Designing Typographic Logo for Men’s Branded Apparel
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Abstract---Typography is a Text based designing process, wherein any written mode is visually adopted to convey a story. It is an application created systematically, especially for text based mediums as banners, newspaper, catalogues, invitation, rubber stamp, letter head, posters and millions of other forms. This work is concerned with the designing of Typographic Logo for Men’s Branded Casual shirt using Computer Aided Designing software. The designing task involved two important processes. The first part is concerned with the Digital Modulation, wherein a manually designed Art work is created digitally enabling all such modulation process like application of color, texture and appearance. The second stage is the Legibility, Scaling and formatting of the Typographic Logo. The study proves that the Typography is an important technique which could be designed using text formatting options in CAD applications and found suitable or textile and apparel based applications like Screen printing, Block printing, Stencil printing, Logo designs, Label designs, Product design and hundreds and thousands of several other applications.

Key words: Typography, Logo, Designing, Brand, Apparel, Visualization, Simulation

I. INTRODUCTION

Computer Aided Designing has been an effective tool in apparel manufacturing for centuries. There has been tremendous unimaginable growth in designing which can be further divided into hundreds of clusters like screen printing, stenciling, block printing, fabric structural designing, embroidery designing, logo designing, 3D visualization, simulation, etc. CAD applications support several integrated Font styles that is used specifically for, scripting, presentation, formatting, editing, mailing, reading and writing. Where in several latest Designing software provide Text tool separately in the tool box for text designing that could be altered, modified, formatted for use in design. A logo is the means by which we identify a Brand. Logo’s Trademarks and Corporate identities are the visual signals representing a value for a brand. The term ‘Brand’ covers products services and organization and can include people, places and nations. A Brand is a feeling. Brands connect with people emotionally and psychologically, guides consumer understanding of value and lead to loyalty [1]. Typography is an effective method to structure and arrange text for visual language.

The question of how Typography is used to convey a message is split into two. The first part is concerned with the Typography’s style. These change according to designer or the client’s preference. Many times Typography may play a major or an invisible role; it may dominate, reflecting the inspiration of the designers and on occasion even lay claim to be an art. Typography invites rational thought and controlled direct communication. Consciously and unconsciously it creates and preserves social links, and provides a remarkable parallel to social form and function [2].

The task of the Typographic designer working on a Brand identity is to create a letter form that suggests a style suited to the Brand [1]. Typography works on the basis of a drawing representing an object; the figure symbol may be intended to be a man but could represent a woman or human being. Typography for reading attempts to encapsulate an idea which has a visual form but more complex abstract ideas. It seeks to convey meaning by combining simple pictograms on the assumption that the reader will make a link between the two objects [3]. Text is everywhere, written words remain the engine of information exchange. Typography has emerged as a powerful creative tool for writers, makers, illustrators and activists as well as graphic designers. Mastering the art of arranging letters in space and time is essential knowledge for anyone who crafts communication [4]. Digital Typography refers to the preparation of printed matter by using only computers and printing devices such as laser-jet printers. Since electronic printing devices are widely available, Typography has become more effective with these printing devices [5]. The designing software has a separate text tool with thousands of styles and formatting options. The text tool has a unique anti-aliasing method that could be set to sharp, crisp, strong and smooth modes, aligning options, text wrapping option, separate character and paragraph option, text orientation option and several other text tool options. The text Statistics option show important text related details like total no of lines, words, characters, ENU, font style used.

Typography designs involve the utilization of complex tools and techniques to design a Typographic concept made suitable for a theme. A Typographic design can be developed by using an aligning tool, Rotating tool, Scripting tool, Design by a path, Text filling option, designing by scaling and many other features. A Typographic designer integrates several important tasks to finish a complete Logo design. A text could be edited in several different aspects; the outline of the text can vary from thin to thick line, dotted, dashed, wave lines. There are several type of Logos used in apparel like chest logo, style logo, brand logo, functional logos, promotional logos etc.
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<table>
<thead>
<tr>
<th>S. No</th>
<th>Technique</th>
<th>Output</th>
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<tbody>
<tr>
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<td>Designing By Aligning</td>
<td>• Vertical and Horizontal Alignment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vertical and Horizontal frame Alignment</td>
</tr>
<tr>
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<td></td>
<td>• Stylized Diagonal Alignment</td>
</tr>
<tr>
<td>2</td>
<td>Designing By Rotating</td>
<td>• Rotating with start angle on a base line</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rotating with start angle away from the base line</td>
</tr>
<tr>
<td>3</td>
<td>Designing By following a path</td>
<td>• Text on a Right angle path</td>
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<tr>
<td></td>
<td></td>
<td>• Text fitted on a outer path of a shape</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Text fitted on the inner path of a shape</td>
</tr>
<tr>
<td>4</td>
<td>Filling Text</td>
<td>• Text fitted away from the inner path of a shape</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Text fitted on a irregular wave path</td>
</tr>
<tr>
<td>5</td>
<td>Designing By Scaling</td>
<td>• Gradation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Radiation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Repetition</td>
</tr>
</tbody>
</table>

II. EXPERIMENTAL

A. Digital Modulation

1) Metadata

The Metadata is a store well for the individual files. In order to digitize the Typographic Logo, all these files are grouped together to make a single output file. The Typographic Logo Designing involves collection and grouping of important files that are to be digitized. The Metadata of the files describes the properties, functionalities and the appropriate file format like .jpeg, .bmp, .cdr etc [6].

