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Edge-colouring planar graphs with precoloured edges.

In this talk we consider the following question: given a planar graph G and a subgraph H of G that has been (properly) edge-coloured, when can we extend this to an edge-colouring of G ? If we hope to get a $(\Delta(G) + t)$ -edge-colouring of G , then we certainly need to know that no more than $\Delta(G) + t$ colours were used on $E(H)$. In addition to this, if we don't have $t \geq \Delta(H)$, there are example where extension is not guaranteed. However, given these two assumptions, we show that we can always extend the edge-colouring on H to a $(\Delta(G) + t)$ -edge-colouring of G , provided $\Delta(G)$ is large enough (eg. at least $16 + \Delta(H)$). (Received July 24, 2017)