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Tourism Portal

Vikas Walake, Mahesh Gaikawad, Ravindra Ingawale,
Anil Maske, Prof. Shrikant P. Bhosale
CSE Department KECSP
India

Abstract: Tourism is a dynamic and competitive industry that requires the ability to constantly adapt to customers' changing needs and desires, as the customer satisfaction, safety and enjoyment are particularly the focus of tourism business. Developments in search engines, carrying capacity and speed of networks have influenced travelers around the globe to use technologies for planning and experiencing their travels. Tourism uses Internet marketing and Web portals by utilizing Information and Communication Technology (ICT) and ICT enabled services in order to gather and/or disseminate information and ease online booking and reservations. In this article an attempt has been made to identify the requirements of efficient Web portal for Solapur Tourism Industry. This article provides a complete series of design guidelines vis-à-vis Web Portal strategy, structure, design, architecture, level of facilitation and features, Technologies and tools and process model for its successful implementation.

Keywords: Tourism, Eco tourism, Web portal, Web portal structure, Web portal architecture.

I. INTRODUCTION

Tourism in Maharashtra and especially in solapur is making tremendous growth [19]. According to Indian The report further bares the information that Maharashtra is likely to witness an influx of 10 Million international visitors by the year 2020, compared to just 5.42 Million tourists in the year 2015. The World Travel and Tourism Council (WTTC) [10] has also reported that Indian tourism industry will remain one of the fastest growing through the next 10-15 years and expects Indian tourism to generate $89.9 Billion revenue by the year 2014. Tourism has been recognized at an industry in the state of Maharashtra which being a “Jewel in Crown” attracts thousands of foreign tourists from almost all countries in the world throughout the year. Right from the very beginning the state has been a place of religious activities and shrines in the state have their own religious values, which attract thousands of devotees every year. ICT and ICT enabled services thus present a great opportunity is for the tourism industry of Maharashtra to take its advantages to flourish tourism related business and developing an efficient Web portal is a major step into this development.In this paper we review various Web portal development issues and present detailed guidelines for design and development of Web portal for Solapur tourism industry.

Web Portal Development Issues

In this section we review issues affecting to Web portal development. These include strategy, design, architecture, structure, levels of facilitation and facility, technologies and tools and Process model.

II. WEB PORTAL STRATEGY

Careful strategy and a clear purpose are the keys to success in building Web portals, particularly while working as part of a development team [11]. If the site is successful it will have to be genuinely useful to target audience, meeting their needs and expectations without being too hard to use [13]. Strategy of a Web portal is a two-part process: first gather the development partners, analyze needs and Strategy of a Web portal is a two-part process: first gather the development partners, analyze needs and goals, and work through the development process outlined to refine the plans [7]. The second part is creating a site specification document that details what is intended to do and why, what technology and content are needed, how long the process will take, what will be spent to do it, and how to assess the results of efforts. The site specification document is crucial to creating a successful site, as it is both the blueprint for the process and the touchstone used to keep the project focused on agreed goals and deliverables [12].In the first step of Web portals strategy, there is a need to identify the target audience [23]. The design and content of a site normally attracts certain types of visitors. It is better to target a particular section of visitors to the Web portal to achieve the goal. Preparing precise content for the Web portal is necessary to attract the exact audience. The content of the Web portal must be very well categorized [4].One should develop the site's content to satisfy the specific needs of target. The next important step in the strategy is to collaborate with online partners and communities. This helps to increase the visibility for the Web portal. It is essential to find and participate in the virtual communities on the Internet that pertain to the topic or subject matter of the site. These communities help to attract many visitors from around the world. It must be on top in the strategy that someone in the Portal will have to take the responsibility for answering e-mail inquiries generated by the Web portal and also periodically visit the Internet to look for new sites and/or virtual communities that might be of interest to the Portal Somebody will also have to assume responsibility for maintaining the Web portal (adding new content, fixing broken links and updating its features).

