UNIVERSITY OF OSLO
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Pragmatic Web Techniques
for
Authentic Travel International

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Summary

The online web portals cater information needs of different viewers. For a commercial portal like International Portal, not only the users differ, not also the mode of technology and tools also differ according to the variance in usage of information. In order to design an authenticated portal, user centered design must be adopted to develop a prototype. So the current study tries to obtain the User centered design by learning the authentic features that a traveler wants to have on a travel portal. Then the study applies the pragmatic web tools to integrate such authentic functionality on the travel portal. So the Current study intends to learn the user experiences on the travel portals by conducting a quantitative research tool by implementing an email survey method on 200 participants and tries to inquire the authentic experiences of the travelers on the online websites. The study purposes to recommend a prototype for an authentic travel portal basing on the findings of the study and by applying the pragmatic web techniques.

The study after an extensive research of the literature and by conducting the qualitative and quantitative research, proposes a suitable prototype for the travel portal for UTEA. The study followed a step by step procedure to evaluate the prototype design using pragmatic web technologies. In the introductory chapter the study has given an overview and problem scenario of web technologies to derive design prototypes has discussed. The purpose of the study is identified as the need to find out a better web technology to achieve design authenticity: the scope of the study has outlined to study the various technologies, Technology adaptation models, etc; to organize the research plan. The research plan is further made constructively in the Task division section.

The study framed the research flow by identifying the certain topics like - authentic travel portal, pragmatics in context of web, need of the current research, existing web technologies- semantic, syntactic and pragmatic web, how technology is adopted by users (TAM approach) to cover the preliminary qualitative research

The study outlined the research strategy that describes about the suitability of the particular research methodology, instrumentation under consider, the population and the sample size demographics and the rationale of the research design etc.,

The study has conducted an extensive Qualitative literature review on various topics like pragmatic approach, information system for social communities, translucence nature as authenticity, design as communication, pragmatics, need for pragmatics and their challenges, pragmatics in context of web, difference between semantic, syntactic and pragmatic Web, principles, pierce pragmatism, theory of inquiry, language-action perspective (LAP), back channels as a linguistic communication, expectation of information communication on web, ambiguity in software development process, authenticity in the software design & development, models of business interaction, assessing business interaction models, business action theory (BAT), authentic activity and web technology, interdependency between semantic and pragmatic and the ontology model etc.,

The quantitative survey results were drawn with graphical representation of the major and related results. Then a pragmatic prototype model for the authentic travel site with a graphic representation and feature outline has been given with a proposed business model for travel portal. The study through a survey method finds that the business model involves four primary users – business, regular, student and travelling agents to interact with the portal for various

transactions. The major information needs that are identified on the portal for users are, information on freight booking and cancellations, car booking/ hotel booking agents/tour guide, research purpose and mountaineering etc., hence the primary tools that can be used with the portal are - web services under semantic level and the mobile services and GDSX at the pragmatic level to offer the user desired content.

The prototype offers e-commerce platform for order booking for internal and external customers and a CMS for franchisee and contact database management. A search engine is also proposed to offer an expensive search for the various levels of real time querying.

NB: All the codes can be found in www.authentictravel.org which you can see the whole system in live.

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Foreword

I would like to thank Dino Karabeg for his guidance through the problem that faced me. I appreciate his tips that have always put me on the right track!

I want to thank also to all who have been around me through my studies and supported me in the work I did at any time.

Chapter 1

Introduction

In order to run an enterprise efficiently, the system needs to deliver all the necessary information in right time, to the right person irrespective of the complexity of the underlying infrastructure. However, frequently, the information infrastructure is only treated as a drain entity, which only costs money and manpower. The key is, that if an information infrastructure is working, as it is designed, nobody will notice.

In the day of information propensity every activity claims the capability of the IT architecture. Travel industry is growing in a fast pace with the advantage given by online tools. Though the travel agencies and the freight interfaces proclaim that they provide the sufficient information to the users like travelers and the clients, most of the time the claims lack authenticity with the features they provide. Some portals offer all the information in the local language where a foreign traveler finds it difficult to understand and follow the direction. So as it is assumed by UTFA a social context can develop authenticity on the travel portal and makes it available to all types of users. In this context the current study tries to observe the details of the online travel industry and tries to develop a prototype using pragmatic approach.

Problem scenario

Though there are widely available guidelines for the semantic web technologies, there is little known about the pragmatic web technologies. So the study tries to explore the pragmatic concepts in context of web technologies and to apply them in designing a prototype o an authentic travel. So in this regard, it becomes necessary to define what

are the authentic features for a travel portal to design a prototype and hence can be a made in developing the research scope.

Purpose of the study

The architecture and design of web sites is an important step and there are techniques and methods evolving for a well-managed development program. The aim of such technology methods is to pursue a less complex, more robust and easy to use that brings much authenticity to the user- whether end user or the developer.

It has become necessary for the web presenters to communicate the most essential elements of their service or business to the viewer in a less complex and high accessible way. The importance and need for accuracy of information between the information producer and the information receiver is growing.

In order to retain a viewer or to have repeated professional clients to a website, the site must build a customer loyalty even through its information architecture and transparency.

So the current study aims to observe the design techniques that can bring out a prototype of an authentic travel portal using the pragmatic web technologies, assuming that pragmatic web technologies can maintain the transparency with the Information.

Scope of the study

The study intends to develop the prototype design of a travel portal and want to do it by keeping the following objectives:

- Study the overview of the Authentic concept
- Over view of pragmatic concepts

- How users adopt particular behaviours on Internet (TAM)

- How Design can be used as communication tool on Internet to meet such users

- What makes the difference of pragmatic web techniques and the other existing web techniques like semantic web?

- Models of business interaction

- Authentic functional features of a travel portal

- Analysing the needs of the user centered design for the travel portal using a survey instrumentation.

- Authentic travel portal in the context of user centered design

- Modelling a prototype design

Task Division/ Chapter summary

The outlines of the tasks of the research are as follows

Chapter1: This is an introductory that gives the scope and direction to the rest of the paper. The contents so f the chapter are - Introduction that gives an overview and problem scenario which states the problem that the research intends to find out, and the purpose of the study that tell why the study needs to be done, and the scope of the study that steers the further research and sets its priorities. And a Task division that describes the steps that are to be carried to get the answer to the research problem.

Chapter 2 This chapter gives background of the contents to frame the research flow of the question. The topics that are derived from preliminary research are the basic features of authentic travel portal, pragmatics in context of web, need of the current research, existing web technologies- semantic, syntactic and pragmatic web, how technology is adopted by users (TAM approach)

Chapter 3: This chapter will outline the research methodology it is adopting. The research steps and the instrumentation it will consider, the population and the sample size demographics and the rationale of the research design are covered in this section.

Chapter 4: This chapter performs the Qualitative literature review on various topics like pragmatic approach, information system for social communities, translucence nature as authenticity, design as communication, pragmatics, need for pragmatics and their challenges, pragmatics in context of web, difference between semantic, syntactic and pragmatic web, principles, pierce pragmatism, theory of inquiry, language-action perspective (LAP), back channels as a linguistic communication, expectation of information communication on web, ambiguity in software development process, authenticity in the software design & development, models of business interaction, assessing business interaction models, business action theory (BAT), authentic activity and web technology, interdependency between semantic and pragmatic and the ontology model etc.,

Chapter 5: This chapter contributes the quantitative survey results to the study and gives the description of the results under the graphical representation of the major and related results.

Chapter 6: This chapter proposes the pragmatic prototype model for the authentic travel site with a graphic representation and feature outline. Proposed Business Model for Travel Portal is given here.

Chapter 7: This chapter gives the conclusion part . The chapter ends with Appendix and references

Chapter 2

This chapter gives background of the contents to frame the research flow of the question. The topics that are derived from preliminary research are the basic features of authentic travel portal, pragmatics in context of web, need of the current research, existing web technologies- semantic, syntactic and pragmatic web, how technology is adopted by users (TAM approach)

What is Authenticity?

Authenticity in simple terms means reality. Or it can be said as a measure to assess the closeness of an item, action, property or custom to the exact context of what actually it is. Authenticity can also be understood as a genuine or devoid of corruptness. Authenticity refers to the truthfulness of origins, attributions, commitments, sincerity, devotion, and intentions.

What features make it Authentic Travel portal

Authenticated travel portal is a genuine portal in which all the features are according to the requirements and information accessing anticipations of the different types of web users. The people who don't know the area in which they are going to visit, for them the online booking and traveling guide to travel in that place along with the travel guide on the food, pricing and clothing to be taken can be a much anticipated value service.

Pragmatics in context of web

The study of pragmatics is driven by an interest in action rather than a theory. It shows how to manage and to evolve mutual understanding between each other and commitments. The understanding and meaning of everything that is discussed in the conversation between both the parties is noted down as contextual. The context which was prepared is very important, if the contexts change, meanings can also change in conversations, documents, and models of the world. So the context should be managed thoroughly in face to face conversation which is written in the form of context called SRS, while working on the web over space and time, attention must be paid such that tools must still support adaptation to new components. The focus on pragmatics gives knowledge on the performance of communicative actions through web media.

Importance of current research

The aim of the current research is to develop a prototype on a travel portal, using the pragmatic web techniques that facilitate the communication and collaboration to a great extent between the social groups. This prototype features illuminates the features of the physical world which can support graceful human to human communication in face-face situation, and includes digital systems which support coherent behaviour by making customers and their activities visible to one another. This is nothing but "socially translucent", and has three characteristics, visibility, accountability and awareness. Which makes people to draw their social experience and to expertise their interactions with one another. This research includes a vision of knowledge communities, and conversational based systems which support the management and reuse of knowledge.

Semantic, syntactic and pragmatic web

The semantic, syntactic and Pragmatic came from the study of sign systems called semiotics. Syntax is the structure of symbols, where as the semantics deals with their meanings and pragmatics deals with their context of usage. These terms were picked up by the early logicians and computer scientists and the semantic and syntactic are frequently used in computer science.

Technology Adaptation Model (TAM)

To predict the user acceptance of computers TAM was proposed initially but in the due course of time it has been used in others fields of information and communication technology. TAM was developed by Fred Davis and Richard Bagozzi", Bagozzi et al., 1992; Davis et al., 1989 as cited in Adam Jenkins.

The technology acceptance model (TAM) is an information systems theory which gives an understanding on the models how users accept or adopt the use of a technology. The model suggests there are many factors that can influence the technology adaptation of a user.

- Perceived usefulness (PU) - This was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989).

- Perceived ease-of-use (PEOU) - Davis defined this as "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989).

TAM has strong assumption on the behavioural elements, and states that the user behaviours are limitless when they forma an intention upon perception. In the real time instances such behaviour forming patterns could be the constraints like environment, limited ability, time constraints, unconscious habits or organizational limits that will limit the freedom to act (Bagozzi et al., 1992).

Bagozzi, Davis and Warshaw assumes that as new technologies such as Internet adoption and PCs, laptops and palmtops are complex there exists an ambiguity in the adoption services linked with them.

Several other researchers like Adams, Nelson & Todd, 1992; Davis et al., 1989; Hendrickson, Massey & Cronan have tried to support Davis proposed relationship between usefulness, ease of use and system use. Much attention has focused on testing the robustness and validity of the questionnaire instrument used by Davis.

An estimate presented by Legris et al. (2003), empirical testing has shown that TAM successfully predicts 40% of a system's use. Hence the current study also proposes to use TAM to evaluate the usefulness of authentic features of the travel portal and to develop the prototype.

TAM approach

This guide was written by leading technology forecasters, highlighting discussion and examples of different mathematical models for technology adoption. The guide helps in understanding the market forecast of the technology. The guide illustrates on the process and patterns of Technology adoption. The authors gave insights to find the future facts of the technology markets and help to predict the growth and implications

of certain technology leading to decision making. By adopting the methods the study can bring out certain forecasts for the adoption of online community forming.

TAM & software design

Software metrics deals with the measurement of the software product and the processes which are in development or already developed. However, the current study tries to develop a prototype for the authentic web portal particularly in terms of usefulness of the end user.

The usefulness of any product varies with user perception. Coke can be the best cool drink to on consumer and the Pepsi can be the heart throbbing cool drink to another customer. Consumer perception changes from time to time even with the same service and brand. However, the software metrics and measurements are studied to further model or upgrade the software packages.

The usefulness is dependent on the perceived benefit from the usage. The usefulness also determines the acceptance of the product or software by the user. The metrics will establish the parameters for user acceptance criteria.

According to Capers Jones, there is an inconsistency in the metrics with software industry. The lack of standard metric and measurement practices creates project imbalances due to the different stakeholder assumptions. When there is no metric or measurement, everyone will assume their own standards to meet. Capers Jones states that, every software metric has numerous definitions and indefinite counting rules. He also expresses that, data bases and data warehouses, web contexts have no quantifying

tools and qualitative measures and metrics at all. Such lack of concrete metric system results in poor quality of software design.

A new model for predicting system usage and validations were proposed by the authors Fiorello, Alan P, after conducting a study to integrate usability metrics and technology acceptance determinants. This study reports on the validity of a new model, entitled the power, performance, perception (P3) model, that links the constructs of usability engineering to user acceptance.

The changing demands of the software users leaves a room for the emergence of new design patters and features that gives a concrete evolutionary models in the technology. So the current study tries to understand the user requirements to develop the specifications and prototype for the authentic web portal under the TAM model.

TAM approach for Software Packages

The ease of use and usefulness, both are the dimensions to describe the service specific influencing factors of the acceptance of any technology adaptation. Software applications are used by different users to perform different functions. The software tool or component usefulness involves the ease of installation and configuration. Then there is a provision of data accessibility by the users even from remote areas. Now a day communication has become much cheaper and fast and flexible. For each of these facilities the users need to use different software. So the users perceive the ease of use and usefulness of different software with diversified usability.

The constantly innovative development in the design of software package development with simplistic layouts, vertical text scrolling, minimal visual elements, minimizing

screen space options and features for bandwidth use etc., are day by day increasing the useful ness and ease of use factors of the software packages.

Usefulness

The literature reveals that software users believe that using the software packages will enhance his or her performance. The utility features like file upload, communication through talking, messaging, e-mail, internet search, photo sharing and teleconferencing video conferencing etc., are the most important means to achieve performance levels in today's world. Hence, the software users depend on these features to improve their performance.

Ease of use

Ease of use of software components on portals is also motivated through the dramatic reduction of learning time, enhanced user acceptance of the features, thus allowing them to focus more quickly on the adoption of the technology.

Software components on portals also affect levels of automation in personal as well as corporate communication processes. This is ensured by the increased optimizing action and decision-making and increased user acceptance levels.

Ease of use applies to three phases: initial system implementation, data entry/information flow and transaction.

Ease of implementation

Software packages will be developed in a way to be configured easily before usage. There is no hassle with defining account creations, authorization proofs, business rules, hectic processes and other component involvement. Such major functionalities can be

easily accessed through business-focused interfaces and simple wizards and user friendly features and options. .

Ease of data accessibility/information flow

Software components on portals are known for its functionality and communication facility. The data or the information flows in enormous for shorter requirements, though not for gigabytes. The current day functionalities like, talking, messaging, e-mail, internet search, file upload, print features, faxing, file convertibles, file and photo sharing and teleconferencing video downloading etc., all are being offered through a single login on many portals at the minimum cost and carriage.

Ease of transaction

The busy schedules of the current day life demands time from every resource. The time needs with such alternatives to save the time. The fastest transaction confirmations is anticipation from the software that makes the user feel useful.

User acceptance

User acceptance is the term used to identify the usefulness of the software by the users. In general, user acceptance is checked in two ways- before release and after release.

The user acceptance before release is done at the ending of the software development to ensure that the software release complies with earlier requirements, including usability. However, an iterative evaluation from the beginning will helps the project developers to build the desired system, so that the final user acceptance test results will not be a choking to the developers.

Pilot release or phased release can implement such iterative user acceptance feedbacks in the following ways:

- Try out the product on a limited number of users

- Evaluate

- Make essential changes & quick wins before full release.

After release usability evaluation

This can be done after the total product release. This can be done through,

- Direct user feedback

- Usage monitoring

- Post-release user surveys

General features of tours & travel agency

Every travel portal offers the following general features, out of which the features of authentic has to be separated out.

Visitor Section

Browse tours by themes (example: Wildlife, Adventure, Religious etc.)

Browse tours by origin city / location

Browse tours by duration

Browse by tours

Featured tours on homepage along with thumbnail images

Each tour has detailed info which includes the following

    Title

    Category (Theme)

    Duration

    Destination

    Short overview

    Detailed description

    Country

    Origin City

    Departure

    Price in USD and INR

    Day wise Itinerary

    Customer review

Multiple images per project

Enlarged images on clicking thumbnails

Package includes

Package does not include

Notes

Validity till

Enquiry button

Booking form button

Send to friend

Multiple static information pages like

About us

Useful travel info like flight schedules

News

FAQs

Picture gallery

Client testimonials

Other services

Contact Us

Tour booking form with email notification

Hotel booking form

Flight / Car booking form

News area on homepage

Login area for traveler who has purchased a tour

Customer (Traveler) Section

Secure login for customers who have purchased a tour

Update contact information

Information of the tour that has been purchased

Messages from the travel company

Post a query to the travel company

Admin (Tours Company) Section

Configuration Options

Edit admin password

Add/edit/delete/activate/deactivate admin users

Categories & Tours Management

Add/edit/delete/activate/deactivate tours

Add/edit/delete/activate/deactivate categories

Add/edit/delete/activate/deactivate sub-categories

Add/edit/delete countries

Add/edit/delete regions

Add/edit/delete cities

Add/edit/delete areas

Admin can view detailed info for all tours

Customers Management

Add/edit/delete/activate/deactivate travellers

Confirmation email (with username and password) on registration of a traveller

List of orders received

Messaging

Inbound messages

Sort messages by date range, tours

Reply / delete messages

Outbound messages

Send message to a particular customer

Send message to all customers of a particular tour

Send message to all customers of all tours

Website Features

Customization of the style with custom site theme image and logo

Customer provided copy

Customer provided graphic (Static or Animated)

Image enlargement facility

Customer provided logo

Contact form

WYSIWYG Editor for unlimited changes to static information pages

Hosting & Email

Support

Telephone support

Email support

Chapter 3

This chapter will outline the research methodology it is adopting. The research steps and the instrumentation it will consider, the population and the sample size demographics and the rationale of the research design are covered in this section.

Research Approach

The current study on pragmatic web techniques for travel web portal includes both qualitative and quantitative research methods to understand the required pragmatic web models for the authentic travel portal. According to the literature review both the research methods have merits and demerits over the other and have the evidence for the suitability on different occasions even when used simultaneously for a single study. The view that qualitative and quantitative methods are no longer be seen as exclusive to their traditional methodological schools, and it is possible for a single investigation to use both methods is propounded by numerous researchers (e.g. Howe, 1988; Wickens, 1999). Several researches argue that both have advantages and drawbacks. Some support the mix of two approaches in their research (Wickens, 1999).

While evaluating the required pragmatic web models for the authentic travel portal, it is assumed that some of the features on travel portal to develop the prototype can only found through the direct interaction with the travel portal users like travelers and the agents. This can be analyzed using quantitative tools. Qualitative research has the facility in describing the background of the successful web tools to understand and inference the results of the quantitative research. And moreover the distinctions

between the two "traditional" approaches are not as precise as was previously believed and that it is no longer. (Strauss and Corbin, 1990; Wickens, 1999)

The current scope of the research compels the researcher to adopt a combination of approach in using quantitative and qualitative techniques. Cook (1995) confirms the usage of this hybrid methodology. In his opinion, both quantitative and qualitative methods contribute to all aspects of evaluative enquiries and can be successfully used together (e.g. Cook 1995). Many researches that cannot validate the outcome through any single methodology will have an approach to this hybrid way. It is most important to derive the answer to hypothesis, rather than restraining to use the methodology.

