

# WellSpring

## Using Mapping and Social Networking Tools to Promote Physical Activity

Government  
of Alberta

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As a runner and mountain biker, I often find technology to be more of a barrier than a help when I am trying to get outside to participate in physical activities.

For example, I often find myself in the position of being all geared up to run or ride when I suddenly receive an e-mail or cell phone call that requires my attention.

In today's increasingly "high-tech" world, I feel that owning a "smart" phone is a double-edged sword. Yes, it keeps me connected to my friends, family and work. But, more often than I would like, it interferes with my plans to spend time being active outdoors.

Having said all this, my research indicates that smart phones, coupled with the Internet and a wide array of software applications (apps) or tools, can play a key role in how people plan, document and communicate their outdoor activities.

### What's in This Article for You?

- A Socially-aware Internet?
- Mobile and Web-based Mapping Tools
- Why is Activity Sharing Important?



This article explores the idea of a smart phone (e.g., a BlackBerry, iPhone or Android mobile device) and the Internet adding value to an outdoor activity, helping to promote participation. The value can be demonstrated by examining two emerging trends in computing:

- social- and location-aware mobile devices; and
- improved online mapping and collaboration (social networking) tools.

When the features of these types of tools are combined, they can actually enable increased "community building" around outdoor activities, potentially contributing to increased physical activity among the general population.

### A Socially-aware Internet?

Recently, one of the people I interviewed while conducting my Masters Degree research posted the following on Facebook:

*In preparation for the upcoming season I am doing hill sessions on Tuesday and Thursday nights. Message me if you are interested in joining. The session will start around 5:30 and go to 7:00. You don't have to do the whole session or all the same hills. It is just a good way to get out with some motivated people. Message me if you are interested.*

This post is typical of that runner, who is very community-minded and interested in running with a group of people. In fact, this individual often links a running-related post to a map of the intended route.

While social networks are very much in vogue these days, and many people use them to share the minutia of their daily lives, the importance of many individual posts can be questioned. But, there is value in being able to connect with a network of family and friends at the push of a button.

This value is heightened or compounded when you share important experiences like vacation or family photographs, or create invitations to events that you want your social circle to attend.

More generally, when social networks are combined with mapping tools, individuals can start to share how they use their local environment for recreation, physical activities of all kinds, or to plan an event.

As with the example above, by posting a running event on Facebook or another social networking site, you engage your network by allowing them to view and comment on the activity. It's also a powerful way to invite many other people to join you; in a way that lets them know what they're getting into.

Furthermore, social networking sites like Facebook empower a group of people to enter into a discussion about an upcoming event or activity. As in our example of a post about hill training, an initial post usually triggers many more posts and a wider

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conversation. The conversation may touch on many relevant topics, such as distance, duration, and even what clothes to wear for the weather.

In our example, the fact that a map was provided with the initial post—coupled with discussions about weather and other factors—greatly increased the comfort of the participants, and, therefore, their overall enjoyment of the activity.

In other words, the event had value and contributed to the likelihood that regular participants would do it again and invite others to future events.

But linking a social networking site with a static mapping application is just the beginning! When a social network is combined with a mapping application and a smart phone with global positioning system (GPS) capability, a whole new world opens up.

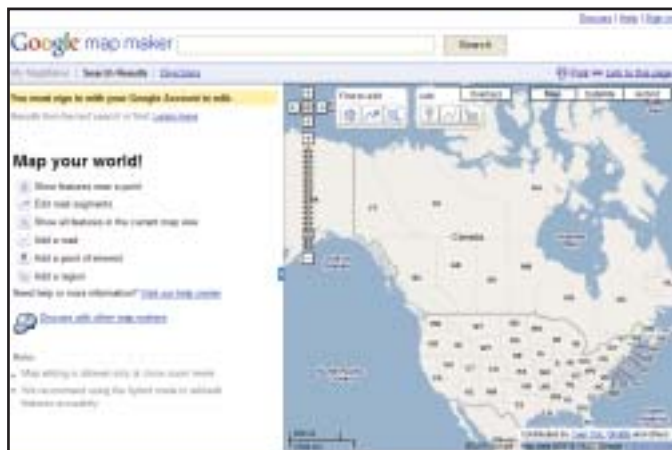
### **Mobile and Web-based Mapping Tools**

Web-based mapping entails a mapping interface that is enabled such that the user can draw features, such as routes, on the map and then save and share that map with others.