III. WEB PORTAL DESIGN

The design of the site determines its organizational framework [26]. The Web portal design includes making the tactical design decisions about what the audience wants, what you wish to say, and how to arrange the content to best meet the audience's needs [6]. Although people will notice the graphic design of the Web pages right away, the overall organization of the site will have the greatest impact on their experience [15] While design undoubtedly affects a Web portal's success, two ideologically opposite schools of thoughts have developed different ideologies as to what is meant by good design [25]. Web content has been identified as one of the main factors contributing to repeat visits.As content on the web includes text, pictures, graphics, layout, sound, motion and, someday even smell, making the right web content decisions are critical to effective Web design [26]. The basic steps in organizing the information are to divide the content into logical units, establish a hierarchy of importance among the units, use the hierarchy to structure relations among units, build a site that closely follows the information structure and analyze the functional and aesthetic success of the system.

IV. WEB PORTAL ARCHITECTURE

Architecture design is the overall hypermedia structure of the Web portal and application of design patterns and constructive templates to populate the structure and archive reuse [18]. A site Architecture is essentially a diagram that shows how the pages of the Web portal link each other. While site architecture gives an overall view of entire site's content, page schematics show what elements of the content live on each page [11].Typical results or contract deliverables at the end of Web portal architecture could include, detailed site design specification, detailed description of site content, site maps, thumbnails, outlines, table of contents, detailed technical support specification, supported browser technology, supported connection speed, web server and server resources, proposals to create programming or technology to support specific features of the site,schedule for implementing the site design and construction, one or more site prototypes of multiple pages, multiple graphic design and interface design sketches or roughs [15].

V. WEB PORTAL STRUCTURE

Web portals are built around basic structural themes. These fundamental architectures govern the navigational interface of the Web portal and mold the user's mental models of how the information is organized. Three essential structures can be used to build a Web portal: sequences, hierarchies, and webs [14]. Information hierarchies' structure is the best way to organize most complex bodies of information. Because Web portals are usually organized around a single home page, hierarchical schemes are particularly suited to Web portal organization. A hierarchical organization also imposes a useful discipline on our own analytical approach to our content, because hierarchies are practical only with well-organized material [14]. Site diagrams are also useful when the project moves from planning to actual Web page production. As the new site is built up in a directory on the Web server, the site diagram is often the first place programmers look to gain an understanding of how the site files should be subdivided into directories also called folders on the server. The pattern of directories and subdirectories of the site files should mirror the major content divisions and structures [14].

VI. FACILITATION AND FEATURES OF THE WEB PORTAL

This step is designed to assist with the decision as to which features to implement on the Web portal [8, 9].Recommendations are based upon the entries made in the Web portal strategy, and include whether a organization or department should have an interactive product catalogue, product support, online sales,external links and so forth. These recommendations are based on the analysis carried out in the strategies chosen in the Web portal strategy stage [11]. The Web portal would contain a number of more features other than the very basic requirements which any web portal has to fulfill which may include having dynamic pages to adapt the changes that may be required, low band width requirements, provisions for visitors for visitor registration and login for performing authorized operations, information about nearest emergency spots like hospitals, police stations, etc.

VII. WEB PORTAL DEVELOPMENT TECHNOLOGY

Web Portal Development Technology & Tools Various technologies and tools are used for development and implementation of Web portals which fall under two major headings vis-à-vis Server Side technologies and the Client Side technologies. Server-Side Technology includes the use of languages like ASP, ASP.NET, PHP, RUBY, JAVA, PYTHON and CGI PERL, Operating Systems like Linux Apache, MS Windows, Mac-OS and databases that usually include MySQL, SQL Server and Oracle. Client-Side Technologies that are frequently used are JavaScript, ASP.Net XML, CSS and HTML and its variants. For designing of various multimedia elements there exist numerous tools that include Adobe Flash, Adobe Photoshop CS3 and CorelDraw etc.

VIII. PROCESS MODEL

Process model or software engineering paradigm is the strategy for development of web portal thatencompasses the process, methods, tools, layers and the generic phases of software/web development life cycle. The various process models used for web development project including Linear Sequential Model also know as Classic Life Cycle or Waterfall Model, Prototype Model, Incremental Model, Spiral Model, RAD (Rapid Application Development) Model, WIN WIN Spiral Model, Concurrent Development Model, The Formal Methods Model and Component Based Development Model.

