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## Effect of Compression on the Accuracy of DTM

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### Abstract

In digital terrain modelling, if the source data (e.g. acquired by image matching) is too dense, a lossy compression procedure, e.g. the VIP (very important points) in ARC/TIN, is then applied to remove those less important data points (or select those important points) from the original data set for efficient data storage and process. This paper describes some experimental tests on the effect of such data compression on the accuracy of resultant digital terrain models (DTM). Results from two areas show that (a) the number of data points retained after compression is linearly proportional to the increase in threshold; (b) a compression of 30% doesn't have too much effect on DTM accuracy. An empirical model is established to predict the accuracy loss due to such compression.

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