Abstract: The evolution of communications technology is changing the way that for-profit and non-profit organizations interact with their constituents. The internet has been the most revolutionary communication mechanism since the telegraph, in that it has changed the way that we communicate, both between individuals and between organizations and their constituents. Through an internship at ONE/Northwest, a Seattle-based web development company, I hoped to learn better how the people and organizations in the environmental movement could take advantage of this new technology, and how this might affect how outsiders respond differently to the movement. The future of the environmental movement will be tied tightly to the internet, as its importance will only grow in the upcoming years.
Why is the Internet Better for the Environmental Movement?

The primary thing that separates humans, as a culture and civilization, from the collective mentality of other species is the ability to communicate effectively through recordable methods. We have evolved our ability to communicate over time from community-level discourse to a potential worldwide audience. Some people consider the inventions of the printing press by Gutenberg, the telegraph by Ampère, Gauss and Volta, and the internet by the US Department of Defense to be 3 of the most important inventions in history, because each of these has affected the speed, amount, and manner in which we communicate (Kreis, America). The internet in particular holds a great deal of promise, because it simplifies the way that information is showcased. The environmental movement, which has been sometimes labeled as out of touch with modern technology, has a vested interest in making use of this powerful form of communication (Shellenberger and Nordhaus). Perhaps the most important aspect of the internet, especially for the environmental movement, has only been realized in the past few years: it can act as a fully interactive gateway between people. Environmental groups, being very people-driven, can take advantage of the interactive nature of the internet more effectively than most other social groups. Effective use of the internet allows environmental groups a better chance at engaging new members and mobilizing existing members to action.

Environmental problems can often be linked back to the classic environmental equation of I=PAT. Paul Ehrlich’s *The Population Bomb* explains that any level of affluence and technology (A and T respectively) is sustainable provided that population (P) remains below a certain level. Given our exploding world population and rapidly advancing level of technology, many environmentalists are changing their focus from the natural
environment to the human environment. It is human nature to work hard on spreading our species and expanding our population, but increases in health care and the quality of life are causing our population growth to skyrocket beyond its natural rate. In addition, human ambition naturally drives us to increase our affluence. In a world where $P$ and $A$ from the $I=\text{PAT}$ equation are increasing without prospect of stopping, we must adopt policies, practices, and technologies that reduce our impact on the planet. To accomplish this goal, education and information are vital, especially education and information about ways that the public can engage in activities that benefit themselves and their environment. This is one key area where the internet improves on prior forms of communication.

Older forms of engagement used by environmental organizations included newsletters and phone tree calling. Newsletters were somewhat effective, but they used a great deal of paper, and were relatively expensive to send out due to printing and mailing costs. (Dart) Thus, these were usually reserved for actual members of organizations, as opposed to those people who were simply curious about an organization. Phone trees were also somewhat effective, but relied on phone lists to allow communication, and oftentimes people had to opt onto the phone list to receive communications. (American Association of University Women) Again, this required active involvement on the part of interested parties to get information. Phone trees are a simple form of “contact networking”.

Early forms of contact networking were much like our modern social networks, but they were limited by a lack of organizational technology. Getting the public involved with an organization or event takes a large outreach program, which many smaller organizations would not have the funding or popular backing to mount. Before the internet, a strong outreach program usually required hours of work by multiple people within an organization
to coordinate and organize people and events. All of this changed when the World Wide Web was popularized.

Where early forms of communication are inefficient because of cost or scope, the internet provides a mechanism for the entire industrialized world to be reached at a low cost. Newspapers are largely locally focused, and although there are exceptions to this rule (*The Washington Post, The New York Times*, etc.), the readership of any given newspaper is still limited by the number of copies that can be printed and distributed in a three to four hour window in the early morning. Radio and television broadcasts are more efficient because they are not limited by a number of copies, but are still limited by the power of the transmitting source. The internet is the first form of communication that is not limited by locality or by a limited amount of accessible copies, but is limited only by a person being attached to the network. This change in format is because the internet is not an active broadcast medium. Websites are “hosted” on servers that contain information and regulate connections to that information (W3C). To view a particular web page, a computer asks the server for information on what to display, and the server responds with the page information. This “passive broadcast” type means that web pages are visited by the active choice of an internet user. Another major change from prior forms of mass communication is that the internet conveys text, images, audio, video, and interactive content, where each prior form of communication could only support one or two of these (Internet Assigned Numbers Authority). In short, these two changes mean that the World Wide Web is only limited by two things: a user’s ability to connect to the network, and a content provider creating a web page about a particular topic. The World Wide Web thus represents a major change in the paradigm of mass communication, because organizations stopped prioritizing
the active broadcast of a message, and started prioritizing reaching and engaging the public with the same message. While this doesn’t appear to be a major change in focus, in fact it is the reason why the internet provides such a user-focused experience.