IX. WEB PORTAL FOR SOLAPUR TOURISM

The solapur is famous for its religious places in Maharashtra. Domestic and international tourists visit the solapur all seasons. Tourism sector remains the biggest contributor to the state's economy after agriculture and horticulture sectors. solapur offers different types of tourisms that include eco-tourism, health resorts, adventure tourism, pilgrim tourism, games etc. Special interest and efforts are being paid towards upgradation and expansion of this industry and as such new places are being developed and promoted as tourist places. A well build Web portal will not only play an important role in the promotion of tourism industry but will also make it manageable and more profitable [2].Keeping into consideration the tourism industry of solapur, The solapur Tourism Web portal is proposed to follow the strategy as mentioned in Figure 1. Similar strategy is being followed globally and has been implemented in various successful portals. The site should follow the strategy as per Figure 1 by properly identifying the target audience, then preparing the precise content for the Web portal, collaborating with online partners and communities, developing an intra-department support network, refining collateral marketing and promotion materials and obtaining the appropriate feedback time to time from visitors.Alongside the content design, the aesthetic design has to be very attractive and logical. Proper icons for links, pictures, thumbnails etc. must be used and color combination has to be kept consistent. At the same time, the file size of the pictures must be minimized for faster loading of the web pages.

solapur tourism involves various types on information heads and the information as such needs to be organized well in a manner that it is easily explored, easily managed and easily updatable. Various types of tourism like adventure, pilgrim, eco-tourism etc., facilities available in these places, the rules and regulations, the environmental conditions at these places, etc. are the main information heads under which the whole information can be categorized. Thus there is a need to put the whole information in a well designed hierarchal manner so as to reduce the chances of various information types leading to confusion. Information hierarchies' structure is the best way to organize this complex information. The information of solapur tourism industry falls under some major categories and each category has various sub-categories. The pilgrim tourism category contains the tourist places of various religions and under each religion fall various religious places of visit. In a similar manner each place has different information headings like photos, web pages, videos, downloads, and so on. Thus the information needs to be arranged in a hierarchical structure as shown in figure 1.

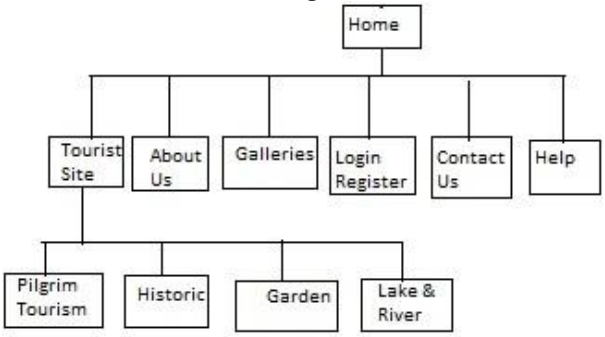

Figure 1. Web Portal Structure

A proper and well organized folder structure, file organization and the database structure is essential to make a strong backend for the portal that can sustain huge storage demands and greater performance as well as will permit easy operations on the content therein. Since the data pertaining to Solapur Tourism Web portal comprises of both binary and non-binary data, therefore the use of both file system and database is necessary for storage. Non-binary and selected binary data must be stored in properly designed tables of database maintaining normalization standards while other binary data must reside in proper folder hierarchy on the server file system. A guideline for such a folder structure is shown in figure 2.