Still the usage of both research methods has their own individual strengths and weaknesses. These need to be properly evaluated before administering the method on a particular study. Such issues to consider when assessing through these methods can be identified as "theoretical" or "practical" (Frechtling & Sharp 1997).

Theoretical issues can be the value of the data types and the basic underlying philosophies of evaluation, whereas practical issues can be the credibility of findings, staff skills, costs, and time constraints.

While Patton (1999: 9) describes evaluation as "a rich feast of different approaches", others aver that consideration must be afforded to which methods are most likely to secure the type of information needed taking into account the values, level of understanding and capabilities of those from whom information is requested (Taylor-Powell et al, 1996: 8).

Qualitative method

Qualitative method is used to collect the secondary data to evaluate the preliminary facts on the pragmatic theories of the web usage. Through qualitative study the general web user behaviour and their possible attitudes towards portal features can be understood by looking at the available literature. Qualitative research methods can be described as naturalistic, anthropological, and ethnographic and can be used through interpretivism paradigm in the current research. As Byrne's (2001) definition, qualitative research is about 'inquiries of knowledge that are outside the framework prescribed by the scientific method, as well as assumptions of inferential statistics', the current study inquires the knowledge of web users about the pragmatic web techniques. Though, qualitative study is assumed as 'vague' (Byrne) and 'loosely defined category of research designs or models (Preissle). The same authors again confirm that qualitative method is a tool that "elicit verbal, visual, tactile, olfactory, and gustatory data as descriptive narratives like field notes, recordings, or other transcriptions from audio and videotapes and other written records and pictures or films" (Preissle 2002).

Qualitative research methodology includes the types like, action research, case study research, Delphi studies, grounded theory, life histories, content analysis, hermeneutics, or general narrative enquiry or participant observer research. Qualitative methods are the most certainly appropriate option when in need of researching patterns and trends in the industry and to understand the depth of the environment around the research point, the cultural characteristics that influence the industry especially when the research is

adopting new areas of identification. Qualitative research is 'mainly concerned with the properties, the state and the character', (Labuschagne 2003).

Qualitative research also gives the flexibility of driving the research according to the scope. This aspect is very helpful where the research area is very vast and the scope of the research needs to go in particular direction. That's why qualitative methods are being preferred in studying the sensitive subjects. The personal skills of the researcher bring out the quality in answering the questions of hypothesis. However the personal skills of the researcher may also become hindrances to elicit the exact answers from the responders as it may be influenced by the gender and ethnicity of the researcher.

Qualitative methods allow openness in conducting the research and help to generate new theories. Participating subjects can discuss issues that are important and relevant to the scope of the research, rather than responding to closed questions, and there is a lot of space to clarify ambiguities and confusion over concepts. 'It certainly seems reasonable to suggest that one may have a better understanding of a community member situation by reading a descriptive passage than just looking at demographic statistics', (Kruger, 2003). Qualitative results are difficult to total and are difficult even to replicate due to the lack of structured design and standardized procedures. However, the qualitative study gives a greater depth in understanding the required Pragmatic web business model for the authentic travel portal.

Quantitative method

Quantitative methods allow for a broader study, involving a greater number of subjects, and enhancing the generalization of the results. Quantitative research is generally defined as the collection of numerical and statistical data. It is perceived as the

scientific approach of research employing 'experimental' and 'quasi-experimental' strategies. Harvey (2002) describes quantitative data as data which can be sorted, classified, measured in a strictly "objective" way - they are capable of being accurately described by a set of rules or formulae or strict procedures which then make their definition (if not always their interpretation) unambiguous and independent of individual judgments.

Quantitative research can be conducted in an artificial environment to exercise a level of control upon the experiment. This level of control can be achieved through laboratory experiments that allow comparing with the real world results. Also the results allow the researcher to know the variance between different dependents and independents of the study. In addition preset answers will not necessarily reflect consequences of a variable but also can elicit an entirely new outcome in some instances. This type of results can be seen in the scientific research applications.

Quantitative methods are ideally suited for finding out who, what, when, and where (Day, 1998). Quantitative methods use structured and standardized methods that allow much accuracy and objectivity of results. Using standards means that the research can be replicated, analyses and compared with similar studies. Usually, quantitative methods are designed to provide summaries of data that support generalization about the phenomenon under the scope of study. To accomplish this, quantitative research employs a set of predefined procedures to prove reliability and validity. Kruger (2003) confirms that quantitative methods allow us to summarize vast sources of information and ease comparisons across categories and over time.

The development of standard questions by researchers can lead to structural bias and false representation, where the study actually expects the view of respondent or participating subject instead of the researcher. However, personal bias can be reduced by researchers keeping a 'distance' from researchers and the study population

The results of the quantitative research are limited, as they provide numerical descriptions rather than detailed narrative of the entire research perception. Additionally, these statistics yields insignificant results.

Quantitative methods only deal with issues known at the beginning of the research project as this is when the questions are decided and documented (McCullough, 1995). They can also be complex process and require considerable investment for proper understanding and using (Kruger, 2003). So, Kruger (2003) discusses how it can be difficult to get the real meaning of an issue by observing at numbers.

In quantitative analysis, the questions have to be direct and easily quantified, and made available to a sample of no less than two hundred participants to permit reliable statistical analysis (Urban Wallace & Associates, 1995). Kruger also warns that people could tune out elaborate statistics, creating difficulties in the utilization of the products of research.

As highlighted by Honey and Mumford (1986) all learning styles have their own advantages and disadvantages and therefore no single style can be considered the best method to undertake. So the current research study adopts the usage of hybrid method of using both quantitative as well as qualitative to identify the hypothesis.

The quantitative analysis process is used to gather and compile data from the questionnaire and to analyze it so as to suggest the prototype for the authentic travel

web portal using pragmatic web techniques. . The results obtained in the survey will be analyzed using quantitative analysis methods. The quantitative analysis exactly interprets on how any respondents rated a certain factor at level 1 or 2 or good or bad. The data coded into the excel format will be decoded against the parameters of against factors and were calculated for the relation between the factors. And then the data was then tested for the hypothesis

Secondly it will elicit the strength of the opinion among the participants and facilitates to know the trend and patterns that are in practical and useful. From an evaluation perspective the use of interviews as a data collection method starts from the assumption that informant's perspectives are significant, useful, comprehensible, clear, and will positively affect the project and produce rich, detailed data for analysis (Frechtling, 1997:3; Lofland et al, 1995). The data produced from the survey is given a clear form of representation against the factors involved taking the overall consensus. The further interpretation of results through quantitative analysis can helps in identifying the prioritized list of quantified factors to understand the Pragmatic web techniques to develop authentic travel portal

Reason to adopt the hybrid approach

Though the literature review of the study observes the pragmatic web techniques, the literature study alone cannot identify all the anticipated features to develop the authentic travel portal. And it is assumed that different web user perceptions and information accessibility and usability alter at different instances. Hence after conducting the preliminary research, the study has chosen to evaluate the necessary or highly desired features to develop authentic travel portal. . This was done by using the

questionnaire to understand what makes web users to prefer or browse some heavy traffic sites

Instrumentation

Under qualitative analysis, the study intends to observe literature review on topics like Social networking behaviour concepts, IT support for semantic, syntactic web techniques besides pragmatic concepts. And then the study will go to identify the roots of pragmatic techniques from the language-action perspective (LAP) and design communication aspects. Then the study will try to observe the business interaction models and theories like - Action Workflow (Action Technologies, 1993; Denning & Medina-Mora, 1995), DEMO (Dietz, 1994; Reijswoud, 1996) and BAT (Goldkuhl, 1996; Goldkuhl, 1998). As part of the qualitative research the study will observed the transparency and translucent nature of the architecture of the social networks to some extent. The written data sources used for the study include published and unpublished documents, company reports, case studies, journals, reports, email messages, bogs, faxes, newspaper articles and so forth. And then the study will make a comparison of the observed literature and facts with a direct preliminary quantitative research where the respondents were surveyed for their adoption to different prominent portals.

The study uses questionnaire as instrument for the quantitative tool for the research. Please see **Appendix** for the questionnaire used for the quantitative analysis. The study will be conducted as an e-mail survey on a population of 200 participants including the population types like Youth, Women, Employed, and Retired people to know their adoption towards authentic travel portals.

Rationale for Questions

Literature on the content chosen for question framing

McCombs. M, (1999) examined five motivations in the formation of the public agenda: self-interest, civic duty, avocation, emotion and peer influence. Hence the current study tried to observe the motivation factors behind the adoption towards authentic travel portals

According to James Bryce the initial affective encouragement can make the individual seek additional information to make them begin to formulate a definite view on the issue. So the study makes a general enquiry about their web usage and information accessibility before digging into the brand issues in Portal adoption.

According to Stern (1997), affective commitment can only be developed through time, and hence consumers get used to positive emotional responses with the recurrent usage and more security is generated in the long time. So the emotional attitudes of the Web adopters will be evaluated.

McIvor et al., (2002) said that in the online context, higher quality in the communication between the parties produces higher degrees of trust which may lead to brand loyalty. So the questionnaire tries to evaluate the communication patterns through which the travel industry and the online portal ties to bring recurrent web users to their sites.

Stockdill & Morehouse (1992) said that the most comprehensive and useful technology diffusion theories are the Critical Factors in Adoption. So the study tried to identify the critical factors of the popular portals that draw the heavy traffic to their site.

Close ended questions

According to Zaller (1992) people do not hold any fixed attitudes on issues. But they build "opinion statements" based on information that is immediately available to them. So with regards to the current study, when the users are asked about the opinion about a particular portal service, there may be high ambiguity in the response which cannot be comprehended. Hence the survey instrument used close ended questions to fix the opinion within the context to avoid the ambiguous answers.

Rating question

Rating scales are often used to calculate the direction and strength of attitudes. Hence the current study uses the rating questions to identify the perception of respondent about him/herself in terms of portal service usage. This is to generate the consciousness in the user about the brand model he is using as well as towards the scope of the study.

Dichotomous questions (Yes/No)

The dichotomous or Yes/No types of questions are framed to screen out the potential responders or to consider the validation of answers on the Portal service utility for the heavy travelers with non heavy travelers.

To bring out the confirmed opinion of the respondents, such dichotomous questions were used in questionnaire.

Upon such separation, different questions are posed to further elicit the response of the groups.

Data Analysis:

The data from the questionnaires will have decoded onto the tables in Excel spreadsheet for further analysis of the results. The result data was then subject to understand their impact by using graphs to highlight the adoption rates and critical factors behind the successful adoption of the authentic portal services.

Design phase

The Design phase is a crucial phase which needs time and effort. The statistical results express that the poorly designed projects experience major failures. A great reduction of ambiguity at design phase can bring about much quality reducing the time and cost. The output of the design phase stage can be a prototype that gives complete functional specifications to the developers and the baseline to check the progress of the project for the project stakeholders.

Task: Develop Traveler Module: logical model (schema) to represent the Traveler data necessary to provide the Traveler details and the frequency of travelling details, booking and other order capabilities identified in the conceptual model (e.g., the real-time operation of Customer Traveler data as and when the customer enters his regular details online).

Implementation Phase

After the data modeling is complete and the logical model has been established and implemented as a physical database schema, programs that access the database and insert, update and access the database are developed.

Task: Write procedures, packages, triggers and constraints to ensure database integrity and access methods.

Dependencies: Completed data model

Task: Design an interactive interface to edit to modify and add data to the database.

Dependencies: Completed data model

Task: Design and implement code to be integrated with CRM files for new schema.

Dependencies: Completed and implemented data model.

For the purpose of integration with CRM in future, the relative fields will be added to the database according to the best available information at the time of data-entry. So that the metadata is complete (based on our as-complete-as-possible model) according to the forecast of store. A Change request can easily incorporate the further requests in the module wise design. In this model, the maintenance of database becomes an extremely infrequent task. The structure is in contrast to many of the current approaches to metadata where databases are stored to disk and can be deleted and for new information to be continually re-loaded, placing the data at secure during the transactions.

Chapter 4

This chapter performs the qualitative literature review on various topics like pragmatic approach, information system for social communities, translucence nature as authenticity, design as communication, pragmatics, need for pragmatics and their challenges, pragmatics in context of web, difference between semantic, syntactic and pragmatic web, principles, pierce pragmatism, theory of inquiry, language-action perspective (LAP), back channels as a linguistic communication, expectation of information communication on web, ambiguity in software development process, authenticity in the software design & development, models of business interaction, assessing business interaction models, business action theory (BAT), authentic activity and web technology, interdependency between semantic and pragmatic and the ontology model etc.,

Information system for Social communities

The information needs of the virtual social groups vary and the expectations escalate depending on the rapid technological advancement. The typical communication system for communities uses many different information tools. These tools aim at interactivity between uses. Some of the tools like chat applications, mailing lists, Short message tools to mobile, discussion forums, blogs and file import and export systems, profile customization etc., However, the usability of the features and functionality is determined by the type of community and their adaptability of the tools on the particular platform. A youth social group can experience the music file sharing where

business communities preferences differ with that. "Usability refers to human-computer interaction: ensuring that people can interact and perform their tasks intuitively and easily". For a social community the software must posses both Usability and Sociability. The sociability concerns should ensure the optimum social interaction while adhering to the social rules and norms, also they must be acceptable, understandable and useful to the users and that enriches the community experience. However, maintaining such social interactivity is a continuous effort and costly. The socio technical fusion can contribute to the flavour to some extent. But this in turn requires a good planning and design of the features. Such Socio technical enhancement will experiment, direct or even catalyze the change in virtual social community. Such change is vital to the continuous viability of the social gathering.

One big challenge in the development of community information systems development is deciding on the design features as a process of development (9) . Choosing a software Engineer to decide on the design of Socio technical tools to create a substantial system is a traditional system and has become absolute. Because System evolution is subtle and continuous as is evident through the evolution of development methodologies like RAD, RUP, Agile, Scrum and Extreme programming from the traditional waterfall systems. Much strategy and expertise in acknowledging the user expectations and tacit knowledge on user behaviours is needed to interpret the socio networking requirements, and to represent the actual specifications (Jarvis as cited in De Moor, Keeler, and Richmond). Furthermore, such systems and specifications can never say to be finished, but rather continuously grow in complexity. As technology develops and as users began to experience the benefit of the features. The system should adapt it however costly in

order to retain the users. Taking the user expectations and user concerns can at least result effective in reducing the early.

 According to De Moor, Keeler, and Richmond, the Social community groups who are working on the portal must become self-aware of their role, and the relation with others. Also they must be aware of the principle tools and the design specification levels they can request on portal. A discussion thread user may not feel usability of certain features or may have an alternate useful ness of some features which a system should be able to capture and escalate them to the actual system developers. Preece.J & Schepress R as cited in De Moor, Keeler, and Richmond also specify that Goal-directedness is essential for productive virtual communities. This goal-orientation will evolve the system through the modifiable and increasing experience of the virtual community users. De Moor, Keeler, and Richmond call this as goal reflection which they suggest "must be integrated with the community's own information system development effort, if that augmentation is to become more effective and efficient". This is nothing but Peirce's pragmatism as it has form of improvement.

Translucence nature as authenticity

There is a narrow difference between socially translucent system and a socially transparent system. This is due to the very important pressure between privacy and visibility. The general questions like, what the people say and do with another person depends on how many and who are watching. The term privacy is neither good nor bad on its own--it merely supports definite types of performance and restrains others. For example, the apparent legality of a selection depends significantly on keeping definite of its aspects very private where as the other aspects very public. As earlier than, what we are taking into consideration is the impact of consciousness

and accountability, in the selection, it is advantageous that the voters not be responsible to others for their votes, but that those who count the votes be responsible to all. To think that translucency is only about the tension between privacy and visibility is a big mistake. Rather, translucency locates in more usually for the power of restriction.

The high concentration here is how the spatial environment of the situation facilitates what was, in effect, a procedure of communal computation. First, as in the case of the door, the contestant could see what was the phenomenon, and thus consciousness and responsibility came into action. Even though rules are not required, what happened was that the transporter would politely offer an underlying principle for moving the section to those in the surrounding area, thus generating a discussion about the principle of that section and the spot of the chapter. The result of this conversation was that either:

- the mover and the on-lookers would agree on the move
- the on-lookers would convince the mover that the chapter was indeed in the right place
- the mover and on-lookers would decide to change the name and definition of the section so that the chapter fit the section better

The result in all of these cases was that, there was a better shared consideration of the segment names and explanation, the general idea of each chapter, and the underlying principle for the chapter's enclosure.

In accumulation to the consciousness and responsibility brought into participate by the visibility of the movement of moving chapters in the region of the room; another spatial possession played a significant role, physical constraints. Restraints fashioned the way in which people could take part in the procedure of association. The truth is that, the

subdivisions and section names were stretched all over the room, had a significant impact: it intended that nobody could dominate the organization of the manuscript. The people, who had strong estimation about where their chapters are in the right place, have a tendency to stay close near their chapters, ready to 'defend' their chapters' situation against would-be reorganizers. In contrary, the people who had thoughts about the understanding of the book as a whole had to flutter about from division to division, thus giving up any tough control over wherever their chapters or any particular chapter were situated. Correspondingly, people who hang about near a single section headline achieved, over time, a thorough consideration of the underlying principle for the section as an outcome of continually take part in the to-move-or-not-to-move discussions for its constituent chapters. This parameter of movement came as a side effect of the information that the capability to hear and see in a jam-packed room decreases as distance increases; which means that, the gap is translucent and not transparent to visualization, speech, and hearing.

It was not merely the survival of the constraints that were important; in accumulation, as with the visibility of socially considerable information, two supplementary levels are of significant. First, it was essential that people were conscious of the existence and character of the constraint*s*. This alertness means that the contestants were able to look forward to the ways in which the constraints prearranged the group's communication and regulate their own actions consequently. Based on the amount of ambient noise, speakers accustomed the volume of their speech in the way such that, they could be attends to, by those people to whom they spoke. Consciousness of and experience with

the physics of real world interaction in order to enable the soft communication among the group. In situations where an awareness of certain constraints is lacking for instance if a partaker has a hearing aid which doesn't manage well with elevated levels of ambient noise, the communication may break down, with people's communicative performance weakening unpredictably, and requiring cooperative action to identify and restore failures.

Secondly, it was significant that participants were aware of the others' consciousness of the constraints. Consequently in the circumstances illustrated, there was a commonly shared consciousness that people on one part of the room were not capable to see or hear conference on the other side of the room. Each and everyone understood, by high caliber of their general experience with the physics of human communication, which was going on. Accordingly, while anyone might apprehend accountable for moving your chapter if you were standing in close proximity and could have simply been consulted, it was an unusual matter if anyone on the other plane of the room, where they can recognize that they could not have seen the other person. That means, not only the constraints do provide to makeup communication, but also the existence of a shared awareness of constraints is also a resource for structure communication.

The dissimilarities among the continuation of constraints, participants' individual alertness of restraints, and shared alertness of constraints is significant because, even though these equipments are usually bundled together in physical atmospheres, they are not essentially joined together in digital ones. In digital environments it is hardly ever manifests that, what the constraints are not, nor whether the constraints are unavoidably shared. The fact that one can hear anyone speaking over a speaker phone does not

necessarily mean that they can hear the other person only if they speak, which are called half duplex lines, nor does their capability to send the other person an email necessarily to imply that they can reply to him. The guarantees of communicative equilibrium that come up out of our experience in unmediated physical authenticity are not automatically present in the digital area.

Design as communication

Designing is a social collaborative activity but not just making things. When a person imagined, developed, produced, and sold a fully designed object it is largely sold out. The interaction designs occur only in the context of a huge organization, or most probably distributed to more number of smaller organizations. Communication plays a vital role in design, which is distributed among smaller organizations, for which it is called as distributed social process.

