

The Commercialization of Exchanging GPS Data

by Doug Adomatis

Finding your way is getting a little easier, but it may cost you a little more. Offroute, Inc.'s GPXchange™ promises widespread adoption of a common GPS data format by hosting a large central database and charging for its use. While commercializing the customarily free practice of exchanging GPS data may be distasteful to some, the proposed business model is appealing to freelance authors who create quality trail guide content.

Traditionally, if you wanted to find the geographic coordinates for points of interest in poorly documented places, you would post your query to Internet newsgroups. And if you were lucky, some kind soul would reply, pointing you to a collection of GPS data somewhere on the web.

GPS data collections found online are mostly lists of coordinates (waypoints) in various forms. If you were just looking for a single point - say a dive site on the Great Barrier Reef - it would be simple enough to write down the latitude and longitude, but if you needed an entire route (a series of waypoints) or an even a more detailed track, you would hope to find a data file. However, there is no standard format for these GPS data files, which makes it difficult to share them unless each person uses software capable of reading the other's files.

In September 2001, a forum of developers started creating a common format for exchanging GPS data, called GPX. The GPX format is based on Extensible Markup Language (XML), which is ideally suited for the interchange of data between applications and Internet services. Within a few months, development was completed on the basic GPX schema, which effectively stores and presents GPS waypoints, routes and tracks. The GPX format caught the eye of Offroute, which has adopted it as the basis for a large, commercialized central database – GPXchange.

The pre-launch information at www.gpxchange.com describes a plan whereby consumers and contributing authors will be charged fees to download GPX files and pay for use of the database facilities. Authors will be able to charge consumers for downloading their files, which will help them recover subscription fees, but – and here's the rub – consumers will have to pay a transaction fee even if the author designates his files as free.

In the introduction of GPXchange.com to the GPX developer's forum, three questions were posed to those who object to its commercial aspects. Although I do not necessarily object, I would like to offer my feedback along with some examples of how I address related issues.

1. Will GPX ever truly realize its potential if a high-quality, central database is not in place that provides easy access to the wealth of data it can provide?

I think that realization of GPX's potential depends more on how many applications adopt the format, rather than how many databases (or how few) host GPX files. That said, I do believe that GPXchange will indeed help the GPX format flourish in areas where Offroute and its partners have an interest.

The basic GPX format can be extended to include more than just GPS data. The pre-launch information indicates that Offroute is developing applications for authors to create and manage GPX files - files that can include guidebook-like images and text. In that respect, it would seem appropriate for traditional authors/ travel writers to use the GPX format for communicating guidebook information. I'll say more about printed materials in a moment.

Return now to the idea of exchanging data between GPS navigation and mapping software applications. In the absence of a standard, at *Travel by GPS* (www.travelbygps.com) I often publish more than one format for the same data. Typically, I will provide a free data file in GPX or another format that can be read by free software. In many cases I also provide data in the format most suited for the adventure. For example, most of my self-drive sightseeing maps are in DeLorme (.dmt) Map Transfer format for use with Street Atlas® car-navigation software. This format allows me to use drawing layers and driving directions to more effectively communicate GPS-guided tour information. Publishing multiple formats is a hassle, but until a standard is adopted, I find it necessary.

2. Will the information housed within this centralized database grow dramatically in size and quality without a means to compensate authors for their efforts and expertise?

While offering compensation may increase the number of contributions, the quality of the database as a whole may diminish unless measures are taken to discourage authors from cranking out junk and passing it off as first-rate.

Quality of content is important to me at *Travel by GPS*. First and foremost, I am the editor-in-chief, and I enjoy building relationships with every contributor. In addition to my personal assurances, there are quality indicators on each GPS Map description page. Each GPS Map has a data classification rating so that patrons will know what to expect in regard to accuracy of the data provided.

Hans Wain, Offroute co-founder, explained the quality measures that are to be employed at GPXchange. Wain explains that every publicly posted GPX file at GPXchange will include user reviews as they become available, and authors will be reviewed and rated separately from the individual files.

While compensating authors for quality content is good, protecting their works from unauthorized distribution is even more important. The basic GPX format does not

include any copyright protection elements. So, the distributors of protected material must shoulder more of the burden. The founders of GPXchange have shown their intent to keep intellectual property safe, but in reality there is little you can do to prevent someone from acquiring information legitimately and redistributing it.

At *Travel by GPS*, stealing GPS data is not an issue because I seek permission from every contributor to freely provide their information without restriction.

3. And finally, regardless of depth and quality of the database, won't more potential users of this information benefit if it is actively promoted by a network of both physical and online entities that facilitate its use through printed representations as well as downloads alone?

Build-it and they will come. The number of people who own a GPS is increasing, and to a lesser degree, the number of people who have the ability and desire to download GPS data is also increasing. Offering GPX data overlays with custom maps and documents will indeed help expand the market to include those who have yet to be bitten by the GPS bug.

GPXchange will not be the first online endeavor to offer printable mini-guides for outdoor recreation. Trails.com offers trail guides for activities like hiking, biking, and paddling called eTrails (not to be confused with eTRAIL CD-ROM of UK walking routes by Garmin Europe Ltd/Emap Active Ltd). Each eTrail includes detailed trail descriptions, directions to the trailhead, and custom map images. The eTrail format can be opened by Adobe Acrobat eBook Reader and printed out on your home computer. eTrail downloads do not include GPS data, and they are not authored by individual contributors. eTrail content comes from published guidebooks, like those from Falcon Publishing.

Early on, I realized the value of overlaying the GPS data on printable maps and mini-guides. In 1999 and 2000, I published printable GPS Guides as companions to my *17-Mile Drive, Historic Charleston, Chattahoochee River, and Mobile Bay GPS Maps*. These guides included map images, detailed waypoint and route descriptions, driving directions, trail length/difficulty tables, and a scenic photo in paper form, which could be stuffed in a back pocket or glove box. I decided to stop producing the printable guides because they took too much time to write and maintain without compensation.

Providing a means of compensation is where I believe GPXchange offers a great opportunity for freelance authors. Moreover, GPXchange will provide authors with greater exposure to wider audience - an audience willing to pay for quality trail guides.

In regard to the GPXchange business model, Wain explains that the “barriers will be extremely low” for authors and that transaction fees for consumers will be on the order of

cents, not dollars. Wain goes on to explain that the profitability of GPXchange will depend more on other commercial aspects and depend less on author subscription and consumer transactions fees.

As for *Travel by GPS*, I plan to continue providing free GPS maps waypoints and tracks for adventure travel. As for Doug Adomatis, freelance author, having another outlet for publishing trail guides is appealing.

I hope this helps!

Doug Adomatis

Owner, Travel by GPS (www.travelbygps.com)

For More Information:

To learn more about the GPX data format, use this referral link
<http://www.topografix.com/gpx.asp?rc=454L3>
to help make more free GPS maps available at Travel by GPS.

Use this referral link to obtain a free trial of ExpertGPS
<http://www.expertgps.com/download.asp?rc=454L3>
a great program for authoring GPS maps in GPX format.