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Judith A. Packer* (packer@euclid.colorado.edu), Department of Mathematics, University of Colorado, CB 395, Boulder, CO 80309-0395. *A projective multiresolution analysis corresponding to the quincunx lattice.* Preliminary report.

We study an example of a projective multi-resolution analysis corresponding to the non-diagonal 2×2 matrix $\begin{pmatrix} 1 & 1 \\ -1 & 1 \end{pmatrix}$ related to the quincunx lattice. The construction method follows that given by the author and Rieffel in their earlier work, but also poses new problems. In the example given here, the one-dimensional initial $C(\mathbb{T}^2)$ -module is not free, but the one-dimensional wavelet module is free. (Received September 13, 2005)