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Douglas P Hardin* (doug.hardin@vanderbilt.edu), Department of Mathematics, Vanderbilt University, Nashville, TN 37240, **Bruce Kessler** (bruce.kessler@wku.edu), Department of Mathematics, Western Kentucky University, Bowling Green, KY 42101-1078, and **David Roach** (david.roach@murraystate.edu), Department of Mathematics and Statistics, Murray State University, Murray, KY 42071. *Refinable macroelements and semi-regular multiresolutions on triangulations*. Preliminary report.

I will present a construction of “refinable macroelements” that can be used to generate star-supported, orthogonal bases of continuous functions that are defined piecewise on an arbitrary triangulation and will discuss the “semi-regular” multiresolution associated with a sequence of triangulations obtained by regular subdivision of an initial triangulation. This is joint work with B. Kessler and D. Roach. (Received September 11, 2007)