In most of the cases the key part of interaction design involves effective communication between intended users. The design team can extract required specifications more effectively from the users, and obtains feedback on various prototypes which are shown and selects the best one for the final design. Correspondingly, the design team necessitates an effective communication within the team. All the team members must reflect on the state of the design, develop assessment of problem, and advise substitute solutions, and so on. Proper communication is very important, mainly in interaction design, where the entire team may be strained from a variety of backgrounds.

The design team should be able to communicate efficiently with the superior organization of which it is a part. The design can really be said to be successful only if it makes it out the door, means it should be called as a good design by the customers and successfully sold out. The designing team can be able to accomplish in convincing superior management deals with the validity of the design projects in which process it may be repeated throughout the life cycle of the design and, if the design is successful, the team must be able to correspond the key aspects of the design to those who will execute, assemble, promote, and distribute it.

This analysis of design as communication raises number of significant queries. Like, who are the spectators for a particular design? How do those spectators change as the design develops through its life cycle? What kind of communication needs to take place among and within these audiences? How that communication can be best and make possible? Basing on these questions and how they can be applied to a specific design project, usage domain, and managerial context, can be an important exercise for a design team.

Pragmatics

During a mobile conversation system context information is of high significance as the user expects the offer of contemporary services, even as navigating through a dynamically altering environment that is, changing precipitation- and temperature levels and traffic and road conditions, which makes the sufficient representation of context knowledge predictable for the task of natural language understanding (NLU). In the field of NLU ontologies are a well recognized instrument for expressing domain knowledge and have been employed in the state of the art multi-modal dialogue systems. Even though, the following settings demonstrate the necessity of including extra linguistic situative knowledge for the province of human navigation in real space:

• For example, a pedestrian might have a preference on the public transportation over walking when it is raining even for minor distances.

• A motorcyclist might wish to use winding country roads over interstate highways when it is warm and sunny, but not, when road conditions are bad.

• A car driver might like to take a spatially longer route if shorter ones are blocked or hazardous.

Why Pragmatics

The major challenges for semantic web are not addressed by either current industry approaches or by the upcoming semantic approaches. To resolve these challenges, some development is required that consider some principles. The required principles are oriented towards the pragmatics of the web.

Challenges

Now we can consider the challenges for web services when they are geared toward composition.

Service Description

An assumption of current Approach is that the services can be described as independent of how they are used. But the services may not be described through their methods. Because of two reasons, the descriptions produced by the service providers even by using the standardized languages, might be incomplete. First one is the usage of the services of the specialized communities of practice would be in a novel ways, where as the second one is the method of appropriate metaphor, instead of the mere method invocation, is negotiation where the consumers and service providers may reason whether or not, and how to interact each other if so. This becomes difficult but interesting when the semantic exceptions are considered. The semantic exceptions are not the operating systems or programming languages exceptions such as the file not

found or a divided by zero cases, but deals with the meaning of task at hand. The Exception handling in service composition is an issue that must confront and it cannot be simply avoided by using the exception handling of the programming language. The exceptions suggest a case where the descriptions of services might form an input to the question of compliance.

Service discovery and location

The implicit assumption of the current approaches is that a logically central registry of services can make the right matches for all the customers. Where as in a real life, the service consumers would need to search for the providers in whom they can trust in a manner that they are sensitive to fulfill all their particular needs. A registry as an implicitly trusted third party is an unrealistic because of the following reasons. First one is the mutual trust on each other, that is between the provider and the consumer is no more continues afterwards because of the lack of interaction. The second one is the registry who has no interaction of its own is unable to judge the quality or a trust worthy service of a service provider. Third is the trust perceived by one in another, which depends upon their interactions and contexts, in which the registry would not and should not be expected to model for all participants. The solution for this problem will be a social mechanism for discovering and evaluating the trustworthy parties of both providers and consumers.

Interaction

In the current consumer approaches for service invocations represent much progress,

They carry the traditional distributed object approaches. The service providers who are now approaching are the low level invocation of services. They are not updated for enabling the mixed features of what the consumer exactly needs. These services are integrated invocating methods regardless to any higher level constraints.WSDL4 allows us to capture all the various methods but restricts the constraints among those methods. Though WSDL4 needs too many methods to be invoked, the functionality is necessary to identify the methods supported by a service. Implementation of methods is an appropriate system for closed applications, however the services are independent and often to be in a process of continuous communication. For example, a long term communication occurs in e-commerce when you try to change an order because of some unexpected conditions like item which you ordered is mismatched or any wrong payment is done or try to get a refund for a faulty product.

Engineering of the structures

The service providers take a procedural view of service composition and considering the dataflow graphs that can be stepped through. The major engineering challenges lie in data standardization. Example: through semantic or syntax. However the web services have the contents that set them apart from the closed traditional systems. They are heterogeneous, long-lived, and autonomous and communicate in different ways to compete or to cooperate with the present market. Engineering a composition of such services requires tools and abstractions that bring these required attributes to the front. The requirements highlight the potential violations only when they are expressive. Example: the failure modes of a composition.

Thus the Engineering composition requires semantic and pragmatic constraints in capturing patterns on which the services may participate in various compositions. This composition requires tools to help reject the composition which are unsuitable to each other, so that only acceptable systems are built.

Compliance and trust

The Traditional approaches cannot deal with high level interactions among services because they take low level and a procedural stance on service composition. Consequently these compositions will not provide any basing to judge whether a particular service which is bound in the work flow can provide the right interactions or not. Comparing to a matching a method signature the compliance subtle a lot. The Trust should be based on interactions and also it should be rigorous even if context sensitive.

Pragmatics in context of web

The study of Pragmatics is driven by an interest in action rather than a theory. Action in the sense, it is how a context is ready to handle the progression of mutual understanding with regard to conversation and the commitment between the parties in conversation. The whole thing lies in the perspective that mutual understanding and the conversation all depends on the Context which is already existent. The same words and objects can create different meanings in different contexts. When the conversation is done face to face clarity can be created with more conversation between parties. But in the web context, time and space are the major barriers to achieve clarity and understanding. So the Information tools that are used for communication on the web should create such

context to facilitate the mutual understanding. Such understanding and clarity can be achieved when focus is given to pragmatic web tools.

Difference between semantic, syntactic and pragmatic web

The semantic, syntactic and pragmatic came from the study of sign systems called Semiotics. Syntax is the structure of symbols, where as the semantics deals with their meanings and pragmatics deals with their context of usage. These terms were picked up by the early logicians and computer scientists and the semantic and syntactic are frequently used in computer science.

The "Syntax" which is the structural codes, is established in the syntactic web, the meaning of semantics is creation. It is still immature in the web, particularly in regard to connecting and producing meaning from the data. The semantic web is under development, so there is increase in using pragmatic web.

The syntactic web

The syntactic web is used to define content at a high level and involves the usage of HTML as web technology. Syntactic level controls the appearance of information. The iformation providers define colors, layouts, content, and font selection, where as the information consumers have only limited control over the representations in their browsers, which includes enabling or disabling animations, plugins, adjusting the size of fonts.

The semantic web

 The According to the Tim Berners-Lee "The semantic web will radically change the nature of the web". The eXtensible Mark up Language (XML) and the Resource Description Framework (RDF) are the representation languages which makes Web based information readable to both humans as well as computers. The search engines are able to collect machine-readable data from various sources, process it and inferring new facts. Coming to the other research projects, like Avanti project, have studied how to separate web content from display modality to better serve the perspective abilities needs of users. The full benefits of the semantic web can be reached only when a critical mass of semantic information is available.

There is always confusion on which stakeholder represents the information and who processes the information. These two concepts have a varied presentation with the syntactic, Symantec and pragmatic web techniques. In Syntactic the information representation is controlled by HTML, in semantic it is controlled by XML where as in Pragmatic the end user has the choice to control the information representation. Also Producer takes the 100% control in Syntactic web techniques, where as the end user exercise the full control on the information processing in Pragmatic web techniques.

Principles

It is some what difficult to understand the principles through which the data and the web applications can be linked. In the development of community consensus, it seems like a reasonable approach to standardize the semantics for various approaches.

Comparing to the pragmatics of the web these principles doesn't lie much in semantics of the web. While shifting to pragmatics of the web, the following are the ramifications, which are called as the principles for building the web systems pragmatically sound.

User before provider: A service provider, before listing the methods or capabilities that he offers, it would be more helpful to model the needs of the consumers of the service. The service providers presents the compositions architecturally as composers of the services to the consumers, with potentially idiosyncratic needs and the highly context dependent requirements. The context of intended compositions must contain description, discovery and invocation of services.

Process before data:

It is important and difficult to capture the context of the usage of data. But understanding the processes behind the data gives a better clue to its meaning rather than a perfectly "reusable" and "impossible to build", semantics.

*Interaction before representation***:** The compositions provide a high level interface which hides the details of semantics that are irrelevant. However, they provide a high-level interface that hides the irrelevant details of the semantics of the data, while exposing the components of the semantics that are relevant for a particular purpose. Just as functional interfaces to data structures hide their implementation details, so too will interaction specifications of services hide the "excess" semantics of the data that might otherwise be revealed.

It is giving a central position to the processes and to the context in which it is used but not to the data. To achieve the vision of semantic web, the concentration should be more on services first rather than data, and secondly by modeling services as agents,

rather than as distributed objects and viewing service providers and consumers as participating in rich multiagent systems.

Multiagent Systems: The Pragmatic web: A cognitive disability person cannot be able to use the colored direction on the public transportation portal if care is not taken in design. All the essential information exists on the web is not able to be accessed meaningfully with conventional information technology.

Comparing to the Syntactic and Semantic web the pragmatic web is not about the meaning of information or a form of a web but it is all about how information is used. The mission of the Pragmatic web is to provide information to the consumers with computational agents and to transform existing information into practical consequences, like implementing the features of what the cognitively disabled person also can do without any help. Sometimes this transformation may be as simple as extracting a number out of a table from a single web page or it may become complicated as intelligently fusing the information from various web pages into new aggregated representation. To deal with a variety of contexts and user requirements, the agent based transformation needs to be extremely flexible.

Peirce pragmatism

Peirce's pragmatism is a method of sorting out conceptual confusions by equating the meaning of any concept with the conceivable operational or practical consequences of whatever it is which the concept portrays.

Pierce opinion on pragmatism

Peirce's pragmatism is a method which sorts out the confusions on the compositional web concepts by equating the meaning of various concepts with the operational or practical consequences of which the concept portrays.

This Peirce's pragmatism doesn't resemble any vulgarity, which misleads for political or any other kinds of advantages. The pragmatic axiom of Peirce is the heart of his pragmatism. It is a method of practically proved reflection occurring at conceptions in terms of believable confirmatory and disconfirmatory conditions, a method which is adorable to the era of explanatory hypothesis, and contributive to the employment and for a better progress of verification to estimate the truth of knowledge which is commonly believed. For such methods pragmatism gives the foundational alternatives which are beyond the usual, they are

"Deduction" from self evident truths, or rationalism

"Induction" or empiricism.

The approach of Peirce's pragmatism is discrete from foundationalism, empiricist or otherwise, as well as coherentism, by the following three dimensions.

- Generating the theory process actively, without any prior guarantee of truth;

- Application of the contingent theory in appropriate time and in order, which is targeted to develop its practical and logical consequences;

- Evaluating the effectiveness of provisionary theory as in the dual senses of the word 'prediction' and control, and for the expectation of future experience.

  These three dimensions in the identification of Peirce, provides to stretch out an approach to inquiry far more concrete than the regular image of simple inductive

overview as describing a prototype observed in occurrence. Peirce's pragmatism was the first time the systematic method was projected as an epistemology for philosophical queries.

Scientists acknowledged this theory as an operational notion for truth. According to the Peirce the scientific method is best for theoretical queries in some cases, but for some cases like practical, time-sensitive queries the traditional and instinct type methods are the best. But in the long term process the scientific method provides the most secured results on which the practice is based.

Peirce discussed about three grades of clearness of conception in his journal called "How to make our ideas clear".

1. Clarity in the familiar conception.

2. Clarity in integrity of which logicians call a concept or definition "distinct".

3. Clarity in integrity of clearness of reasonable results as of conceived objects.

Peirce introduced this concept which he named this as pragmatic maxim.

Peirce addresses the truth and real questions of the reasoning presuppositions by giving the example of how to clarify the conceptions in general. In the second grade of clearness discussed by Peirce, is defined the truth as a correspondence of signs to its object, and as an object of such correspondence defined 'the real'. Therefore the real and the truth are independent of thoughts that any community researchers may have. In the third grade of Peirce's clearness, which is a Pragmatic grade, here he defines the truth such that it would be reached, faster or later by adequately prolonging the research. The 'truth' is defined here such as the 'real' should be dependent on final opinion. Peirce disagree that even to argue in contradiction of the sovereignty and

discoverability of truth and the real is to presume that there is, about that very question under disagreement, a truth with just such sovereignty and discoverability. In the Peirce's 'Pragmatic Theory of Truth' he explained the theory in detail.

In the Peirce's pragmatism, he discussed everything as a method and theory of definitions as well as the clarity of ideas. This is a department with in his theory of inquiry, which is called as "Philosophical" or "Speculative" and "Methodeutic" Rhetoric. Through out his task he applied Pragmatism as a method. In the main articles of "Pragmaticism" and "Pragmatic maxim" he discussed them in detail.

Theory of inquiry

Peirce has derived four methods of inquiry and settling belief in the articles called "the fixation of Belief". 1. The method of tenacity which is called a persistent determination, 2. The method of authority, 3. The Method of congruousness, or the a priori which is called theory than observation, or the dilettante or "a point of agreement"(in which it gives nothing as a result of argument) and 4. The method of science. Peirce held that, in practical situations, slow and stumbled reasoning based on formal logic is always dangerously substandard to response, and tradition, the scientific method is also best matched to theoretical research, on which it should not jump to other possible methods and practical ends. The scientific method is suggested above all of the others because it is intentionally designed to arrive, ultimately, at the most protected beliefs, on which the most victorious actions can finally be based.

The Pragmatic model or theory of inquiry extracted by Peirce is from its unrefined resources in traditional logic and refined it simultaneously with the early development of representative logic to deal with the problems regarding the characteristics of scientific analysis.

Abduction, deduction, and induction can encompass a cycle which is comprehensible as a whole insofar but do not make complete sense in segregation from each other as they meet the parameters at the end of inquiry. In the way of pragmatism thinking in terms of possible outcome of action, everything has a purpose, and the first thing is to notice the purpose of that thing. The purpose of inquiry is to condense that query and lead to a state of belief which is called knowledge or certainty to any person in that state. The three kinds of deduction functions analytically to reduce the suspicions and complexities that occurred the inquiry, and when the inquiry succeeds to the extent, it leads to an improvement in the knowledge or skills, in other terms an enlargement in the proficiency or accomplishment of the agent or a community which is occupied in the inquiry.

The purpose of abduction is to produce guesses that deduction can illuminate and that induction can estimate. This gives a meaningful but a meek constraint of speciousness, practical testability, etc on the production of hypothesis. It is not like guessing on justification that submits itself to reason and bows out when conquered in a match with reality; where as the reason of abduction gets implicated with the financial system of research. Similarly, the other types of inference understand its purpose only in agreement with its proper responsibility in the entire sequence of inquiry. It is independent of how much it may be essential to learn these processes in generalization

from each other to the veracity of inquiry places strong boundaries on the valuable modularity of its most important mechanism.

"What kind of limitation, exactly, does pragmatic thinking of the end of inquiry place on our presumptions?" Is the consequent question that usually acknowledged as a problem of giving a rule to abduction? Peirce's answer for all these questions was "The Pragmatic Maxim". In the year 1903 Peirce name the query of Pragmatism as "the question of the logic of abduction".

The scientific methodology illustrated by Peirce is as follows:

1. **Abduction**:

"Production of descriptive hypothesis". Peirce differentiates induction as inferring from abduction and on the source of tests, the percentage of truth in the hypothesis. Each and every inquiry, whether it is into thoughts, brute facts, or norms and laws, occurs in the attempt to determinate the wonder of astonishing observations in the given domain. All the theories of explanatory content are achieved by way of abduction, which are the most vulnerable among types of inference. As a process of Induction it is far time-consuming for that job, so financial system of research demands abduction, whose degree of accomplishment depends on one's being somehow accustomed to nature, by characters cultured where as some of them, likely inborn. Abduction includes some common inductive rationalization in which it works frequently enough and that nothing else works, may be not quick enough when the science is by now rather slow, the work of an indefinite period for many generations. The abduction depends on instinctive or developed instinct accustomed to nature and is determined by the need to economize the inquiry process; its descriptive hypothesis should be most favorably simple in the terms

of "natural" of which Peirce discriminates from "logically simple". Since the abduction is an undefended presumption, it might have consequences with believable practical behavior leading to intellectual tests, and, in science, contribute them selves to scientific testing.

2. **Deduction**:

Peirce described two stages for evaluating the hypothesis and presumption of its consequences in order to test the hypothesis.

- Explication- Analyzing the hypothesis logically in order to deliver it as discrete as possible.

- Demonstration or deductive argumentation- Deduction of out come of action, of hypothesis.

3. **Induction**:

The long term legality of the rule of induction is deducible from the principle which is an assumption to analysis in general and that the real is only the object of the final estimation to which sufficient research would lead. In the other terms, if there were something to which an influencing process involves in ongoing tests or clarification would never lead, on which that thing would not be real.

Peirce described three stages in the Induction:

i. **Classification**: grading the objects of experience under common ideas.

ii. **Probation** or direct Influencing Argumentation: There should be a debate on the issues on how close they are with the element of truth

iii. **Sentential Induction:** Inductive reasoning, followed by their permutations, to make them prove in their self-assessment before the final judgment

However, the *purpose* of the information is an ambiguous area that needs high concentration where every architecture faces challenge. In this paper, we outline a pragmatic community information systems development process by combining PORT with the Conceptual Graphs-based RENISYS method for the legitimate user-driven specification of community information systems. Peircean pragmatism provides a self-critical approach for tool selection in virtual communities.

Language-action perspective (LAP):

Since the efficient communication is a must in the interaction design the concept of LAP helps in communication as well as in designing

LAP- the Language-action perspective was first introduced by Flores and Ludlow. They challenged the conservative conception that communication is simply spreading of information or symbols and disagreed about the concept that people are linguistic beings and people use language to perform actions. LAP disagrees with the conception that language is used for only exchanging information; it argues that language is not only used for substitute of information but also to perform actions, for example in promising, in ordering, in requesting and in declaring etc.

The LAP originates an interpretative and norm-based substitute of how language represents in social life to evaluate its propositions for the design of information systems. LAP emphasizes how people communicate with each other; how language is used to create commonly shared truth and how people use communication to synchronize their activities; since it recognized the significance of communication in an

organizational environment. The LAP approach is, thus, depending on the principle that a large amount of work in organizations is carry out through language, that is communication is primarily an action which in turn, facilitates coordination and interaction.

The LAP approach has modified into a new establishment for designing efficient information systems with two key principles. First one is the source for an understanding and designing information system is the linguistic communication. Second one is, people act upon actions through communication; the main role of an information system is to maintain, organizational communication. The main hypothetical foundations for the LAP approach are Searle's Speech Act Theory and Habermas' theory of communicative action.

Back channels as a linguistic communication

The concept of Back-channels supports the linguistics and communication which indirectly supports the design. The theory of backchannel has two major references- one is from linguistics, in which back channel expressions such as "uh-huh" or "yes, quite" may be used by a listener to point out that they are paying attention to what they hear, or that they have the same opinion with what is being said. The other is political implication, referring to casual, "unofficial" communication in the background that can maintain deniability over other feasible benefits, in the public foreground. More of late, researchers have paying attention on digital backchannels and their responsibility in group communications. For example, chatting one-to-one during classroom lectures, or

the utilization of chats as a public backchannel in physically-shared spaces such as an academic seminars.

Generally the backchannel statement divided into five categories.

