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Lorenzo A Sadun* (sadun@math.utexas.edu). *Tilings without finite local complexity*. Preliminary report.

If a non-periodic tiling has finite local complexity (FLC) with respect to translation, then its associated tiling space is a matchbox manifold – locally the product of a Cantor set and Euclidean space. Furthermore, the dynamics of translations on the tiling space are related to the properties of C^* algebras built from the transversal. When a tiling does not have FLC, the situation is more complicated (and more interesting). I will show how to construct such spaces and how to view the transversal, and will present some ergodic and topological results. This is joint work with Natalie Frank and Ian Putnam. (Received July 28, 2011)