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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 23702.2-2010

**Ergonomics -- Computer manikins and body templates -- Part 2:
Verification of functions and validation of dimensions for
computer manikin systems**

人类工效学 计算机人体模型和人体模板 第2部分：计算机人体模型系统的功能检
验和尺寸校验

(English Translation)

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Foreword

GB/T 23702 "Ergonomics computer mannequins and body templates" is divided into two parts.

--- Part 1. General requirements;

--- Part 2. computer manikin system function test and check the size.

This part of GB/T 23702 Part 2.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method using identical 15536-2 ISO .2007 "Part 2 Ergonomics Computer mannequins and body templates Score. computer manikin system function test and check the size. " this part of the National Standardization Technical Committee learned Ergonomics (SAC/TC7) and focal points.

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Introduction

To have confidence in the product design using a computer model of the human body, designers need to understand the accuracy and reliability of these tools. alignment Accuracy requirements depend on the intended use. Some designs require a high degree

of accuracy (for example, quantitative gap analysis), some are just low Accuracy (for example, simulation training). GB/T 23702.1-2009 detection methods are given basic accuracy. The method is based Construction mannequin used basis between anthropometric data and corresponding human body model to reproduce the data comparison. These data only for standard measurement the amount of position, such as standing and sitting (see GB/T 5703-1999).

However, in the product design process, in addition to the standard posture commonly used in the computer simulation mannequin broader posture and movement. Let Design to understand the accuracy of these cases the computer mannequin is very necessary. Further, since the human body model when building a computer to make with a lot of anthropometric parameters and biomechanical parameters that assess the accuracy and repeatability of mannequins and computer related applications in when problems arise. This requires additional specific test to accurately measure the size of each of the body may be rendered, shape and working posture.

When the human body model data or algorithm changes, the problem will be more complicated, additional tests to evaluate their dimensional accuracy.

For an institution, for each possible test conditions for all human model parameters accuracy of the test is economically not feasible, so the need to develop cooperation and users to evaluate the accuracy of the computer model of the human body. Developers can for the most common Case testing accuracy manikin system, to provide users with application-specific human model system accuracy and repeatability the key test methods. Therefore, users need for their specific applications to measure the accuracy of the human body model, and developers need to provide computing Human Body Model Machine and easy way to measure and assess the human body model accuracy.

Computer Ergonomics and the human body model Body templates - Part 2. Computer model of the human body Size and function of the system check test

1 Scope

This section GB/T 23702 specifies the functional test computer mannequins and check the size requirements. These requirements include computing Machine manikin accuracy-related data files, size and function test method validation methods.

This section specifies the requirements applied to construct a computer model of the human body measurements, biomechanical data and modeling software features.

While this section focused on anthropometric data and measurements, but also includes application and when building a computer model of the human body will not be Less biomechanical parameters.

This section gives a framework for reporting computer manikin accuracy and human source

data. This section is intended to make a computer-based model of the human body. Conventional non-expert users can take advantage of automated software developers to provide, under the conditions to complete the field test measurements for each function independently.

This section does not require developers to verify and validate the computer model of the human body systems under certain circumstances.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Basic human body measurements (eqv ISO 7250:1996) GB/T 5703-1999 for technical design GB/T 22187-2008 General requirements for establishing anthropometric databases (GB/T 22187-2008, ISO 15535:2003, IDT) GB/T 23702.1-2009 Ergonomic computer mannequins and body templates - Part 1. General requirements (ISO 15536-1:2005, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

Manikin accuracy Computer manikin system to reproduce the accuracy of the measured individual size, shape, position, angle, motion paths, and other geometrical features.

Developer

Development of computer manikin system companies, organizations or individuals.

Field test conditions field-testing conditions Computer users usually manikin system in which the working conditions, the typical situation is. the office environment have a computer workstation, but no professional anthropometric laboratory equipment, biomechanics laboratory equipment and technical support staff.