

## **GeoWeb Networking**

### **An introduction to a Web 3.0 Transformation**

**Gary O. Grimm**

**Mountain Visions**

**November 3, 2008**

Historically, the process of cooperatively sharing ideas and resources between small human groups living in a local environment has always been important for the individual and group survival in primitive times. This remains true in our modern global ecological, economic and political world. At the end of 2008, given the current ecological and economic crises, the Global Internet and the World Wide Web will continue to improve as transformational agents of change as they have been in the past three decades.

During the 1980's the Internet improved to provide a networking mechanism to connect an increasing number of computers worldwide together. In the mid 1990's a first phase of the World Wide Web provided a more profound networking opportunity that allowed governments, businesses, organizations, communities, interest groups, and individuals to connect and share web sites and web page URLs worldwide. By mid 2000 a second phase began to appear in an explosion of different social/ interest networking services. Included are photographic and video sharing projects, and collaborative Geographic virtual world maps. Many have referred to this as a Web 2.0 phase. It is estimated that 70-80 % of web site information is related to a geographic location and a new Geospatial Web (GeoWeb) is also being created to categorize specific data and information related to place and time. Furthermore, the increasing capabilities of smart mobile phones already are creating geographic Mobile Web opportunities that would have been unbelievable a few years ago.

Now, as we approach 2010 the emerging Semantic Web, or Web 3.0, is starting to provide new ways to connect and link specific data sources available on web site pages with similar data on other web sites. Also referred to as the "Data Web," more sophisticated Semantic tagging techniques are resulting in new Semantic search engines that can provide more accurate, reliable and useful search efforts for specific and connected information than ever before.

Between now and 2020, and in the future, we can expect even more transformative and open source Internet and World Wide Web technologies to continue to be developed. This movement has the growing potential for people everywhere gain abilities to make better and more informed decisions on a personal, local, regional, and global level.

The brief outline below provides a general summary of the important components that are already providing impetus for the important development of this new third phase of the Internet.

## **Geospatial Web Or GeoWeb**

This includes Online Geographical Data base information, GIS Internet Map Servers and Web GIS, expanded with the new use of neogeographic tools, that provide ordinary web users the ability to create their own online maps. These can include links to a wide range of content such as data, documents, organizations, text, images, web projects, networking efforts and invitations to others to contribute and collaborate on the development of these maps. Also included are online "Virtual Globe" collaborative maps loaded with Place & Time Based data about specific places in the physical world. Google Earth/ Maps, Virtual Earth, and NASA World Wind are examples of popular neogeographic tools.

## **ImageWeb**

In the past few years there has been an increasingly expanding growth of very popular image web servers that encourage sharing of photographs, images, video and maps.

Flickr, YouTube and Panoramio are only a few examples. In addition virtual worlds

projects are available for people to build and share realistic 3 D environmental scenarios. Second Life and others are examples. Google earth is another model that has attracted hundreds of millions of users. As Geo and Semantic tags become the norm, it is becoming possible to search and find images, multimedia projects and visualization efforts and related to geographic locations and time based and related subject matter from many diverse web related data repositories.

## **Semantic or DataWeb**

Scientific, government, organizational and community natural resource, and environmental web sites already contain a wealth of "Expert and Knowledge based Content and Concepts." Semantic Searching is becoming available that will increasingly result in much more defined, reputable and reliable search findings related to this knowledge and to Geospatial place and time projects. It is important that web content providers provide better metadata and geo and semantic tags to all data sources in the future to aid in this search capability.

## **OpenSourceWeb**

The open source model of operation and decision-making allows concurrent input of different agendas, approaches and priorities, and differs from the more closed, centralized models of development. The principles and practices are commonly applied to the development of source code for software that is made available for public collaboration. However the term open source culture also applies to the creative

practice of appropriation and free sharing of found and created content. Participants in the culture can modify those products and redistribute them back into the community or other organizations.

Collaborative maps, photo and video sharing services, and interest networking projects are a few examples of growing open source efforts on the Web today.

## **Interest/Social Web**

Corresponding to much of the growth in web site interaction is the growth in networking projects that encourage users to interact with each other because they share common interests. Hundreds of millions of people are now engaging in these opportunities provided by many web sites and by networking organizations such as Ning, MySpace, FaceBook, Google Maps, and photo sharing servers like Flickr and

YouTube, mentioned above, are also examples.

## **MobileWeb**

The World Wide Web as accessed from mobile devices such as smart cell phones, PDAs, and other portable “remote sensing gadgets” connected to a public network continues to grow exponentially. Access does not require a desktop or even a laptop computer. Web users and devices can access and input comments, images and data from the field at any time. The mobile web is becoming one of the most important ways for people worldwide to access data and information on the Internet.

2001 Canal St. Boise, Idaho 83705 (208) 336-2992

mv@mountainvisions.com www.mountainvisions.com Cell (208) 585-7512