Why not a Geo-Wiki Corps?

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The current technological setting provides the tools for average citizens to contribute updates to maps and spatial data bases in much the same way as they create and edit Wikipedia entries. While skeptics are quick to demean Wikipedia, a huge percentage of the general public have made it their primary reference source. While a general reference user may decide to rely the answer they receive from Encyclopedia Britannica the geospatial data user soon discovers that there is no "authoritative source" for most requests and it certainly is not the federal government. Therefore, it is relevant to ask whether the geospatial community should rely on citizens to form a corps of geo-wiki creators and editors? While this may seem to be very "uncontrolled" approach to building a trusted source for geospatial data, it is exactly the concept that was initially advocated by the USGS as a way to update data for the National Map. It also does not seem much different than the plans that the Census Bureau has for spending 500,000 temporary workers out in the field with ArcPad to build address point files for the 2010 census.

The lack of an authoritative source for the location of a street address becomes apparent when one uses various web based geocoding services (MapQuest, Google Map, Microsoft Live Maps etc.) and when on board navigation systems generate the location for an address. Unfortunately, when a voice states that you have "arrived at your destination" or even when an emergency vehicle arrives at a site there is often considerable uncertainty until one locates house number on the a door or mailbox. Since the federal government has not embraced a national perspective on parcel data and does not believe that it can share the census Bureau's new address files with the public then we are left to rely on the private sector to develop the best source of reference files for geocoding. The urgent need for improved geocoding is being fueled by the requirements of major customers such as MicroSoft and Google. These companies have an urgent need to support real estate applications that can assure a client that their system can accurately geocode an address to the precision that it unambiguously is associated with the correct building represented on high resolution imagery. In fact, MicroSoft is willing to pay vendors, or public agencies to provide "rooftop" and even a "passageway" geocoding service. It should be noted that Google has already formed a business relationship with states in Australia to provide parcel level geocoding across the country. Unfortunately, Google and MicroSoft can't write a check to the FGDC and ask it to provide a similar service.

I believe that the ultimate solution to creation of an accurate and current geocoding service in the United States will be a federated partnership between local, state and federal governments to build and maintain a national program for parcel data. In the interim, Telatlas is driving the roads to create an address

point file that will duplicate the efforts of the Bureau of Census. A more interesting approach is NavTeq's "Map Reporter" program that is a commercially supported version of a geo-wiki corps. This program encourages individuals enter new locations for addresses, points of interest, roads or traffic restrictions along with supporting evidence.

While it is clear that the technology can support citizen input there must be gatekeepers to monitor the transactions. As with Wikipedia the Navteq system relies on a trusted set of editors to monitor the changes. The USGS found it difficult to establish such a set of editors to oversee the citizen input aspects of the National Map program, however, the state of Delaware did some experiments with the concept. In other systems, such as a new ArcIMS site operated by the South Carolina Institute of Archeology and Anthropology, cultural resource experts are being trained to use web based tools to remotely enter new archeological sites. A similar system has been prototyped that will allow a local government to remotely update corporate boundaries and forward them to a state level integrator. A more radical approach has been implemented by Google. Michael Jones, Chief Technology Officer, of Google Earth and Maps declared at the recent Ordnance Survey Cambridge Conference stated that they have already enlisted private citizens in India to create the content for Google Map products. He is confident that the local creators can function as their own monitors and bad data will be pushed out by better data. In fact, he stated that Google will populate their data bases with or without the support of national mapping programs.

Another important question relates to enlisting members of the Geo-Wiki corps. An interesting perspective on this was recently offered by Robin Mannings a futurologist for British Telecom at the recent Ordnance Survey Cambridge Conference. He links his view of the Geospatial Future in the context of Maslow's hierarchy of human needs. Mannings, who desires to be geographically sensed continuously, argues that as society has evolved and embraced technology – especially geospatial technology – that an increasing number of individuals desire to become active participants in improving geographic resources , just as they do with Wikipedia. In other words, he predicts that there will be such an explosion in the number of self actualized individuals that have reached the peak of Maslow's pyramid. He points to the fact that since 2002 there are more wireless than land based phone calls and that an increasing number of these phones are geographically aware. The fact that Google was able to enlist a sufficient number of members to the "Geo-Wikipedia" corps in rural India strengthens this argument.

The implications of the emergence of a substantial number of self actualized individuals who would volunteer to form a loosely structured Geo- Wiki corps are interesting. It can be argued that if Google and Navteq believe that they can rely on a voluntary Geo-Wiki corps then maybe the USGS should revisit their original concept for the National Map