2014 Proceedings

Charlotte, North Carolina



Dharma Adharma

Ford Bowden & Lisa Parrillo Chapman, Ph.D. Department of Textile and Apparel Technology and Management, North Carolina State University, Raleigh NC

Keywords: Silk, Painting, Reactive, Printing

The designer's objective for the creation of this 5mm silk habotai kaftan was to mimic the look of hand painted silk utilizing the technology of reactive inkjet printing. The designer conducted contemporary color and motif trend research using WGSN. Thematic research was conducted on pop culture (namely musical artist M.I.A.'s album *Matangi*) and on textile samples from the



Tamil Nadu area of India. When researching silk painting, the ancient craft component of the design proposal, the designer discovered that this technique could be traced back to India, early A.D. This finding, along with research on the tantric Hindu goddess Matangi, inspired the designer to look to historic Indian textiles for motifs. After conducting thematic and motif research, the designer began rendering motifs. Special care was taken to stay true to the motif inspiration without directly copying historical work. The designer painted the motifs with gouache using the WGSN S/S 2015 Macro Trend, History 2.0 color palette, updating the motifs for a more contemporary and fashionable look. All of the motifs were then scanned into digital files for manipulation in Adobe Photoshop. Various filters were applied to areas of the motifs utilizing the color selection tool, which provided an aged, historic aesthetic. The motifs were

then placed within the kaftan silhouette, which was also created using Adobe Photoshop. A radial gradient with four stops was then created, beginning from the neckline and ending at the borders of the kaftan. Finally, an image of smoke was placed over the entire design.

Though the CAD software allowed for a swift work process, many iterations of motif and color placement were required to create an effective design. Various motifs were edited out, while others were recolored or emphasized/deemphasized. The composition, engineered within the kaftan silhouette, was guided by historic Indian kaftans. To manage color during the design

Page 1 of 2

© 2014, International Textile and Apparel Association, Inc. ALL RIGHTS RESERVED ITAA Proceedings, #71 - www.itaaonline.org

process, the designer chose to work with an ICC color profile instead of CTB, which requires a color reduced, indexed file. While color reduction was not necessary, several test prints were required to achieve a desired result within the printer's color gamut. The ICC color profile allowed the designer to achieve a higher level of detail in the kaftan design due to the higher range of printable tonal values.

From the research, the designer found that reactive inkjet printing is similar to silk painting. In silk painting, color can either be mixed before application to the substrate as spot color, or mixed directly on the substrate. In digital printing, color is applied as process color in a dot matrix pattern, composed of cyan, magenta, yellow, and black. The mixing of these dots yields the printable color gamut with varying tones and hues. The colors produced by inkjet printing have a similar aesthetic as hand painted silk, however the colors achieved through reactive printing are largely predetermined in the CAD system and limited by the printable gamut. In addition, on-substrate color mixing in silk painting is less predictable than colors achieved through printing, lending itself to a more spontaneous process, but is more difficult to reproduce in a production setting.

References:

Carroll, K., & Chapman, L. (2012, December 6). Matisse, the Cone Sisters, & their world of textiles. North Carolina State University, Raleigh, NC.

Gillow, J., & Barnard, N. (2008). *Indian textiles*. London: Thames & Hudson. WGSN Creative Direction Team. (2013, June 12). History 2.0. Retrieved February 1, 2014.