First one is 'Process oriented' which is nothing but the analyzing or navigating the group procedure or stating on the knowledge of being in the online environment. The second one is content-oriented in which private answers to main channel discussion. The third one is participation-enabling which is helping users function better in the location in which the dealings take place. The fourth one is tangential -which is taking a string started in the main channel offline and 'Independent' which is unrelated to the main channel conversation.

In the investigation on backchannels it has revealed both positive and negative consequences, for the group communications, and for backchannel partakers and non-partakers. Positive consequences consists of being able to get or give help, ask questions, or present correlated references without disturbing the main channel communication and helping to spotlight and characterize main channel conversation by influencing both method and content.

Negative consequences consists of diversions for people who uses backchannels, like occasionally impolite content, the separation of in-group and out-group conflicts, and which effects on main channel membership for example irregular involvement from co-present people, off-topic chat or unfortunate disturbances. However, in professional and work settings investigation again and again it demonstrates a high quantity of suitability in utilization of chat and backchannel tools.

According to Clark and Brennen's opinion of common ground it is useful to think of backchannels; that is, the information that people have in general and identify that they have in common. According to Olson and Olson while visibility and audibility support the establishment and preservation of general ground in face-to face communications; only audibility is obtainable to those on conference calls. But as the Rendezvous conference call proxy is anticipated to create visibility and a discriminating sense of co-presence.

Digital Backchannels

Digital backchannels are an exciting combination of the two senses of backchannel. They permit listeners to present uninterrupted feedback to the speaker, at the same time they may take on the more classified nature of the subsequent more political view of backchannel which allows two members to chat with one another with no indication to others that it is occurring. Digital backchannels vary from face-to-face backchannels and even in that they may be more complicated to determine. That is, in a face-to-face backchannel, those who are co-present recognize the physical and sensory characteristics of the various backchannels: they see who is present, and understand that gossiping and note-passing is possible.

But when communication is digitally intervening, backchannels may not be apparent. That is, even if participants know who else is participating in a communication, this doesn't guarantee as it does in the real world that there is an available backchannel.

Through the conference call proxy and iHelp functions, Rendezvous identifies the importance of backchannels and provides mechanisms to access them.

Audio communication and conferencing

Rendezvous contains system to enhance audio communication, but it is not the first one to discover ways to improve audio communication. Before Rendezvous, Moors illustrated between the design content of an auditory meeting and control information that express information used for detection of speakers, feedback, and turn taking.

The Smart Phone system in the design let users see who was partaking in the program and send feedback to the speaker or to the group through pre-coded text messages. For example, retrieve the system used pre-recorded messages from a mobile phone, so that it helps to deal with auditory communications. Recently, in a sequence of revision, documented problems along with audio conference, and the Central Meeting systems, discovered methods for dealing with these problems, together with providing information about participants, text and speech based backchannels, enhanced audio quality and the capability to spatially separate voices.

The idea of providing 'extra' information about conference contestant is taken from the source where there are varieties of different ways of achieving this. For example, both Meeting Central and Rendezvous systems are designed as collectively transparent systems, with the control of being intervened socially for example, it is theoretically achievable for a listener to interrupt a speaker, rather than being obligatory by the "system," as in Smart Phone even though this constraint was consequently relaxed.

A trademark of Rendezvous' approach is its firm incorporation with enterprise systems. It collects all its information about gathering and their attendees from its users' calendars, caller ID of the users to authenticate them, and is incorporated with the corporate directory so that an attendee of a particular meeting can see where others are timed in the organization chart, he can also browse the projects they're on, and so on.

Rendezvous in use

The service of Rendezvous emerge to be a VoIP version of audio conferencing, instead of calling straight into an audio conference, a Rendezvous user chooses from Corporate calendar, from their effect phones and selects a meeting from it, and enters into a mutual discussion with the people invited to that conference. As a result of this, Rendezvous users have a few phone numbers that they can use for all their conferences calls and a simple way of managing several phone numbers and pass codes. Since Rendezvous uses VoIP system, it is much cost effective for the business organization. Likewise it was illustrated, Rendezvous uses the available information which is mechanically available about users; it supplies other functionality from visualization and communities compute help function, iHelp, etc.

Expectation of information communication on web

Now a day, information from web is being accessed by the different users in several ways like Desk Tops, Mobile, laptop, PDAs, VOIP phones, and special devices like GPRS systems etc., and specialized information. However, the information on the web does not guarantee the access of the information to all the above said users. Because information representation needs to be in different formats that are to be supported by different browsers of accessing devices. Also many of the times the format support present in the devices are no according o the customer accessing requirements. This can be explained when a user finds an important information on a web and cannot make use of the information due to the non accessibility for view and read. The information producer and the information receiver may be using different formats due to the poor design and poor perception of the end user requirements. This can be understood as Producer/consumer *information representation mismatch* which is prevalent in the following forms:

• **Wrong Modality**: Textual description cannot be read by blind users. In this case an automated Text-to-speech interfaces can help the information producer to make the information available to the blind users by converting the textual scripts to verbal information. But if the web page design is totally formatted with visual clues of information, the verbal information conversion cannot be possible and information mismatch can take place.

• **Wrong Language**: Some websites contain the Important Information in the local language which cannot be understood by the foreigners. A trsavel guide should avoid such information mismatch and should be developed in the universally agreeable

language. "Less than 15% of U.S. Web sites contain Spanish translations (Lamb, 2001)".

•**Wrong Nomenclature:**The information which is on the website may be articulated in an unusual dimension. For example, the conversion of Celsius to Fahrenheit or kilometers to miles, although scientifically inconsequential, it may present a severe obstruction to many users.

• **Wrong Time**: sometimes the information may be accurate, applicable and understandable, but accessible at the wrong time. For instance, Stock information is most useful information, when it is presented in real time, otherwise it will be useless.

• **Wrong Format**: Any information can look enormous on a huge computer monitor, but be entirely inappropriate for small information strategies like, PDAs and cell phones. A difference between information arrangement and the design required by an information customer can be some what difficult to deal with a conventional Web browser. For the financial reasons, a producer may prefer to use a single illustration scheme that deals with only the requirements of a predictable mainstream of information customers.

Ambiguity in software development process

In modern days, software process has becoming a major issue with the industry. A process is defined as a method of producing something, thus a software process is a method of developing software. Processes, no matter how professionally executed, are dependent on the individuals involved in the software project. This usually accomplished with three main problems. The first one is with maintainability of the software. There is an extensive documentation which explains the state of the work in progress. This results to an ad-hoc process, not a defined one. The second problem is it is difficult to gauge the quality of the finished product to any independent assessment. If there are two developers working on different processes, there is no objective or proper goal as to comparing their work or even with a customer's own criteria. The last one is that there is a big overhead as each developer works in their own way. To avoid these problems, it is necessary for project groups to define processes before starting up a project. This gives them a guide as to the correct direction in achieving the company's goals and objectives. A process may be defined in order for it to be effective, can be easily maintained, predicted and repeated, it is of high quality one, it can be easily improved and tracked. (Tyrrell, 2000)

The designed developed IT systems are measured through quality. Quality systems are those which have undergone a series of tests and have successfully passed the quality assurance testing. Quality systems may also be defined as "fitness for purpose". This is based on the features and characteristics of a product and the degree of excellence relative to any kind of character. The eight (8) key dimensions of quality

include performance quality, feature quality, reliability, conformance, durability, serviceability, aesthetics and perception. To be more specific, in software development, dimensions of quality include product operations, product revisions and product transitions. These are the three (3) broad categories of quality software. The figure below shows the key dimensions of software quality (Tyrrell, 2000).

Figure 1: Quality Systems' Key Dimensions (Tyrrell, 2000)

Authenticity in the software design & development

It has been an issue that software development is notorious for its unreliability. The main thing is that software development has been taken seriously by everyone involved especially for customers who are willing to pay more for it, the sales force which emphasizes it and can use it to win sales, the management who are willing to pay for the added development costs and for the management who are willing to invest in long-term development. There have been a number of themes which are aspects of software

development that are important in producing high-quality software. One is maintainability which involves making the software and making it easier to modify later. This is important for top-quality software and planning for this modification makes sense over the long term. A Pragmatic Web development does in needs of the IT methodology that allows the easy maintainability to the user at any level. The most important factor in maintainability is the design. The chances of later modification of the code of the software are higher if the design is clearly and coherently divided up to the responsibilities of the different parts of the project. (Tyrrell, 2000)

Another factor of maintainability is communication. The programmer or the user need to know what functionality or features owns what resources, the pros and cons of the different approaches and the circumstances in which the code or feature are expected to or not expected to scale well. All these information needs to be communicated properly from the people who understand the code itself. This creates the Pierce' pragmatism and eliminates ambiguity. Another factor to consider in software development is the requirements – specifying what the customer wants and needs. It must be clearly defined in the prototype about the differences between the requirements and specifications. Requirements are those that describe the goals of the customers while specifications describe the details of how the software is suppose to work. (Tyrrell, 2000)

In software development, there are two ways – the waterfall and agile development. The waterfall methodology involves sequence of steps which are planned and must be executed in correct order while agile methodology emphasizes an adaptive approach with shorter, iterated development cycles which can immediately respond to

feedback. A well-defined specification allows the waterfall model to proceed to the next stage. To have a clear understanding of the requirements in software development, it is best to use a use-case model. A use-case model describes what the software and the user does in a given scenario. It is also needed to include in a use-case model the behavior in error paths. Moreover, developing high-quality software must be highly reliable. One way to get an accurate estimate is to make one when the task is already done. This, in turn, reduces the margin of error. (Tyrrell, 2000)

On the other hand, to be able to get an accurate project plan, the design must include a work-breakdown structure to clearly see the different tasks of the persons involved in the development of the project. An example of an initial project plan is shown in the figure below (Drysdale, 2005-2007).

In software development, an important factor which plays a vital role is Object Oriented Design since this determines the structure of a software solution. This is vital for cost reduction and quality assurance in the design stage and must have a higher return on investment. The design of the software is an important factor to consider since it does not only determine the cost of the software but also the cost on implementation and maintenance. To be able to achieve the best possible design in software development, quality assurance that takes in the form design assessment and review is needed. If design measurement is without a purpose, it is still useless because the actual measurements would have no meaning at all. Thus, the metrics have to be associated with quality model which determines the interpretation of the measurements and defines the notion of the design quality.

Quality is measured by metrics. Software metrics are generally categorized into *product metrics* and *design metrics*. Project metrics evaluate the project specifications like - staffing levels, development phases and total effort. They measure how much has been done and how much is left to do in the project. However, project metrics do not measure the quality of the software being developed.

Design metrics are measurements of the static state of the project design at a particular point in time. These metrics look at the quality of the way the system is being built, Lorenz Mark, Kidd Jeff as cited in Jaana Lindroos.

Design metrics can be divided into *static metrics* and *dynamic metrics,* Tarja Systä as cited by Jaana Lindroos, The Dynamic metrics have a time dimension and the values tend to change over time and are only be calculated on the software as it is executing.

In addition, it is mentioned in a study entitled "Software Quality Assessment of Open Source Software" (Gousios, et. al.) that an open source project allows any user to and eventually evaluate their source code. In most cases, projects also published some process-related facts such as mailing lists and configuration management logs. There is a known conjecture in software engineering that refers to the external quality characteristics which are related to the internal quality characteristics and source codes are now providing some useful data for the assessment of the software's quality. In the field of software engineering, there is a framework which is provided by the International Organization for Standardization 2001 (ISO/IEC 9126). This framework is

used for software evaluation quality. This includes the six (6) quality attributes of software which is enumerated below:

- Functionality - This feature refers to the functional requirements or specification of software. This also pertains to whether or not the software functions as expected.

- Reliability - This feature pertains to the fault-tolerance and recoverability of software. This is an important factor since software which is not reliable will produce less output than what is expected.

- Usability - This is one factor which is also important in any software. Usability refers to ability required by the user to easily understand and learn the said software.

- Efficiency - Efficiency in software pertains to the use of resource behavior of any software and the speed at which it responds to the commands and actions wanted by the user.

- Maintainability – Software must undergo a frequent maintenance in order to meet the users' needs and specification. This feature of software refers to the effort by the developer to modify the software. This is important so that the software is updated with the adjustments made by any user.

- Portability – This feature of software refers to the ability of the software to run in whatever platform it is in.

The six (6) attributes mentioned are most important for any software to have. Functionality, reliability, usability, maintainability and efficiency are referred to as non-functional attributes while portability is a functional one. More often than not,

software is measured in terms of its functionality rather than its functional requirements. In some cases, software metrics has a big factor in relation to software quality. Therefore, this is widely used in software development. One more factor that is essential in software development and the assessment of its quality is the design of the software. A design principle called as sub-system decoupling allows the software to evolve as its modification becomes cheaper. On the other hand, the design of the software is based on three functional properties: Simplicity, Extensibility and Interoperability.

A good software engineering approach can be based upon the project completed. If the project gets positive responses from the users, it means it is 100% successful and it uses a very good software development approach. However, if a project gets negative responses from the users, it simply means they are not satisfied with it and it must have undergone a wrong software engineering approach. Therefore, for the software developers to get positive feedback and responses from users and 100% customer satisfaction, they must be able to do and incorporate a very good, if not the best, software engineering approach. This is vital to the success of the software or project being developed.

While evaluating the suitable metrics of the software usefulness it is, assumed that some of the factors behind the usefulness perception can only found through the direct interaction with the software users. So the current study adopts to quantitative research methodology for this section.

This chapter discusses the research designs, tools, surveys and statistical procedures, tests or comparisons. This also includes the techniques and methodologies used to obtain data and also the explanation on the sources of the data such as personal interviews and questionnaires. This also tackles the methods used to analyze the data in order to come up with a list of useful assessment tools in determining the usefulness of a authentic portal design specifications.

Models of business interaction

In the present business communication there is an increase in complication. Budding technologies are launched together with new forms of communication between customers and suppliers. The support of information technology is growing in different phases and different areas of business communication. There are also new varieties for e-business to be projected. There are lots of Business networks rising and there is a discrimination of business associations. There are methodical as well as realistic needs for ways to interpret and be aware of various business interaction circumstances.

When studying the interaction between business parties, conceptual representation of business interface can direct researchers and practitioners. Such representations can be used for interpretation, assessment, representation and design of business interaction. Such representations are to be useful and should be standard, which means, they must conceptualize necessary and common properties, and they must also be potential to make use of and become accustomed to so many unusual inquiry and design

circumstances. Within the schema of language action convention (LAP) many designs for business communication have been obtainable.

There are standard models for synchronically work, which can also be used for studying business interaction as well as for other sort of work. The source of such models arrives from the Conversation-for-action (Cfa) plan. All these models are not entirely leaning towards business communication between customer and supplier. The models illustrate the synchronization of work between an initiator and a performer. The synchronization described can be a business communication between a customer and a supplier, but it can also be any intra-organizational coordination. The other models have been developed, like BAT which is more adaptable to business interaction.

Assessing business interaction models

The power of the language and action viewpoint is that it is based on the inspiration that communication is not just transmission of information. When a communication is happened automatically the action also takes place which means, some action in relation to the addressee occurs. Actions are performed together with building dedication and conformity between business parties. Relationships are fashioned between businesses parties during presentation of business interact. As a back bone of LAP approaches agreements are to be observed. Both conformity on what to do and conformity on performed actions are emphasized.

The various types of LAP approaches can be distinguished into common coordination approaches like, Action Workflow and those approaches that are exclusively modified to business interaction. Action Workflow observes the discussion flow in an action workflow loop. The fundamental sequence of actions in the action workflow loop is depends on the thought of the two interrelated roles of customer and performer. The action workflow circle is separated into four phases; preparation, negotiation, performance and acceptance of the customer.

In the other design model called DEMO the foundation concept is the transaction. A transaction is a prototype of activity performed by two actors who are the initiator and the executor. A transaction is collected of three phases, they are, the Order phase in which two actors approach to a concurrence about the implementation of some future action the second phase is the Execution phase, in which the negotiated action is performed and the third and the last one is the Result phase, in which the actors negotiate a concurrence about the result as conveyed about in the implementation phase. Some universal ideas regarding roles and actions from these approaches can be used. Anyway, these approaches must be discarded as proper conceptualizations of business communication outstanding to their general character. All These models are restricted towards how one party that is the supplier satisfies the other party's need that is the customer.

These approaches are approximately the one-way models which are from the customer by means of a performer and back to customer. Such asymmetric focus is unfortunate

for business communication. One flaw in these one-sided models is that the act of payment becomes concealed. The business communication is more difficult than these loop models which are discussed. A business communication consists of interactions, both communicative and material interactions. In Action Workflow material performs such as delivery are expelled. A small and serious defect in these models is also the hypothesis of strictly pre-defined action prototypes. These assumptions can hinder the analyst in renovate how business communication actually is performed. These open-minded approaches towards business modeling, than these firm successions of actions, need to be assumed.

The utilization of a theoretical representation should not stand for forcing pre-defined prototypes on experimental data. The BAT model was introduced as a result towards insufficiencies like these. BAT is a six-phase model describing standard business interaction logic. This model illustrates communication between a provider and a customer. It begins with business fundamentals of customer and provider and goes through business communication. Example, offers inquiries, negotiation and a contract towards accomplishment, through delivery and payment and ends with the fulfilled product procedure or dissatisfaction and possible claims.

The various phases are 1) business fundamentals phase, 2) exposure and contact search phase, 3) contact organization and suggestion phase 4) contractual phase, 5) fulfillment phase, and 6) completion phase. The BAT model illustrates standard business measures between a customer and provider. These business procedures can be both

communicative acts which are offer, order, and confirmation and material acts such as delivery of products or money transfer. The nature of these business measures is interactive. This means that one action executed by one business client is intended towards the other business client. These actions are assembled within various substitute types, which represents the different stages described. This is nothing but interactions of proposals, commitments and fulfillments. The concept of business action is an important building block for conceptualizing business interaction. These features describe how business actions can be assembled to superior units of business communication in an encrusted framework.

Business action theory (BAT)

Business making is not simply agent-less transportation of information and material, it consists of customers and providers performing communicative and material actions. These various actions are related to each other in generic patterns. BAT is an attempt to describe the non-specific business action logic. This theory is established in communicative action theories and business relationship theories. These generic business frameworks describe business procedures which consist of six different phases. It begins with business fundamentals of customer and providers and approaches through business communication for example offers, inquiries, negotiation and contract to accomplishment in the course of delivery and payment and ends with the contented usage or discontent and achievable claims.

The phases are:

1. Business prerequisites phase: in this phase the fundamentals are recognized, both within the providers and the customer's association, for performing business.

2. Exposure and contact search phase: in this, the parties, customer and provider, look to contact each other. The suppliers' capability is presented and showing to the market. The customer's requirements and lacks generate demands.

3. Contact establishment and proposal phase: in this phase the dealer presents obtainable and achievable offers to a particular customer. The customer shows some requirements and purchase interest.

4. Contractual phase: in this phase the provider and consumer make obligations that are exposed clearly in an order form, from the consumer and an acknowledgement of the order from the supplier.

5. Fulfillment phase: in this phase the provider and consumer fulfill their assurance or commitments. The provider fulfils their commitment by performing and presenting a delivery of the work and the customer fulfils by paying for the received delivery.

6. Completion phase: in this the consumer and provider accomplish satisfaction or dissatisfaction. Either the consumer uses the delivered products with more satisfaction and the provider receives the payment, or certain claims are raised. There are certain business actions which always have to be executing when doing business, for example the communicative actions offer, order, delivery promise, and contract, etc. Such events always have to be performed in most important, but in uncomplicated business situations, these actions can be implicit or integrated with other actions. The theory also

accentuate that there is a certain principal order between various groups of actions within a business process. The different phases comprise such groups of actions.

