1129-60-21 **Louis V QUINTAS*** (lvquintas@gmail.com), Mathematics Department, Pace University, New York, NY 10038, and **Edgar G. DuCasse** (educasse@pace.edu), Mathematics Department, Pace University, New York, NY 10038. *Random processes with transition digraphs whose nodes are graphs.* Preliminary report.

Let Cl denote a class of unlabeled graphs of order n. A graph G(0) in Cl is called an initial graph in Cl , if the deletion of any edge of G(0) produces a graph not in Cl. Then, starting at any G(0) in Cl , randomly add an edge uv to start a random walk (G(i)) such that at each step G(i + 1) = G(i) U uv is in Cl for all i greater than or equal to 0.

The probability that edge uv is selected is 1/N, where N not equal to 0 is the number of edges such that G(i + 1) = G(i) U uv is in Cl. If N = 0, then the graph G(i) is called a terminal graph.

The transition digraph for this random process is the directed graph made up of the union of all such random walks. Each random walk is a Markov chain.

Old and new random processes of this type are studied yielding new results and observations concerning these processes. Obtained are properties of their transition digraphs and their underlying graphs. (Received January 15, 2017)