INTERACTIVE COMPUTER GRAPHICS AND THE DESIGN OF WOVEN TEXTILES

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ABSTRACT

The use of interactive computer graphical techniques in establishing a good environment for
the design and analysis of woven textile structures is examined. A novel microcomputer implementation
of these techniques is discussed in terms of the manipulation of the initial design data to enhance
the aesthetic and structural properties of the fabric design. This implementation is also discussed
with reference to the formulation of appropriate state transition diagrams to describe the required
processing. The need for archives of classic structural designs is included and illustrated with
the planar isonmenal forms. Additional illustrative examples of textile structures are included which
exhibit patterning at both the macro (or block) level, as well as the micro (or individual
intersection) level.

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8 SHAFT DESIGN

SAME 8 SHAFT DESIGN USING "COLOR AND WEAVE EFFECTS"

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DESIGN AS A BLOCK DRAFT

DESIGN WITH 5 SHAFT SATIN AND SATEEN BLOCK SUBSTITUTION
PLANAR ISOCHEMAL ARRAYS

16 SHAFT TWILL

15 SHAFT TWILLIN

16 SHAFT COLOR
ALTERNATE TWILLIN

16 SHAFT COMPOUND
TWILLIN

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