What is Authentic activity

According to Merriam-Webster's dictionary the definition of 'authentic' is genuine and real. Lebow illustrated the activity of authentication as experiences of personal significance which authorize developers to perform skills in environments parallel to those in which the skills will be used. Brown, Collins, and Duguid illustrated authentic activities as the "ordinary performance of the culture." According to Newmann and Wehlage, authentic activities are real-world tasks that a person can anticipate to encounter on the job, in the home, or in other social perspectives.

An important inference of these definitions is that authentic activities have the potential to promote meaningful intellectual achievement and developing, since authentic developing activities are directly related to developers' real-life experiences.

Developers at every stage commonly complain that they do not perceive the relevance of the training tasks assigned. If the learning tasks are authentic, then students can make direct connections between the new material and their prior experience. They can also apply the new learning to their current practice and future activities.

The multi-modal conversation systems prepared with the capability to comprehend and practice natural language utterances frequently utilize a formal, clear specification of mutual conceptualizations for machine programming. In the same time the rising Semantic Web, bases on such formal conceptualizations, called "Ontologies" to include semantic information to the textual and other data which is available on the Internet. In

the mobile multimodal dialogue system, Smart Web navigation ontology is essential, which symbolizes knowledge about the locomotion of the projected user to support car, motorcycle and navigation of a pedestrian. Existing navigation ontologies illustrates route metrologies, which do not capture background dependencies. The single application-specific framework, for example, directing only pedestrians - always on foot and for all time on the shortest path, we can utilize such a context-free ontology. Nevertheless, many tunable parameters are taken to use which are offered by today's route planning and navigational systems, as it is described, one must provide the means to find the right background depending on the concrete situation at hand in the least persistent way, that is decreasing the amount of restrictions and role settings acquired by asking the user.

In the following it is described how the Smart Web navigational ontology challenges to provide a principled approach to encode pragmatic knowledge about achievable dependencies between the particular contextual factors, such as the actual weather, and other settings such as the alternative of road type.

Characteristics of authentic activity

In explaining the distinctiveness of authentic activities, different scholars have demarcated them in different ways. Herrington, Oliver, and Reeves conducted a thorough journalism analysis related to these characteristics and recognized 10 key characteristics of authentic activities.

1. Contains real-world consequence.

2. Are ill-defined, and necessitates developers to define the tasks and subtasks required to complete the activity.

3. Includes complex tasks to be scrutinized by the developers over a persistent period of time.

4. Providing the opportunity for developers to observe the task from different perspectives, using a selection of resources.

5. Provide the chance to collaborate.

6. Provide the opportunity to replicate.

7. Can be integrated and applied across various subject areas and directs beyond domain-specific conclusions.

8. Are effortlessly incorporated with evaluation.

9. Create sophisticated products, which are precious in their own right rather than as preparation for something else.

10. Permit challenging solutions and dissimilar outcomes.

Authentic activities that encompass these 10 characteristics make possible group work. Within a developing environment built around authentic activities, developers have their own roles, at play, or in other collaborative social contexts.

Authentic activity and web technology

Technology has been used to support both developing and training for a long time, even though with limited success. Regardless of a less than planetary history of effective usage in education, however, technology appears to have great potential to support developer performance of authentic responsibilities and their consequential developing. Before the extensive diffusion of computers and Internet technologies, it was to a great

extent complicated, and in some circumstances even impossible, for designers to use authentic activities in real-life settings because of the limitations in the subject matter, time and finances, and practical constraints and risks of physically moving designers to fields of practice. With the improvement of Web technology, such limitations have relieved.

A Web-based developing environment, if used efficiently, permits, enables, and promotes constructivist development using authentic activities. The Web suggests access to an enormous amount and selection of information, including dynamic data and visualizations of composite experience. Designers can provide developers with access to information about investigation results, realistic simulations of complex incident, and other forms of real-world or replicated data. The information can be obtainable in almost any form, such as text, graphics, audio, video, and any mixture of these. Evidently, information is not enough for developing. The developers must be challenged with authentic responsibilities that force the need to use, convert, apply, and reinterpret that information. By renovating information into various formats such as audio and video and engaging in mutual experiences, developers can create their own sense of understanding and develop robust proficiency, which is related to solving complicated and ill-structured problems.

As illustrated the majority of authentic developing tasks encompass team work. Fortunately, communication programs such as e-mail, bulletin boards, and the other interactive tools found in commercial or public-domain course management systems allows developers to talk about problems, discuss issues, and exchange information regarding job completion and related activities. In asynchronous circumstances,

especially, developers have increased opportunities for indication and examination of issues before they respond to a comment or query. Also, the designers can provide individual or group direction, recommendation, coaching, and feedback through the various communication tools. Because of these advantages, more programs are starting to make use of Web-based authentic activities.

Authentic activity and meaningful interaction.

The utilization of authentic responsibilities is derived from social constructivist principles of locating learning in the context of reality. Authentic tasks can promote knowledge transfer because collaboration among the development team not only helps them gain knowledge of the concepts under discussion but also demonstrates how these concepts are used in real-world contexts to build the travel portal. In the 21st century, few knowledge human resources labor in isolation; yet the team members may be divided by thousands of miles, they achieve their tasks collaboratively. To accomplish a challenging authentic task, the developers and designers must interact sharing their thoughts, relating their ideas to past experiences, collaborating with their peers, actively raising their own meaning, and integrating the dissimilar standpoint of others. Social constructivists believe knowledge can be enhanced through these types of interaction. According to the hypothetical principles of community constructivism, well-designed and well-operated courses focused on authentic activities should meet the expectations of meaningful interaction that contribute to developer's growth. Even though this sounds good in theory, instructors who want to use authentic tasks for their own courses

may still ask themselves, "How can we design an authentic task in our subject area? How can we facilitate the process of task accomplishment? What kind of challenges will we face when using authentic activities? How are other instructors using authentic tasks?" Most instructors need some field-related information and a clear picture of how to design and use authentic tasks in real courses.

Interdependency between semantic and pragmatic

Ontology: Ontology is a data model which characterizes a set of concepts within a domain and the relationships between those concepts. Usually it consist of Classes which includes sets, collections, or types of objects called Instances: the fundamental or "ground level" objects called Relations: the ways that objects can be connected to one another, where it can be used as schema for information management system, to rationale about the objects within that domain.

The ontology model

The ontology model which is used in OntoLight is a comparatively simple model which covers most of the well known light Informatica weight ontologies. The model which is described is a partition of richer ontology formalisms in the sense that richer ontologies could be imported but not all their articulateness can be used. The light-weight ontology model is defined by:

UA list of languages used for lexical terms. UA list of class-types used for representing various types of nodes in the ontology structure.

A list of classes, where each class can have several lexical representations in one or several languages. One class represents one node in the graph.

A list of relation-types used to label relations (links) between classes in the ontology graph.

A list of dealings involves classes in the ontology graph.

Every ontology can have one or several grounding methods. Each grounding model is a function which recommends zero, one or more classes for a given instance. This corresponds to a classification or categorization model in machine learning terminology.

Pragmatic patterns

Collaboratories are growing socio-technical arrangement of people and tools intended at providing surroundings for valuable and proficient collaboration. Concerning collaboratories repeatedly only fractional knowledge of different degrees of specificity can be represented. The technique uses ontology-grounded development patterns to capture different levels of sociotechnical circumstance knowledge about information and communication procedures in collaboratories, including knowledge about workflows, design processes and development processes. The collaboratory development is a Peircean pragmatic inquiry process in which proposition about socio-technical improvements of the collaboratory are constantly constructed and tested in the community. This process, properly supported, should direct to more successful and

efficient collaboratory advancement. Such an inquiry process could be a most important driver of meaning selection in a community and hence outlines an important constituent of the Pragmatic Web.

The collaboratory development process is an excellent example of a community using patterns to evolve specification knowledge about its own socio-technical system. In the existing system, we want to develop a broader viewpoint. Instead of using patterns just to develop collaboratories, we propose to use patterns to 'improve semantics'. Given is the theoretical model of the Web, what kind of prototypes do we need? How do we characterize them? How can we use them to transaction with some of the problems restraining the progress of the Semantic Web?

Patterns

Patterns are used to organize the world and make sense of things in difficult situations. Patterns are frequently used in the production of complex systems. An influential description of patterns in architecture, also useful for information systems, A pattern is a cautious explanation of a persistent solution to a recurring problem within a building context, describing one of the configurations which brings existence to a structure. A pattern thus includes elements of an answer to a problem, and concerns within a particular framework. The thing which is significant is to focus on the words recurring problem and persistent solutions, representing that the pattern characterization of problems and solutions must be common enough to cover up an assortment of problem condition which in actuality are forever delicately different from the ultimate, while

being precise enough to present useful solutions for the particular complexity at hand. Patterns are another observation on domain models which are stored in ontologies. The open environments like the Semantic Web is complicated for developing ontologies, because more policies make ontologies less generic, while inconsequential ontologies are not very useful. This problem of finding the right degree of semantic specificity of ontologies to address problems in the domains they were created for is not going to go away. The problem is not technical, but philosophical. If the types and number of applications of ontology are infinite, and cannot be known beforehand, it will not work to try and produce the 'ultimate ontology' of semantic patterns. The utility of ontology is always in the eye of the beholder, or more precisely, the eyes of many beholders: the many communities and individuals within communities using the ontology for their particular, changing, collaborative purposes. Accepting this authenticity of everlasting semantic preconception, conflict, and confusion, there is another, potentially more satisfying way to go. It consists of (1) making a strict theoretical partition between modeling and using ontologies, (2) recognizing metapatterns, i.e. pragmatic patterns that can (3) be used in meaning development processes in communities of users in order to make obtainable ontologies more useful and easier to change. These processes include what we referred to in the previous section as meaning representation, assignment, selection, alignment, and negotiation. (4) Only by equipment these pragmatic issues confrontational can the vision of the Semantic Web assisting the progression of human understanding as a whole, be recognized in practice.

Core pragmatic patterns

Core pragmatic patterns are needed to operationalize the vision of the Pragmatic Web. By using theoretical graphs, it should be comparatively easy to configuration and reason about their (Meta) semantics.

In a particular community, core pragmatic patterns consist of:

Pragmatic context: the pattern that characterizes the presenter, hearers, type of communication, and identifiers of the individual and common contexts of a community.

Individual context: the pattern that describes an individual community member, personal circumstance parameters and an identifier of the individual context ontology.

Common context: the pattern that describes the common circumstance parameters and an identifier of the common context ontology of a community.

Individual pragmatic pattern: the sense, pattern is related to an individual community member. Individual framework ontology consists of the total set of meaning patterns relevant to that individual.

Common pragmatic pattern: a meaning pattern applicable to the community as a whole. The common framework ontology consists of the total set of general meaning patterns related to the community. Pragmatic patterns are template descriptions that can be used as the foundation of theoretical definitions used in meaning negotiation and other meaning development processes. These patterns can be sophisticated and extended by communities if and when they are required. Pragmatic patterns have a normative status, being necessary, acceptable, or prohibited. In the case of a pattern being required, this means that the pattern must be satisfied in the procedure where it is

applicable. If it is forbidden, it could not be harmonized in such a process. If it is acceptable, it could be applicable, but it is not necessary that it should be applicable. Such normative identical processes can supply powerful direction of meaning development processes. The number of pragmatic patterns, if selected at the correct level of specificity, can be comparatively small. These procedures concern the development of explicated connotations. Several meanings are implicit, in people's heads. Even though they may, and probably should transform as well, understanding these things is more than the focus of, for illustration, psychological studies. Exclude the endless number of details which formulates each pragmatic framework distinctive, but only those that contribute to improving the effectiveness and efficiency of meaning development, with a focus on the meaning negotiation.

Patterns for the pragmatic design

The Pragmatic Web consists of a set of pragmatic frameworks of semantic resources. A pragmatic context includes of a general context and a set of individual contexts. A general context is defined by the general concepts and conceptual explanations of concentration to a community, the communicative exchanges in which these concepts are explained and used, and a set of frequent context parameters which are relevant properties of concepts, combined goals, communicative situation, and so on. Every community member also has an individual context, consisting of individual concepts, descriptions of interest, and individual context parameters.

The significance evolution plays a key role in connecting the variety of Webs. Two meaning development processes pertaining to the Syntactic and Semantic Web are meaning assignment and meaning alignment.

The Meaning assignment takes place when syntactic possessions are semantically enriched such as by XML-tags being added further to HTML-pages.

The Meaning alignment has to do with interoperability connecting the ontologies, to what degree do their semantic models agree, how can ontologies be significantly connected, How to compact with definitions that partially extend beyond in meaning. Such meaning alignment problems mostly focus on modeling representational and evolutionary aspects of ontologies.

Nevertheless, as we have seen, what requirements separate attention are issues of using ontology. Three meaning development processes related with the Pragmatic Web and its communication with the Semantic Web are meaning assortment, meaning representation, and meaning negotiation.

Evaluating the consequences of semantic choices in a particular pragmatic context implies that there needs to be some user-controlled meaning assortment process of semantic demonstrations. In such a process, the members of the community, who use the knowledge for a particular purpose, are actively involved.

The Community-acknowledged modifications in the implicit meaning of concepts should be in the end also directs to change in the meaning illustration in ontologies. For example, if users for all time ask for concepts that are not, or only inadequately, illustrated in ontology, it may be advisable to add this concept to the ontology.

The Meaning assortment and illustration processes, however, do not occur in isolation, but are determined by a meaning cooperation process in a specific community of users. In such a procedure, stakeholders arrive at the mandatory as determined by their shared goals amount of concurrence on shared concepts.

The E-business project for the travel portal

The Mobile broadband communication technologies which are ranging from wireless local area networks to UTFA and the evolving semantic web technologies situate the period for intelligent web-based services. Together these services make available the means for narrative ways of interacting with and accessing semantically described information. Based on these developments the Smart Web scheme seeks to recognize omnipresent interaction and semantic access via multimodal human-computer interfaces. The objective of the superior research attempt behind this work is to lay the foundations for multimodal user interfaces to access distributed and compensable Semantic Web services utilizing a wide range of mobile devices.

Integrating pragmatic knowledge for the authentic web portal design

The authentic Web foundational ontology makes use of the highly axiomatized Descriptive Ontology for Linguistic and Cognitive Engineering. It features various modules, for example ontology of strategy and a module called Descriptions & circumstances.

 Travel site

Recognize the visitor's needs, create individual circumstances, and create elements to help them along the way.

The Travel site presents health and safety information as well as host nation travel rules and regulations. It offers advice on what to take, what to leave home and how to ensure you have a safe journey.

User-centered design

Though not all design problems need the involvement of users in the design cycle, the cases where user expectations are the primary concerns for design, a tactic consideration of user characters and behaviours is needed.

The quality of human-product interaction can be improved by following a user-centred design process, Preece *et al as cited in* Renee Wever . The basic design cycle presented by Roozenburg and Eekels (1995) is followed by many patterns and consists of an analysis phase facilitating the designer to understand the problem to generate solutions for further simulation and evaluation. The final product will look back for accuracy to inline with the user specifications at each evolutionary phase.

Such user centered design will facilitate the designer not only with the user expectations but also the requirements of the technology tools during the development process.

Such user expectations, user characters and behaviours are collected and architected in the form of Contextual mapping

Schneiderman (1998) as cited in Goh Chu Hiang emphasizes that "all designs should be initiated according to a comprehensive understanding of the users' characteristics.

Such user characteristics include visitor purpose, education, demographic profile, training, personality and motivation. In the development of a travel Portal website, personas were intended to use to create model characters to correspond with real time target web users. Such prototype will help in further change making in the functionality of the website according to he user choices. Personas usage is encouraged by Goh Chu Hiang to develop the context of web development for cultural tourism web site, under the opinion that they provide design insights. The personas will also help to incorporate the behavior and experiences of the travelers that browse the travel portal.

Chapter 5

This chapter contributes the quantitative survey results to the study and gives the description of the results under the graphical representation of the major and related results.

Results

1. General Purpose Travelling

The study also found that 85% of the users consider expedia.com and the travelcoity.com as the general-purpose travel sites. Through these sites, the users are found to retrieve information on travel packages, freight details highly than other information.
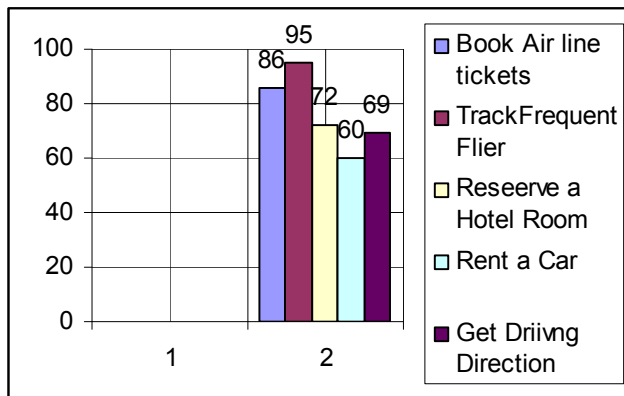
2. Inconvenience with Travel Portal

Most of the users doubt about the authenticity of the web information before ordering.
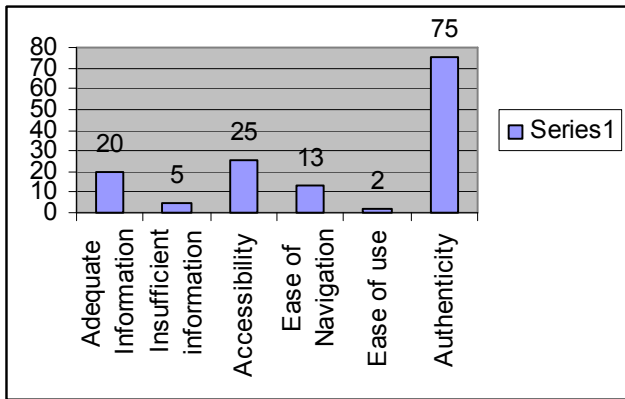
Problems with the travel web pages:

Most of the users experience difficulty with the Page load errors.
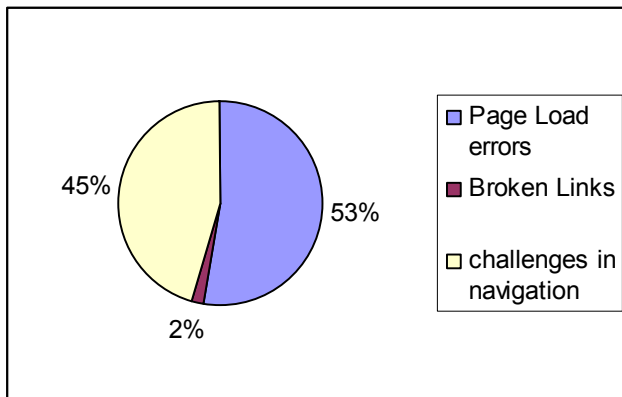
3. Expectation from a Business Travel site
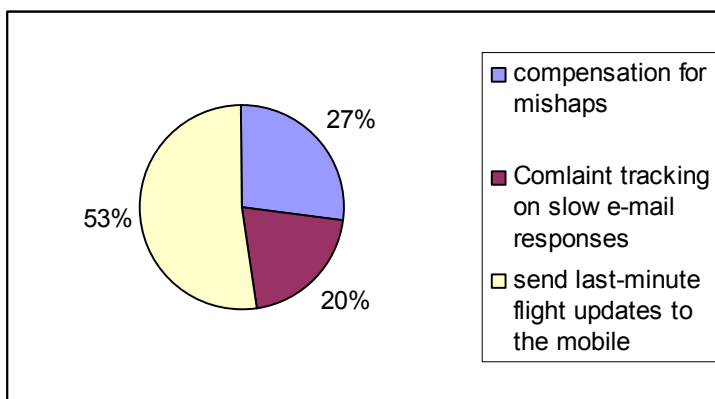
5. Reason to surf the travel portal

Chart axis labels: 0, 20, 40, 60, 80, 100

Categories:
- Choose travel pack
- Research destination
- find the best airfare
- book airline tickets
- track frequent
- reserve a hotel room
- rent a car
- get driving directions
- check the weather
- Others

