Reviewer's report

Title: Comparing 3D Foot Scanning with Conventional Measurement Methods

Version: 1 Date: 15 April 2014

Reviewer: Scott Telfer

Reviewer's report:

Major compulsory revisions

Page 14-15, accuracy results: From table 3, in foot breadth for example, the
mean caliper measurements were 85.2mm and 97.1mm for 3D scanning. I don't
understand how the authors can go from this large a difference to the accuracy of
1.9mm reported in table 5 when using digital calipers as a gold standard? This
seriously affects the conclusions in the paper.

Minor essential revisions

Page 2, end of results paragraph: Clarify that 3D scanning was more accurate
compared to footprint methods when using digital calipers as the gold standard,
similarly in the conclusion.

Page 7, data collection section, first sentence: I'm not sure this is a valid reason
to only assess the right foot. Suffice to say only the right foot was assessed to
ensure statistical independence.

Page 8: What form did the landmark markers take? How did they appear on the
scan image?

Page 8: It's a limitation that the markers remained on between trials as there
could be some variability in the placement of these.

Page 9, axis definition: "top" should be vertical

Page 9: Stating the accuracy of the calipers is confusing, better just to state the
resolution.

Page 10: Likewise just the resolution of the scanner is fine. Are these figures
from the manufacturer?

Page 10: If the markers had thickness was this subtracted from the relevant
measurements?

Page 12, last sentence: Stated earlier, please delete

Page 16, first sentence, last paragraph: I'm not sure this is a valid reason

Discretionary revisions
Page 13, gender results: the range of differences found using the different measurement techniques could be reported here

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests