I would appreciate any help on the following problem :

I have a 3-D array which has an image of some object. The object is
basically a surface like a coffee mug. The array is a 64x256x256 array.
To make matters simple, the coffee mug does not have a handle. If I run
down the 1st dimension of the array, then each of the 256x256 arrays looks
like two concentric circles, describing the inner, and outer radius of the
cup. As I go down on the first dimension, the radii (inner and outer)
also are decreasing monotonically. That is to say, the cup sort of looks
like a paraboloid.

I can use extract_slice and display longitudinal cuts at any angle w.r.t.
the 1st dimension, and see the whole outer wall of the cup, from top to
bottom. I would like to use these longitudinal cuts, and define points
along the walls of the cup. So I actually get X,Y,Z arrays that define
the cup's surface.

MY problem is : How can I use min_curve_surf to get an equation for the
surface of the cup. Can any body tell me how min_curve_surface works.
I am not able to understandwhat this routine does. What are thin-plate
splines. Any pointers to TPS will also be appreciated.

Ratnakar Amaravadi   Software Engineer
Indiana University School of Medicine   Imaging Sciences div.
Ph. (317)274-1843   Fax:(317)274-4074