Legend: Series1
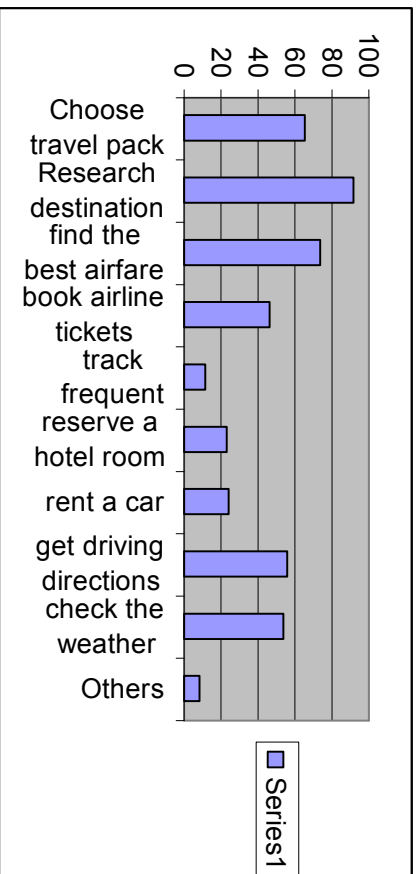
6. Knowledge on flight mishap compensation

57% of the people recognized the service availability with biztravel.com

Chart axis labels: 0, 10, 20, 30, 40, 50, 60

Categories:
- expedia.com
- Travelocity.com
- biztravel.com
- getthere.com
- priceline.com
- Hungry Suitcase
- RIU Cancun Portal
- YellowstonePark.com
- Seabourn Cruise Line
- Excalibur Las Vegas Resort

Legend: Series1
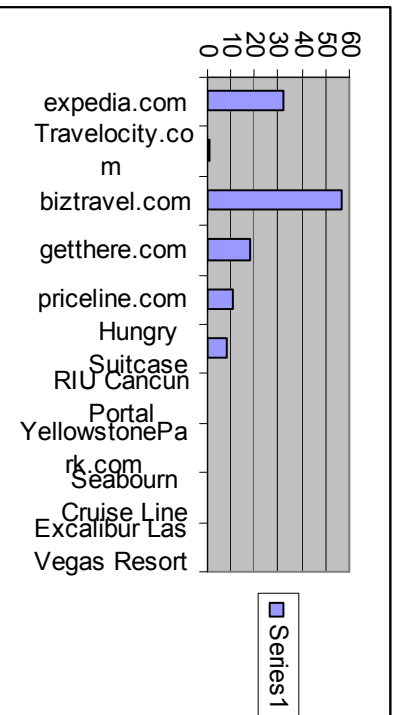
7. Recognition of Managed Travel site

Chart axis labels: 100, 200, 300, 400, 500, 600, 700, 800

Categories and values:
- expedia.com — 12
- Travelocity.com — 15
- biztravel.com — 45
- getthere.com — 67
- priceline.com — 12
- Hungry Suitcase — 14
- RIU Cancun Portal — 12
- YellowstonePark.com — 11
- Seabourn Cruise Line — 10
- Excalibur Las Vegas Resort — 7

Legend: Series1
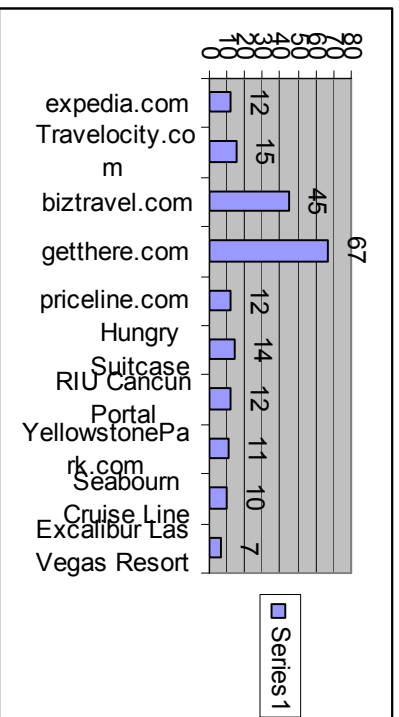
8. Expectation of necessary services from an online travel Portal

☐ *		Web Portal
■ *		Customer data management
☐ *		Multi service Provide Connectivity
☐ *		Ticketing
■ *		Accounting
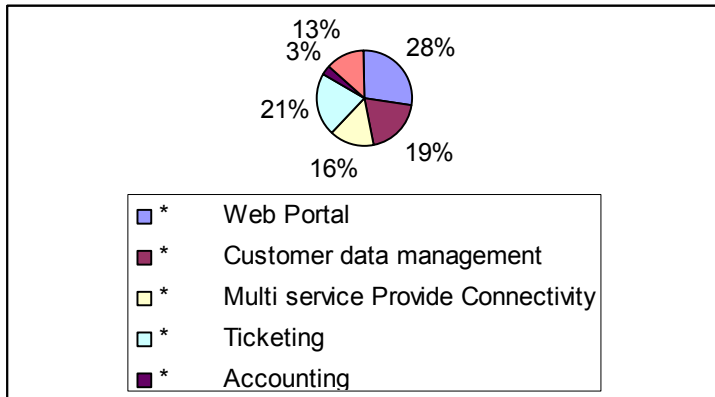
9. Brand Loyalty with the type of travel

Brand Loyality

13%

87%

☐ Personal Travel
■ Business Travel
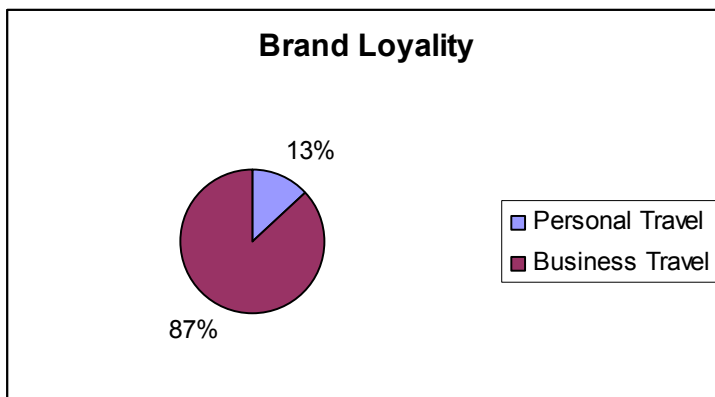
10. Sharing of Authentic Experiences

Sharing of authnetic experiences

3%
9%
32%
56%

☐ travel-related reviews,
■ ratings,
☐ photographs
☐ videos
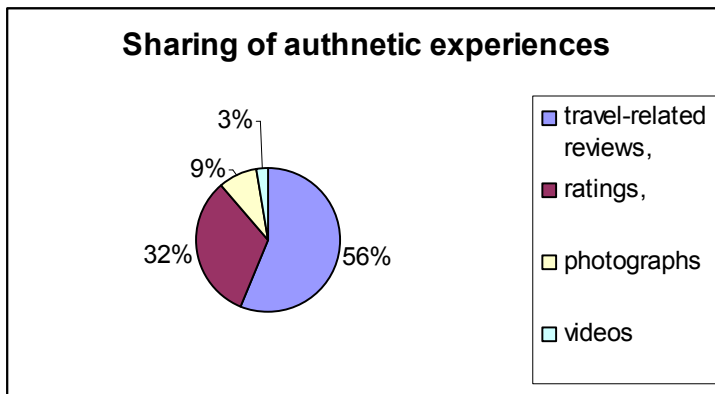
11. Consideration of Features as Authentic Sharing

Authentic consideration

Bar, Club & Pub *
Car & Driver, *
City Walking *
Cultural *
Entertainme *
Food & Cafes *
Lodging *
Shopping Show *
Me Around *
Sightseeing

■ Series1

Accessible Device:

Accessible device

26%
25%
26%
23%

■ Desktop *
■ Mobile *
■ Laptop *
■ Palmtop *
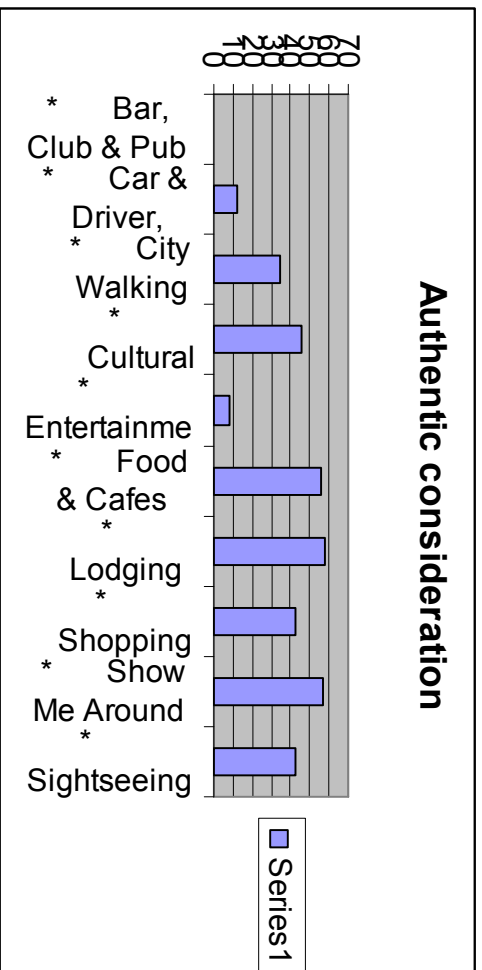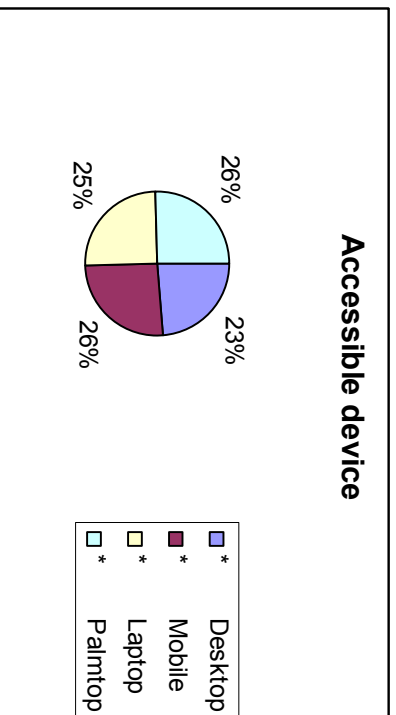
12. Usability information from the Travel Portal

Useful Information

Printable PDFs
Online HTML
FAQ section
Search by area
Map drill down
Area locator
Discussion forum
Experience sharing
Find Locals
Chat with Tour
Discussion board

■ Series1
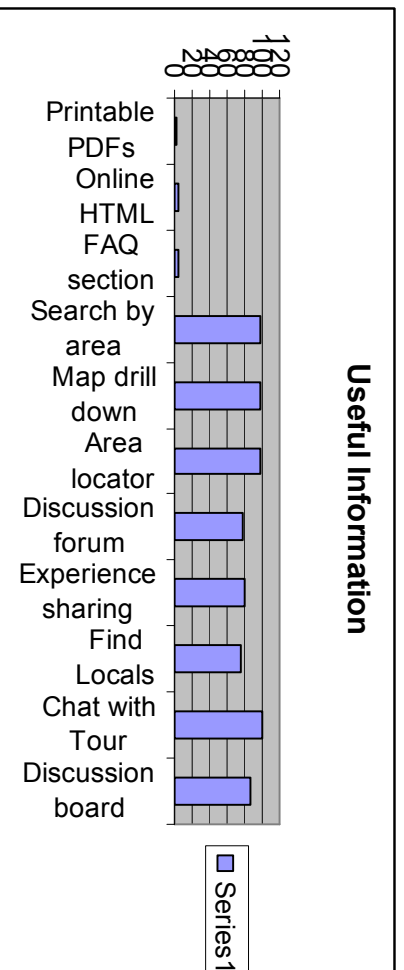
Findings

According to the above results the following user centered design can be obtained as a finding. An authenticated travel portal will be visited by personas from different backgrounds like students for study tours, and to perform research on arts and cultural tours, business people finding hotel bookings and air bookings for trips, other tourists that are interested in visiting folklore or art, monuments, nature and pilgrimages in different parts of the world.

The audience segmentation analysis for the travel portal is as follows:

1. Business User: (Information on Freight booking and cancellations)

2. Travel Agent: Freight booking/Car booking/ Hotel booking agents/tour guide

3. Student: (Research Purpose)

4. Holiday Traveler: (Mountaineering)

The primary persona was identified as Business User because of his high frequency internet usage and very high potential to travel. The characters and behaviors of the profile are used as the key reference in the website development.

The Secondary User is Travel agencies and their staff: These users are heavy traffic creating users on the portal. So for them site needs much bandwidth. Their design features run around the needs and necessities of the other users.

Student segment: This represents a younger generation the browses the site for study purpose or to make fun and to interact with other social groups. This group is a heavy internet usage group and looks for socially connecting internet tools like chat, discussion boards, audio and video file sharing and posting messages (mailing). This group if provided with particulars can refer or become the potential active travelers.

The fourth group of portal user is Holiday traveler who needs to be updated on fright and weather forecast in case of mountaineering and some sensitive place. Such users need GDSRS mobile tools to be connected on the portal.

The Challenges in developing prototype for such Web communication involve – Interaction, Engineering of the structures and Compliance and Trust:

Basing on the above analysis the following Prototype is proposed for the International Travel site:

THE PROPOSED PROTOTYPE MODEL FOR UTEA TRAVEL PORTAL

The Context Diagram of the international Travel portal:
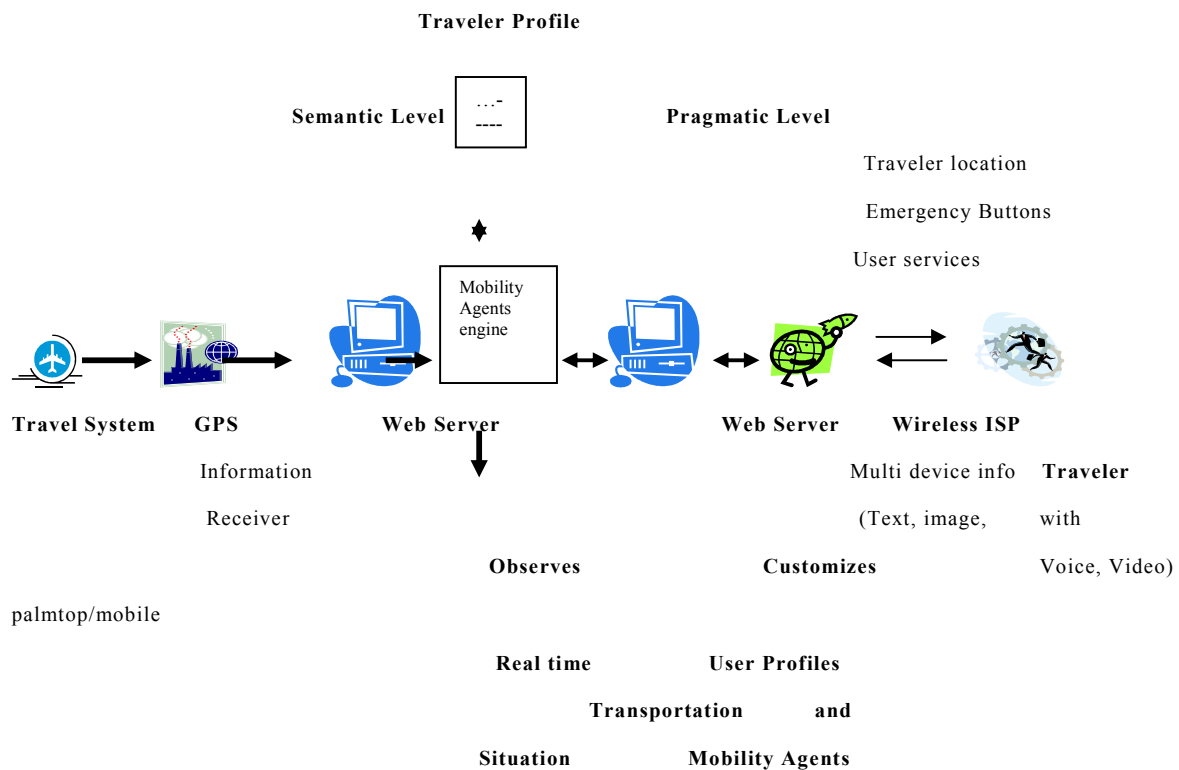
Fig-1- Context Diagram of UTEA-Travel Portal

PRAGAMATIC DESIGN FOR THE UTEA TRAVEL PORTAL

Purchases

Who uses

Ticket Booking Engine

OSLO HQ Members

Corporate Subscribers

Franchisees

Travel Agents

B2B Subscribers

Who are

Travel Departments

Customers

Paid Access

Ticket Ordering/
Tracking Info

Who carries

Free Search./Query

Mobiles

Paid Access

Publishes

UTAF
TRAVEL
PORTAL

Mobile Asse

GDSX
Travel Info,
Maps
Travel Guides
Travel data feeds
Weather guides
Local Person
interaction
Weather guides
Flight & Hotel
Bookings
Value added services

Contains

e-Business
Travel plans &
Product catalogue

Sends alerts on

Web services

using

HTML/JAVA SCRIPT

XML/ API

Meta Search Engine

Content Management
System (Text, Image
Video, Audio)

Auto alerts,
E-mail notifications
Promotional Distributions

Traveler Data base
(uses for
promotion)

Fig-2: Pragmatic design of the UTEA Travel Portal

Chapter 6

Choosing the right architecture in Internet applications is very important. The architecture of the solution is the foundation for all that will be built on, and it has happened very many changes in the Internet languages last couple of years, which means that this is a cluttered area within programming. Choice of technology like operating system and programming will be have major consequences, and the wrong choice of technology can provide significant constraints of what is possible to develop an affordable price.

This chapter proposes the pragmatic prototype model for the authentic travel site with a graphic representation and feature outline. Proposed Business Model for Travel Portal is given here. When you create a system like this, there are many technologies that you can choose from. In this task I wanted to choose a technology that could be interesting and appropriate to develop flexible web applications.

I chose the same database and programming for both prototypes. There are several advantages of using these two technologies.

PHP

PHP was a tool for development of sites with relatively simple functionality. It has however, developed into one of the fastest and more advanced tools for large sites. In unlike other web development languages such as ASP and Java, PHP is designed specifically for the web. The language allows object-oriented programming and has a good integration with different databases. PHP executes quickly and can withstand high traffic. Security is thorough and well. PHP can run both on Linux, Windows and other platforms. Websites in PHP can exchange data

with websites developed with other technologies via XML. PHP is used today to store critical

systems such as stock market trading over the Internet.

MYSQL

MySQL is a very fast database for storing and retrieving data. The contents of the databases will

also often implemented into web pages, as well as control the look and features of the page. PHP

uses often MySQL databases for this purpose. MySQL suitable for small and medium-sized

databases. If MySQL running on Linux, able to support the large databases with high traffic.

PHP & MySQL

PHP and MySQL is free Open Source tools. As we normally use Apache web server. This

combination provides a very fast Web service. The source code for all Open Source tools is

freely available. The same is a variety of applications and libraries for PHP and MySQL. Any

support can be purchased from many competing suppliers. A Web site developed in PHP and

MySQL can easily deploy and managed by an ISP. Since the software is free, is this is normally

the cheapest webhosting found.

	Prototype
Operating System	Linux
Database	MySQL
Software	PHP installation
Language	PHP. HTML, SQL
Web Server	Apache

Research Website

In this section I introduce how I have made the research website for the scientists who will work with the Authentic Travel International project.
The goal was to create tools for researchers, designers and developers that they could cooperate and communicate with each other. At the same time to collect all scientific publications that could be useful for Authentic Travel International can be developed.