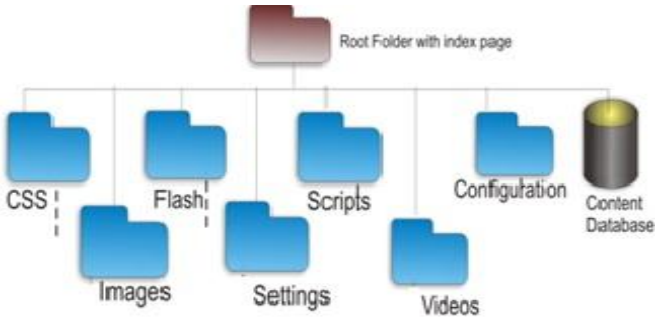

Figure 2. Web Portal folder structure

It is proposed that the basic levels of facilitation and features in the Web portal other than the basic ones should include those mentioned in the table 1. It describes the overall Web portal structure for solapur Tourism industry.

This structure is based on the features and facilitations that must be incorporated in the Web portal that have been identified through careful analysis of existing tourism system of Solapur. The diagram indicates various important page groups and individual pages which are shown linked to the main page and storage. It may be used as an outline for successful implementation of the Web portal.

For the development and design of the tourism Web portal, it is necessary to make aproper selection of technologies and tools to use. As a Server side technology it is recommended to make use of Open Source Technology namely PHP as the development language and MySQL as the backend database. In contrast to other Server side Technologies like .NET, etc. which may help in rapid application development, the use of Open Source Technologies like PHP and MySQL will cut down the development costs. Further, these Technologies are platform independent and offer a choice in server Operating System.Also these technologies have a very vast support available from the developer companies and from other discussion forums.

Traditionally, website navigation has been focused on minimizing the number of clicks required to open a given page. However, this goal has nothing to do with the real purpose of navigation, which is to make finding information easy, consistent, and transparent to the user. Also, as websites get bigger, traditional navigation controls such as drop-down menus or tree views become impractical. Faster Internet connections and larger screen sizes now allow developers to experiment with new styles of navigation. This article shows how to implement incremental navigation, which is a style of navigation where users find information by clicking through a series of lightweight pages, with each click resulting in a small, but highly visible change to the navigation user interface.

Tourism has become one of the major generators for social and economic growth in the world and one of the leading drivers of international trade. In order to gain the support of key decision-makers in government and industry it is critical that the value and importance of tourism for each destination is clearly articulated. The aim of this chapter is to highlight the importance of tourism for generating income, creating and sustaining jobs, encouraging foreign investment and facilitating trade opportunities for each of the 21 APEC economies within the regional trading bloc and worldwide. It also emphasizes the impact of world events on national economies and the business of tourism. It also emphasizes the impact of world events on national economies and the business of tourism everywhere. This chapter is intentionally directed at national, state/provincial and local government officials who may not be fully aware of the economic value of tourism to their destinations, yet whose support is crucial to destinations having resources in place to manage risks to tourism.

Tourism is one of the driving forces of economic development in industrialized, less-developed and developing countries. The travel and tourism industry contributes substantially to:

- strong economic growth,
- creation of skilled and semi-skilled jobs,
- greater export returns,
- foreign investments and currencies, and
- economic well-being and social stability.

Travel and tourism is one of the world's largest industries and generators of jobs. The tourism industry is labour intensive and provides a wide range of employment opportunities, especially for women and young people, helping to break the vicious cycle of poverty by enhancing human capital and creating new prospects for future generations. The development of small and medium size enterprises creates work for unskilled and skilled workers in existing centres and rural areas. Visitors' expenditure in a destination flows directly to industries that serve visitors and indirectly to the money other businesses that supply goods and services to these tourism businesses.In this way, the benefits from visitors' expenditure flow right through local, regional, state/provincial and national economies and throughout communities.

Tourism is well accepted as an important contributor to the economy and sustainable development of regional areas in Maharashtra. Tourism is often advocated as a means to diversify economic conditions in rural and regional areas by providing alternative sources of employment and income generation arising from fluctuations and downturns in traditional industries such as agriculture and forestry, depressed commodity prices, and drought conditions. Furthermore, tourism can contribute to the enhancement of regional areas through public and private sector investment in new infrastructure and facilities.

