

**SELECTIVE DEGRADATION OF AERIAL PHOTOGRAPHY FOR
HOMELAND SECURITY.** *M.Arsenovic, C. Salvaggio and T. Ruhren, Center for
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When considering imagery from a security position, the detail acquired from images can be translated into a threat depending on the subject. This possibility becomes a reality when the focus of the image entails government installations, nuclear power facilities, and other areas of sensitive nature. This study inspects the application of a blurring/low-pass filtering and feathering algorithm to specific areas of images containing sensitive information. Based on supplied polygonal boundaries that correspond geographically with the defined areas of interest, the developed algorithm selectively degrades within the boundaries, removing detail. Edge effects generated along the perimeter of polygons were significantly decreased using a feathering technique. Internal edge artifacts that can be produced when more than one image occupies the defined polygonal area are removed by creating a mosaic on the fly. After the operation is complete, the generated mosaic is disassembled and the affected images stored individually. All processing accomplished by this method produces an irreversible degradation of the imagery.