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Joshua Harrelson* (jth0048@auburn.edu). *List-edge coloring planar graphs of maximum degree.*

The famous List-Edge-Coloring Conjecture (LECC) states that $\chi'(G) = \chi'_\ell(G)$ should hold for all graphs, but this has only been verified for a few specific classes. Vizing showed for every graph G with $\Delta(G) = \Delta$ that $\chi'(G) \leq \Delta + 1$ which led him to pose a relaxation of the LECC that every graph G with $\Delta(G) = \Delta$ satisfies $\chi'_\ell(G) \leq \Delta + 1$. Borodin verified Vizing's conjecture for planar graphs with $\Delta \geq 9$. The conjecture has also been verified for all graphs when $\Delta = 3$ or 4 . Using the notion of precolorings we replicate Borodin's result for planar graphs with $\Delta \geq 9$ and explore what approaches like precoloring could be used to make progress on Vizing's conjecture for planar graphs with $\Delta = 5$. (Received January 25, 2019)