Brian Harbourne* (bharbour@math.unl.edu), Mathematics Department, University of Nebraska-Lincoln, Lincoln, NE 68588-0130. Hilbert functions, resolutions and matroids for fat points supported at 8 or fewer points of the plane. Preliminary report.

I will report on recent joint work with E. Guardo (for resolutions of ideals defining fat points supported at any 6 points of the plane) and with A. Geramita and J. Migliore (for Hilbert functions of ideals defining fat points supported at any 8 or fewer points of the plane). We classify all possible special positions of the points. (Received February 28, 2006)