1154-05-2787 **Janet Fierson*** (fierson@lasalle.edu), Dept. of Mathematics and Computer Science, 1900 W. Olney Ave., Philadelphia, PA 19046, and **Tyler Knappenberger** and **Ricky Whitmoyer**.

Vertex differentiation in reconfiguration graphs. Preliminary report.

For any problem with multiple solutions, we can construct an associated reconfiguration graph. This reconfiguration graph has a vertex for each solution of the problem. Two vertices are connected by an edge if the solution associated with one may be transformed into the solution associated with the other by a single application of a specified reconfiguration rule.

Reconfiguration graphs have been applied to a wide variety of problems. However, when properties of these graphs are investigated, vertices are typically treated equally, without regard for differences among solutions. When we return to these problems but allow for differentiation of vertices in reconfiguration graphs based on the associated solutions, some interesting questions naturally arise. We present results obtained from considering this alternative view of vertices and relative goodness of solutions. (Received September 17, 2019)