Geospatial Prospects for the New Year

2018 is now upon us and promises to be interesting for everyone, with Brexit looming and an unstable economic and political situation, but there are encouraging developments as well.

For geospatial surveyors, the rate of technical innovation will provide excitement. Rapid development of BIM, artificial intelligence (AI), drones and smart cities will keep everyone on their toes, and threats such as theft of instruments will require attention. This issue of GW covers many of these topics. Our theme is laser scanning and UAVs, and the keynote article by Mathias Lemmens reviews the current state of the art in point cloud processing which involves automatic object recognition and touches on many other issues. We will be following up on AI with an article by the speaker at the RICS evening lecture in October on feature extraction from laser scanning. We also have an interview with Philipp Amon of Riegl talking about laser scanners on UAVs and explaining what we can expect in 2018, including developments in bathymetric lidar.

The cover picture this month, appropriate for looking forward in a new year, is the Airbus Zephyr high elevation UAV. Several organisations are developing these high altitude long endurance (HALE) autonomous platforms, Google in particular is interested in using HALE platforms to bring the internet to remote areas, and there is also an interest in using them for acquiring imagery, either for mapping or surveillance. A HALE UAV positioned over a city can continuously monitor activities and provide information for smart city analytics. On this topic Richard Groom reports on a conference on Smart Cities and attempts to define this rather amorphous topic. In theory, collecting data to enable cities to be run efficiently should be a prime activity for geospatial surveyors, but at present few cities have got their act together well enough to recognise the importance of location.

Aspirations for 2018

It is traditional to make New Year resolutions in January, but since these are usually broken we will only express some aspirations! Whilst most practicing geospatial surveyors will be mainly concerned with maintaining a full order book, there should still be an interest in the bigger picture. The government has a role to play, and recent decisions give encouragement to our profession. The government announced a Geospatial Commission in November and of course is strongly supporting BIM and major infrastructure projects such as Crossrail and HS2, so we can hope that the geospatial is favourable. Digital Build Britain mentioned by James Kavanagh is further evidence of government support for geospatial. Support for Survey4BIM should be a priority for 2018 as discussed in the news from TSA. The announcement of apprenticeships is another encouraging development and we support RICS, ICES and TSA in their efforts to promote this. The government also supports smart cities through the Future Cities Catapult, and although there is some ambiguity about the function of smart cities, as discussed in this issue, smart cities are undoubtedly going to be important in the future, especially issues relating to transport, (autonomous vehicles, traffic management), air pollution and IT, location is central to this. So an aspiration for geospatial is for greater recognition of the importance of our role in collecting data and extracting information for use in decision making. It is worth remembering that promotion of BIM and smart cities is good for the profession as a whole.

Another aspiration for 2018 should be to enlarge the range of businesses using geospatial, the report on the forensics conference by Adam Spring shows one direction that such an initiative could go, so we can hope that the government attitude to geospatial is favourable.

On a more practical level we hope for collaborative effort to reduce, or preferably eliminate theft of survey equipment; and to cheer us up we can laugh at the antics of the flat Earth fanatics mentioned in Undercurrents.

So with these hopeful thoughts in mind, we wish our readers a happy and prosperous New Year.

This article was published in Geomatics World January/February 2018