1026-05-46 **Louis V. Quintas*** (lquintas@pace.edu), Mathematics Department, Pace University, New York, NY. *Graphs whose vertices are graphs with bounded degree.*

Let S be a set of graphs with a closed operation between pairs of members of S. Then, taking S as the set of vertices and the operation as the adjacency relation will define a graph whose vertices are graphs. Such a graph is the following. Let U(n, f) denote the graph with vertex set the unlabeled graphs of order n that have no vertex of degree greater than f. Vertices H and G are adjacent in U(n, f) if and only if H and G differ, isomorphically, by exactly one edge. A study of results, variations, and problems concerning such graphs can be found in "Random Graphs with Bounded Degree" by K.T. Balinska and L.V. Quintas, Publishing House Poznan University of Technology, Poznan (2006). It is an open problem to determine the values of n and f for which U(n, f) contains a Hamilton path. The cases f = 0, 1, and n = 3 with f = 2 are trivial, since in these cases U(n, f) is a path. All that is known about the nontrivial cases f = 2, 3, and n - 1 is contained in "Hamilton paths in graphs whose vertices are graphs" J. Comb. Math. Comb. Comp 56 (2006) 3-16 by K.T. Balinska, M.L. Gargano, L.V. Quintas, and K.T. Zwierzynski. The cases U(5, 3), U(6, 3), and U(7, 3) are the only known non-trivial cases in which a Hamilton path exists. Here we shall discuss the cases $3 < f < n - 1$. (Received February 24, 2007)