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## Accuracy of a commercially available digitizer: A new method for assessment of errors in linearity

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### ABSTRACT

A commercially available digitizer has been tested for accuracy. The various areas of the digitizing tablet show degrees of precision that can differ for the x- and y-coordinates. The tablet has a mean absolute error of 0.016 mm for the x-coordinate and 0.09 mm for the y-coordinate. Error tended to increase toward the sides of the tablet. Partitioning the error into systematic and random components revealed that the x-error is due mainly to errors in linearity of the digitizer. When compared with the error involved in locating cephalometric landmarks, one can conclude that this type of digitizer is suited for orthodontic purposes. This article describes a new methodological approach to locating and measuring errors in linearity.

**KEY WORDS:** Digitizer, Error, Linearity, Cephalometry.

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