After the internet gained popularity in the mid 1990s, organizations began to strategize about how to get users to their websites most effectively. The originators of this field of thought were advertisers and for-profit companies that wanted to maximize profits from their internet stores. To this end, many companies started streamlining their websites based on consumer feedback. This change highlighted the interactive features of the internet, because consumers were able to drive change in how an organization structured its webpage. This particular advance had applications for both for-profit and non-profit organizations because all organizations have a goal of reaching their audience more effectively. The process of changing a website based on user preferences is called a “feedback loop.” Throughout the 1990s and early 2000s, this strategy of feedback loops drove the major advances in internet technology, and eventually led to the development of web analytics.

Web analytics is another evolutionary step for this process of centering a business’s focus on the public. Modern web analytics has been developed throughout this decade (2000-present) as a way for website developers to see how traffic uses a website, and how website structure and content can contribute to the success or lack of success for an organization’s website. This is a major development, because it changes the focus of a website from what an organization wants to disseminate to what a user wants to read about. This paradigm shift is one of the most important developments in engagement strategy,
since it places total focus on reaching out to the public and making sure that the information presented is pertinent to popular interest.

The final paradigm shift toward public outreach on the World Wide Web has been the development of the so-called “Web 2.0” technologies. The O’Reilly Media group, one of the pioneers of the Web 2.0 concept, describes it as lacking a “hard boundary, but rather [having] a gravitational core.” (O'Reilly) What this means is that there is not a clear delineation between Web 1.0 and Web 2.0, just that each tends to have similar characteristics. An example of the differences between the two is the Encyclopedia Britannica and Wikipedia. Traditional Web 1.0 sites like Britannica Online contain a wealth of information, but that information is provided entirely by Encyclopedia Britannica, Inc (Encyclopaedia Britannica). Wikipedia is a Web 2.0 encyclopedia that is entirely community generated and edited. This takes the concept of a consumer-centric website to a new level by not just focusing on the community that reads the site, but by actually being created by that same community. (Wikipedia:About) This has the disadvantage of opening up the website to vandalism and personal bias, but the tradeoff is being able to better address a broad variety of topics at an expert level. There are several thousand people around the world that contribute to and edit the articles on Wikipedia, many of whom are experts in a field. This publicizing of content generation harnesses the power of the masses, and allows for far greater amounts of high-quality information to be added and edited on a daily basis.

**ONE/Northwest Internship**

Through the summer of 2008, I interned at a non-profit Seattle-based web development firm called ONE/Northwest. ONE/Northwest occupies a unique niche in the web development industry by working exclusively with non-profit environmental
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organizations to help advance their use of information technologies. This is a mutually beneficial system. Most environmental organizations are small and do not have the resources to write and maintain a fully-functional modern website, and ONE/Northwest provides those organizations with services that are both high-quality and priced to be affordable for non-profits. In addition to website development services, ONE/Northwest also offers database development, as well as some engagement strategy consulting.

I chose this internship because it provides a unique look at how environmental groups are actively pursuing the advancement of their technology, and how this is affecting their scope. I was chosen by ONE/Northwest to work in a research team focusing on the generation of an education program on web analytics for our clients. Through my experience in this internship, I feel like I was able to see how the evolution of communication technology is changing the way the organizations think about the public, and how the public thinks about organizations.

The most important aspects of engaging an audience are reaching the audience, influencing the audience, and keeping track of those that you influence. Websites are an especially effective method of reaching the appropriate audience. This is because they offer an ability to convey information in an “on-demand” format. Users actively search out information on a given website instead of having that information be simply placed in front of them.

Websites provide people with an easy way to receive more information from an organization, to donate to an organization, or to join an organization as a member. This multi-level engagement system can help organize people who have varying degrees of interest in an organization, which can dramatically increase the overall number of people...
that are engaged. People will naturally have different levels of interest with certain groups, and will have a limited desire for direct involvement. A person is much more likely to opt to receive a free email newsletter rather than pay membership dues to join an organization, especially if they only have a passing interest that organization. While providing several options might slightly lessen the proportion of so-called “die hard” supporters of an organization, it greatly diversifies and increases the overall number of people involved with an organization.

