

Role of Internet as a communication platform and ISPRS Student Consortium Web Site

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ABSTRACT:

Today many international organizations are becoming aware of the capacity of youth for a dynamic and sustainable organization. Students, young researchers and professionals are encouraged to attend the organizations with youth oriented events and activities under the main organization events. In order to sustain these activities, relevant commissions, chapters and working groups are taking more important roles for society. ISPRS-International Society for Photogrammetry and Remote Sensing had established its youth body in the year of 2004 with the successful youth activities during and the after of the XXth. ISPRS Congress in Istanbul. ISPRS Student Consortium was established under Technical Commission VI, Working Group V to organize its activities. In the year of 2008 ISPRS Beijing Congress, Student Consortium had developed its structure and outputs. Since providing a continuous link and networking through different countries, SC volunteers developed a website to provide a global communication platform on the Internet.. This paper contains the necessities, needs and benefits of such an interactive system for SC members. The workflow and design for flexible needs, in house programmed database and website are explained with the fundamental software architecture. The World Wide Web services and future of web applications are evaluated with a perspective of ISPRS SC future.

1. INTRODUCTION

1.1 General Information

ISPRS Student Consortium has significantly become a very attractive global network within the last few years. International summer schools focusing on scientific and technological developments, Youth Forums dedicated to young authors works, workshops and many more activities are planned and organized by volunteer SC members.

SC is now a self sustainable organization and it has an Administrative Board, a regional representative structure based on the world geographical distribution, a web master. It is also strongly linked to ISPRS with the Technical Commission VI, Working Group V Officers, SC liaison in ISPRS Council and SC Supporters from previous terms. (Kivilcim, March 2010)



Figure 1: ISPRS SC Members Map from worldwide

Among all these groups SC has reached 380 individual member registrations from 68 different countries all over the world as this paper is prepared (Fig1).

1.2 Communication of Student Consortium

Student Consortium missions to increase the number of youth participating to ISPRS. Hence, beginning with the very early days of the organizations, communication with different individuals from different parts of the world has been a key issue. Several ideas and works have been discussed and many applications were used in the early days. One of the main solutions was to establish email groups where SC members could see general announcements. Later on, to provide a networking, Yahoo! Groups were established for the members of SC International Summer Schools. Between 2004 and 2008 more than 7 groups were established to provide communication between active members, local organizers and participants to each event (Kivilcim, 2008).

Although, this necessary internal structures was a good step to provide the first communication they were based on general web groups and it was not possible to have the desired flexibility. In addition, promoting SC in www and reaching individuals from all around the world and connecting them with each other, providing more information on SC activities, serving them for their needs with technical data and social outputs, a self stand web site would be the ideal solution.

2. UNDERSTANDING INTERNET

The Internet is a global system of inter connected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks of local to global scope that are linked by a broad array of electronic and optical networking technologies.

The Internet carries a vast array of information resources and services, most notably the inter-linked hypertext documents of the World Wide Web (www) and the infrastructure to support electronic mail. The Internet has enabled or accelerated the creation of new forms of human interactions through instant messaging, internet forums, and social networking sites. Below figure 2 shows the www network around Wikipedia in 2004.

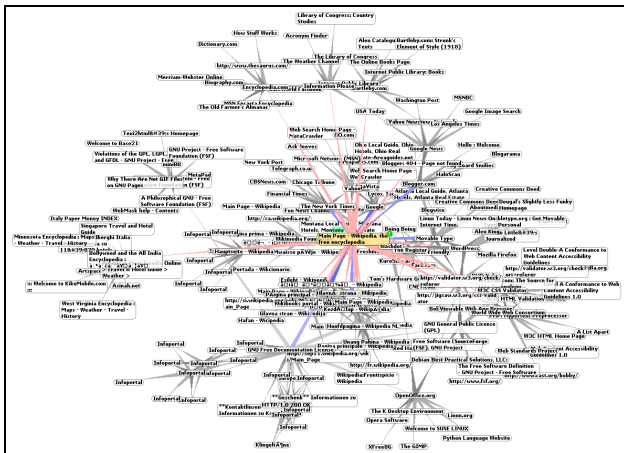


Figure 2: World Wide Web around Wikipedia's main page in center.

2.1 Evaluation of the Internet

The origins of the Internet go back to 1960s when the United States funded research projects of its military agencies to build robust, fault-tolerant and distributed computer networks. The United States National Science Foundation spawned worldwide participation in the development of new networking technologies and led to the commercialization of an international network in the mid 1990s, and resulted in the following popularization of countless applications in virtually every aspect of modern human life. As of 2010, an estimated quarter of Earth's population uses the services of the Internet.

