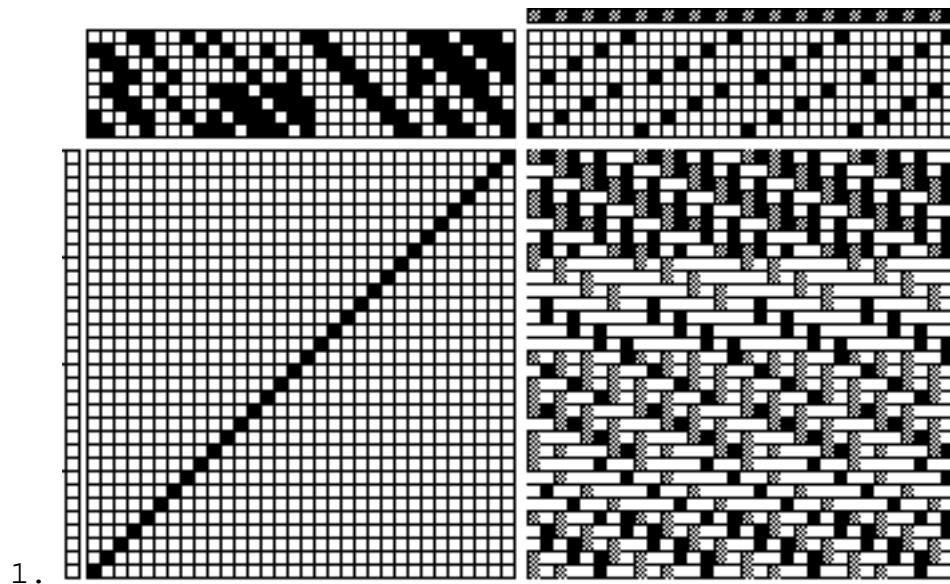


## Working with a Comby SLIPS Interface and Swiftweave

----- Pat Williams

I have been investigating ways of differentiating compositional areas in a weaving by using different weave structures to effect subtle contrasts of both color and texture. On my loom is a multi-colored cotton warp, with two sets of related colors dispersed evenly throughout. Swiftweave 4.05 has been very helpful, both for showing quickly which warp colors will be dominant with different weave structures and, in conjunction with a Comby SLIPS interface, for controlling the complex weaving sequences which are necessary for this approach to woven compositions. What follows is a description of the method I have developed.

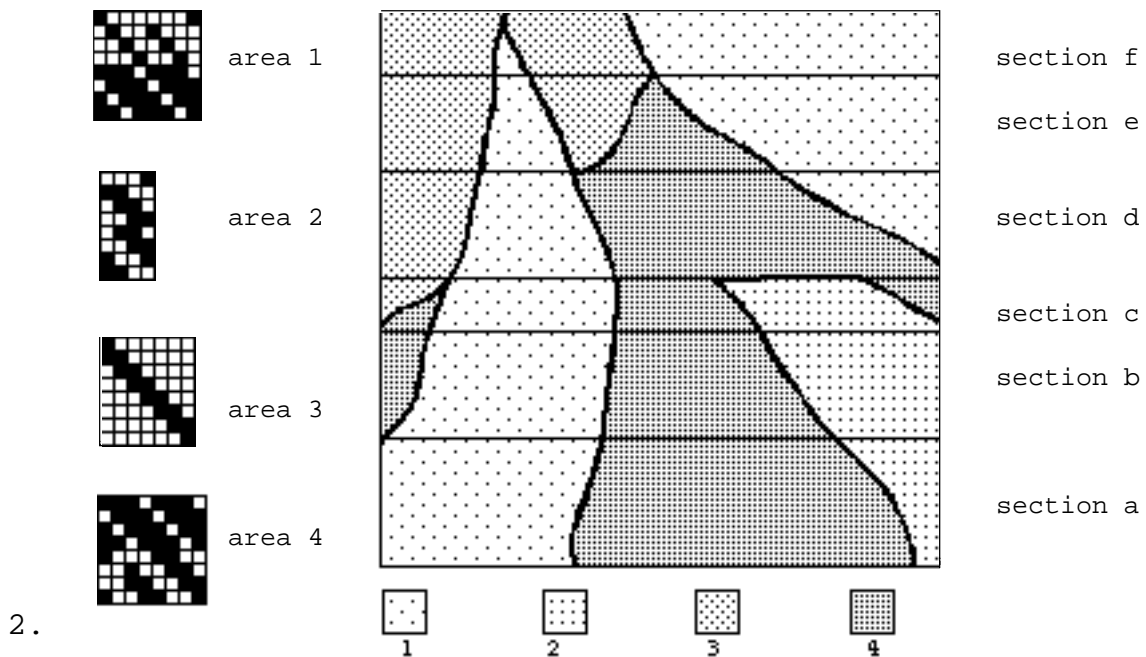
To begin, I enter the warp threading sequence and select two contrasting colors to indicate the sets of related warp colors mentioned above. Then I enter a number of weave structures in the tie-up area and choose a straight treadling sequence as well as a white weft color. In order to see which set of warp colors will be dominant in each weave structure, I have Swiftweave do a color drawdown. Illustration 1 shows an example.



