URN etd-0407109-183706-389
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Statistics This thesis had been viewed 46 times. Download 0 times.
Department
Year 2005
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title The Implementation of Low Cost Motion Capture System
Date of Defense 0000-00-00
Page Count 86

Keyword
motion computer
bluetooth
Bend sensor

Abstract
It is popular to make 3D cartoon with a computer with the fast progressing of the computer technology. It take much time and much money to make 3D cartoon by manpower only, and the moving object of the produced movie is limited. So it is popular to catch the true performer's movements by the motion capture system, then apply it to the cartoon. At the present, two kinds of the most popular motion capture system on the market, one is the image type and the other is the electromagnetic type.However, the two kinds of the motion capture system are very expensive and heavy, so that the motion capture system can not be popularized. This paper is concerned with a special topic to make a motion capture system with light weight, and low price, the main characteristic has:

1.Bend sensors are used to detect the attitude of a person.
2.A MSP430F149 single chip computer is used to read and to transmit the attitude data.
3.A MX25L1602 Flash ROM is used as storing device and calibrating data.
4.A bluetooth chip is used for communicating media.
5.The attitude data will translated to physical angles by a VISUAL BASIC program.
6.The attitude of the human body will dynamically showed in graphic by a FLASHMX multimedia player.
7.A calibrating procedure is done in user friendly interface, such that the system can be suitable for different bend sensors and human characteristics.
8.The system is with record function and play function such that it can be applied to sport training and medical treatment.
9.The system is used as the input device of a digital game.
Advisory Committee Yih-Ran Sheu - advisor

Files No Any Full Text File.
Date of Submission 2006-08-17