An example of an "anti-singing" trailing edge modification is shown in figure 3. It is important to note that the nose-tail line of the modified section no longer passes through the trailing edge, so that the convenient decomposition of the geometry into a mean line and thickness form is somewhat disrupted.

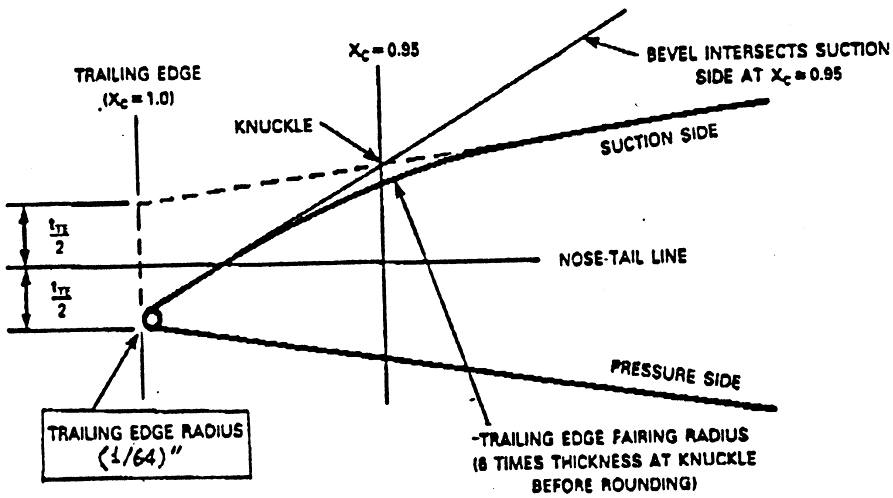

Figure 3: *An example of a trailing edge modification used to reduce singing. This particular procedure is frequently used for U.S. Navy and commercial applications.*

The procedure for constructing foil geometry described so far is based on traditional manual drafting practices which date back at least to the early 1900's. Defining curves by sparse point data, with the additional requirement of fairing into a specified radius of curvature leaves a lot of room for interpretation and error. In the present world of CAD software and numerically controlled machines, foil surfaces— and ultimately three-dimensional propeller blades, hubs and fillets— are best described in terms of standardized geometric "entities" such as *Non-Uniform Rational B-Splines* (NURBS) curves and surfaces. As an example, figure 4 shows a B-spline representation of a foil section with proportions typical of current marine propeller. In this case, the foil, together with it's surface curvature and normal vector, is uniquely defined by a set of 16 (x, y) coordinates representing the vertices of the B-spline control polygon. This is all that is needed to introduce the shape into a computational fluid dynamics code, construct a model, or construct the full size object.