There are a number of web-based maps, including OpenStreetMap.com and Google Map Maker ([google.com/mapmaker](http://google.com/mapmaker)). Map Maker, for example, has enabled a user to draw points, lines and areas that can be saved and shared with others.

Map Maker's other features allow users to upload photographs and descriptions. When a drawing is combined with photos, video and/or text, these powerful features enable individuals to represent their personal experience and interactions within their local geography, such as mapping points of interest, favorite routes, and places.





For instance, I love cycling in Edmonton's Terwilliger Park and telling people about my rides. With Google Map Maker, I can map the route that I ride and load the pictures that I took during the ride. As a result, my friends get a better understanding of why I love riding in that area and may be more likely to join me the next time out.

This type of new technology represents a major shift away from traditional expert-mediated Geographic Information Systems, and opens the prospect of citizen-based maps (see OpenStreetMap.com for an interesting project and great example of citizen mapping).

Perhaps the most powerful mapping technology, in addition to the Internet, is the development of a GPS-enabled smart phone. By integrating a GPS with a phone, users can document where they are and how they travel through the environment, and then share that location-specific information with their friends.

Specific applications (e.g., from Apple's App Store) can be downloaded onto your smart phone to make the process of documenting your location easier. For instance, RunningMap.com (developed by a runner and app developer, Randy Troppmann, of St. Albert, AB), consists of two components:

- a web-based map that provides access to a dynamic mapping interface; and
- a mobile app that allows the user to record a route that they are traveling by bike, walking or running.

Like Google Map Maker, the web-based map allows you to plan a route that you want to travel and then perform some simple analysis of that route,

like calculate its distance. This is important, for instance, if you are training for a running event and need to build your mileage over time, or even just to determine the distance you walked or cycled.

When coupled with the mobile application, you can record the route while you travel it and get a precise distance, and then upload the travelled route onto the map to share with friends via a computer.

But measuring distance and sharing routes is only a basic way of using these tools and features. More complex apps are coming onto the market, with more features.

For more information on other applications and resources, check out the links on the Alberta Centre for Active Living's website: [www.centre4activeliving.ca/publications/wellspring.html](http://www.centre4activeliving.ca/publications/wellspring.html). Click on the April 2010 issue.

### Why is Activity Sharing Important?

One of the key benefits of a social- and location-aware Internet is the inherent ability to link where you are with others who might be interested and those whom you would like to see.

For instance, when I run, I am more interested in running with a group of people than alone, because running with others helps to motivate me. Plus, it's more fun and social to go with others for a beverage or a bite to eat after the run. Rather than try to plan all this by e-mail or phone, the newer technologies allow me to:

- define a route, including a starting place and time;
- invite participants; and
- discuss with the group any changes that should be made to the route, with reference to the original running map.



In my experience, location-based tools enable meaningful face-to-face social interactions.

Within this context, there are some emerging technologies that combine social networks with mapping and collaboration tools. *Wiser is the Path*, an application that I am developing as part of my research with the City of Edmonton, will try to leverage social interactions via a map interface as a means of describing the Edmonton region in detail.

For instance, you may contribute your experience (perhaps a description of your favorite trail in Elk Island National Park, near Edmonton) to this map interface, for everyone to see. Concurrently, a friend may recommend a running route or walking trail for you to explore. The important component is to use online and mobile tools as a means of enriching your “real world” social life; by connecting places that you know to the places that your friends know.

## Conclusion

Technologies are becoming more streamlined and integrated within our everyday lives. The powerful combination of location-aware, socially interactive mobile devices and the Internet allows for a seamless sharing of experiences.

Over time, these social networks, when coupled the power of the Internet, and with mapping and collaboration tools, will further enable communications among people and groups with the intent and interest in participating in physical activities, such as running, biking, trail-walking, and more.

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## Mission Statement of the Alberta Centre for Active Living

Working with practitioners, organizations, and communities to improve the health and quality of life of all people through physical activity.

### IF YOU HAVE ANY SUGGESTIONS OR QUESTIONS, WE'D LIKE TO HEAR FROM YOU.

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WellSpring is published six times a year.  
ISSN 1187-7472

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Centre for  
**Active Living**

Research and education for the promotion of physical activity