



Pattern Data Format Standardization Between Apparel CAD and 3D Body Scan with Extensible Markup Language

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ABSTRACT

In the apparel industry, 3D body scan systems have been attractive to apparel CAD/CAM companies, apparel companies, and researchers in that the body scan systems can provide fast and accurate enabling the development of made-to-measure garments. Apparel CAD/CAM companies have partnered with body scanner manufacturers and linked the body scan system with their existing apparel CAD products for made-to-measure solutions. As more companies increase globalization and partnership with new technology suppliers, the CAD/CAM data compatibility and standard data formats have been critical issues. For this reason, XML (eXtensible Markup Language) has been considered for the standard exchange data format in that XML has extensibility, structure, mega data transport capabilities, and easy conversion. In fact, the XML has already been implemented in apparel companies who are dealing with e-business, globalization, and standardization. For example, the use of XML for standardization was found in the global standard organization for apparel business, and attempts at standardization of 2D and 3D body measurement representation with XML was found in e-T Cluster in U.K. In addition, the importance of XML for the future apparel pattern data exchange format has been in development the ASTM D13.66 sub committee: Apparel & Sewn Products Automation.

The purpose of this study was 1) to introduce XML format for pattern data exchange, 2) to provide an experimental design written in XML for bi-directional transmission of data from a 3D body scan system to an apparel CAD system, and 3) to investigate the potential use of XML for standardizing pattern data format between apparel CAD systems and 3D body scan systems by examination of the experimental design written in XML format. The experimental design in XML format was sent to an apparel CAD supplier (Gerber Technology Inc.) and a body scan supplier (ITC)² to determine if it would be a viable standard format. In this study, current data file formats for data exchange and use of XML format were reviewed, and limitations of using the XML format were revealed in that the acceptance of the XML format was tightly related to timely agreements in the apparel industry.

Keywords: 3D Body Scanning, Data Integration, xml, Standards, Patterns, CAD