1067-05-646 **Daniel Pragel*** (dpragel@uafortsmith.edu), 5210 Grand Avenue, Fort Smith, AR 72913-3649.

Algebraic and Graph-Theoretic Properties of the Box Product of Two Paths.

The box product of graphs G and H is the graph with vertex set $G \times H$ such that $(i, j) \sim (i', j')$ if and only if either $i = i'$ and $j \sim j'$ in H, or $j = j'$ and $i \sim i'$ in G. We look at various properties of the graph formed by taking the box product of two paths, such as the determinant of its adjacency matrix and its possible endomorphisms. (Received September 12, 2010)