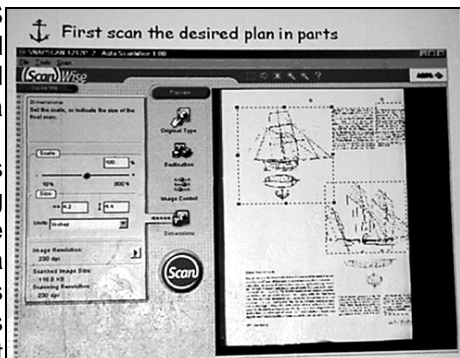


Computers and Scratch Built Modeling

It would be safe to say that model shipbuilding is an ancient hobby. Even today, we still have to cut, carve, sand, glue, machine, paint, rig, and sew various materials to create a miniature model ship. We may have more power tools, but the challenges remain the same. However, as technology has impacted our lives, we have seen changes gain momentum that are allowing us to explore avenues and build models at a level of accuracy and detail never considered.

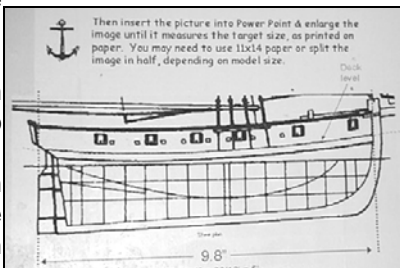
John Mitchell gave us a glimpse of what can be accomplished with a PC, scanner, printer, and some basic computer know how. This fascinating presentation walked us through the design and development of a model of HMS *Fly*, which started out as a small illustration in a book.

The process began by placing the drawing face down in a scanner. This device has software that



allows you to program in various bits of information, such as scale, resolution, destination, and type of original you are working with. In this case, John programmed in 100% scale, 230 dots per inch, a file on his hard drive as the destination, and black and white since he was scanning a drawing. Mitchell cautioned us not to choose too high a resolution, since it will consume so much memory when enlarged, that your hard drive might not be able to handle the memory usage.

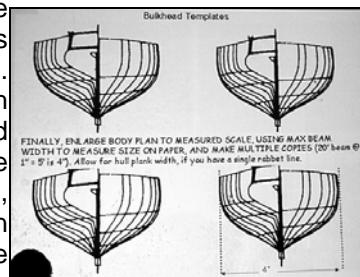
One other nice feature is the fact that you can scan a particular portion of the drawing. John made three different scans of the Body Plan, Sheer Plan, and Half Breadth Plan. Once he had them on file, he was able to erase the sail, mast, and rigging information from each view since he was only interested in the hull and deck plan at this point.



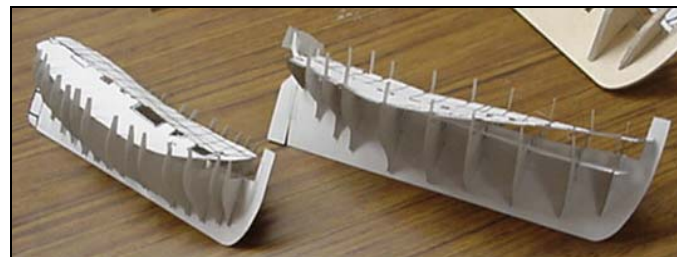
John knew the actual dimensions of HMS *Fly*, so he transferred the Sheer Plan to a Power Point Page, where the drawing was scaled to the correct length between perpendiculars. This was done by highlighting the frame that the Sheer Plan was in, and then dragging any corner in or out as required. Measuring a printout determined whether further adjustments were required. The same procedure was then done for the other two views.

Mitchell stated that the drawing for the *Fly* showed a single rabbet line for the planking. This indicated that all dimensions were being shown to the outside of the planking.

Consequently, compensations were made on the Body Plan templates for the double planking this model would receive. Multiple copies of each view were then made, and a common reference line was drawn on the views, which helped maintain accuracy when the notches in the bulkheads

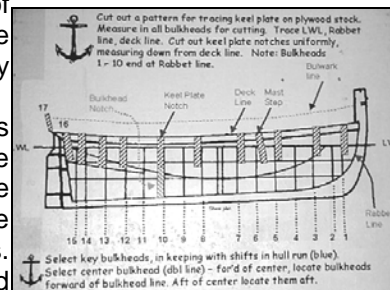


and keel plate were cut. John actually builds a cardboard mockup of the model's frame before starting on the real

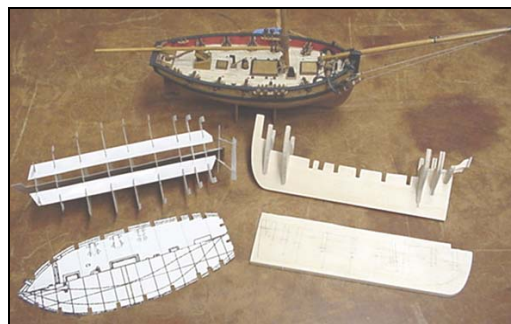


thing. This helps him to determine whether there are errors in his design or adjustments have to be made. In the *Fly*'s case, some of the bulkheads were deemed unnecessary and not used.

Once John was satisfied with the templates, they were used to cut out the plywood pieces. Mitchell emphasized



one important point when cutting the notches in the keel plate. The templates forward of the center frame represent the aft portion of each notch, and the templates aft of the center frame represent the forward side of the notch.



Mitchell stated that one area where his technique caused problems was along the transom. The curve and angle of that surface did not allow the true shape to be projected in any view, and John was required to work at it until he obtained the correct form.

Last but not least, for those of you who were wondering about the larger scale causing thicker lines and thus inaccuracies, John always uses the center of each line when taking measurements. It looks like he's thought of everything