

**Date**

Tuesday 14th July 2009

**Title of session**

Workshop: Volunteer Geographic Information

User Content in Authoritative Databases: Motivations and Case Studies

**Name of presenter/chair**

Mark Corey, Assistant Deputy Minister, Earth Sciences, Natural Resources Canada  
– Chair

Dr David Coleman, Department of Geodesy and Geomatics Engineering, University  
of New Brunswick - Presenter

**Name of rapporteurs**

Emily Dover & Luke Hampson

Mark Corey opened the session by suggesting that there had been two big changes in mapping in recent times. The first was the work that had been done on developing standards that would enable people to work together. The second was the introduction of mass market demand for geographic information through outlets such as Google and through products like Tom Tom. He went on to suggest that there had been three ages of mapping – the third had embraced data sharing – and that we are now entering a fourth age which could give us a system of free map updates.

He then introduced Dr David Coleman's presentation.

David began by explaining that he had travelled the world looking at different examples of crowd sourcing. He outlined three principles underpinning Web 2.0 – the most important of which was that the community could take on some of the functions of the editor. He went on to ask how we can reliably improve our data in this context.

If we can use the experience of the crowd, he said, we can achieve faster updating cycles and greater user involvement. He cited Open Street Map, Google and Tom Tom Map Share as good examples here. He was clear that this approach was not a panacea and acknowledged that there were both enthusiasts and critics. He added that he understood why existing data suppliers and governments found this

threatening and confusing. However, he felt that there were efforts on the web that managed open source software, contributor rating and customer map updates successfully. We can learn from these. He also directed the audience towards a number of relevant sources on user motivational research.

Moving on to the issue of characterising contributions, he outlined that it was possible to track users and understand where updates come from. There would be some people that would be motivated to make both constructive and damaging contributions but that there would also be those motivated by a particular social or economic agenda. For example, the recent release of information about Steve Jobs being admitted to hospital caused a drop in Apple stock and activity from buyers. Specifically with mapping, users may wish to divert heavy traffic away from towns and villages. What is special about individual contributions to spatial information is that they have a direct link to the location and they will pay more attention to attributes.

Dr Coleman went on to some examples of this approach to mapping and what had worked or failed in each case. In Australia for example, the Victoria Department for Sustainability and Environment in collaboration with other bodies including local authorities, set up a notification and editing service. This was extremely successful because roles were well defined and there were allowable timelines within the updating workflow. When custodians updated and verified contributions in nine out of ten cases the data proved to be genuine.

On the other hand the National Map in the USA was less successful. Thousands of interested users were tasked with providing detailed GPS data. However, The National Map project wasn't geared up to accept the volume of information that was provided and so update was slow. People didn't see the results of their effort fast enough.

Finally Tom Tom Mapshare is considered successful, first of all because you have to update the information on your own device before you can share it – thus minimising malicious updates.

What we have learned from this is that contributors want recognition but also that in-house functions are evolving from production towards intelligent filtering and this may be where the role for authoritative data suppliers will be in the future. For mapping organisations this will require a culture shift. Most importantly this approach will need to be resourced properly including the ability to rapidly and defensibly evaluate contributions, detailed audit trails and the ability to rate and adjust the reputation of a contributor.

Questions/Comments	Answers