1046-I1-233 Paul Raymond Bouthellier* (pbouthe@pitt.edu), 504 East Main Street, Titusville, PA 16354. Using Linear Algebra for Image Processing. Preliminary report.

Given a bitmap image-which is nothing more than a matrix of pixels-each defined by a 24 or 32 bit hexadecimal numberwe can use matrices to illustrate rotations, translations, skewing, and scaling in both R2 and R3. Projecting images onto surfaces such as spheres and cubes are also considered. As time permits, concepts such as backface-culling and reflections of light sources off surfaces-both which involve dot products-will also be illustrated. The package Flash CS3 will be used for the illustrations. (Received August 21, 2008)