1. INTRODUCTION

The fashion industry in particular has come a long way and has grown into one of the largest industries in the world. On account of the growth of this industry, the use of technology in this field has increased. The current areas of application of computers in textile industry include weaving, knitting, printing, fashion illustrations, texture mapping, embroidery, pattern making, pattern grading, marker-planning and cutting. Computer is a technology, which has generated great excitement in many branches of textile industry. The world of fashion and the world of computers share the same commonality of continuous change. Easey (2009) is of the view that the continual change in fashion involves the exercise of creative design skills which results in products that range from the basic to the rare and elaborate. Paul and Paul (2011) aver that the constantly changing business environments and faster changing consumer demands, it becomes necessary for a business to quickly update and upgrade its production processes to stay competitive in the industry. Especially, when it comes to fashion, where change is a constant, there is a growing need for good information tools to remain ahead of the competition.

Digital fashion illustrations really started during the 90s as more affordable and capable technology made it possible for illustrators to experiment with this fledging art form writes Tallon (2008). At present, fashion designers are increasingly using fashion-designing software. Fashion design software greatly aids the work of a fashion designer and help in more effective performance. The main advantages of using Computer Aided Designs (CAD) for creating designs are the capability to quickly try out numerous design ideas and reduce lead time simultaneously. Thus CAD software packages help the designer in experimenting with a number of textures, colours and patterns for producing the perfect design. They provide a variety of sketch backgrounds and tools for designing and repeating patterns and texture mapping.
These CAD software aid the designer right from the stage of designing to the production of perfectly fit garments. La Mode and Der Mode (2009) are of the opinion that the garments have become a new medium for graphic artists. The common 2D software used in the field of designing are CorelDraw, Adobe Photoshop, Lectra CAD, TukaCAD and Reach CAD. In garment designing, 3D designing is still a new concept. Literature are available on 3D software like V Stitcher, Modaris 3D, Lectra fashion PLM, My label, Optitex, Assyt bulmer, 3D Studio Max, Maya, Animation master, Cinema 4D and Poser but is common in use among the garment designers. General purpose software like 3D Studio Max is used by the graphic designers, but not by garment designers.

Library has a collection of books, newspapers, videos and music kept for people to read, use or borrow. Design library helps the user to recollect and reuse the designs with or without modifications. This is an age of information technology and as on date design libraries do not exist in the digital format. If the designs are presented in the digital format these groups of people will be highly benefitted. Faculty members of fashion design can be visually presented with nuances of garment styles and the use this as a teaching aid to show the effect of colours and textures on different personalities. The fashion designing students will avail an enriched knowledge repository on garments at the click of a button.

Fashion designers and the textile and garment manufacturer can use this as a way to promote their business by presenting their fabrics as different garment styles without physically making a garment. Orders can be approved online or by digital visual presentation. Also retail textile and garment showrooms and tailors can replace catalogs with digital libraries which reduces the cost of preparing and maintaining catalogs for every season. It will be very useful for the consumer to select and purchase garments in showrooms or for placing orders for garment designs with the tailor.

Garment designs for the 3D human figure are usually presented as sketches or photographs, which is 2-dimensional. In 2-dimenesional sketches it becomes hard to
imagine how it will be in the other angles, say for example side view. According to Watanabe (2009), fashion design drawings will be more convincing if the model and the garments are portrayed with a certain 3-dimensional effect. Miller (1997) is of the opinion that 3D computer visualisation is a very effective way to communicate design ideas. Design library in the 3D becomes the need of the day for the following reasons:-

- In this age of information technology, it is essential to have a database of garment designs in the 3D image. Traditional garments are a treasure to our heritage. Hence it is necessary to store them in the 3D form for the future generation to view our rich culture.

- Before the dress is sewn, the tailor cannot know for sure what the dress will look like and what the effect will be when it is worn on the human body. For a new fashion design, the tailor can only imagine the results, depending on his experience and talent. With 3D designs, there is no need to physically produce the product. The styles can be presented to the consumer and tested for their acceptance or rejection.

- Fashion show is the presentation of a designer collection using a human model. This involves lot of time, manpower and money. The 3D images can present a virtual fashion show at a minimal cost.

- Clothing is three dimensional, which means it is perceived in the round. As we visualise some of our designs on paper or view them from catalogs and magazines, it is important to remember that this view point is only two dimensional shapes observe Amaden and Crawford (2005). 3D catalogues will be of great interest to the consumer while shopping through internet.

- 3D designing also enhances e-business capabilities by allowing user to create an e-store with the 3D collections prepared by the garment manufacturing companies.
Keeping the above facts in mind, the researcher has undertaken an effort to create a design library in the 3Dimensional form using CAD software. The objectives of the study include:

- Study the preference of women’s garments among the college going girls of South India
- Create 3D design library for the selected women’s garments using 3D Studio Max
- Evaluate the 3D design library for its usefulness among the fashion designers, faculty members and students of fashion designing courses, textile and garment manufacturers, textile and garment showrooms, college students, working women, housewives, computer professionals and computer illiterates