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Neighborhood Representatives

In 2017, Hedetniemi asked the question "for which graphs does the indexed family of open neighborhoods have a system of distinct representatives?" The team at large has almost completely exhausted the possible additional graph parameters by which we can define the sets and has reexamined the question as a list-coloring problem. A parallel interpretation of the list assignment problem is discussed, and some new questions are posed.

Keywords: list coloring, list assignments