

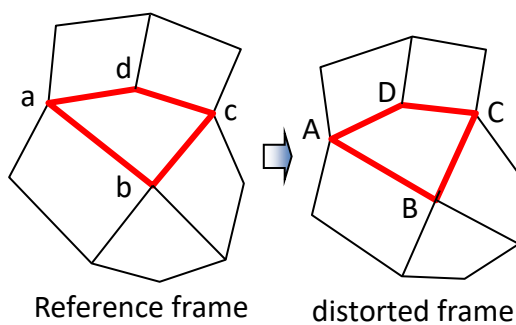
Remote Sensing

(521 M7100) 2017

Due Date: 2017-5-31

Assignment #4

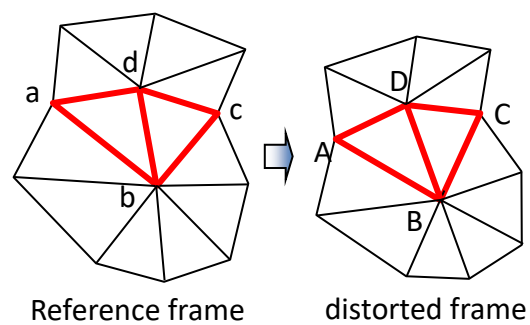
1. The piecewise polynomial mapping can be used to correct the local distortion of the satellite images. In this method, the whole satellite image is firstly subdivided into small and contiguous quadrilateral or triangle regions (see figure (a) and (b)). The distortion within each region is then modeled by a separate polynomial, and the results pieced together.
 - (a) What kind of the polynomial function can be selected for the coordinate transformation within the quadrilateral region and triangle region respectively?
 - (b) According to your selection, please describe the advantages and disadvantages when the quadrilateral region or the triangle region is use.



Reference frame

distorted frame

(a) piecewise quadrilateral warping



Reference frame

distorted frame

(b) piecewise triangle warping