<table>
<thead>
<tr>
<th>S. No</th>
<th>File Name</th>
<th>Type</th>
<th>Size</th>
<th>Dimension</th>
<th>Bit depth</th>
<th>Color mode</th>
<th>Color profile</th>
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<td>JPEG</td>
<td>158 KB</td>
<td>1670 X 2236</td>
<td>8</td>
<td>RGB</td>
<td>SRGB IEC6 1966-2.1</td>
</tr>
<tr>
<td>2</td>
<td>Red Water Texture</td>
<td>JPEG</td>
<td>130 KB</td>
<td>865 X 489</td>
<td>8</td>
<td>RGB</td>
<td>SRGB IEC6 1966-2.1</td>
</tr>
<tr>
<td>3</td>
<td>Final Logo</td>
<td>JPEG</td>
<td>130 KB</td>
<td>844 X 407</td>
<td>8</td>
<td>RGB</td>
<td>SRGB IEC6 1966-2.1</td>
</tr>
</tbody>
</table>

Table 2: Metadata of the Typographic Logo, Metadata Source – Adobe Bridge CS4

The Metadata required for the Typographic Logo involved the creation of Art work using Corel Graphics Suite X5. The Red water Texture image was designed using Adobe Photoshop and the final Logo design was generated using
Adobe Photoshop CS6. The file required was then saved into a single folder for further processing.

2) Legibility, Scaling and formatting the Logo Design

The Artwork was developed using Computer Aided Designing software which supports standard formatting features. The exact size of the Logo will be 2cm x 4cm, in which 8mm x 7mm, 5mm x 25mm size texts is to be placed.

![Fig. 1: The Typography Logo Artwork](image)

The Figure 1 shows the artworks scaling and it has been formatted in perfection to suit the Logo design generation.

The Color Profile defines how a color’s numeric values map to its visual appearance. The color profile of the artwork is mentioned below:

- Logo Text E – Color #d2774
- Logo Text NTICER - #F5F281
- Background color - #8C0F17, #B50F19, #EB333F, #F0A3AB, #FFFFFF

The Typographic Logo is created using the SRGB IEC6 1966 – 2.1; which is a Standard space endorsed by many Hardware and software manufacturers, and is becoming the default color space for many Scanners, low end printers and software applications. The working space specifies the working color profile for each color model. The working space is used for documents that are not color-managed and for newly created documents that are color-managed.

3) Design Properties

The design properties like Length and width of the Typographic Logo, Stitch count, Sewing time, Color count, Color code has been mentioned below. This clearly describes how the intelligent computer environment behaves and responds to the user requirement. Stitch count is the number of actual stitches produced by the needle to complete a single layer for the motif. The stitch count is further divided into ratios. If a motif require four sequence of thread operations then each individual threads stitch count and sewing time is calculated individually and then they are added together to find out the total stitch count and total sewing time. The embroidery machine functions in such a way that when a single needle complete its task the signal is sent to the following needle to continue its task.

- **Design Property of Background Image**

  Sewing option:
  - a. Line interval - 2 mm
  - b. Max density - 4.5 line/mm

  Color option:
  - a. Thread Chart - My Chart
  - b. Color Set - Auto Set

  Design Size:
  - a. Width - 40 mm
  - b. Height - 20 mm

<table>
<thead>
<tr>
<th>Index</th>
<th>Color</th>
<th>Code</th>
<th>Brand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>800</td>
<td>Embroidery</td>
<td>Red</td>
</tr>
<tr>
<td>2</td>
<td>Dark Brown</td>
<td>058</td>
<td>Embroidery</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>3</td>
<td>Amber Red</td>
<td>333</td>
<td>Embroidery</td>
<td>Amber Red</td>
</tr>
<tr>
<td>4</td>
<td>Khaki</td>
<td>348</td>
<td>Embroidery</td>
<td>Khaki</td>
</tr>
</tbody>
</table>

![Table 3: Design Property Box for Background image](image)

The Table 3 lists the number of embroidery threads required for the background of the Logo design. The sequence of stitch formation for the Background image is shown in Figure 2.

