1016-13-55 **Christopher A. Francisco*** (chrisf@math.missouri.edu), Department of Mathematics, University of Missouri, 202 Mathematical Sciences Building, Columbia, MO 65211, and **Huy Tài Hà**. *Making a graph sequentially Cohen-Macaulay.* Preliminary report.

Let G be a simple graph on vertices $x_1, \ldots, x_n$, and let $I(G)$ be the edge ideal of G in $R = k[x_1, \ldots, x_n]$. We say that a graph is (sequentially) Cohen-Macaulay if $R/I(G)$ is (sequentially) Cohen-Macaulay. In this work, we consider the effect of adding whiskers to a graph. To add a whisker to a graph G means to add a new vertex y_i and to connect it to a single old vertex x_i by an edge. Villarreal proved that if one adds a whisker to every vertex of a graph G, the new graph is Cohen-Macaulay. We use Alexander duality to investigate what configurations of whiskers added to a graph make the new graph sequentially Cohen-Macaulay. (Received January 23, 2006)