A stellar example of this multi-level system of engagement was employed by Green For All, an organization that supports development and lobbying for “green-collar jobs” in America. Their “Get Involved” page online gives three different options for a user to express interest in the organization: sign up, volunteer, and donate. The “sign up” option registers a user to receive an email newsletter from Green For All. The “volunteer” option directs a user to a page with volunteer opportunities in various areas, so that a person can become involved actively with Green For All. The final option, “donate,” is designed for those people who are interested in helping Green For All,
but either do not have the interest or the time to actively volunteer with the organization. These three options provide a choice for users of the website, so that they can tailor their level of action to their level of interest.

ONE/Northwest’s database development services act to help the environmental movement in a different way: by allowing environmental organizations to organize and maintain relationships with constituents at different levels of engagement. Until the popularization of computers and the internet, only large organizations could employ enough staff to actively reach out to people who are at different levels on the spectrum of engagement. Now, using modern technology, maintaining an accurate list of followers of an organization with many different levels of engagement is simple.

During my tenure at ONE/Northwest, I had the opportunity to look at how modern social networks like Facebook and MySpace can help spread ideas and organize events. One feature of social networking sites that is different than a normal website is that the “attitude” of a social network is less formal than a traditional website. Services like Twitter (a social media site that allows posting of small snippets of information, less than 250 characters at a time) allow an organization to informally interact with people; this strategy can sometimes increase the engagement between the organization and a curious potential member. Event organizing through social networking sites is simple in comparison with traditional event organizing because the site handles invitations and attendance tracking for you. Also, some social networks offer the ability for attendees to invite their friends, thereby substantially expanding the overall base of people attending. This possibility to harness the power of your attendees to attract even more attendees is probably the most important aspect of social networking.
Green For All used Facebook to promote their Green Jobs Now campaign and to help their event organization website receive traffic. There were about 100 events scheduled on the Green Jobs Now website before the organization started using Facebook. Through the next three weeks, the website received a considerable amount of traffic directly from the www.facebook.com domain, which was important for two reasons. First, the nature of social network group growth is that after a certain point, it grows exponentially. The analytics team at ONE/Northwest monitored growth of this group, and saw that it did begin growing in an exponential manner. Second, this growth can be directly tied to the number of events scheduled with Green Jobs Now. After the three week period of exposure on Facebook, there were over 700 events scheduled, in all fifty states of the US. This sevenfold growth in events shows that social networking can contribute greatly to the success of a social movement, especially one associated with the environment.

How does this Connect with the Environmental Movement?

Given the exploding popularity of environmentalism and conservationism, organizations have to react by creating a structure that will support these new members.
This structure must take into account several factors to both engage new members and to foster a relationship with existing members. First, a method to connect directly with a constituent is necessary. Second, a method to easily keep track of members, and continue their engagement with an organization, is necessary. Also, since many people are best engaged through action, a method to organize events is necessary. The internet, and especially Web 2.0 technology, provides these features.

Another important aspect of the internet is that it eliminates organizational waste, because it is a paperless form of communication. The necessity of paper-based communication has traditionally been the bane of many environmental organizations, because paper-based newsletters are wasteful, costly, and hard to produce. With some rudimentary knowledge of the HTML programming language, an organization can produce an aesthetically pleasing, informative newsletter that can be distributed by email. Email communications can streamline the communications process for both the organization and for the potential member by eliminating waste, allowing frequent free communication between the organization and the person, and by allowing easy archiving of communications.

Finally, and most importantly, the internet provides a mechanism for a social movement to be developed and fostered. Technologies developed in the form of social networks and other Web 2.0 websites involve the public, and thus engage the public, whether they realize it or not. This is exceedingly important because the environmental movement is, and always has been, a social group. Gideon Rosenblatt, executive director of ONE/Northwest and writer of *Movement as Network*, explains the situation well:
“People relate to environmental causes in different ways. The movement has done a good job of connecting with one-sixth of the public via “high engagement” membership and activism strategies. It must now also build a “low engagement” strategy to connect with the remaining 80% of the public who share environmental values. New organizational strategies are required to reach and serve these new audiences.” (Rosenblatt)

These “low engagement strategies” are being developed in the form of social networks and interactive websites that offer the ability for people to choose their own levels of engagement. In truth, the most powerful aspect of the internet that is allowing the environmental movement to take such great advantage of it, is choice.