As at December 2008, 52 percent of expenditure by domestic overnight visitors, 58 percent of domestic day visitors and 20 percent of international visitor expenditure was spent in regional areas of Maharashtra ($23.2 billion, $8.2 billion respectively and $26.4 billion)2. Over the next decade, however, the domestic and international tourism environment globally and within Maharashtra is predicted to be dynamic, aggressively competitive and increasingly volatile attributable to the current global financial crisis that has led to falls in consumer and investor confidence. Given the significance of tourism to the Solapur regional economies and the volatility of domestic tourism in maharashtra, it is imperative that tourism is maintained and enhanced as an economic driver for the local economy, but planned and managed in a sustainable way to enhance and conserve the natural environment, protect the well-being of the residents and attract visitors with shared values.

The genesis for this research stemmed from the annual Maharashtra Regional Tourism Convention, held annually since 2001. Various presentations and forums at the Convention over the years had focused on the role of destinations in regional tourism and had highlighted various case studies of best practice from regional Maharashtra. The aim of this project is to provide government, industry and community stakeholders, across national, state, regional and destination levels, with practical guidance on best practice principles for the sustainable planning, management, development and marketing of regional tourism destinations to inform future tourism planning and management initiatives.

A team of seven researchers from five universities around Maharashtra have contributed to this research . In addition, an industry reference group comprising representatives from each state and territory tourism organisation and Tourism Maharashtra have guided the project.

The aim of this research was to determine what regional tourism stakeholders have learnt from practice, and what they consider to have contributed to best practice, for the sustainable planning, management, development and marketing of regional tourism destinations in Maharashtra. From this aim, the project was guided by three objectives:

1. To identify principles of best practice from representatives of stakeholder organisations and groups engaged in the planning, management, development and marketing of regional tourism destinations in solapur, across national, and state, regional and destination levels;
2. To examine 21 case studies of practice in regional tourism destination planning, management, development and marketing involving every state and territory in solapur;
3. To develop best practice guidelines for stakeholders engaged in regional tourism destination planning, management, development and marketing.

Tourism being a smokeless industry is now a multi-crore, multi-sectoral and multi-dimensional activity in the world. World-wide web is fast becoming useful tool for the tourism industry and it presents a platform that brings products and services to the tourists. A web based tourism information system may provide on-line brochures along with both value and services. Tourism is being considered as an agent of social change bridging gaps among nations, regions and people.
Tourists generally want to find objects of tourism and amenities with reference to their geographic position and surroundings. In many cases, it is not satisfying to find a good hotel without a reference to restaurants, sights or event locations located nearby. This case study on web-based tourism information system for Solapur city takes into account the user needs to present the tourism objects in geographic context on interactive tourist maps.
Therefore, city's tourism sector may be promoted by global marketing of its tourist attractions, facilities and services. This application as it provides the world wide users with spatial information about the place that is very close to reality. This should further be useful for supporting and planning for tourism through analysis, decision making and management using this website, and making it available online on the internet.
So because of above reason we trying to reduce the efforts of tourist while they are on tour. We provide the information about tourism place and roots to find out the destination on this website. Also we are providing the nearest restaurants and resort information.

X. CONCLUSIONS

In this paper we have explored the Web portal development issues in terms of its strategy, design, structure, architecture, facilities and implementation technologies in order to provide all necessary guidelines to make the tourism website successful. The necessary Web engineering has been analyzed and accordingly the guidelines have been put forward. Most of the times Web portals fail to deliver expected results due to the lack of proper plan or strategy, deficient of proper goal, short of usability, well planned structure and design, negligence in timely updates and incomplete or unusable information. This paper brings to front all of these issues and provides necessary recommendations to avoid failures on their part. The paper provides a blue print for design, development, implementation and deployment of the Solapur tourism Web portal.

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The Authors
Vikas S.Walake,
Mahesh S. Gaikawad,
Ravindra V. Ingawale,
Anil G. Maske.

