

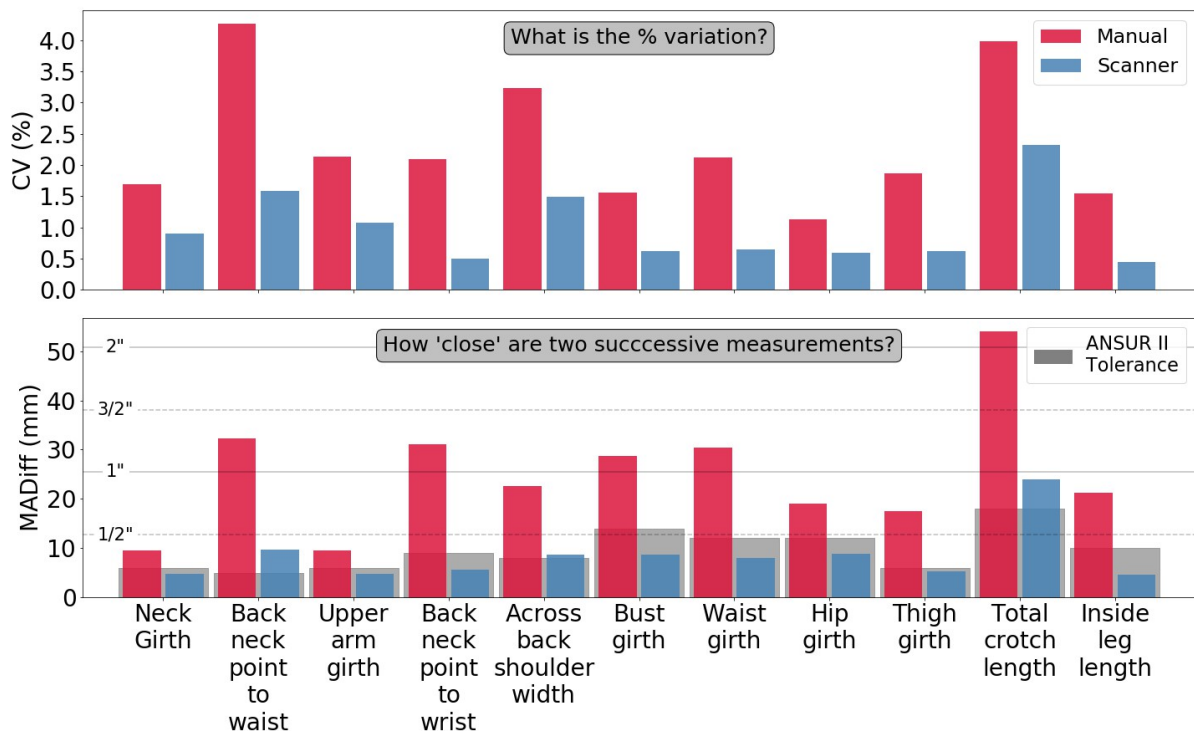
Man vs. Machine Measuring People for the Apparel Industry

Warren WRIGHT *
 Size Stream LLC, Cary, NC, USA

Abstract

The Institute of Electrical and Electronics Engineers 3D Body Processing Industry Connections group is conducting a Comparative Analysis of Measurement Methods of 3D Body Scans (project details are given elsewhere). This article reports on the results of the first phase of the project. Over 60 subjects were scanned and manually measured at the Portland, OR site during November 2018. Here we report on the measurements acquired manually and those acquired by a Size Stream SS20 3D body scanner. The project goal in focus here is to understand the reliability and compatibility of measurements obtained through traditional 1D and advanced 3D methods. Scanner reliability was shown to have more than double the precision of manual measurements (via Coefficient of Variation analysis). Furthermore, we find that the variability of the two measuring techniques individually is greater than any bias between them (difference in the mean). After accounting for this bias, manual and scanner measurement techniques are compatible and can be used interchangeably.

When measuring one individual multiple times



Results from IEEE 3DBP scan study. Nov 2018, 60 subjects, 8 manual + 2 scanner measurements each. Analysis by Warren Wright © Size Stream.

* wwright@sizestream.com. Dr. Wright is a Lead Systems Engineer at Size Stream