For any finite group $G$, a natural question to ask is the order of the smallest possible automorphism group for a Cayley graph on $G$. A particular Cayley graph whose automorphism group has this order is referred to as an MRR (Most Rigid Representation), and its Cayley index is the index of the regular representation of $G$ in the automorphism group. Study of GRRs (Graphical Regular Representations, where the full automorphism group is the regular representation of $G$) showed that with the exception of two infinite families and ten individual groups, every group admits a Cayley graph whose MRRs are GRRs, so that the Cayley index is 1. I will present results that complete the determination of the Cayley index for those groups whose Cayley index is greater than 1. This is based on joint work with Josh Tymburski.