



COMPARITIVE ANALYSIS OF THE IMAGE TWIN SYSTEM AND THE 3T6 BODY SCANNER

Lashawnda Mckinnon and Cynthia Istook
North Carolina State University

ABSTRACT

Technology has radically changed the manner in which anthropometric data is collected. Consequently, the apparel industry along with others has begun to explore utilizing this technology to provide mass customization, improve ergonomical design, and an array of other applications. There is a need to better understand how these measurements coincide with comparable physical measurements. This study evaluated the body scan data rendered by two TC² scanners, the Image Twin (2T4) and the 3T6 in comparison to physical measurements. Results suggest that there has been significant improvement in the newer version, Image Twin, however there are still many areas that need to be explored further as is detailed in this article.

M

KEYWORDS: 3D Body Scanning, mass customization, body measurements, anthropometry, measurement extraction software, Image Twin, body scanners, physical measurement

Introduction

The last decade of the 20th century brought about a revolution in anthropometry. The development of existing technology made it possible to collect anthropometric data using a non-contact body scanner (Paquette, 1996). This technology eliminated the greatest hindrances to anthropometric surveys: time and data reproducibility. Once created, the image file can be used again and again to extract the same descriptive information, reliably. Error can be introduced to the data however, through the lack of standardization that currently exists in the scanning process. Respiration is just one of the known factors that can affect critical measurements in the torso (Daanen, Brunsmann, & Robinette, 1997, Mckinnon, 2000).

Body Scanning technology has the potential to impact applications from apparel to healthcare. The apparel industry is perhaps the most advanced user, currently. The use of body scanning technology for customization, apparel design, and development has come to the forefront and is an integral part of the industry's vision of the future. Since the concept is still in its developmental stages, few retailers and manufacturers have adopted this technology. Levi, once the sole company in the US exploiting this technology, has recently been joined by Land's End. This may be attributed to the fact that many companies fail to see profitability in this endeavor and remain locked in a traditional mentality. Most manufacturers and retailers still believe in the ancient concepts of mass