

GIS and Humanitarian Work Come Together – Interview with Jus Mackinnon



Our editor Robin Waters interviews Jus Mackinnon, a founder of CrisisMappersUK, who is a self-taught GI enthusiast with a background in aviation and a passion for humanitarian relief work and crisis mapping.

On the Juscomms.com website, Jus Mackinnon describes her company as a full-service, multi-disciplinary business consultancy providing expert services to the private, public and third sectors. Maps, mapping and GIS creep into the site in the context of airfield management and humanitarian crisis mapping. But if you talk to Jus you will be rewarded with a passionate discussion of many of the issues that have exercised the GI industry since its inception. And if you are still sceptical of “crowd sourcing”, Jus will provide the evidence to justify much more of it!

I don't think you could describe Jus as having a “day job”. She lives and breathes for her humanitarian work while earning money from consulting – if you have never heard of LEAN Six Sigma then go to Wikipedia and check what it could do for your business. Jus talked to me from her home and office on Hayling Island where she looks out at the Isle of Wight. Crisis mapping was very much to the fore during the bad weather for last year's festival. But we are not just talking about southern England – you will see mention of many countries and Jus is very proud to have recently been awarded the US Presidential gold medal for humanity and volunteering services.

GIS Professional: I heard about your work for the Olympics and humanitarian crisis mapping. But what is your background?

Jus Mackinnon: I started work in hotel management and computer consultancy. I then had a complete career change and joined BAA working at London Heathrow Airport. During my ten years in the company there was a very supportive environment in which I learnt many new skills. These enabled me to finish my time with the company as duty manager, airside, with responsibility for delivering the operational effectiveness of the aerodrome licence as laid down in aviation law.

In practice that meant I had to provide inspirational, proactive leadership to the airside operations team and manage them to provide a positive experience for customers and stakeholders while also ensuring that airside operations complied with BAA and regulatory requirements. That included meeting the requirements of the Civil Aviation Authority Safety Regulations and Department for Transport.

During this time Terminal 5 became operational, there was a massive snow fall and also a Boeing 777 plane crash. At the same time, I became interested and involved in voluntary crisis management organisations after meeting several of the people involved.

GIS Pro: You are currently developing some more airport-related software – can you explain what this will do and for which customers?

JM: Yes we are working on “Jus9”, which is a new way to access information using GIS for decision-making on airfields – whether civil or military. This also builds on crowd-sourcing, which enables instant integration of real-time reporting from registered users all around an airfield. This is not only ‘user-friendly’ but positively encourages accurate reporting with full feedback and behavioural changes.

GIS Pro: We heard about you from Joel Myhre at the UN Operational Satellite Operations

Programme who mentioned that you were involved with the Olympics. Can you tell us how you were involved and what sort of data you were using?

JM: I founded CrisisMappersUK with Francesca De Florio in June 2012. We are the UK affiliate to Crisismappers.net. We use all types of geographically referenced data with advanced visualisation, live simulation and modelling to provide early warning and rapid response to complex humanitarian emergencies. We collated and distributed relevant, real-time information to a broad range of stakeholders (general public and emergency services) to support situation awareness and facilitate rapid reaction in emergencies.

Our definition of 'emergency' included incidents (transport disruption, emergency services) and health events. We collated and distributed data using an open source platform for information collection, visualisation and interactive mapping created by CrisisMappersUK through social media and other available communication channels. The platform was an open source website generated from Ushahidi – which specialises in developing software for humanitarian projects.

We were fully involved throughout the Olympics 24/7 backed up by the New Zealand Virtual Operations Support Team (NZ VOST) operating in their daylight hours! This is a great team led by Caz Milligan with experience of the terrible Christchurch earthquake. We supplied much real-time information with this deployment especially traffic and accidents. We monitored social media channels to be ready to respond immediately if an emergency occurred. As we now know the games went off remarkably smoothly and, luckily, there were no major incidents.

GIS Pro: CrisisMappersUK requires volunteers to help with various tasks – all operating from their home/office bases. Can you explain how that happens and how our readers might get involved?

JM: CrisisMappersUK is always looking for new members. We need volunteers to collate and organise data received from social media and other channels on different platforms to make it available to the general public, emergency services and other stakeholders involved in public security and safety. These stakeholders can freely access the data, which will facilitate and speed up situational awareness and rapid reaction in case of an incident or emergency.

GIS Pro: We discussed the perennial issue of how to get geographical/location data better used and integrated into mainstream applications. You believe that this is often due to authorisation/approval to gain access to it. How have you dealt with this and how can the rest of us improve?

JM: Authorising the use of data or making it more "open" can be a challenging step forward for any organisation. There are multiple reasons for this, including the fear of not understanding who is sharing the data and what they are doing with it. Although many of the emerging volunteer and technical communities (VTCs) articulate their aims and methods on websites or in response to queries, it can be challenging for a traditional organisation to understand the relationships between all of the actors in any particular situation. Individual websites can help, but can anyone keep track of them all? This problem is addressed by networks like the Digital Humanitarian Network – DHNetwork (<http://digitalhumanitarians.com>). The DHNetwork brings together many of the larger, international VTCs so that anyone can quickly learn what communities exist, what types of work they undertake, and what track record they have. The DHNetwork also provides an activation process to help traditional organisations find the right VTCs for a given situation.

In the future we hope that organisations could release their data to the DHNetwork directly, safe in the knowledge that the data will only be used by a "vetted" group of VTCs. They would therefore feel much safer about what will be done with the data and who will be doing the work.

GIS Pro: In the 'conventional' GIS community, MapAction is well known for its volunteer work in emergency situations. Do you ever work on the same projects?

JM: Standby Task Force and MapAction are both part of the Digital Humanitarian network. The purpose of the Digital Humanitarian Network is to exploit the potential of digital networks in support of 21st century humanitarian response. More specifically, the aim of this network-of-networks is to form a consortium of volunteer and technical communities (V&TCs) and to provide an interface between formal, professional humanitarian organisations and informal yet skilled-and-agile volunteer and technical networks. Our different skills and areas of expertise work well together to enable us to respond to many different incidents. We feed each other with information as required. MapAction are a fantastic group of people doing amazing work.

GIS Pro: What do you wish most for in 2013?

JM: On my website you will see a reference to JusTech: a project "empowering women to use emerging technology and tools on the ground in under developed and crisis hit areas for emergency preparedness and incident, crisis and disaster reactive management". I would really like to be able to fund and roll out JusTech in many countries so that the local first responders can collect the crowd sourced information that is so readily available and use it quickly to the benefit of their communities.

An example of this was the response to typhoon Bapho/Pablo in the Philippines in December 2012. We collated real-time situational awareness reports via social media with photographs and, on the ground, prioritised areas for responses. The integrated map is at <http://google.org/crisismap/2012-pablo> and many thanks to Google for their continuing support. I think it will be a great asset for GIS professionals to have people already on the ground with local knowledge who can work with them immediately.

Thank you, Jus, for a very stimulating interview – if only a fraction of your enthusiasm reaches our readers they should be volunteering in droves. Is there anyone out there still not convinced at the power of social media in this context? Watch out for Jus' paper on 'Global command and control post disaster including volunteer and technical groups', which she will publish later this year.

If you are interested in volunteering with CrisisMappers UK, please contact jus@juscomms.com for further information.

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