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In this talk, I will discuss an specific topic on geometric modelling, which is the science of modeling curves and surfaces by small patches (e.g. Bezier patches). I will present a characterization of one important property, linear precision, for parametric patches. In particular, I will show that the only polygons for which the corresponding patch has linear precision are either scalar multiples of the standard simplex or rectangles. I will also present a simple numerical algorithm to compute the parametrization of a (toric) patch having linear precision. (Received September 26, 2006)