Limitations and Drawbacks of Internet-based strategies

One aspect of this technology to note is that it requires a computer and internet access to be fully realized. In westernized society, these two stumbling points provide no issue, but in third world countries oftentimes finding clean water and electricity is a more pressing need than getting to the computer. Figure 3 shows clearly the disparity of internet connectivity between the developed and developing worlds. The image was developed using the 2000 World Bank Development Report and data from the Internet Software Consortium. We can see clearly that developing nations lack the same connection to the internet as developed nations, and this presents problems for the environmental movement. Many of the environmental issues that we face today are
problems of population expansion, and access to education is one of the most important limiting factors in birth rate. (El-Ghannam) The fact that so much of the developing world cannot take advantage of the educational power of the internet is very important. The CIA publishes a list each year of the number of internet users in each country, and perennially the third world appears at the bottom of the list. This can partially be attributed to a lack of infrastructure, and can partially be attributed to a lack of computer ownership in developing nations, and in less affluent areas of developed nations. (Lorna H McNeill, Elaine Puleo and Bennett)

A possible solution to this problem is being developed, in the form of an ultra-inexpensive notebook computer that can be distributed to homes in developing nations at an affordable cost. The so-called “green machine” is a $100 computer that powers itself through a mechanical wind-up system, which is ideal in communities that lack access to electricity. (Twist) Several governments have taken interest in these notebooks as a part of their investment in education. Given the importance of access to information in the learning process, this may hold the key to the future of the information technology revolution in developing nations.

Another problem with the internet is that it tends to make interactions less personal, since there is oftentimes less face to face contact between people. This impersonality is a problem for the environmental movement because social movements are reliant on motivating and inspiring groups of people to action, and this is much more easily done when there is a connection between the organization and the person. An organization that uses just the internet to interact with its members will lose members that feel like they are not accomplishing anything by being a part of that group.
The solution to this particular problem is Web 2.0-based event organizing. The direct face-to-face contact needed to drive social engagement can be accomplished using the internet to organize an event, and then actually holding the event. The fact that many organizations will need an online face does not mean that all activities must then be online; it only means that the internet will be used as an interface and communications medium between the organization and a person. It will be up to individual organizations to ensure that they strike a careful balance between providing strong informational services online, while still providing activities and methods for average people to get involved on an active level. The combination of these two connections provides the best possible source of engagement between an organization and a member.

**Future**

Through the course of time the number of people that are connected to the internet will increase, and as a result of this the relative importance of having a website will increase. This will hold especially true for environmental organizations and non-profits. Having a website helps an organization save money and operate more efficiently in reaching the public, and these are the two main goals for environmental non-profits. The importance of having a hand in many different aspects of the internet will continue to grow as the internet continues to develop, because each of the above mentioned methods of engagement will only grow in their abilities. Organizations that do not have a website will fall behind in the next few years, because people will become involved with organizations that make involvement easy.

The most effective way to reach new members is through a well-developed, functional website that gives enough information for a user to make an informed decision as
to their personal interest in that group. The most effective way to organize events for an organization is through a social networking site, which provides maximal access to people while maintaining organization. The most effective way to keep track of members of an organization is through a robust database that contains contact information and information about what level of engagement each person has with the organization. All of these technologies will continue to develop in the upcoming years, and we can expect the internet to play an even larger role in how people interface with the organizations that interest them.

**Conclusion**

The internet represents one of the most powerful forms of technology that we have ever conceived of, and it will continue to evolve over the next few decades. The key part of this particular form of technology is that it helps ameliorate our environmental impact by disseminating knowledge and promoting a community-based environmental ethic. The fact that the internet helps reduce societal waste is in stark contrast to most other forms of technology that contribute to our environmental impact. The internet holds the potential to spread information more quickly than any other communications medium that has existed previously, and this will have applications in energy technology sharing, education, and improvement of the quality of life for people in developing nations. The environmental movement can take advantage of this technology to motivate the public toward goals, and can work effectively to get people involved in protecting our planet. The knowledge and ability to do this is only one mouse click away.
Works Cited