At this point, I turn on the Comby and weave several wefts of different color, diameter, sheen and texture with each weave structure. Then I select the combinations of weft and weave structure I want to use in the weaving.

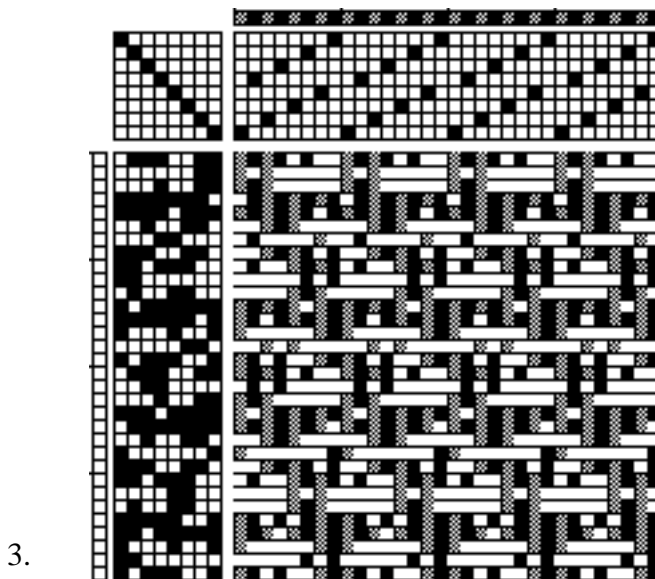
Once I have this information, I begin to analyze the composition I plan to use. In order to differentiate image areas with weave

structures, I need to know the number of separate areas there are in different parts of the composition. In illustration 2, different dot patterns indicate different image areas. Horizontal lines divide the composition into the sections which need different sequences of weave structures. For example, I would need to weave the three areas in section "a" with different weave structures in order for them to be visible and to have different dominant warp colors. I would use those same structures to differentiate the same three image areas in section "b." However, since the darker area occurs in two separate places in section "b," I would need to weave the structure for the darker area at two different points across the width of that section.



Since I plan to weave this piece primarily with a single shuttle, supplemented by inlay, I need to direct the loom to raise the harnesses in the correct sequence for each shot of each different weave structure. For example, if I start weaving at the bottom left of section "a," I want to weave the first shot of the area 1 structure, the first shot of the area 4 structure, and then the first shot of the area 2 structure. For the second weft pass, going from right to left, I want to weave the second shot of the area 2 structure, the second shot of the area 4 structure, and then the second shot of the area 1 structure. I want to continue in subsequent weft shots through the treadling sequence needed for each weave structure in the section. Illustration 3 shows a direct tie-up for this type of

weaving sequence. Because the drawdown section is a composite, with all of the weave structures interspersed, it bears little resemblance to how the weave structures appear in the different image areas.



To proceed further, I analyze the remaining sections of the composition and enter the treadling sequence needed to lift the harnesses in the proper order for the weave structures I want to use in each area of a section. Because the Swiftweave loom control will loop continually through any treadling sequence you tell it to, it is only necessary to enter the interspersed treadling sequence one time for each section.

Once I have a direct tie-up for each section of the weaving, I am ready to turn on the Comby and begin weaving. Each time I need the next shot for a weave structure in a particular area, it appears.

Although the analysis process I have described may seem cumbersome, the weaving process it enables is almost magically fluid. When I had attempted this approach to weaving on a table loom, the weaving process was far more cumbersome and time-consuming. Using this technology allows me to work in ways which are otherwise simply not feasible. And it is great fun!