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Reconfiguration Graphs for Minimal Domination Sets

A dominating set S in a graph is a subset of vertices such that every vertex is either in S or adjacent to a vertex in S. A minimal dominating set M is a dominating set such that $M - v$ is not a dominating set for all $v \in M$. In this talk we introduce a reconfiguration graph $\mathcal{R}(G)$ for minimal dominating sets under a generalization of the token sliding model. We give some preliminary results which include showing that $\mathcal{R}(G)$ is connected for trees and split graphs. Additionally we classify all graphs which have $\mathcal{R}(G) = K_n$ and $\mathcal{R}(G) = \overline{K_n}$ for all n.