I have built the system modular so you can easily add new modules and at the same time can remove modules without affecting the system. I have also separated the encoding from the design.

Page Structure

ATI

Blocks   doc   images language includes themes modules localadmin superadmin

footer.php   header.php   index.php   config.php   funksjoner.php
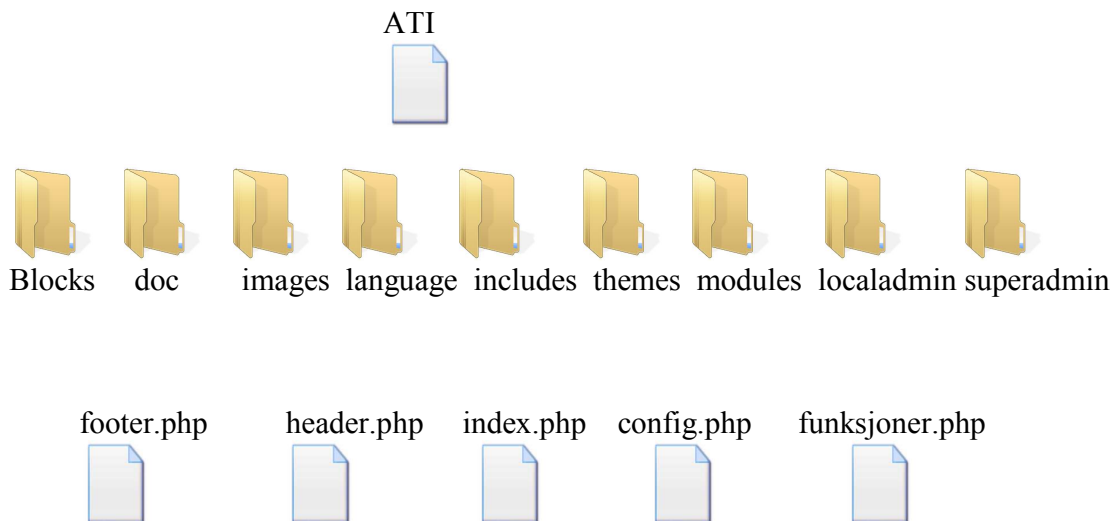
Modul

The system is modular. I have a file called modul.php and superadmin.php.

```php
<?php
    $path = $_GET['name'];

    include("modules/$path/index.php");

    ?>
<?php
    $path = $_GET['name'];
```

```
include("superadmin/modules/$path/index.php");

?>
```

All modules are placed in the "modules" and "super admin" folders. Where each module will have its own index file.

Modules

Loginn   news   lostpassword

Index   index   index

superadmin

Modules

Article   news   profil

Index   index   index
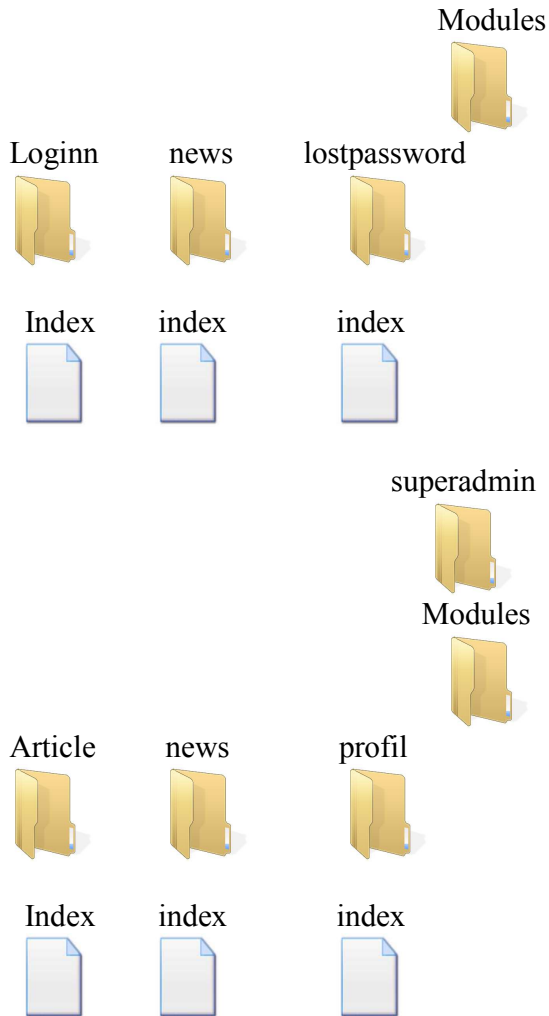
In the super-admin folder, all files that are based right is placed there and that they have admin rights to access.

Themes

The system is built, so that one can have different design for the page, you can add more themes, or remove them. In config.php, you can decide which theme to use.

```
$theme="DeepBlue";
//$theme="Stil";
$foot="Copyright 2009 Authentic Travel International ";
$language="norsk";
```
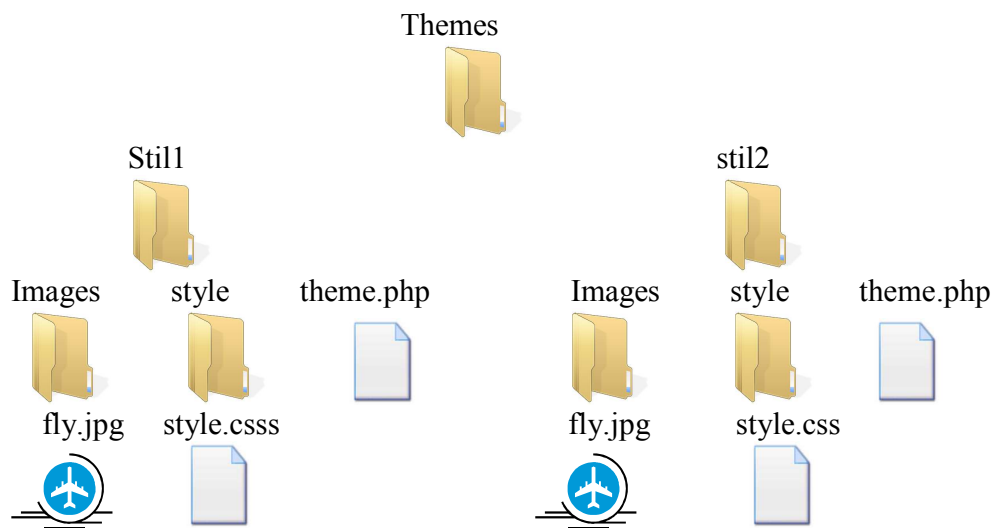
Themes figur

Layout

Layout is organized so that they call a header.php and footer.php

header.php

```
/******************************************************/
/*        Hoden til alle filer              */
/* Her hentes selve stilen, via themeHeader()        */
/* Blokker som kommmer på venstre side hentes også her   */
/******************************************************/


include_once("funksjoner.php");
include_once("themes/$theme/theme.php");
echo "<html>\n";
echo "<head>\n";
```

```php
echo "<title>Authentic Travel International Project</title>\n";
echo "<LINK REL=\"StyleSheet\" HREF=\"themes/$theme/style/style.css\"
TYPE=\"text/css\">\n";
echo "</head>\n";
themeHeader();
```

footer.php :

```php
themefooter($foot);

echo "</body>";
echo "</html>";
```

in funksjoner.php there are those methods which needed so that what should be on the right side or left side

```php
/*****************************************/
/*      Blokker på venstre side      */
/*****************************************/
function left()
{
 $who = page_check($_COOKIE['USERNAME'], $_COOKIE['PASSWORD']);
 include("blocks/hovedmeny.php");
 themesidebox("Redesign","$hovedmeny");
 include("blocks/innlogging.php");

 if($who==0)
 {
      themesidebox("Innloging","$logginn");
 }

 else {
      themesidebox("Innlogget","$loggut");
 }

}

/*****************************************/
/*      Blokker på høyre side      */
/*****************************************/
```

```php
function right()
{
 $who = page_check($_COOKIE['USERNAME'], $_COOKIE['PASSWORD']);
 $eier=isEier($_COOKIE['USERNAME']);
$sentral=isSentral($_COOKIE['USERNAME']);

 include("blocks/siste_nytt.php");
 themesidebox("News","$beskjed");

 if($who!=0 & $sentral!="1")
 {
        include("blocks/felles.php");
        themesidebox("Snarveier","$felles");
 }

 if($who==1)
 {
        include("blocks/superadmin.php");
        themesidebox("Superadmin","$superadmin");
        include("blocks/dokumenter.php");
        themesidebox("Themes","$dokumenter");
 }

 else if($who==2)
 {
        include("blocks/localadmin.php");
        themesidebox("Lokal admin","$localadmin");
        //include("blocks/dokumenter.php");
        //themesidebox("Dokumenter","$dokumenter");
 }

/*****************************************/
/*   Sjekker ved første innlogging       */
/*****************************************/


function authenticate($username, $password)
{
        $query = "SELECT * FROM personer WHERE brukernavn='$username' AND
passwd=md5('$password')";
        database_connect();
        $result = db_query($query);
        $numrows = mysql_num_rows($result);
        $row = mysql_fetch_array($result);
        db_close();
```

```
        if ($numrows == 0)
        {
                return 0;
        }
    elseif ($row["isSuperAdmin"]==1)
    {
                return 1;
        }
    elseif ($row["isLocalAdmin"]==1)
    {
                return 2;
        }
        else
        {
                return 3;
        }
}


/**************************************************/
/*      Sjekker hvergang i en sikker side         */
/**********************-***************************/

function page_check($username, $password)
{
        $query = "SELECT * FROM personer WHERE brukernavn='$username' AND
passwd=md5('$password')";
        database_connect();
        $result = db_query($query);
        $numrows = mysql_num_rows($result);
        $row = mysql_fetch_array($result);

        if ($numrows == 0)
        {
                return 0;
        }
    elseif ($row["isSuperAdmin"]==1)
    {
                return 1;
        }
    elseif ($row["isLocalAdmin"]==1)
    {
                return 2;
        }
        else
        {
```

```php
                return 3;
        }
}


function getFullName($username)
{
        $query = "SELECT fornavn, etternavn FROM personer WHERE
brukernavn='$username'";
        database_connect();
        $result = db_query($query);
        $row = mysql_fetch_object($result);
        $fornavn = $row->fornavn;
   $etternavn = $row->etternavn;
        db_close();

        return "$fornavn $etternavn\n";
}


function getId($username)
{


        $query = "SELECT idPersoner FROM personer WHERE brukernavn='$username'";
        $result = db_query($query);
        $row = mysql_fetch_object($result);
        $id = $row->idPersoner;

        return $id;
}
```

Proposed business model for travel portal

The key technical requirements for the system are as follows. The scope of the system is to develop and implement a complete contacts database system with the following capabilities:

- A system that can store, share and retrieve all contacts info in one centralized database.

- The system can retrieve contacts information even from remote area through h web based interface.

- Automatic alerts on the important alerts and To dos with contact list.

- Contacts can be segregated and viewed according to the type and can be formed as communities.

- Contact the contacts in database from different browsers and platforms

- Different modes of contacts like-email, phone, SMS, teleconference is possible with the possible availability of communication method with the contact

- Various levels of data export into CSV (for opening with MS Excel), HTML (for publishing as web pages) and TXT (for importing to all kinds of databases) for other applications like Outlook Express, MS Excel and FileMaker etc.

- Bulk mailing and mass campaigning to various contacts with a single mouse click.

Commercial contacts database creation through the Travel Portal

There is a growing need for contact management and information sharing for every small and large organization which is in the way of expansion. Such organization looks to create more contacts to improve its business operations. Hence the need for seeking consultancy services to create such databases is increasing as a firm may not have that reach and capabilities to collect the data on it contacts and to store them. The endeavour to offer customer relation management services are also pushing the market demand for the commercial contacts databases.

Requirement for Agency and Traveller database design

The UTEA is in need of developing commercial contacts database for the following reasons:

- A contact management system that allows for an unlimited number of travellers per agency, in one centralized location.

- Correspondence templates for pre-merged business letter, proposals, and estimates. Includes a label generator and the ability to fax or e-mail from within the program.

- The resource locators or the project seekers need to get the contacts list in community wise (bus, air tc,)

Business goal to implement commercial contacts database system

Personal contact list according to the agerncy type

Access to general forum for business discussions

Search for local and global traveller contacts

Create and manage individual networks

Join networks and take part in discussions

Be part of a large and growing travelling-oriented networking website

Extensive tools enabling to network with other members

Recommend a company /Service

Submit own events for all members to see

Add and manage classifieds

Add and manage products or services

Traveller Management for Business to Business sales.

Aim & Objectives of database development

The objective of this process is to generate qualified licensing leads for the agency and turn these leads over to the client to begin negotiations and promotions. With the collecting and synthesizing of background information on the industry, the client is in a better position to enter into such an agreement. The new contacts database offers the following business benefits:

- Improved knowledge share.

- Improved customer service.

- Improved accessibility between networks.

- Increased revenue to the country.

Some of the features of Traveller contacts database

The traveller contact database needs the following features

- **Traveller or Customer Information**

    o Track traveller information.

    o Store all traveller information according to business segment in custom fields.

    o Add traveller to a list.

    o Add traveller to multiple lists.

    o Track traveller by their organization or by routes.

    o Record company data only once for all traveller s, view all communications for that company.

    o Attach files.

    o Attach pictures, Word documents and any other files to traveller and communication records.

    o Manage duplicates.

    o Automatically identify potential duplicates, then merge or delete them instantly. Control how suspected duplicates are highlighted.

    o Date-stamped notes.

    o Track entire history of interactions with a customer, complete with date, type of interaction, notes and any files.

- **Database Enhancements**

    o Customize the data.

    o Create custom fields or delete those which are not necessary, change screen layouts and create custom reports and views.

- Automatically fills in City, State and Country by postcode and vice versa (may not cover all areas)

- **Reporting Functions**

  - Search and Filter the traveller s in various ways.

  - Select records by any combination of fields, part values, ranges and history.

  - Customize default selections, sort results multiple ways

  - Customize views & reports.

  - Create customized views and output reports without programming within short span of time.

  - Management and Statistical Reports.

  - Produce powerful management reports, detailing performance of travellers business, products, staff and segments of customer base.

  - Export reports for use in other programs.

  - Drill-down Reports.

  - Interactively drill through statistical reports, move down or across, navigate to find any key information.

- **Making traveller**

  - Communicate with customers and travellers.

  - Send personalized messages via email, fax and letter to people in the individual database or to easily created distribution lists.

  - Automatic communication history.

- Letters, faxes and emails sent through SCD are automatically tracked on the database giving you access to the history of contacts.

- Manual communication history.

- Manually record conversations or other contacts, to supplement the automatic history data.

- **Marketing Functions**

  - Call cycle.

  - Create automatic communication plans, link contacts to the plan individually or by custom searches.

  - Organized alerts for events and conferences.

  - Record anniversary and birthday data for traveller s, or any other important dates.

  - Traveller database analysis.

  - Analyze travellers by any parameters in the database.

  - Track traveller s by their sales patterns.

  - Run loyalty programs, targeted special promotions, up sell and cross-sell.

  - Efficiency Analysis.

  - Analyze ROI of your marketing effort; see what works and what does not.

- **Data Sharing and Collaboration**

  - Network sharing

  - Share data across a local network, pay only for concurrent users.

  - SQL Server technology.

  - Share data between many users, across inter-office network or Internet.

- o Handle very large number of records

- o Internet sharing.

- o Synchronise data between disconnected computers across the Internet in just a couple of keystrokes.

- o Password protection.

- o Set a username and password to access data.

- o Flexible access.

- o Allow different users access to different

- **Integration with Other Systems**

  - o Import from various sources.

  - o Import from Excel, Outlook or other standard text file formats.

  - o Web forms to Contacts

  - o Convert registration forms from web site into contacts automatically.

  - o Export information.

  - o Export into a tab

Security alerts

Email or mobile alerts can be sent almost instantly to the traveler's phone, suggesting on a troublesome event or potential predicament that might impact them. By taking contracts on security alert services, companies can guarantee their travelers contacted on a 24/7 basis.

'Reflecting the prominence on security' which is present at many corporations, is the unyielding link between the travel department and the security department.

UTEA TRAVELS | Travel Vertical Modules

- Portal access to Internet, Intranet and Extranet.

- The customizable designed templates or wizard-template-builder is used, with the capability to generate hundreds of possibilities of professionally deliberated building blocks to generate a template via portlets contained by a portlet module, especially for travel & tourism vertical market segmentation.

- Flexible and user friendly GUI supported portlets within a portlet drag and drop website constructive and editing features.

- Self constructed customizable social set of connections modules.

- Enormous network of travel wholesale and direct suppliers to decide, from budget, sensible, lavishness to ultra-lavishness products category such as published fares, aggregated consolidator fares, cars, limousines, transfers, vacations, holidays, hotels, adventures and niche tours, cruises, entertainment & dining, yacht charters activities, private jet charters and travel insurance.

- Preferred contractors or booking engine automated online application form in which suppliers may approve or reject the request.

- Pre-built booking engines and chosen wholesale suppliers network to choose from the approval from suppliers and some engines are free and some may require setup fee or licensing fee.

- Booking of the Engine from third-party integration place holder.

- Third-party XML based integration, for example build up your own booking interface in which the approval process is required.

- Third-party negotiated rates uploading, administration and XML integration.

- Preferred suppliers commission matrix and schedule.

- Preferred suppliers enabling or disabling module.

- Suppliers of record contact information and look up database.

- Customizable template supported portlets within a portlet inventory web-database management catalogue and dynamic packaging via shopping cart-booking capabilities for non-GDS travel & tourism products and services for example accommodation, transfers, vacations, holidays, adventure tours, specialty cruises, activities, charters, promos & coupons and extras.

- Cross-selling and up-sell products and services.

- Payment gateway & mercantile use, you're own or suppliers or both will need to use providers mercantile account for commissionable products.

- Net rates or commissionable rates contents to choose, own mercantile account on net rates – suppliers may require you to deposit funds to be subtracted with all your bookings.

- Travel deals and products content-holder. With keywords explanation tagging association to automate travel deals graphics, price and description coming from your preferred suppliers booking engine. And dynamically display it in your website, no more cutting to generate fresh dynamic contents.

- Affiliated program deployment month to month subscription, no long-term contract.

- Franchise program deployment negotiates directly with suppliers. Transaction fee and setup fee is required and one-year contract.

- Real-time margin commission tracking and reporting.

- Affiliate program's parent-to-child virtual hosting less than one master account with unique URL feature via CNAME domain pointing.

- Monthly hosting, transaction fee and revenue-share model to choose from.

- Custom world class portal design, web apps development and integration.

- Economical website-build training, maintenance, support and enhancement services via block-of-hours purchase program.

Mobile Engine Features

Mobile tour technology is rapidly being adapted with new functionalities coming into picture to deal with other business travel issues.

Pre-trip approval from mobile devices

Facilitates the traveler's manager to support the trip using the mobile device at the click of a button when away from the office. The same is being developed for mobile expense report approval.

Policy enforcement while on the road

Mobile services that move forward chosen suppliers and rates to travelers' devices in the occurrence of a change of travel plans would eliminate a huge gap in the managed travel process, which often leads to uncooperative behavior. When travelers miss a flight, they typically take the easy route out, booking the best flight home, despite the consequences of the travel policy.

Some travel suppliers are planning to offer straightforward booking applications that would facilitate travelers to rebook a flight using their mobile device if their flight is missed or cancelled. As a mobile application of the commercial self-booking tool, the booking would be submissive with the travel policy. Such services save on travel

agency transaction fees, since it saves the traveler from having to call the agent to rebook the flight.

