

A labeled embedding of a planar graph  $G$  is a pair  $(\mathcal{G}, g)$  consisting of a planar drawing  $\mathcal{G}$  of  $G$  and a function  $g$  assigning labels (colors) to the faces of  $\mathcal{G}$ . We study the problem of Embedding Restriction Satisfiability (ERS) that investigates whether a given graph has a labeled embedding satisfying a provided set of conditions. ERS is a relatively new problem, so not much is known about it. Nevertheless, it has great potential. It generalizes several problems looking for a particular drawing of a planar graph, such as the problem of Partially Embedded Planarity. Therefore, ERS may become a focal point in the area of graph drawing. In this thesis, we examine the computational complexity of ERS. We show that ERS is NP-complete. After that, we look at the complexity of some specific classes of its instances. We try to locate the boundary between the NP-complete and the polynomial variants of the problem.