

TOWARDS A NEXT GENERATION UNIVERSALLY ACCESSIBLE 'ONLINE SHOPPING-FOR-APPAREL'

Pawar Prajkta.¹, Shelke Vaishali.², Kokate Sonali.³, Daund Priyanka.⁴

¹ Pawar Prajkta M., Computer Department, SND COE & RC YEOLA, Maharashtra, India

² Shelke Vaishali A., Computer Department, SND COE & RC YEOLA, Maharashtra, India

³ Kokate Sonali V., Computer Department, SND COE & RC YEOLA, Maharashtra, India

⁴ Daund Priyanka D., Computer Department, SND COE & RC YEOLA, Maharashtra, India

ABSTRACT

In before system of virtually cloth changing room or VFR (virtual fitting room), the 2D kinect sensor camera is used for the fitting room. And accuracy of the previous system is also less than today's system. We overcome the problem of existing system in online shopping for apparel. We present method of creation of virtual fitting room (VFR) for minimizing the time for changing the cloths in shop. The solution on these problem is creating a virtual fitting room for changing the cloths virtually. In these method first capture the image of human being in 3D position with the help of 3D kinect camera which having high resolution. By using the kinect sensor, measuring the 12 points of body and shows the real time picture of user on the screen. kinect create the virtual body by using the measured body clones using kinect camera. And the system content a database including all the data, which are available in the soppo. These is the real time application which are updated current values or data and also body measuring information or values. User select the cloths which are available in the soppo, which are content by the database, then user simply touch the cloths which are shown on the screen from some distance and then the those cloths are virtually shown on our body. From these system the time required is less and the user can select multiple choices of cloths. This is the aim of real time cloths application.

Keyword: - Virtual space, Image tracking, Image processing, Architecture.

1. INTRODUCTION:

Research on cloth simulation has been started since few years which are operate many functions by connecting the sensor and web the operation has been complex hence a operation device should have highly usable using human emotions and biological signal is developed. Hence, using the information non contact type sensor such as cameras interactive devices. FITNECT company had developed 3 Dimensional Virtual Fitting Room system which are shows the cloths on the human body and also kinect sensor developed by the Microsoft corporation by using 3D camera and Infrared sensor. In addition tracking a 12 points of a human body and realizing the human skeleton. The purpose of system is to developed a Virtual Fitting Room. In order to show suitable cloths to create the each size of the human body parts. In this system we are use single kinect in case of two kinect. In the above figure working of kinect sensor is showing. In kinect camera the foreground image, face and upper body detection, skin segmentation and arm fitting this all is sensing by the kinect sensor. And all system is depend on the kinect sensor.

2. RELATED WORK:

The purpose of Cloth simulation method provide a way of testing patterns by assembling 2D patterns in a computer system and covering them on a virtual human body. Along the advanced and mature stage of cloth simulation techniques, focus was primarily aimed to address realism through the accurate reproduction of the mechanical features of fabric materials. The early framework, developed a many year's ago, had to acceptable very limited

computational power and display device, and therefore were geometrical models that were only meant to reproduce the geometrical features of deforming cloth. Many researchers concentrated on a specific domain in cloth simulation, collision handling, for getting more realistic cloth motion. A Web application for online tailor has done in MIRA lab is one of the recent remarkable works, covered most of the process of garment modelling. Further, a strong impulse comes from clothing and fabric furniture industries, where CAD (computer aided design) tools are increasingly demanded to assist the whole cloth design process. Techniques of cloth simulation mostly applied to apparel industry help fashion designer to sew CAD two-dimensional cloth pattern and show complete garment in three-dimension.

Another application which is provided for general users is a virtual clothes shop on the web. Buying garments becomes easy and convenient. However, these developed applications only provide a platform for online shopping. Customers need to decide what to put in the cart. Our application concentrates on automatically providing clothes matched with personal wardrobe for general users. Moreover, there are also studies showing that neural networks can be used as a tool for feature extraction, i.e., to produce new features based on the original features or the inputs to a neural network. Cognitive scientists view neural networks as a possible apparatus to describe models of thinking and consciousness. ALCOVE (Attention Learning Covering network) is a good choice in categories learning, which is done by John A. Kruschke in 1992. This model is designed to describe how people, relying on similarity, learn to classify items into different categories. A comparison of back propagation artificial neural network model and ALCOVE model was made by V.E. De Brunner. ALCOVE is relatively more efficient than back propagation in their classification simulation. Additionally, SUSTAIN (Supervised and Unsupervised Stratified Adaptive Incremental Network) is another selection of category learning models. This model applies both supervised and unsupervised learning mechanism to forming categories. SUSTAIN initially assumes a simple category structure. If simple solutions prove inadequate and SUSTAIN is confronted with a surprising event (e.g., it is told that a bat is a mammal instead of a bird), SUSTAIN recruits an additional cluster to represent the surprising event. Fuzzy logic allows for set membership values to range (inclusively) between 0 and 1, and in its linguistic form, imprecise concepts like "slightly", "quite" and "very". Specifically, it allows partial membership in a set. It is related to fuzzy sets and possibility theory. It was introduced by LotfiZadeh. Neuro-fuzzy hybridization results in a hybrid intelligent system that combines the human-like reasoning style of fuzzy systems with the learning and connectionist structure of neural networks. Neurofuzzy hybridization is widely termed as Fuzzy Neural Network (FNN) or Neuro-Fuzzy System (NFS) in the literature. The strength of neuro-fuzzy systems involves two contradictory requirements in fuzzy modeling: interpretability versus accuracy.

our research is to develop a VFR with a high responsiveness. In order to show a suitable clothes, it is necessary to estimate the each size of part of user's body. We propose a estimation method of the size of parts of body. The proposed method is verified through single Kinect case and two Kinect case.