REFERENCES

[1] Dieter Gollmann, "Securing Web Applications", Information Security Technical Report, pp 1-9, 2008.
[2] DimitriosBuhalis, Rob Law, "Progress in Tourism Management", Tourism Management, 609-623, 2008.
[3] Buhalis D. and Zoge M. "The Strategic impact of the Internet on the tourism industry, In M. Sigala, L. Mich and J. Murphy (Eds.), Information and Communication Technology in tourism, Springer Wien, pp 481-492, 2008.
[4] J. Kim, S. Hong, "Architectural Criteria of Website Evolution – Conceptual Framework and Empirical Validation", Internet Business Center, Yonsei Univ. Seoul, Korea, 2003.

[5] Christopher W. Iervolino, "Using Date Envelopment Analysis to Measure Web Site Efficiency", Ph. D. dissertation, School of Computer Science and Information Systems, Pace Univ., USA, 2002.
[6] M. Y. Ivory, M. A. Heast,"Improving Web Site Design", IEEE Internet Computing, March-April 2002.
[7] D. Gehrke and E. Turban, "Determinants of successful website design relative importance and recommendations for effectieveness", presented at proc. of 32nd annual Hawaii International Conference on System Sciences, Maui, HI, USA, 1999.
[8] J. W. Palmer, "Web site usability, design and performance metrics", Information Systems Research, vol. 13, pp 151-167, 2002.
[9] Ragnanthan C. and S. Gangapathy, "Key Dimentions of Business-to-Consumer websites", International Journal of Information Management 39, pp. 457-465, 2002.
[10] WTTC, "The World Travel and Tourism Council (WTTC)", http://www.wttc.org/
[11] Burdman, Jessica R. "Collaborative Web development: Strategies and best practices for Web teams", Addison-Wesley – 1999.
[12] Dobson, Michael Singer, "Practical project management: Secrets of managing any project on time and on budget" SkillPath – 1996.
[13] Friedlein, Ashley, "Web project management: Delivering successful commercial Websites", San Francisco: Morgan Kaufmann - 2001
[14] Fleming, Jennifer, "Web navigation: Designing the user experience. Sebastopol", Calif.: O'Reilly–1998.
[15] Rosenfeld, Louis, and Peter Morville, "Information architecture for the World Wide Web", Sebastopol, Calif.: O'Reilly – 1998.
[16] RNCOS, "Indian Tourism Industry Forecast (2007-2011) - 2007", RNCOS Industry Research Solutions available online at: http://www.rncos.com/Report/IM531.htm, 2007.
[17] Karl W. Wöber, Andrew J. Frew, Martin Hitz, "Information and Communication Technologies in Tourism", Proceedings of the International Conference in Innsbruck, Austria, 2002
[18] Joseph M. Clifton, "An industry approach to the software engineering course", ACM SIGCSE Bulletin, Volume 23 , Issue 1 , pp 296 – 299, March, 1991.
[19] M.S.Kohli, "Mountains of India: Tourism, Adventure, Pilgrimage", Indus Publishing – 2004.
[20] BandhuDesh, DeshBandhu, "Jammu Kashmir and Ladakh: Tourist-attractions & Tourism", Anmol Publications, 1989.
[21] Lynch and Horton (www.webstyleguide.com).
[22] Debra Howcroft and John Carroll, "A Proposed Methodology for Web Development", IS Research Centre, University of Salford, Salford available online at is2.lse.ac.uk/asp/aspecis/20000053.pdf.
[23] Jose L. Caro, Antonio Carrillo, Andres Aguayo, Sergio Galvez and Antonio Guevara, "CRM Techniques for analyzing client profiles in tourism promotion websites", http://www.infactres.co.uk/crmuniverse/
[24] Patrick Tierney, "Internet-Based Evaluation of Tourism Web Site Effectiveness: Methodological Issues and Survey Results", Journal of Travel Research, Vol. 39, No. 2, pp 212-219, (2000).
[25] Peter O'Connor, CergyPontoiseCedex, "Conflicting Viewpoints on Web Design", Journal of Travel & Tourism Marketing, The Haworth Press Inc, Vol 17, Issue 2/3, pp 225 – 230, 2005.
[26] Deborah E. Rosen, Elizabeth Purinton, "Website design: Viewing the web as a cognitive landscape", Journal of Business Research, pp 787-794, 2002.

