

Discussion

Using iPhone borne LiDAR to quickly generate 3D models of geology

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Summary: Geoscience education has recently seen a significant rise in the use of virtual 3D models and complete virtual excursions. Traditionally, creating these 3D models has been a time-consuming and costly endeavour, often requiring advanced technology. However, the integration of LiDAR sensors in the latest iPhone and iPad PRO models, along with the development of apps like Scaniverse that utilize these sensors, has significantly streamlined the process, making it faster and more accessible.

We evaluated the capabilities of these new sensors by developing a virtual excursion to Rognstranda, a renowned geological site in southern Telemark. By combining 3D models, panoramas, and 2D photographs, we were able to create an effective virtual excursion using relatively simple methods. Our experiments demonstrated that these 3D models work best for medium-sized features, ranging from a few decimetres to a few meters, with simple geometries, such as small outcrops or sediment sections. The simplicity of the process also makes it feasible for students to use for field documentation.

Key words:

3D, virtual, geology, Scaniverse