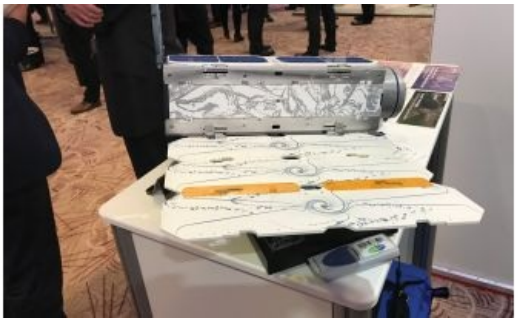
Geospatial Intelligence for National Security - DGI 2019



DGI 2019 followed the pattern of previous years with a subtitle of Geospatial Intelligence for National Security and with similar themes, the main ones being collaboration, integration and partnerships. There was an emphasis on the role of geospatial analysts, with sessions on what makes a good analyst, training analysts and how to get analysis to decision-makers in command centres and the field. Although the conference is focused on geospatial intelligence for defence (GEOINT) there is much for civilians to take from the conference.

Collaboration, integration and partnerships are clearly related and many speakers emphasized the need for trust between collaborators and added that trust does exist between military mapping organizations within their own groups. One speaker noted how trust has eroded by comparing the reaction of the Soviet Union to the evidence derived from satellite imagery during the Cuban missile crisis, to the reaction from Russia to similar evidence during the incursion into Ukraine. "Geo is true" is no longer accepted fact.

There were several sessions on training and recruitment. It is considered essential that analysts come from a wide spectrum of backgrounds and that knowledge of geospatial can be added to their primary subject – the Australian Geospatial Intelligence Organization recruits at 'tech' conferences such as Comic-Con.

The commercial involvement in DGI comprised an exhibition and presentations. Major defence companies such as Airbus, BAE, Raytheon, and Digital Globe attended, along with a number of smaller data acquisition companies and a number of data analysis organizations. One newcomer is Capella, who use SAR to give persistent surveillance from space using 36 orbit planes with 1-hour revisits when fully configured. Orbits are non-sun synchronous with a 90-degree inclination. Other companies underlining the increasing importance of SAR are NovaSAR and ICEYE. The latter is a Finnish company supported by Seraphim Capital, a UK investment company specializing in startup companies with and interest in space. Revisit capability is also increasing for optical sensors. Planet now collects 1.5 million images a day and has an average of 800 images for every location on Earth.

Vanessa Lawrence in her presentation on the Space Application Catapult highlighted the success of UK start-up companies such as Birdi and noted that they are involved with image analytics and encourage collaboration between military and commercial. There are other opportunities for commercial companies and agencies responding to disasters to collaborate with defence organizations. It was noted that although the military has much to offer, for example in data assurance and data fusion, they also have much to learn about response to disasters and working with a professional NGO service. There is a need to be prepared for collaboration, it is too late when a disaster occurs. A speaker from UNOSAT, one of the United Nation's agencies dealing with satellite imagery referred to a paper by Quin et al (2018) which showed how AI has been used to study refugee settlement mapping.

One question which arose from the conference was ‘what is the relevance of DGI to UK commercial activity?’ First it can be seen that the papers are not only about GEOINT, many presentations covered technology and applications of interest to commercial companies. There is also a strong emphasis on the need for collaboration and standards, and the commercial sector can learn from the way that this is done, for example in military education (educating technical and leadership students together to learn from each other).

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References

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