

Colour Management in Global Apparel Supply Chains

A business seminar addressing the challenges of colour management was held on Tuesday 23 March 2004 in Manchester. Those who attended came from a variety of backgrounds: representing both brand owners and companies in the supply chain.

Lorraine Hall of Apparel Matters introduced the topic by drawing from her own experience over the past 20 years in manufacturing, catalogue shopping and retailing. The communication of colour standards has emerged as one of the leading issues facing apparel retailers and their suppliers. Colour choices are often initiated on a computer screen or with trade show samples. Description of colour is typically a highly subjective matter, yet we always expect others to understand what we mean! Communication routes may involve physical swatches, electronic images or paper printouts. The dyeing or printing of fabric samples takes place a long distance from anyone with direct involvement with the colour selection, and lab dip samples may be repeated three or four times before an acceptable colour is achieved. Ensuring continuity of colour on production batches is also a major quality issue.

Delegates then participated in a workshop exercise to identify the issues relevant to their own businesses. There were two working groups: a brand owner/retailer group and a supply chain/manufacturer group. Each delegate contributed 4-5 issues and these were further analysed to identify the themes. The top three themes for the brand owner group were:

1. Inconsistency of colour. They were particularly concerned about colour variations across different substrates (components, surfaces, textures), between dyelots, establishing workable tolerances.
2. Time delays affecting the supply chain. Multiple lab dips are a widespread problem creating time delays and often resulting in compromises on colour.
3. Communication through the supply chain. There was concern about different understanding of the issues across the supply chain, and awareness that there is no common vocabulary. Simply taking things seriously was flagged up as an issue.



Lorraine Hall addresses the seminar

The Supply chain group had much overlap, but there were significant differences. Their top three themes were:

1. Technical problems. Colour specification was often not clear, and there is a need to interpret some reference colours as not all can be obtained using available dyes and the specified substrate. Interpreting tolerances was an issue, and also obtaining the specified performance of the coloured material (in fastness to light and washing, for example).

2. Consistency of colour. Continuity from sample-to-bulk and from batch-to-batch was identified. The problem of making commercial decisions about matching colour is significant. The challenge of obtaining the same shade on different materials was also highlighted.
3. Communication through the supply chain. The issues identified related to specifications, tolerances, dealing with adjustments, making decisions and understanding the processes.

Significantly, brand owners wrestle with the time delay problems arising from colour **inconsistency**, whereas the supply chain wrestles with the technical problems that must be solved to achieve colour **consistency**. The time delay problems did not feature in the issues identified by the supply chain delegates, and the technical problems associated with colouration decisions did not feature in the issues identified by the brand owners. Some other points to note: system cost was an issue for most of the brand owner delegates, but this did not feature at all in the feedback from supply chain delegates. Neither group identified “Training” as an issue: only two people in the brand owner group identified a training gap.



Some of the “Supply Chain” group in action during the Workshop

David Tyler of the NW Advanced Apparel Systems Centre spoke on Colour Management Strategies. This looked at the colour science underpinning colour management and explained why the present colour management problems are occurring. This considered the different approaches to handling colour by CAD systems, by scanners and printers, by the use of standard swatches and Pantone standards, and by the textile dyer or printer. While there can be a variety of improvised and pragmatic approaches, the solutions can only come by specifying colour at the design stage by reference to spectral data.

Keith Parton of Clariant UK presented on the Archroma approach to colour management. He identified a four stage approach supported by the Archroma system: access to engineered shade libraries, availability of engineered colour standards, efficient distribution of shade standards, colour communication. As a case study, Keith drew on feedback from Littlewoods Home Shopping who contributed examples of their use of Archroma and comments on the effectiveness of the system.

This event was hosted by the North West Advanced Apparel Systems Centre, a project funded by the European Regional Development Fund supporting small-medium enterprises in clothing, textiles and footwear in NW England. The Centre is linked to the Department of Clothing Design & Technology, Manchester Metropolitan University.

