Social Media Support of Research

Geoffrey C. Fox, Siddharth Maini, Barbara Ann O'Leary
Indiana University
gcf@iu.edu

More detail can be found at Social Media Support of Research Web Site: http://informall.org/earthcube

According to Wikipedia "Social Media includes web-based and mobile based technologies which are used to turn communication into interactive dialogue among organizations, communities, and individuals."[1]

Social Media has matured to the point that it now offers rich opportunities for researchers and scientists to engage swiftly and effectively with colleagues, collaborators, staff, funders, press, and the public. The very nature of Social Media is to foster immediate, accessible, fluid sharing of information resources, insights, opinions.

The benefits of utilizing social networking platforms include low barrier to use of technologies to organize, deliver, and share video, visual images, audio, text, etc.

Advantages of adopting a commodity approach to online interaction include:

- minimal set up time to establish online collaboration or resource sharing spaces - often minutes rather than months
- broad engagement with social media environments, such as Facebook, Twitter, and Google+ makes it easy for collaborations to take place without the need to learn about new environments
- access to worldwide conversations on a vast range of topics and disciplines instantaneously.
- many of these online resources are free

Social Media tools are not designed to present structured data in a logical fashion. They are designed for semi-synchronous, time-ordered communication and are particularly good at capturing what's happening now. The difficulty in using current EarthCube Ning site to present structured information illustrates the trade-off between time-sequenced and content-arranged presentation of information. Time ordering is a good way to capture time sensitive collaboration but typically not as effective for organizing scholarly work even if tagging is used.

Some earth science is very directly related to people and so the community social networking links to science research. Examples are seen in natural hazards like earthquakes and illustrated by value of internet tools in locating people and resource status in the major 2011 Japanese earthquake (see for example http://www.google.com/crisisresponse/japanquake2011.html). Another is work relating volume of Tweets to events described in our Twitter resource.

We will be presenting information about six particularly interesting and typical concepts in Social Media with screenshots and descriptions of their key features.   The field of Social Media is rapidly changing. The selection of these 6 Social Media resources is not meant to be an endorsement.   At a later date we will expand to explore the effectiveness for research science of additional social media resources such as:

- wikis: server software enabling group creation and editing of websites

- blogs: information sharing sites generally time-organized and often having social networking interactive components to facilitate discovery, dialogue, and sharing
- LinkedIn: social networking site emphasizing professional relationship building
- Flickr: image-sharing website with strong social networking component
- YouTube: video-sharing website with strong social networking component
- Pinterest: fast growing photo pinboard social network
- Storify: a social storytelling space, supporting development of coherent social media narratives.

Drop Box supports sharing of files based on cloud storage. Other examples of interactive file sharing include Google Drive, Microsoft SkyDrive, Box, and SugarSync.

Facebook emphasizes Liking and Sharing. "With over 900 million active users, more than half of them using mobile devices,"[2] is clearly the most popular of the social media sites. Facebook offers extensive applications, strong multimedia engagement, and effectively provides a sophisticated alternative to email through Instant Message/Chat, though buy-in by a wide user base is required. Timeline, Pages, Groups, Events and Interest Lists are among the ways Facebook facilitates engagement.

Google+ offers interesting features with Circles, which facilitates management of relationships, and integration with interactive collaboration tools such as Hangouts, Photo, Video, Google Docs, and Google Drive. Google+ Pages provide engaging opportunities for organizations to share collaboratively. Google+ builds strong connectivity around the web through their +1 tool. In a limited study the integrated nature of Google resources has been shown to be quite positive.

Google Docs provides the ability for collaborative document development in a relatively robust and fluid environment, allowing for group editing, commenting, or viewing of documents.

Google Drive or an enhanced version of what was formerly known as Google Docs - is a document sharing, collaboration, and storage system that gives you access to your files on the web, from your hard drive, and even from your mobile device. It facilitates ease of document creation as multiple authors can access and edit the same document in real time. Google Drive gives you control over who sees, comments on, and edits each document. Please use the slider above to learn about more about its features relevant for science.

Skype provides audio, video and text communication one to one and in groups.

Twitter utilizes an effective communication strategy, which, while constrained to 140 characters per Tweet, enables robust interaction through following, @mentions, DM direct messaging, #hashtags, lists. Twitter is the most popular example of a micro-blogging system.

The momentum seems to be in the direction of multiple interest social media platforms with strong connection to other resources and other social networking capabilities in cyberspace. We anticipate the movement toward fluid interaction across sites to continue to strengthen. Niche sites (walled gardens) are unlikely to survive in this emerging environment where users/ use beget more users/use in a viral effect.

[1] Social Media entry on Wikipedia: http://en.wikipedia.org/wiki/Social_media

[2] Facebook entry on Wikipedia: http://en.wikipedia.org/wiki/Facebook