

PROPERTIES, CONFIGURATIONS AND APPLICATIONS

Oblique Airborne Photogrammetry

Oblique airborne photogrammetry is rapidly maturing and entering the workflow of service providers. Many applications embrace the advantages of airborne capturing combined with slanted viewing geometry which comes close to human perception of scenes while standing on the ground. The authors provide an overview of the properties of oblique airborne images, the most common configurations and applications.

Today's aerial surveys are often carried out using multiple small or medium-format cameras mounted together and simultaneously capturing nadir and oblique images.

Oblique images capture the scene under a tilt angle, which is much larger than in nadir views. The tilt – the angle between nadir and optical axis – improves visibility of

façades, lamp posts, trees and other vertical structures, but worsens occlusions and introduces large-scale gradients from foreground to background. Two types of occlusion may be distinguished: self-occlusion, for example when the rear side of a building becomes invisible, and occlusion by other objects (Figure 1). In the 'north view' of Figure 2, the rear side of the tower is not visible, and the tower also occludes parts



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Yoeri Slagboom has been owner of Slagboom en Peeters Aerial Survey, Teuge, The Netherlands, since 1992. The backbone is the

creation of orthoimagery using a wide range of cameras owned by the company. The present fleet consists of five aircraft. In 2009, the company started developing oblique products.

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