2.2 Communication

E-mail is one of the major services available on the Internet. The concept of sending electronic text messages between parties in a way analogous to mailing letters or memos predates the creation of the Internet. Today it can be important to distinguish between internet and internal e-mail systems. Internet e-mail may travel and be stored unencrypted on many other networks and machines out of both the sender's and the recipient's control. During this time it is quite possible for the content to be read and even tampered with by third parties, if anyone considers it important enough. Purely internal or intranet mail systems, where the information never leaves the corporate or organization's network, are much more secure, although in any organization there will be IT and Pictures, documents and other files can be sent as e-mail attachments.

Most of the technologies that are unique to the Internet require communication to be done in text letters with some symbols and punctuation. Communicating effectively involves taking the time, except in informal communications, to use correct grammar, spelling, and punctuation and writing an appropriate message.

3. ISPRS SC WEBPAGE

Considering these requirements a website was designed just before the ISPRS Congress in 2008. The web site is based on experiences of many years, designed and programmed security standards and user friendly member module provides member directory, an individual page, member map, message boards and many more in technical and social. Figure 3 shows a screen shot of main page of the ISPRS SC website.

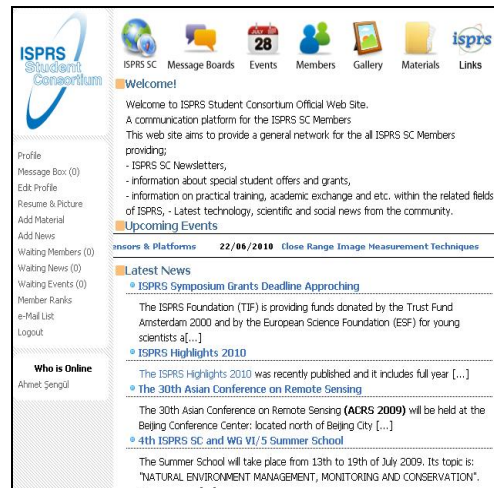


Figure 3: ISPRS SC website main page

The main idea is to collect all the members on the same platform where everyone has the opportunity to share their ideas, useful information, several opportunities like travel grants, foundations or job offers, upcoming activities such as Summer School, international conferences, workshops... etc.

3.1 SC Web Services

Behind the student consortium website, there are many cutting-edge web technologies, which provide powerful, extensible and easy manageable development platform for developers, so that SC has exemplary web platform. PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used general-purpose scripting language on the grounds that it is used to build SC's web site. Even though PHP is sufficient, database software is also need to store and analyze data on the database. MySQL is used for this purpose because of it is the most popular open source database software and also a complementary part of LAMP (Linux- Apache-MySQL-PHP), the website. Many of the world's largest and fastest-growing organizations use LAMP to powering their high-volume web sites including industry leaders such as Yahoo!, Google, YouTube and Wikipedia.

In order to make rich user interface, jQuery, which is lightweight and offering lots of plug-ins, have also been used. The website is built with two kinds of page which are called as static or dynamic. Static pages cannot change when an action triggered or a new data entered, they are generally used for information pages about SC such as history, organization, etc. In contrast, dynamic pages can response user's interaction and are rendered by scripting language, in this case is PHP, regarding data from database or user input.

Dynamic pages are key parts of SC's web site that has five modules, user profile and administration page based on them. First module is the Message Board; it was created to achieve carrying on communication with members and providing discussion platform. Message Board has five different main topics to categorize messages also members can manage their subscriptions for each topic. Subscriber gets e-mail notification when someone post new message to subscribed board. Furthermore, the rich text editor with spell check and text styling enables anyone to post without if they were editing a Word document.

Following up the ISPRS and relevant events around the world especially for students may be hard work for most students and time consuming. However, event module has three event categories; ISPRS SC Events, ISPRS Events and Other Events. Like other modules, members can easily add new event in a couple of clicks as soon as they invite or inform other SC members(Fig4).

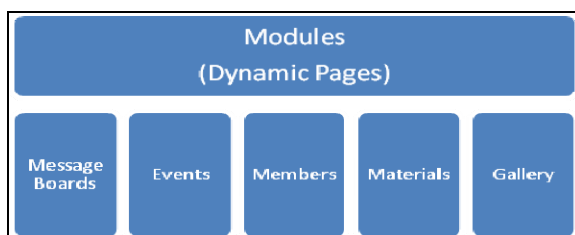


Figure 4: Modules of SC Web

3.1.1 Member Profile

Members can update their information in member profile and list other members with filters by country or region in member directory.



