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Justin Cantu* (justincc@math.tamu.edu). *Periodic groups via orbital graphs.*

We introduce a method of proving when an infinite group of homeomorphisms of a Cantor set is periodic using the geometry of its orbital graphs. In doing so, we expand a recent class of infinite finitely generated periodic groups introduced by Volodymyr Nekrashevych. In particular, we generalize his concept of fragmentation to arbitrary groups of homeomorphisms of a Cantor set, and give examples of finitely generated groups that can be fragmented to produce groups of Burnside type. (Received September 14, 2019)