
- Several times a year

8. How did you hear about Match.com?

- Portal/search engine
- Recommendation from a friend
- Magazine or publication
- Flyer
- Other (please specify):

9. Do you use any other personal ads services on the Internet?

- Yes
- No

10. Do you find Match.com a reliable matchmaking service?

- Very reliable
- Reliable
- Fairly reliable
- Unreliable
- Very unreliable

11. How satisfied were you with your overall visit to our site?

- Extremely Dissatisfied
- Very Dissatisfied
- Dissatisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

12. Do you think the avatar in the prototype system is attractive to the user?

- Extremely Attractive
- Very Attractive
- Attractive
- Not Attractive

Name: _____

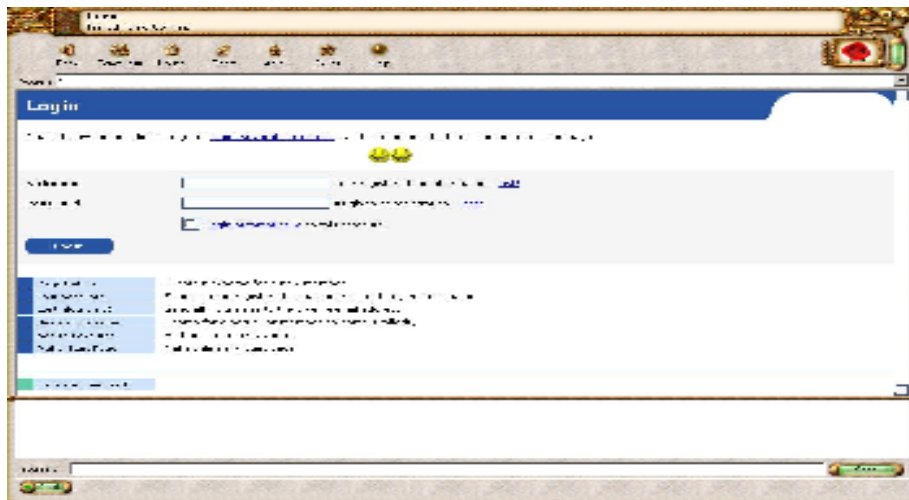
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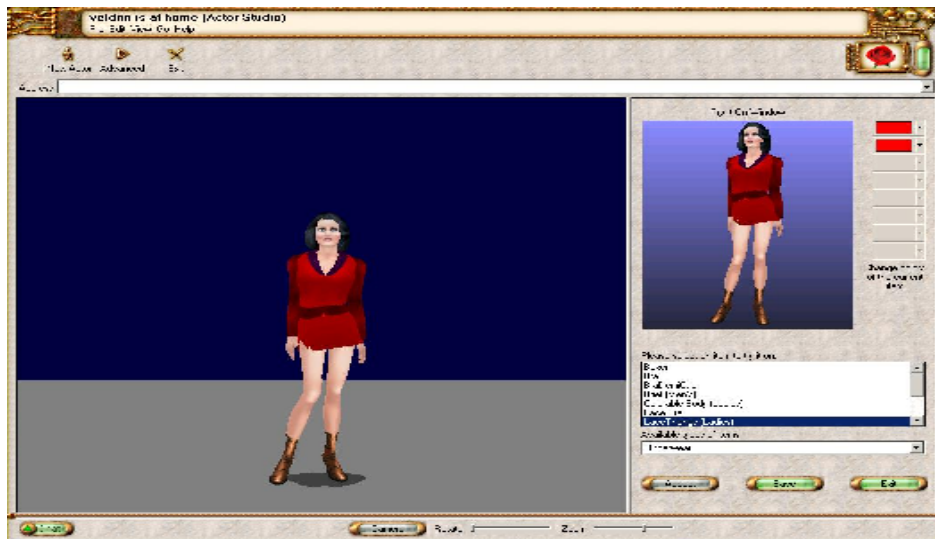
Signature: _____

Note: All information collected through this questionnaire will be strictly kept private and confidential. Thank you.

SCREEN SHOT



Login screen



User Design