Figure 5: A member profile page example from the website.

Moreover, they can send and receive private message to/from other members by using their private message box. Member map, is based on Google Maps API, visualize the distribution of members on the map by grouping them by countries. The other module is Gallery; it is powered by Flickr API which gives opportunity to obtain album and picture data over web services provided by Flickr that is a worldwide picture hosting company on the Internet.

3.1.2 Materials

ISPRS-SC publishes newsletter regularly and send materials for promotion or other relevant cases. To always serve updated version of materials with tracking download rates or last updated date, materials module is created. Every module has their own control panel is accessible for administrators who control all content and confirm new registrations. The web site doesn't just store, manage and publish with its built-in content management system that allows time-consuming tasks can all be done in a couple of clicks without coding or extra tools.

3.2 Evaluation of SC Web Services

History of SC website started with very minimalistic solution for the ISPRS 2008 Beijing Congress. In 2008, SC was 4 years old and it had a simple website that had only one static page to inform visitor.

However, it is far away to meet needs of an organization which wanted to register new members from all over the world. To meet needs and respond to requests of members, SC board have to had a finished new web site at least having functions for registering new members on the web page and store their information on the database software. Thus, basis of current web site formed before ISPRS Congress in 2008. All parts of SC web site has programmed by SC volunteer members from the scratch without using any content management systems. SC web site has been developed and released new versions with new features for two years. According to statistics, it doubled hits as much as the number of members increases rapidly (Fig6).

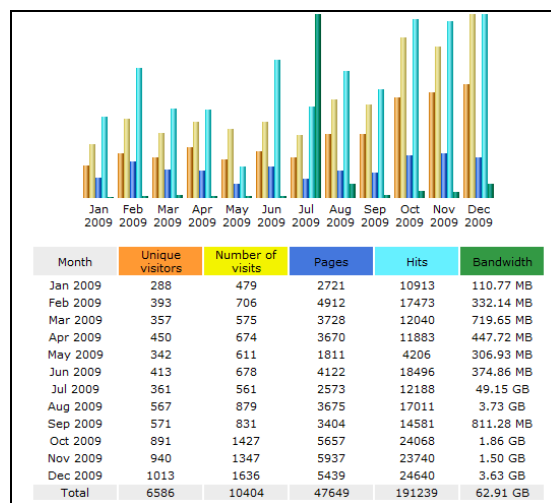


Figure 6: Number of Visits to SC web page in 2009

3.3 Future Perspective of SC Web Services

The roadmap of development has new milestones for the future releases. Current web site has lack of some features even if it is incomparable to any other student organization web sites. In the future following improvements are expected to complete;

- Integration of other social networks to improve distribution and promotion,
- Providing the website to be accessible on mobile phones and devices,
- Increase the customizable interface and privacy settings,
- Newsletter publishing module,
- Increasing the variety of administration settings.

In the meantime, requested features from members will also evaluate and may add to roadmap, so SC web site is welcome to new ideas.

4. CONCLUSION

In conclusion, Student Consortium will be an effective bridge between students and ISPRS. By Student Consortium activities students will be familiar with ISPRS. People, who will take responsibilities within ISPRS in the future, will commence working within Student Consortium. And those people will assign in the future of ISPRS.

The World Wide Web and the Internet have provided a space in which we can network with those whom we might otherwise never have had the opportunity to meet with each other from worldwide networking.

5. REFERENCES

Kivileim C. O. ISPRS Student Consortium Yearly Report [Journal]. - [s.l.] : ISPRS Highlights, March 2010. - 9.

Kivileim C.O. PROCEEDINGS OF THE ISPRS STUDENT CONSORTIUM: [Conference]// ISPRS Congress. - Beijing : [s.n.], 2008.

Ernest Ackermann and Karen Hartman"Internet and Web Essentials" (ISBN 1887902460), and published by Franklin, Beedle and Associates,

URLs

Internet: <http://en.wikipedia.org/wiki/Internet>. - May 2010.

Student Consortium <http://www.isprs-studentconsortium.org>. - May 2010.

PHP <http://www.php.net>- May 2010

MYSQL <http://www.mysql.com>- May 2010

FLICKR <http://www.flickr.com/services/api/>- May 2010

GOOGLE MAPS API <http://code.google.com/apis/maps/>- May 2010

JQUERY <http://jquery.com>- May 2010