Using the Internet as a means for promoting mountainous areas

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Abstract

The development of Information and Communication Technologies (ICTs) appoints data and knowledge available in a large audience, through the World Wide Web. This paper presents the design and development of a multipurpose website environment for promotion of mountainous areas leading to their development through the case study of the two university Forests of Pertouli and Taxiarxis. The website was constructed, using Macromedia's Dreamweaver MX 2004, in a friendly format for easy and efficient navigation. The maintenance of the website for the mountainous province on the Internet, aims in upgrading their inventory and presentation, but also promotes and encourages recreational and tourist purposes.

Keywords

Internet, web application, mountainous areas, regional development

1. Introduction

Information and Communication Technologies (ICTs) in all aspects of human endeavors have gained increased visibility in recent years, primarily as a result of the proliferation of the delivery of basic social services and improvements in the effectiveness and efficiency in service delivery (Sealy, 2003). ICT, as defined in the Information & Communication Technology Sector Strategy Paper of the World Bank Group (World Bank, 2002), consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, images). Received wisdom has it that ICT is transforming all aspects of society—from education to civic involvement, employment to leisure (Hull, 2003). The World Wide Web is the open community of hypertext-enabled document servers and readers on the Internet. Users require new advanced internet-enabled services for access to people and information.

The definition of forest has been changing towards a wider spectrum of qualitative features, more of an ecosystem aspect that integrates various land uses (Kennedy et al., 1998, Helms, 2002). Forests produce and regulate water, offer raw materials for the logging industry, forages for feeding livestock, food and nursery services for coastal fisheries, nutrients recycling, firewood, habitat, protection against disasters, among many other goods and services (Costanza et al., 1997). This generation is more sensitive and willing to be involved in formulating policies that affect their communities, countries and the world in the medium and long term. Among these policies is the improvement of the attractiveness of an area that
upcoming will lead in reside in the local habitats. The course of action for mountainous areas must depend on the natural environment of the area as a comparative advantage, characterized by the mountainous nature of the landscape (Andreopoulou et al., 2004).

Aristotle University one of the biggest universities in the Hellenic district possesses two university forests; one in Pertouli Trikala in the mountain of Kosiakas, and the other in Taxiarhis Chalkidiki in the mountain of Holomontas.

The maintenance of a website for mountainous areas aims in the improvement of the communication, the attractiveness of the area as it supplies a range of reliable information and in the recognition of the area mainly from specific target groups. On parallel it sustains local commercial and tourism activities in order to promote local natural resources and various traditional and artistic products.

2. Methodology

2.1 Materials

The information for the Forests of Pertouli and Taxiarxis (text, images, maps, graphs) was given by the Administration of the Forests. The University Forest Administration was established in 1951, in support of the student’s education of the department of Forestry and Natural Environment, research and assessments, creation of template forests and last for effective administration and management.

The texts were processed using a text editor (MS Word) while graphs elaborated with a graph editor (MS Excel) and images along with bitmaps were worked out using Adobe Photoshop.

2.2 Implementation

To create a web-based application, a general-purpose programming editor or a specialized HTML (Hyper Text Markup Language) editor like Macromedia Dreamweaver™ is required, along with an FTP (File Transfer Protocol) client or an HTTP (Hypertext Transfer Protocol) client to upload the page to the web server.

Macromedia Dreamweaver MX 2004 supports lots of platform independent technologies (West and Muck, 2002) and allows the development of well-constructed websites recognizable by all popular web browsers, like Netscape Navigator, Internet Explorer, Mozilla Firefox, etc (Crowder and Crowder, 2001).

The available information (text, pictures, maps, graphs) were programmed in a website created using Macromedia's Dreamweaver MX 2004, in a friendly format for easy and efficient navigation.

3. Results

The user-friendly structure and the usability features of the web-page was an initial goal, since the end-users in the target group are not necessarily computer literate. Thus, basic
design principles for usability were adopted (Lynch and Horton, 1999, Nielsen, 2000) aiming in the improvement of the effectiveness of the website.

The website has a bilingual presentation, either in Greek or English, in order to be useful and traceable worldwide, also has a collection of pages that describe content, search and navigation instructions as well as information of general interest. The introduction welcome page of the web site (Figure 1), leads in the main index page.

![Figure 1 – Introduction webpage](image)

The main index page (Figure 2) is divided in two frames; the left frame with main content categories available in the form of active buttons for the user to select, that lead in to various information, and the central frame where the information is displayed.

