Tissue Covering a Rubber Model (per Gene Wallock)

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Dope the framework that will come into contact with the tissue. Use one coat of straight nitrate dope. This will raise the wood grain. Sand with 400 Wet n Dry sandpaper. Put on a second coat of 50-50 dope/thinners. Sand with 600 Wet n Dry sandpaper. Make a 5O/50 mixture of Duco Cement and Acetone and brush this on the under cambered portion of the wing, and the top of the ribs at the dihedral or polyhedral joints. Also brush this mixture on the top or bottom of any rib where a tissue join will occur. (Editor's note; Gene Wallock is a Duco guy; other guys swear by Ambroid or Testor's Green or some other Acetone based cement. Sal Taibi uses Aerodyne's Covering Adhesive-which I suspect is simply thinned Super Seam adhesive which is used in fabric coverings for full sized light aircraft.] Allow the Duco to dry.

Tissue has grain. Always run the grain in the long direction of what you're covering. Start the covering task on the stab bottom. Cut a piece of tissue about 1/2" wider that the stab chord. Use acetone and a small brush, and tack the tissue to the center LE and TE. Pull it towards one tip and tack in the center of the tip. Pull the other end of the tissue to the tissue splice point and tack in the center of the rib. Make sure it is symmetrical between the LE & TE. You'll see you now have two taut triangles of tissue. Proceed tacking from the center to each tip of a rib at the TE and LE positions. You should be gently rubbing the tissue towards the LE and TE at each rib position. Repeat for the other side. At this point, the tissue should be taut. Rub out any wrinkles that may appear. Complete the fastening with acetone. The advantage of acetone is that it releases quickly and easily if you have to reposition the tissue to get rid of a wrinkle. Now attach the tissue the full length of the tissue splice rib. Trim excess tissue from the side of the rib. Brush on a coat of the thinned Duco on the length of the tissue splice rib and let it dry. Cut a small piece of tissue, big enough to cover the tip bottom. Set up the same procedure, including working into getting the tissue into a triangular form. Once the tissue is affixed to the bottom, trim the bottom flush with the wing's plan form outline. Do not go over the edge.

Repeat the process for the top of the stab, except cut your tissue piece 3/4 " wider than the chord. Gene's technique for the compound curves that appear on the top of the wing tip is as follows. He tacks the tissue to an individual 1/16" square spar and carefully cuts the tissue for the start of the compound curve at the mid point of the spar to the tip. Release one half of the tissue and overlap the remaining tissue on the spar. Release one half of the tissue, and overlap the remaining tissue on the spar. You can also cover the tip one bay at a time. This involves more tissue seam joints and is not as neat.

For the wing, cut a tissue piece to cover the bottom center first. You'll need to apply Duco at the center rib over the tissue. After the "triangles" are set, go ahead and use acetone to attach at the LE and TE at each rib. Then brush acetone over each rib and quickly, but firmly press the tissue down against each rib and the bottom spars. Trim the bottom panels, and then cover the tops of the wings, using the technique you used for the stab. Once the Duco and acetone are dry, water

shrink. If you want to add color to your fuselage, cover it with Polyspan, heat shrink it and put on two thin coats of dope. Then make believe that the fuselage isn't covered, and Duco the edges and lap uprights, and cover with tissue. Water shrink it and after drying, dope on straight Acetone to attach the tissue to the polyspan. Take out any wrinkles with a Monokote Iron. Apply two coats of very thin dope, and you're done.