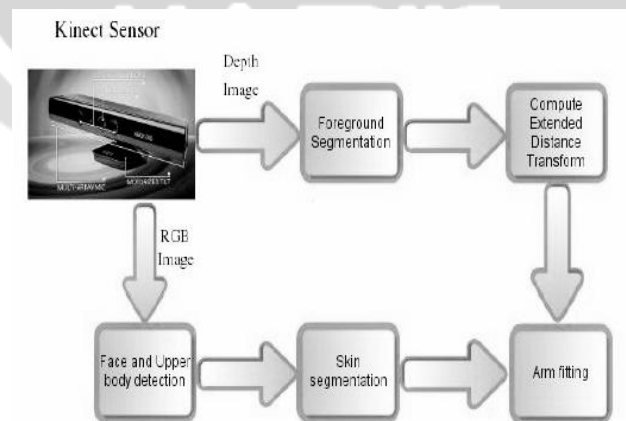


Fig -1: Architecture of Kinect Sensor.

3. EXISTING SYSTEM:

Many of the existing virtual dressing room based on diverse approach in this cloths are dynamic behavior , movement of the cloths depends on the certain velocity and computational speed. The main drawback are inaccurate

capturing image process and missing the possibility virtual mirror. By using the kinect become to possible track the movement of the body. In general the accurate methods are slower than method of approximation. In other words, the question are how to define the approach that can produce the real time performance while maintaining satisfying result. FITNECT Company have developed 3 dimensional VFR. The 3D FRS (Fitting Room System) display cloths on the user's body. From this information a highly interactive system need to use the dynamical information. We believe that optimization on cloth simulation can be done by using the simulation of the garments an objects collision detection can be limited to the garments.

3.1 PROPOSED SYSTEM

3 dimensional virtual fitting room systems had develop in our proposed system. On the users body 3D camera displays cloths. get a 3D color images and a distance information, this sensor developed by Microsoft corporation is used as the sensor of the 3D kinect sensor equips RGB Camera and infrared sensor, We are using the kinect sensor. The working of the kinect in the system is explained as following.

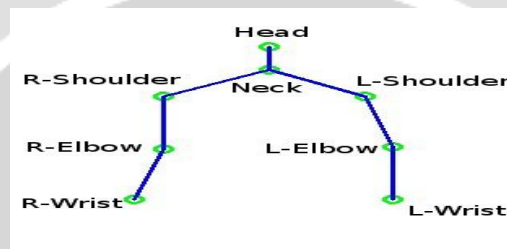


Fig -2: 12 Points Detection In Kinect

3.1.1. IR Emitter And depth sensor-

where each pixel comprises the information about the distance between the sensor and the object with, the IR emitter and the depth sensor are works together to produce the depth data,

3.1.2. IR Emitter-

Calculating Distance Between Sensor And Skeleton

3.1.3. IR Depth Sensor-

Calculating The Pixel From Images

3.1.4. Color VGA video camera –

By detecting three color components: red, green and blue, this video camera aids in facial recognition and other detection features. To the color components it detects, Microsoft calls this an "RGB camera" referring.

3.1.5. Motorized Tilt – to ensure that the camera has the best possible view of you, the motorized tilt enables you to adjust the camera up or down 27 degrees

3.1.6. Multi-array microphone – The voices of the players from the noise in the room, this is an array of four microphones that can isolate. This allows the player to be a few feet away from the microphone and still use voice controls. We represent the human skeleton model by 7 body parts involving 8 points. We fix the head and neck points as the centroid. The shoulder points are fixed halfway between the face detection. In the Kinect view area. In addition measuring skeleton 12 points of body, is realized using this information. In the sopping order to show a suitable size cloth, a suitable size of user is estimated from this information. In these system the extra additional part we can add for better performance. We add the jewelry like cloths.

4. CONCLUSIONS

The live demonstrations at Malls and Messed events, the open-structured surveys received wide-ranging input from the public attending. Associated with a wheelchair-bound person that they considered would benefit from a dedicated adaptation of the product, 13 wheelchair-bound individuals gave direct input as well as others who were either friends. Healthcare students, and salespeople from other stands at the Messe events, this included healthcare professionals. To ascertain a general opinion on benefit potentials upon testing and being presented with the current solutions available, statistic relevance in this work is not considered as a qualitative / subjective approach was central. Especially when purchasing trousers or shoes, to address all sizes of customer as well as children the camera

had to “find” the person and that person had to stand at a distance to be able to view the whole body. Yet that distance had to be close enough to allow the person an operable view of the interface control detail.

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BIOGRAPHIES (Not Essential)



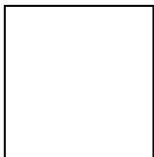
Miss. Pawar Prajkta M.
Studying in SND COE & RC
YEOLA. Completing Computer
Engineering From Pune Univercity



Miss. Shelke Vaishali A .
Studying in SND COE & RC
YEOLA. Completing Computer
Engineering From Pune Univercity



Miss. Kokate Sonali V .
Studying in SND COE & RC
YEOLA. Completing Computer
Engineering From Pune Univercity



Miss. Daund Priyanka D .
Studying in SND COE & RC
YEOLA. Completing Computer
Engineering From Pune Univercity