Business model for UTEA Infrastructure

Scenario

In the scenario of Globalization, tourism has become one of the majorly attracted area by the global customers. The needs and characters of the Industry greatly vary from time to time.
The local business traders are influenced by the international chains and brands in their offer.
Also the authentic travel business lacks clear quality standards and control, causing the potential customers attracted towards the established enterprises, though less authentic.
But authentic travel experience cannot be met by the foreign intruders.
A foreign visitor expects the authentic tourism from the local communities that offers the traveling experience in the natural way to conserve and refresh their cultural heritage, representing the local economy, resources, jobs, talents and lifestyles. So it becomes imperative for the local traders to raise the levels of their services to meet the demands of the global travelers.

Causes

The cause for the underdeveloped authentic traveling is the lack of support as like a modern business. The modern business will have the Infrastructure like design, money, marketing, modern communication technology and global or international presence, growth factors and

opportunities, investment opportunities. International chains do. So it is indeed that UTEA should develop a constructive Infrastructure that not only becomes eligible to attract the global customers but will also retain its authenticity. An Information driven business model can reduce the ambiguity of customer expectations and the industry provisions.

So the Infrastructure for authentic International tourism can be built by involving the ingredients like money, modern communication technology, state-of-the-art information design, marketing, information technology etc.,

The Infrastructure

The implementation of UTEA new business model is based on the development of value-based franchise network. These value-based franchises are intended to offer the authentic travel. Till now the local franchisees are facing competition from the large chain competitors. But the UTEA franchises can get the competitive advantage by developing the infrastructure using the money, modern communication technology, state-of-the-art information design, marketing, information technology.

The new infrastructure gives the following 6 key advantages to the local franchisees.

1. Franchisee Network Design

2. Marketing

3. Technology adaptation

4. Quick Communication

5. Easy Recognition /Identification

Components of the Infrastructure

The Components of the Infrastructure can be explained dint eh following way:

1. Contacts Databse:

This integrates the various components of the International Travel business like – Destinations (UTEA Coordinators), Travel Business Members (UTEA B2B), Consultants- (University of Oslo, Norwegian Academy of Arts and Design, Holiscope Co) Event Managers/ organizations, Sales Staff, modules, while the Internet software development and communication design, Customers (Personal & Incentive) and UTEA Internet Portal.

2. Marketing & Sales:

UTEA marketing strategy involves the positioning of the company as a core value. Creating novelty attractiveness to the concept is one way to face the challenge from the modern businesses.

Authentic Travel Portal is the primary promotion tool which facilitates the interesting tour promotions to the Oslo and Holiscope staff, so that they can browse through the portal after office hours and select particular tour packages foe vacations. Authentic experiences, photos and file sharing options can easily facilitate the traveler networking on the portal.

Regular news letters and article pushing can also remind the people about the tour promotions.

The marketing aspects can be designed into ways: One for franchisees and another for the consumers.

Marketing towards franchisees

This is done by establishing contact database of franchises through the existing network of agencies and friends. A step by step approach of including the Destinations will improve the franchise contact DB. In selecting the Franchises it is necessary to make a thorough evaluation.

Marketing towards consumers

This can be done by identifying or profiling the targeted customers for business trips, holiday packs, student trips, professional groups, etc., and targeting them with unique promotions.

3. Revenues:

Money from Business Systems and Organizations; The major revenue sources of UTEA come in 2 ways - 1. One time installation fee of the laid on franchisees, and annual membership fee. 2. Customer payments through online ore booking for designations or traveling facilities through authentic travel portal

4. Technology:

The UTEA Travel portal is proposed to be developed with high end technology like XML and web services using semantic and pragmatic web techniques. Such facilities will give competitive advantage of the information exchange between the travelers and Traveler service providers.

5. Communication:

The technology offer instant communication by using h tools like GDSRX which gives the instant reports and alerts to the travelers wherever he is from the tour service operators.

6. Business System Organization:

The Infrastructure by using the technology send the event management tot eh franchisees and to the customers on the events they selected from the various options given on the portal, that is

developed using the pragmatic approach. The topic based maps and searching functionality will also allow the traveler to get the desired information on the portal

7. Online Sales:

The portal facilitates the online sales for the destination which makes the effort of the customer less to attract them more.

Travel portal modules

The proposed system offers the existing authentic travel businesses all the advantages that are now reserved for their international-chain competitors, and at the same time to support and enhance their own intrinsic advantages.

1. **Destinations:** Offers the traveler the access to all his needs like hotels, food, Entertainment, recreation activities etc.
   - Accommodation: List of Hotels in which some of them can be booked online and availability of rooms etc..
   - Entertainment: details of the entertainment programs, food festivals and places in that city and the root map to reach the destination.
   - Recreation: recreation programs conducted by the event organizers.
   - Add, Edit, Delete options for updating the information of all the attributes.

2. **Members or Travel business modules:**
   - Details of all the Travel agencies —the tours package details and the costs and advantages of different kinds of Travels and packages etc.
   - Admin can Add, Delete, Update the travels, costs and packages of the travels.

3. **Fine arts Gallery:**
   This module not only displays the fine arts but also offers the shopping facility for the viewers through online purchase options.
   - Display of the fine arts of different places along with the description.
   - Shopping cart for the items along with the payment gateway.
   - Add, delete, update of the items in display and the description and the cost of the items.

4. **Communication platform:** Discussion forum, Blog about the tours, places and services.

- Open feedback form, Blog for the authentication experience, discussion board and the questionnaire to clarify the doubts of the users.
- Add, delete, and update options to update the feedback and the questionnaire forms.

5. **UTEA Sales**: Flight booking, trains, buses, Destination booking, Travel agent booking etc. The advertisements of various products or sites.
    - Different categories of bookings are maintained like –flight, bus, and destination booking like hotels that were authorized by this website.
    - It will take the scheduling time of journey and the amount. The admin can add, delete, update the details of the sales.
    - Ad management will be given so that the ads can be add, delete or updated from the control given.

6. **Event Management Module**: This module offers the dinner party or a vacation to an incentive trip or a conference to the travelers.
    - It will have the theme of the party and the venue details and the other attendee details which can be updated by add, delete or update options.

7. **Event Scheduling**: Automatic scheduling of Business Trips by Freight, Car, Conference hall/Hotel bookings, Calendar, Alerts etc.,

DB Model for Authentic Travel Portal

Destinations

Sell Id   PK
Seller Name (varchar)
Requested Cost   (Int)
Contact No (int)
DateOnMarket
(Datetime)
Business Name
 (Varchar)
Business Address
City-state
Business phone (int)

Customers

Cust Id   PK
Cust Name
(varchar)
Estimated Cost
(int)
Contact no (int)

Weather

watch

Exp Id FK
Area   (varchar)

Package Type

Tour type code
(primary key)
Tour model
(Varchar)(Region, city)
Feature   (varchar)

Events

Event Id   Primary key
Cust ID   FK
Sell ID   FK
 ID   FK
Exp ID   FK
Tourtypecode FK
Area   (varchar)
State   (varchar)
Estimated Cost   (int)
 Address (varchar)
Picture   (image)

Search

Search ID PK
Destination
(varchar)
State (varchar)
Max price (int)
Min price (int)

Cost Estimate

Buy ID FK
Expert quotes
Area   (varchar)
Soldoutprice
(int)

GDSRX

Art Gallery

Buy ID FK
Area
(varchar)
Sold out
price (int)

Tour Guide

Guide ID PK
Guide Name
Quotes (int)
REgion Name
(varchar)
Profession category
(varchar)
Business Name
 (Varchar)
Business Address
City-state
Business phone (int)

Staff

Staff ID
PK
Purpose of
travel (int)

Maps

Area

Chapter 7

Conclusion

The study after an extensive research of the literature and by conducting the qualitative and quantitative research, proposes a suitable prototype for the travel portal for UTEA. The study through a survey method finds that the business model involves four primary users – business, regular, student and travelling agents to interact with the portal for various transactions. The major information needs that are identified on the portal for users are. Information on Freight booking and cancellations, Car booking/ Hotel booking agents/tour guide, Research Purpose and Mountaineering etc., Hence the primary tools that can be used with the portal are - Web services under semantic level and the Mobile services and GDSX at the pragmatic level to offer the user desired content.

The prototype offers e-commerce platform for order booking for internal and external customers and a CMS for franchisee and contact database management. A Search Engine is also proposed to offer an expensive search for the various levels of real time querying.

Limitations of the study

As the current study data involves too many parameters like User centred design features, authenticity, pragmatic web technologies to be adopted at different layers of the development process, the study became a bit complicated one in identifying the relation of each single variable on its dependent. However a careful understanding of the concept through the content reference from various angles and further investigation into the literature reduced the complexity and limitation of the study.

Also as the quantitative research method that intended to bring the user centered design features may not be sufficient enough in its strengths to pull all the authentic web features for a travel portal, because of the fact that sample population is only a representation of the entire population but is not the entire population on its own. The results may vary is it is conducted with another sample form different demographic parameters.

Also due to the lack of standard guidelines on pragmatic web techniques for the design concept, the correlation of the results of the user cantered design with the features of the prototype design of the travel portal cannot be said as scientific but is only a suggestion or recommendation.

Appendix-1

Survey Questionnaire

The Current research tries to collect the Travel portal user information to make a technology adaptation and the service satisfaction analysis in order to measure the gap between the perceived importance of particular system attributes and their actual performance. The survey consists of Section-A and Section-B. Section B is again divided into 4 parts.

• Part A contains questions which measure the extent to which certain features of the (or the ontology based application) travel portal are perceived to be important in ensuring the effectiveness of the communication tools in the application

• Part B contains questions about the further anticipation from the users or future requirements

• Part C consists of the questions on the performance rating of the International travel portals.

• Part D contains a question on the overall performance.

Section-A

    I.   Personal Details

        a. Name: _____

        b. Age: _____

        c. Country if Residence: _____

        d. Countries visited till now _____, _____, _____, _____

    II.   Travel Details:

1. From the recent period of 12 months which of these methods have you used to plan your travels

1	My company's internal online booking engine or travel portal	
2	Call/email a travel agency of my choice.	
3	Travel supplier Web site	
4	Discount travel site where you cannot specify flights or hotels directly	
5	Travel section on Web portal site	
6	Tourist/convention bureau Web site	
7	Newspaper or magazine article	
8	Traveler community site	
9	None of the above	

2. From the recent 12 months, which of these methods have you used for your travel reliability program points/rewards?

1	To book flights for leisure travel	
2	To book hotel stays for leisure travel	
3	To book flights for business travel	
4	To book hotel stays for business travel	
5	To upgrade leisure travel	
6	To upgrade for business travel	
7	None of the above	

3. Can you please advise us how much you agree or disagree with each of the following statements?

1	It´s easy to use the Internet to plan and buy travel.	
2	I enjoy planning and buying travel on the Internet.	
3	It´s more convenient to research travel offline	
4	I do not trust Internet for accurate or updated travel information.	
5	I am concerned about disclosing personal information to travel companies online.	
6	I like that I can book online whenever I want from almost anywhere I want.	
7	Travel Web sites clearly present my choices and trade-offs	
8	Travel Web sites help me save money	
9	I am likely to only purchase travel on websites I am familiar with.	

4. Can you please tell us how much you agree or disagree with the following statements?

1	When buying PERSONAL travel, I consider myself to be "brand loyal"
2	When buying BUSINESS travel, I consider myself to be "brand loyal"

5. In the recent 12 months, how much of your business travel have you researched online?

1	Less than 25%, but more than 0	
2	25% to less than 50%	
3	50% to less than 75%	
4	75% to less than 100%	

6. In the recent 12 months which of the following have you used to research or plan personal travel

1	Visit, call, or email a travel agent	
2	Visit or call a travel company directly	
3	Use a Web site, or a Corporate blog	
4	Read an article in a print magazine or newspaper	
5	Watch/listen to a television or radio program	
6	Newspaper or magazine advertisement	
7	TV commercial	
8	Email from a travel company	
9	Advertisement sent to your mobile device	

10	Promotional information received in the mail	
11	Ask friends and family	

7. For which of these reasons have you supply any travel-related reviews, ratings, photographs or videos to any web sites in the past 12 months?

1	You wanted to warn travellers of your bad experience	
2	You wanted to share information about special offer with other travellers	
3	You wanted to share a good experience with other travellers	
4	You wanted to make the travel provider aware of its benefits/shortcomings	
5	You felt you had a unique perspective that would benefit other travellers	
6	You wanted to respond to something someone else had submitted	☐
7	You received an email inviting you to provide feedback	
8	You were angry or disappointed with your travel experience when you posted your content	
9	Having a cumulative score about the number of posts you´ve made is important to you	
10	I have not contributed any travel-related reviews/ratings/video in the past 12 months	

8. Please indicate how much you agree with the following statements

1	In the current economic environment, I expect travel companies to try hard to make me feel valued.	
2	I would recommend travel companies that made me feel valued to friends/family	
3	I would be loyal to travel companies that make me feel like a valued customer.	
4	I am sympathetic to the challenges the travel industry has in the current economy.	
5	Most travel companies are making strong efforts to make me feel like a valued customer.	
6	Promotions that offer me a discount for future travel are very influential on my booking decision.	
7	I am happy to give a few minutes to provide my opinion on my travel experience if asked.	
8	Email newsletters from travel companies are always relevant to me.	
9	When I purchase travel, I am always confident that customer service will assist me if any issues arise.	

9. Which Service do you consider authentic if the website offers the information on the following topics:

☐   Bar, Club & Pub

- ☐ Car & Driver, Limousine

- ☐ City Walking Tours

- ☐ Cultural Experiences

- ☐ Entertainment

- ☐ Food & Cafes

- ☐ Lodging

- ☐ Shopping Tours

- ☐ Show Me Around

- ☐ Sightseeing Guides

10. Which of the following Travel tools helped you mostly during your previous experiences while accessing information Online:

- ☐ Adventure & Sports Travel

- ☐ Airlines & Airports

- ☐ Ask the Locals ~ NEW!

- ☐ Beach Vacations

- ☐ Budget Travel

- ☐ Business Travel

- ☐ Cruises

- ☐ Culinary & Food

- ☐ Culture

- ☐ Deals

- ☐ Destinations
- ☐ Driving & Car Rental
- ☐ Eco-Travel
- ☐ Family Travel
- ☐ Gadgets & Gear
- ☐ Groups
- ☐ Grateful Traveller
- ☐ Health & Fitness
- ☐ Hotels & Accommodations
- ☐ Luggage & Packing
- ☐ Luxury Travel
- ☐ Off The Brochure(sm) Guides
- ☐ Pets & Travel
- ☐ Radio Show
- ☐ Photography
- ☐ Safety & Security
- ☐ Senior Travel
- ☐ Shopping
- ☐ Trains
- ☐ Travel Insurance
- ☐ Travel Tips
- ☐ Videos
- ☐ Volunteerism

☐ Web Resource Links

☐ Women's Travel

11. Do you need information on the following topics to be made available to you through Portal: (Rate the Priority)

☐ Apartment rentals

☐ Wireless Internet

☐ Airport Transportation

☐ Personal introductions

☐ Travel Agency

☐ Import/ Export Opportunities

☐ Cellphone rentals

☐ House parties

☐ Boat parties

☐ Excursions:

12. How do you access your travel information.

☐ Desktop

☐ Mobile

☐ Laptop

☐ Palmtop

13. What motivates you to choose a particular travel package: (Rate Them)

☐ Travel Deals

☐ Purpose of Visit

☐ Place description

☐ Facilities

☐ Local Information

☐ Experience review

☐ Tourist Guide

☐ Tour tips

☐ Maps

☐ Information on What to bring

14. How do you like to have the following technology tools available on the website:

☐ Printable PDFs

☐ Online HTML Manuals

☐ FAQ section

☐ Search by area

☐ Map drill down

☐ Area locator

☐ Discussion forum

☐ Experience sharing

☐ Find Locals

☐ Chat with Tour operator

☐ Discussion board

15. In your opinion a Tour operator must possess the following before getting you to their travel board (Rate your Priority)

☐ Web Portal

☐ Customer data management

☐ Multi service Provide Connectivity

☐ Ticketing

☐ Accounting

☐ Insurance overage

16. Among the below popular websites tick that you think them as general Purpose Travel sites:

expedia.com   ____

Travelocity.com   ____

biztravel.com   ____

getthere.com   ____

priceline.com   ____

Hungry Suitcase   ____

RIU Cancun Portal   ____

YellowstonePark.com   ____

Seabourn Cruise Line   ____

17. What type of following Inconveniences do you experience with the Travel Portals

Adequate Information   ____

Insufficient information   ____

Accessibility   ____

Ease of Navigation   ____

Ease of use   ____

Authenticity   ____

18. The general Problem you face while browsing the travel websites

a. Page Load errors ------

b. Link errors   ------

c. Challenges in Navigation----

19. For What purpose or feature you surf through a Travel portal

Choose travel pack   ------

Research destination ------

find the best airfare ------

book airline tickets ------

track frequent flier miles ------

reserve a hotel room   ------

rent a car   ------

get driving directions ------

check the weather forecast ------

Others   ------

20. For compensation for mishaps in flight which online is the most reliable among the

below:

expedia.com

Travelocity.com

biztravel.com

getthere.com

priceline.com

Hungry Suitcase

RIU Cancun Portal

YellowstonePark.com

Seabourn Cruise Line

21. What are the features you expect from a business Travel Portal:

Compensation for mishaps   ------

Complaint tracking on slow e-mail responses   ------

Send last-minute flight updates to the mobile   ------

22. Which one among the following is a managed-travel Portal

expedia.com

Travelocity.com

biztravel.com

getthere.com

priceline.com

Hungry Suitcase

RIU Cancun Portal

YellowstonePark.com

Seabourn Cruise Line

SECTION-B

Part A – Importance

Please respond by ticking the option which reflects your opinion about the importance of the following listed attributes of ontologies and ontology based systems in ensuring their effectiveness.

A.1 Common attributes of ontologies

1 Easy access of the information with the design on the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

2 Up-to-date ness of the information with the design on the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

3 User confidence in the design of the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

4 Degree of personal control over the design of the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

5 Design of the travel portal responsiveness to changing users needs

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

6 Participation in the planning of requirements or competency questions

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

7 Extent of user training on design and functionality

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

8 Documentation of the design and features of the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

9 A high degree of technical competence from design administrators

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't Know_____

A.2 Comprehensiveness of the design of the travel portal

10 User's understanding of the design and features of the travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't

Know_____

11 Match of users' perception of phenomena with the design and features of the travel

portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't

Know_____

12 Understand ability of the categorization of concepts in the design and features of the

travel portal

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't

Know_____

13 Size of gap between the design and features of the travel portal concepts and the

preferred concepts of the user

Irrelevant _____ Not important _____ Important _____ Critical _____ Don't

Know_____

Part C – Actual performance

Please respond by ticking the option which reflects your opinion about the actual

performance of the following listed attributes of design and functionality of the travel

portal

C.1 Common attributes of ontologies

1 Easy access to the design and functionality of the travel portal

Very poor ____ Poor _____ Good _____ Excellent ____ Don't Know_____

2 Up-to-date ness of the design and functionality of the travel portal

Very poor_____ Poor _____ Good _____ Excellent ____ Don't Know_____

3 User confidence in the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

4 Degree of personal control over the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

5 The design and functionality of the travel portal responsiveness to changing users needs

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

6 Participation in the planning of requirements or competency questions

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

7 Extent of user training

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

8 Documentation of the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

9 A high degree of technical competence from design and functionality of the travel portal administrators

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

C.2 Comprehensiveness of the Design and Functionality

10 User's understanding of the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

11 Match of users' perception of phenomena with the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

12 Understand ability of the categorization of concepts in the design and functionality of the travel portal

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

13 Size of gap between the design and functionality of the travel portal concepts and the preferred concepts of the user

Very poor_____Poor _____ Good _____ Excellent ____ Don't Know_____

Part D – Overall opinion

Please rate your overall opinion about the ontology and the design and functionality of the travel portal based system.

Very poor _____ Poor _____ Good _____ Excellent _____

Please supply any further comments about the performance of the design and functionality of the travel portal

_____

_____

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