

Satellite Imagery – Examination and use of widely available satellite imagery

Over the last 20 years there has been a steadily increasing amount of satellite imagery available worldwide. Along with the increase in imagery availability there has been an increase in resolution of that imagery; most notably, since 1999 the commercial availability of sub 1m imagery. Up to fairly recently, although this imagery has been in existence, it has required positive action to research and seek out.

Due to this constraint, purchase and use of imagery has tended to be limited to areas where changes are already known to have taken place. Although on the one hand this has limited the identification of change areas it has also limited the amount of resources required to assess the imagery.

The situation has now changed. With the continued expansion of the internet and particularly with the advent of sites such as Google Earth, worldwide imagery coverage is available to everyone on their desktop at the touch of a button. While this imagery cannot just be downloaded it also cannot be ignored, particularly if it shows discrepancies with current charted information.

However, with the increasing availability of worldwide satellite imagery there is a real danger of data deluge. UKHO procedures state that ‘all newly-received information of possible use for charting is to be examined against the relevant Admiralty charts’. This is becoming increasingly difficult to achieve within reasonable time frames without using an unacceptable amount of resources.

In order to address this issue UKHO are considering investigating alternative ways of assessing satellite imagery, possibly using automated, change detection techniques.

UKHO is interested to discuss how other nations use widely available satellite imagery.