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function [npoints, csize] = normalizePoints_mod(points)
%   Normalize a set of points to have centroid of [0,0] and size 1, (i.e.
%   the MEAN distance of all points to centroid is 1).
%
%   normalizePoints returns the normalized points npoints as well as the
%   normalization factor csize.
%
%   points = a 1 x 2n matrix of x,y,x,y....
%   npoints - normalized points
%   csize - scale factor that produced normalized points.
%
%
% Compute the centroid of the points
Xc = mean(points(1:2:end));
Yc = mean(points(2:2:end));
cent=[Xc Yc];

% Recenter the points to have a centroid of (0,0)
npoints = zeros(size(points));
npoints(1:2:end) = points(1:2:end) - Xc;
npoints(2:2:end) = points(2:2:end) - Yc;

% Calc scale factor that will normalize npoints to have mean distance to
centroid of 1
csize = mean(sqrt(npoints(1:2:end).^2 + npoints(2:2:end).^2));
% Normalize npoints to unit size
npoints = npoints ./ csize;
% Flip the y-axis. (For some reason, LAMINA uses reversed polarity on the
% y-axis.) Multiply every other element in npoints by -1.
npoints(2:2:end) = -1 * npoints(2:2:end);

```