

Abstract submitted for the SaGES 2013 Conference

Riding the Wave of the Next Revolution: ‘Intelligence’ and ‘Meaning’ in Measurement Processes as a Paradigm of Change

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Abstract

Traditional measurement processes place much of the ‘intelligence’ in measurements up-front in the measurement process. More modern measurement technologies, such as photogrammetry, LiDAR, laser scanners and remote sensing, require the ‘intelligence’ to be placed after the measurement process. This is one of the core changes happening in the current surveying/geospatial revolution.

This presentation will explore the key changes that occurred in the previous surveying revolution (1550–1650) and bring lessons learned from that investigation to the current revolution (1950–?). How can we classify measurement processes to allow better understanding of the impact of this change? What directions will technology and techniques take in the future as a consequence of these changes? What does history suggest for changes in the future, not just for geomatics, but more widely? In particular, the presentation will focus on how the surveying/geospatial professions can deal with ‘volunteer geographic information,’ ‘crowdsourcing,’ and similarly named phenomena, where geospatial data is being created and widely disseminated by non-professionals.