Abstract - Organizations have been busy creating GIS databases, custom GIS software solutions, and providing GIS Services. Much knowledge exists that is internal to organizations, but which may benefit others. In this paper the author looks at different online marketing techniques and approaches that can be used by organizations to promote themselves and the sale or use of their GIS data, products or services.

Introduction
Online marketing is the use of the Internet to advertise and sell goods and services. Online Marketing includes numerous approaches including pay per click advertising, banner ads, e-mail marketing, and search engine marketing. GIS organizations that have products (data/software) or services to sell, may consider online marketing in addition to traditional marketing approaches to promote their activities to government (B2G), businesses (B2B) or end-users (B2C).

Some online marketing approaches cost time, while others require both time and financial investment. Online marketing consists of campaign planning, execution, monitoring, evaluation, and enhancement. This paper provides an overview of different online marketing techniques with GIS-specific examples.

Email Marketing
An important approach which may not require a financial investment is email marketing. An organization may utilize its internal email list(s) to be in touch with various stakeholders including clients, prospects, and suppliers of the organization. Software such as Microsoft Outlook may be utilized to mass-email a personal message to a group of contacts, with it’s email merge functionality.

Collecting Emails
The larger the email list, the more individuals/contacts will be aware of your organization’s message. There are a number of approaches to collecting and utilizing an email list. The emails collected should be opt-in emails, that is, emails of people that you have had some contact with, and that have provided you with permission to contact them.
While there are costs to some of these email collection methods, in many cases these are costs that organizations are currently committed to as part of their traditional marketing efforts.

One approach to collecting emails for an opt-in list, is attending conferences, meeting people at booths, in the hallways, at seminars, and asking them for their business cards to follow-up with them at a later date. You could start an opt-in email relationship by following up with an email immediately following a conference, indicating how nice it was to meet them at the conference, or how informative it was to visit their booth, and asking for additional information about their organizations, products or services.

**Website Basics**

Your organization’s website could be modified to include on each page a Contact Us form which allows the visitor to your website to enter their name and email. The visitor’s contact information will be forwarded to your email address, and allow you to follow-up with the visitor. Another opportunity is to include a Refer a Friend form, which allows the visitor to enter their name and email, as well as the names / emails of other people that the visitor wishes to refer to your website.

**Electronic Mailing Lists**

Electronic mailing lists are email discussions for people with similar interests which you can join to discuss GIS related topics. An email address is assigned to a group of people. You subscribe to the list. Once subscribed, any message you send to the list will be sent to everyone in the group. You can find many GIS electronic mailing lists by visiting [www.lsoft.com/lists/list_q.html](http://www.lsoft.com/lists/list_q.html). This site allows search for LISTSERV lists related to GIS (or any other topic). The three other popular list administration software are: Majodomo, Listproc and Almanac.

**Newsgroups / Discussion Groups**

A newsgroup is part of the usenet news system. Usenet news is a collection of thousands of different discussion groups on a huge variety of topics. Participants write articles which can then be read by any person who has access to the usenet news system.

In order to have access to the usenet news system, your site must be set up for usenet news. You should ask your system administrator or support staff whether usenet news is available, and how to access it. Commercial on-line services traditionally offer usenet news access.

Alternatively, there are web sites where you can read usenet news, such as Google Groups. You can find these by clicking the Groups link at [www.google.com](http://www.google.com). You can then search for “Geographic Information Systems”. You will find groups such as comp.infosystems.gis. You can post messages or reply to messages posted by others. Both activities will increase exposure to
your organization, products or services. You can reply by showing interest in the work of others, and later showcase yours work to them.

Some groups are listed on http://home.earthlink.net/~rpminfonet/gislist.html. For example, you can subscribe to ESRI-L ArcInfo Users Group which covers Discussion of issues relating to ArcInfo products by sending an E-mail message and in the body of the message, writing subscribe to E-Mail Address: esri-l-request@esri.com.

**Reading Industry Publications**
You may follow-up with people that write articles online or hardcopy industry publications to congratulate them for the articles they wrote and introduce yourself. You may also follow-up with people that are mentioned in articles to congratulate them for appearing in an article and asking to find more about their work. These are ways to start relationships with people you have not yet met in your industry. An example of an industry publication is Geospatial Solutions. You can find information about it at www.geospatial-online.com/geospatialsolutions.