![Figure 2 – Main index page](image)
The menus include Administration and Management, for both University Forests; Tourism, where tourist information are stated for both areas along with the plentiful outdoor activities that can be accomplished; Society presenting the two non profitable clubs, Forest Friends of Pertouli/Taxiarxis, aiming in the protection, conservation and promotion of environmental and cultural inheritance; Links for further information regarding other Hellenic institutes supporting environmental issues; and a communication page with the administration of University Forests under the title, Contact us.

The option of a map is also available (Figure 3.). Users can select the menu map, and a map of the Greek district is available. The prefectures in which the forests are located are illustrated with a different color and the exact position of the forest in each prefecture is being displayed.

![Figure 3 – Location of the forests in the Greek district](image)

The location of the University Forest of Pertouli is close to the mountain range of central Pindos. It is in the East and Southeast slope of the mountain Kosiakas, in latitude of 39°, longitude of 21° 35’ and altitude from 1070 m to 2050 m. The measurement lengthwise of the University Forest of Pertouli is 3296,59 hectares. The 2530,39 ha of them are forested with spruce and pine, the 583,71 ha are mountainous rangeland, the 114 ha are grassland and the rest 68,49 ha are fields, built up areas etc.

The University Forest of Taxiarxis – Vrastamon is in the center of the prefecture of Chalkidiki and particularly in the South and Southwest slope of the mountain Holomontas latitude with 40° 23’ – 40° 28’, longitude 23° 28’ – 23° 34’ and altitude from 320 m to 1165 m. The length of the University Forest of Taxiarxis is 5834,6 ha. The 3894,48 ha of them are forested, the 264 ha are semi-forested, the 84,5 ha are arid area and the rest 1591,62 ha are fields, built up areas etc.

The flora and fauna of the two forests is of unique beauty and importance. The plant species and the animal species of the two forests are illustrated when user selects the management
button; leading in two chooses one for the Forest of Petrouli and the other for the Forest of Taxiarxis.

The area of Taxiarxis is dominated with deciduous forests (Figure 4.). The uncultivated plants with great economical interest are oak, and beech. Sporadically one can find Quercus Pubescentis, Quercus Delechampii, and the evergreen broadleaved Arbutus, holly (evergreen oak), briar, basswood, etc., Due to reforestation one possibly will also find pines and spruce. The fauna found in the Forest of Taxiarxis are roe, wild boars, hares, partridges, woodcocks etc.

Figure 4 – Flora and fauna in Taxiarxis

The zone in which the Pertouli forest is found is Fagetalia (Figure 5.) In this area dominates spruce and scarcely there are species of the Abiety-Fagetum. This means that except for the domination of spruce sporadically is found oak, beech, maple, cedar, junipers, willow, basswood, and hop hornbeam. Due to reforestation some species of pine, have been planted. The fauna found in the Forest of Pertouli are bears, deer, hares, partridges and pheasants.

Figure 5 – Flora and fauna of Pertouli
Options about the tourism are displayed by choosing the equivalent button. The Forest of Pertouli offers numerous chances and opportunities. It is a very popular destination for winter since there is a ski center with a length of about 1100 m. and an altitude from 1130m to 1370m. Various activities and sport events take place during the entire year along with cultural festivals which occur in the famous grasslands of Pertouli in May every year. Hunting is another popular sport, held in a controlled hunting area (Figure 6.).

![Figure 6 – Activities and Sports in Pertouli](image)

Taxiarxis offers alternative type of tourism like mountain bike, hiking, off-road tracks, camping, walking paths.

4. Discussion

ICTs offer vast opportunities for progress in all walks of life for all to benefit and new opportunities exist for economic growth, improved health, better service delivery, learning through distance education, and social and cultural advances (Sealy, 2003).

Since the primary measures of portal success are high levels of user acquisition and retention, only those sites that attract and maintain the desired target audience and build valuable customer relationships will have the potential for long-term success. The availability of up-to-date and accessible information that can be gathered from many sources and compiled easily to use for multipurpose purposes helps leverage resources and support programs such as community planning for economic development.

Basic design principles for usability were adopted during the design of the website since it addresses to a range of end-users, not all of them computer literate. Interactive use of the website is enhanced through the bulletin board features available. There are also important information resources on the tourism and recreational possibilities in the area, in order to make the surrounding a recognizable tourism destination, especially for winter tourism, agro tourism, and other alternative types of tourism plus in parallel to promote local tourist and cultural activities. Processes of knowledge capture, transfer and learning in project settings rely very heavily upon social patterns, practices and processes in ways which emphasize the
value and importance of adopting a community-based approach to managing knowledge (Bresnen, et al 2003).

Those who understand the centrality of broadband internet and related ICT’s in reconfiguring access to local and global resources are therefore in a better position to decide whether, and how, to use this technology to enhance their own situation and help to close social, economic, education, health, age, gender and other divides (Dutton et al, 2004).

5. References


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