Virtual Makeover and Virtual Trial Dressing

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ABSTRACT: Now-a-days everyone wants to look fashionable. But, it is difficult for ordinary users to make a wonderful makeup and hairstyles. Moreover, when you are in nude look and want to share better look with your friends, the fastest and easiest way is virtualmakeup. However, current existing makeup software needs many user inputs to adjust face landmarks, which influence the user experience. And, it cannot remove the flaws on skin as good as the real cosmetic makeup. Hence, we have introduced such system that allows you to do almost all the makeup work. The system would be platform independent and made up of all the free-source development tools so that if taken commercially later we will keep the cost as low as possible. This will make it accessible in small time running beauty parlors.

KEYWORDS: Virtual Makeover,Augmented Reality,Windows

I. INTRODUCTION

A. What is virtual dressing room?

A virtual dressing room (also often referred to as virtual fitting room and virtual changing room although they do, on examination, perform different functions) is the online equivalent of the near-ubiquitous in-store changing room – that is, it enables shoppers to try on clothes to check one or more of size, fit or style, but virtually rather than physically.

Having begun to emerge from 2005, fit technologies started to be widely reported from 2010, but are now available from an increasing variety of providers and are in use by a growing number of prominent retailers in their webstores.

A fit technology may be categorised according to the problem that it resolves (size, fit or styling) or according to the technological approach. There are many different types of technological approach, of which the most established and credible[according to whom?] are:

Size recommendation services
Body scanners
3D solutions
3D customer's model
Fitting room with real 3D simulation
Dress-up mannequins/mix-and-match
Photo-accurate virtual fitting room
Augmented reality
Real models

Augmented reality (AR) is a live direct or indirect view of a physical, real-world environment whose elements are augmented(or supplemented) by computer-generated sensory input such as sound, video, graphics or GPS data. It is related to a more general concept called mediated reality, in which a view of reality is modified (possibly even diminished rather than augmented) by a computer. As a result, the technology functions by enhancing one's current perception of reality. By contrast, virtual reality replaces the real world with a simulated one. Augmentation is conventionally in real-time and in semantic context with environmental elements, such as sports scores on TV during a match. With the help of advanced AR technology (e.g. addingcomputer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulable. Artificial information about the environment and its objects can be overlaid on the real world.

II. RELATED WORK

REVIEW OF LITERATURE

The Virtual Fitting Room (VFR) application presented in this paper is a real-time human friendly interface, which allows trying new clothes using webcams or smart phones. We propose a three stage algorithm: detection and sizing of the user's body, detection of reference points based on face detection and augmented reality markers, and superimposition of the clothing over the user's image. The proposed algorithm is implemented as a universal Java applet using Open CV library functions and it can run in real-time on existing mobile devices.
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AUGMENTED REALITY PLATFORMS FOR VIRTUAL

FITTING ROOMS

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ABSTRACT

Multi-sensor body scanners combined with new algorithms and social media technologies have started a revolutionary shift away from the classic desktop paradigm and into the direction of intuitive, "natural interaction" where people interface with the technological world through hand gestures, speech and body language. This article reviews recent examples of Virtual Fitting Rooms (VFRs) and supporting technologies which facilitate the shopping experience by letting customers to try-on apparel and/or mix- and-match accessories without being physically present in the retail shop. These platforms are not only powerful decision tools for the on-line shopper, but also contribute to the fun factor of in-store shopping. Using depth scanning techniques, VFRs can create accurate 3D models of shoppers and meaningfully query retail digital catalogs, filter out non-fitting items and allow customers assess the styling and matching aspects in real time. In addition, omnipresent social networking features allow sending photos or videos of the shopper wearing the apparel for quick feedback. The quality of service provided by current VFRs is sufficiently high to boost sales but also minimize returns due to improper fit.

A. *Problem definition:*
In the advent of the commercial world we find that customers' choice is most important and with the huge competition, the markets always try to sway the competition from their competitors. at the same time, with the trending war of e-commerces, customers often buy the clothing online yet not 100% satisfied with the products all the time. we always have heard this, all that glitters is not gold. the product which looks interesting and better, might not always be customers' actual choice. this not only leads to customer unsatisfaction but also affects the revenues of the seller, as with the new refund policies, customers always try get the best deal and refund if they don't like it. this also affects the revenues of the e-commerce stores selling all these apparels and accessories.coming back to keep customer as the centre of the universe, customers are not able to judge if the clothing will actually look nice on them. customer has no idea on how it appears on them. another issue is that there is no customization that the customer can make out. especially in terms of the sizes and styles. if you give customer 20 different color options, its bound to happen that customer might get confused. it might affect the sales as well negatively. with no option for trial, the conversion rate of users to buyers also decreases as the customers do not want to invest in something which they're not sure if they like and then in turn waste money if it goes wrong.by developing this application we plan to eradicate all the above mentioned problems faced by the buyers as well as the sellers.

