Subject: Triangulate and Trigrid
Posted by Chunhua Qi on Wed, 10 Sep 1997 07:00:00 GMT

Hello, all;

   I don't know whether anybody had raised any doubts or questions on
the reliability of the results by triangulate and trigrid. I had some
irregular-gridded data from satellite (about 1000 points for northern
hemisphere) and wanted to fit them to a regular grid. I knew there were
three big value points near each other and intuitively I would think
they must come from a big-value area around this three points. Actually
I binned the data into lat/lon boxes and took weighted averages and I
got this big-value area. But when I used the procedures triangulate and
trigrid, the result came like two big-value areas each of which centered
on one of those three points with the low-value node between them. You
know that was incorrect for the sense of interpolation. Later I found
that this was due to the selection of the Delaunay triangulation. The
triangulate procedure would select the points that far away those three
points as triangulates and made the interpolation by them. It seems if
there were a second trianulation algorithms, they would gave a much
different result.

   Have you guys met this kind of problem before ? Your suggestion would
be very appreciated.

Regards,
Chunhua