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### THE TRIPLET MEASURED BY AERIAL CAMERA USING LINE SEGMENTS LINE MATCHING-BASED RELATIVE ORIENTATION USING TRIPLET CAMERA

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**Abstract.** In urgent observations after disasters, we can mention that the image matching processing is an essential technique to establish more stable and rapid 3D data generation. Particularly, multi-images taken from various viewpoints are useful in the disaster monitoring. Thus, feature and corresponded point detection would be designed for a multi-image matching. Recently, Structure from Motion (SfM) is often applied to generate 3D data. The SfM is useful approach to generate 3D data from images of random viewpoints. However, Scale-Invariant Feature Transform (SIFT) requires a plenty of time to detect feature points and corresponded points from multi-images. Therefore, we proposed a methodology to improve triplet matching and SfM with line segments extracted from images. Moreover, we evaluated our methodology using multi-images taken from aerial triplet camera.

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