![Fig. 2: Sequence of stitch formation for Background](image)

- **Design Property of Typographic Text E**

  Sewing option:
  - a. Line interval - 2 mm
  - b. Max density - 4.5 line/mm

  Color option:
  - a. Thread Chart - My Chart
  - b. Color Set - Auto Set

  Design Size:
  - a. Width - 8 mm
  - b. Height - 7 mm

<table>
<thead>
<tr>
<th>Index</th>
<th>Color</th>
<th>Code</th>
<th>Brand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amber Red</td>
<td>333</td>
<td>Embroidery</td>
<td>Amber Red</td>
</tr>
<tr>
<td>2</td>
<td>Tangerine</td>
<td>209</td>
<td>Embroidery</td>
<td>Tangerine</td>
</tr>
<tr>
<td>3</td>
<td>Silver</td>
<td>005</td>
<td>Embroidery</td>
<td>Silver</td>
</tr>
<tr>
<td>4</td>
<td>Carmine</td>
<td>807</td>
<td>Embroidery</td>
<td>Carmine</td>
</tr>
</tbody>
</table>

![Table 4: Design Property Box for Typographic Text E](image)
The Table 4 lists the number of embroidery threads required for the Typography Text E. The sequence of stitch formation for the Typography Text E is shown in Figure 3.

Table 4: Design Property Box for Typography Text ENTICER

<table>
<thead>
<tr>
<th>Index</th>
<th>Color</th>
<th>Code</th>
<th>Brand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>202</td>
<td>Embroidery</td>
<td>Lemon Yellow</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>001</td>
<td>Embroidery</td>
<td>White</td>
</tr>
</tbody>
</table>

Figure 3: Sequence of stitch formation for Background

- **Design Property of Typography Text ENTICER**

  **Sewing option:**
  c. Line interval - 2 mm
  d. Max density - 4.5 line/mm

  **Color option:**
  c. Thread Chart - My Chart
  d. Color Set - Auto Set

  **Design Size:**
  c. Width - 27 mm
  d. Height - 5 mm

The Table 5 lists the number of embroidery threads required for the Typography Text NTICER. The sequence of stitch formation for the Typography Text NTICER is shown in Figure 4.

Table 5: Design Property Box for Typography Text NTICER

<table>
<thead>
<tr>
<th>Index</th>
<th>Color</th>
<th>Code</th>
<th>Brand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>513</td>
<td>Embroidery</td>
<td>Lime Green</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>534</td>
<td>Embroidery</td>
<td>Teal Green</td>
</tr>
</tbody>
</table>

Figure 4: Sequence of stitch formation for Typography Text NTICER

- **Design Property of Butterfly Motif**

  **Sewing option:**
  e. Line interval - 2 mm
  f. Max density - 4.5 line/mm

  **Color option:**
  e. Thread Chart - My Chart
  f. Color Set - Auto Set

  **Design Size:**
  e. Width - 27 mm
  f. Height - 5 mm

The Table 6 lists the number of embroidery threads required for the Butterfly motif. The sequence of stitch formation for the Butterfly motif is shown in Figure 5.

Table 6: Design Property Box for Butterfly Motif

<table>
<thead>
<tr>
<th>Index</th>
<th>Color</th>
<th>Code</th>
<th>Brand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>707</td>
<td>Embroidery</td>
<td>Dark Gray</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>208</td>
<td>Embroidery</td>
<td>Orange</td>
</tr>
</tbody>
</table>

Figure 5: Sequence of stitch formation for Background

III. RESULT AND DISCUSSION

Figure 6 shows the final Typographic Logo design which was developed as proto sample on a piece of sample cloth.

Figure 7: Final Typographic Logo Design Visualization on Men’s Casual Shirt

The Typographic Logo positioning and design analysis has been shown in Figure 7. The Logo is placed exactly at 4.35 cm from the top of the pocket flap. Initially the casual shirt is drafted with entire design details. The miniature of the final logo design is applied on the drafted image for visual examination. The exact size of the logo is determined in the Art work shown in Figure 1. The proto sample of the Men’s casual full sleeve shirt was developed where the Typographic Logo was embroidered. Certain preparatory works like stitching the base interlining under the stitch surface to stabilize the base fabric during embroidery process was carried out.
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Fig. 8: Film image Men’s Casual Shirt

Fig. 9: Typography Logo on Men’s Casual Shirt

Figure 9 display the final men’s casual full sleeve shirt with the stitched Logo design.

IV. CONCLUSION

This study provides a complex understanding on imaging and image modulation techniques. Certain critical task like digital modulation, creating Typographic Text, legibility, scaling and formatting the Typography text has been simplified. Wide designing options are possible in Typographic text designing which could be not only used for logo designs but also for labeling, monograms, printed designs and many other text forms. Hence Typography is a better technique which is highly suitable for garment designers.

REFERENCES