**Writing for Industry Publications**
Industry publications constantly look for articles about new products, services, or interesting people in the industry. You may take your organization’s work, and re-format it into a publishable article. When you submit the article to the publication, make sure to include a brief biography of yourself, and information about your organization, products and / or services. Make sure to include your email address. People interested in what you write will email you their feedback. Examples of publications to which you can write include GeoWorld, GeoSpatial Solutions, or company specific publications such as ArcUser.

**GIS Portal Links**
Submit your website to a GIS portal. For example, you can submit your website to www.gisportal.com or www.gisuser.com. The more linked you are to other GIS websites, the more people will know about you. Since GIS portals bring many GIS users together, you can gain substantial exposure with such links. Additional GIS portals include: www.gisuser.com; www.geocommunity.com; and www.directionsmag.com.

**Website Links**
You may suggest that websites add links to your GIS website, to an information website you create, or to other websites that already feature your website, your company, products or services. This will allow visitors to other websites to find these links, and follow them to your website, were you showcase your organization, and allow visitors to contact you. For example www.gislounge.com allows link submission at http://gislounge.com/freisin/submiturl.shtml.
**Press Releases**
A Press Release is a vital tool for announcing your business, or a new service within your business, to the media. The media consists of editors and journalists for newspapers, newsletters, magazines, and trade publication, as well as radio and television stations. This type of marketing informs journalist, editors and producers that you and your service are available to be interviewed for their publication. When you are featured in an article you gain credibility with your buying audience. It indicates that you are a leader in your field and newsworthy. While an ad is a very acceptable form of marketing a product or service, an article can not be purchased. An ad says that you are paying for others to see this and buy from you, while getting featured in a publication announces you and your product or service as newsworthy. It creates a bigger impact much faster than a paid ad can create.

You can submit a press release to websites. For example www.gislounge.com via email to the editor editor@gislounge.com. You can also submit your public relations message to www.giscafe.com. Free submission is available at www.geoplace.com.

**GIS User Groups**
Groups of users of GIS software have formed throughout the country and worldwide. Some groups are region-specific; others are more global in their reach. ESRI and other GIS company's groups can be found on company websites such as www.esri.com or on GIS Portals such as www.giscafe.com. Communicating with members of such groups will increase your exposure.

**GIS Electronic Newsletters**
Subscription to newsletters of different GIS related companies and organizations can provide you with information about people in the industry. You can follow-up with them and establish online relationships. You may also be able to contribute some of your written work to these newsletters, thus providing many others with access to you.

**Event Submission**
You may organize a local GIS event in your city. You can submit the URL about this event to various websites. For example www.gislounge.com allows event submission at no cost. Visit http://gislounge.com/conf/subconf.shtml and enter the event’s name, date, location, URL, and additional description. You will have people interested in the event directed to your website. Some may register, and you will increase your opt-in email list. You can submit an event at www.geoplace.com; you can also submit your event to www.giscafe.com via email to gismarketing@ibsystems.com, or at www.gisdevelopment.net.

**Article Submission**
Submit articles, technical papers and other GIS content to websites. For example www.gislounge.com allows article submission at
www.gislounge.com/library/blsubarticle.shtml. You will be asked to enter your name, email, and submit the article for review. The www.giscafe.com website allows submission of a variety of articles as well as, technical papers. Your articles will increase your visibility. Make sure to include your contact information for the benefit of your readers.

Discussion Forums
A discussion forum is a database that stores, sorts, organizes and manages messages submitted by participants as contributions to ongoing discussions. The forum allows participants to read, create and respond to messages on the Internet. For example, www.giscafe.com has a number of discussion forums:

- GIS Education - There are many Geographic Information Systems to choose from but for now this discussion board deals with the concerns of those who are attempting to learn about GIS. Readers can post questions and problems concerning any GIS software, such as ESRI products, MapInfo, Intergraph, CARIS, ER Mapper, Manifold and many others.
- Business Geographics - This discussion board focuses on the business aspect of Geographic Information Systems. It encompasses the concerns of industries that make use of GIS, including real estate and retail. The business of GIS is broad and there are many opportunities for data sharing here.
- GIS Tools - This discussion board is open to those who wish to explore GIS tools that exist as well as those they would like to have. This board facilitates the exchange of information about products and their pros and cons.
- GIS - Remote Sensing; Imagery - This discussion board is open to those participants who are interested in or active in the use of remote sensing products and other imagery products. The discussion may range from orthophotogrammetry, to LIDAR mapping, to mosaicking, to digital aerial cameras and much more.
- Data and Metadata - Data is a vital part of every GIS professional’s working environment. This discussion board is open to those who want to participate in all aspects of data, including sources, quality, availability, price, as well as whether there is metadata to accompany it. Valuable information about viability of data links, data sharing, etc. is posted to this board.
- GIS User News and Reviews - Discussion of user news and views articles.

There are a number of forums available at www.geoplace.com, including:
- Careers - Post jobs and job interests, discuss training options, certification and necessary skill sets.
- Data Discovery - Communicate the utility of a newly found data set or query your peers about available data.
- Enterprise Integration - Share the pains and triumphs of integrating GIS with other business-critical systems within your enterprise.
- GeoWorld Magazine Feedback - Post feedback in response to a column or feature that appeared in GeoWorld magazine.
- Location-Based Services - Discuss indoor and outdoor location technology, technical requirements, interesting applications, and more.
- Policy - Legal issues, privacy, government mandates and organizational rules are the focus of this forum.
- Troubleshooting Tips - Share tips and tricks. Query your colleagues about software problems and conflicts.

Text Advertisement
You can pay to advertise your organization, its products or services. Text ads traditionally cost less than display ads. You need to consider if text ads are sufficiently effective for your purpose. As an example, www.giscafe.com allows submission of text ads up to 40 words in length.

Banner Advertisement
Display ads may include graphics in addition to text, and may be more visually appealing to your audience. The www.giscafe.com website allows submission of 234x60 pixel GIF or 125x125 GIF (10KB file size, up to three rotations), and also include the click-through URL.

PowerPoint Presentation Submission
Some websites may allow for submission of PowerPoint presentations of your activities. One such site is www.giscafe.com. Such a submission could increase exposure for your products or services.

Company Profile and Logo Submission
Your company's profile and logo may be submitted to different websites. For example, www.giscafe.com allows submission of your company profile. At www.geoplace.com you can submit a basic company listing at no cost. For a small fee, you can add your logo, and email contact information, as well as provide a longer description of your company, products and services. At www.gisdevelopment.com you can submit your company profile for free at www.gisdevelopment.net/company/registration.asp. These submissions will increase awareness of your organization, and allow more people to visit your website and contact you.

Downloads Submission
You may have an evaluation version of a product that you wish to sell. You should considering providing your product to websites which will offer it as a free download to their visitors. For example, www.giscafe.com allows submission of evaluation software, or free-ware. It requests your contact name, email, company name, URL, download description, the actual file, and for you to select the category to which the download belongs – from a list.

Jobs Submission
Submitting job postings for your organization exposes you to many people actively seeking jobs in the industry, and which will eventually become members of your or other organizations. This is your opportunity to showcase your organization is a positive way while posting a job advertisement. You may, for

**Web Directory Submission**
A Web Directory is an Internet search tool that searches for information by subject categories. People that have a broad or generic search may start with a web directory rather than a search engine. To promote your organization, you can submit your website to Yahoo Directory > Science > Geography > Geographic Information Systems (GIS). Basic submission may be free or for a fee.

**Guest Book Submission**
Some websites allow their guests to record their visits. For example, at www.gisdevelopment.net you can submit your name, email and opinion to their website. Other visitors may be interested to see who else visited the site, and encounter your listings. If your comments interest them, they may contact you.

**Thesis Submission**
You can submit your Ph.D., Masters Dissertation, or internship report to websites. For example you can submit your deliverable to www.GISdevelopment.net by emailing info@gisdevelopment.net. This will provide exposure to your work.

**Summary**
A systematic treatment of online marketing will promote your organization, its products or services. Twenty five activities were reviewed in this paper. You need to review your current marketing activities, and determine which methods discussed could be incorporated. As with other marketing approaches, you need to evaluate and measure which methods will benefit you more over a period of time, and adjust your strategy based on these findings.