B. *Scope of the project:*
This project will consist of creating a virtual dressing application based upon the given literature survey and the guidance. The project is expected to be completed by February, 2015. Modules of the application will include a virtual makeover application allowing users to put make up by having a facial photo clicked, and a Virtual Dressing Room,

where the person can pick from their different apparel options and then without wearing the actual dress, the person can see a live impersonation of the clothes worn on the user body by the means of Augmented Reality.
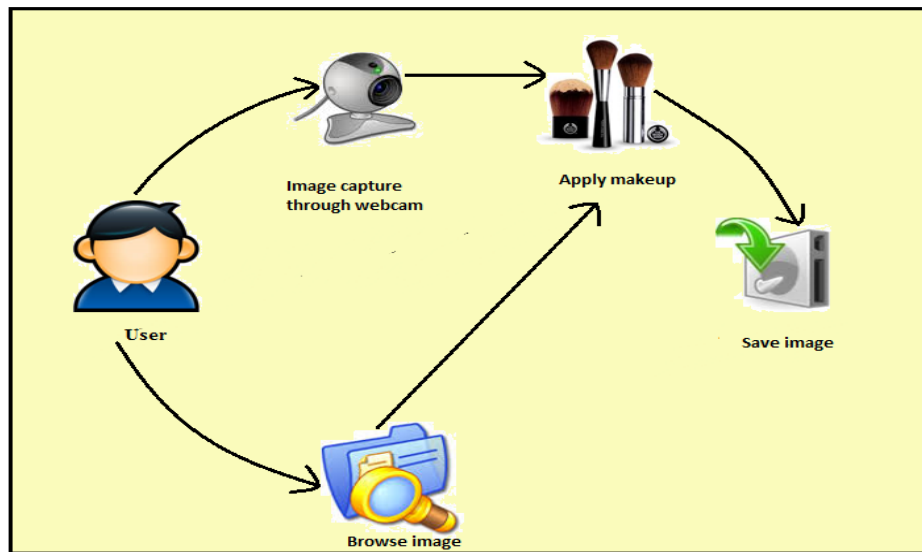
III. PROPOSED SYSTEM

A. Syetem architecture:

Fig 1.System Architecture

B. Avatar control:

It is more natural and easier for users to control their avatars via their body movements than via basic input devices such as keyboard, mouse and joystick. commercially available motion capture equipment, however, is far too expensive for common use and cumbersome, requiring the user to wear 40-50 carefully positioned markers and skin-tight clothing. chai and hodgins introduced an approach to performance animation that employs video cameras and a small set of retro-reflective markers to create a low-cost, easy-to-use system. the cost is low because only two synchronized video cameras are required. the system is easy to set up and relatively non-intrusive because the user is required to wear only a small set of markers and can wear street clothes. the proposed system transforms low-dimensional control signals obtained from only a few markers into full-body animation by constructing a series of local models from a database of human motion at run time and using those models to fill in probable values for the information about the user's motion not captured by the markers.
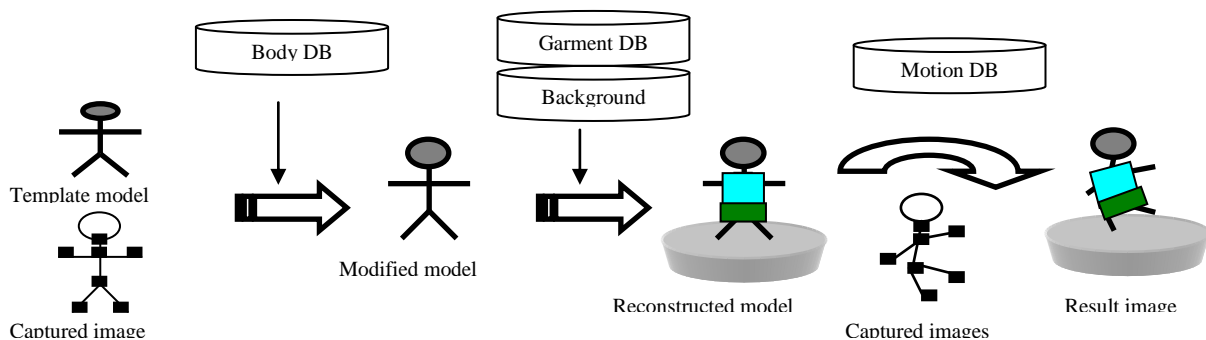
C.Virtual dressing:

Fig 2.Structure of Virtual Dressing

D. Preprocessing:

Template models: two template models for each gender should be created and they also have the skeleton-weight scheme for instant animation via sdd.

bodydb: the system constructs body db with range scan data from 3d body scanners. the more data the system has, the more space the parametric body db can represents.

Garment db: 3d garment models of all items in a garment store should be created for the template models. they are also represented for 2d patterns with draping information. the user can choose garments just by taking or touching garments where the rfid (radio frequency identification) has been installed.

Background db: garments are closely related to certain kinds of environment such as weather, place or events. for example, a customer wants to buy a dress for her wedding, a leather jacket for fall season or a swim suit for summer vacation, then the virtual dressing system provides wedding place, road with fallen leaves or sun shining beach. background is chosen by simple user interaction or automatically chosen by the types of garments.

Motion db: people usually have posing motion such as walking, turning, standing and bending after putting on garments. those sample motions should be recorded with a full set of markers to supplement incomplete information about the user's motion from small set of markers to control avatar model.
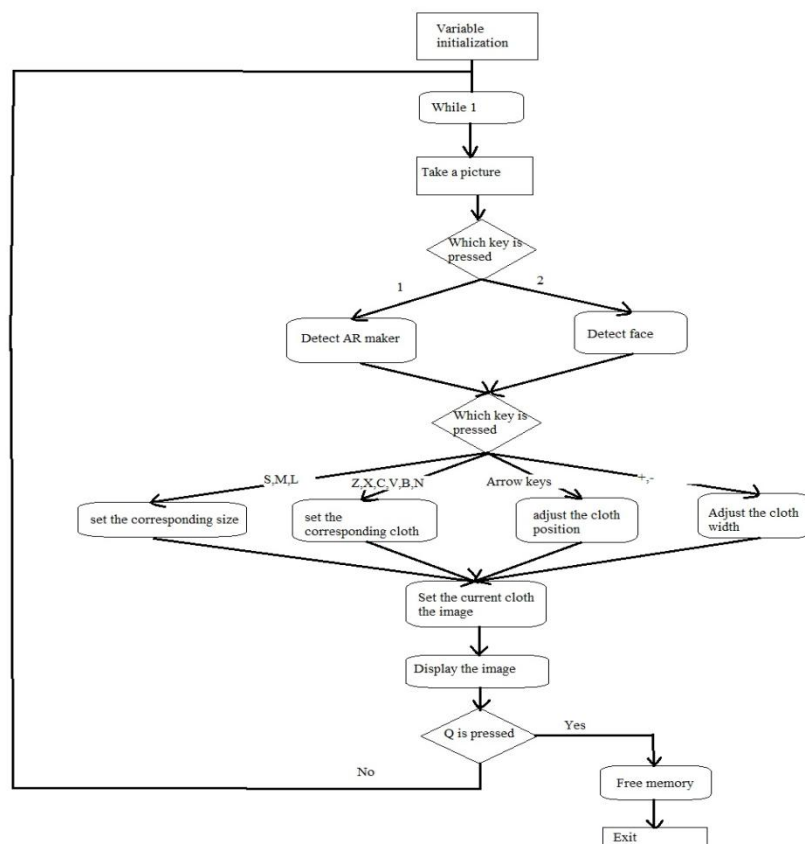
E. Flow Chart

Fig 3. Flow Chart for Virtual Fitting Room

IV. CONCLUSION

- Virtual makeover is the technology based commercially important tool.
- It can be used for Commercial and Training purposes.
- Virtual makeover can be efficiently used by any person with limited motor skill for PC.
- It works on the advanced Augmented Reality technology to get Virtual Reality experience for the customer.

V. FUTURE SCOPE

- Work on normal quality images effectively
- No need to digitize the images
- Apply more customizations to the color

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