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**Isaac M Goldbring\*** ([isaac@math.ucla.edu](mailto:isaac@math.ucla.edu)), Department of Mathematics, University of California, Los Angeles, 520 Portola Plaza Box 951555, Los Angeles, CA 90095-1555. *Ends of Finitely Generated Groups from a Nonstandard Perspective*. Preliminary report.

An important geometric invariant of a finitely generated group is its space of ends. The space of ends of an arbitrary topological space may be intuitively described as the set of “path components at infinity.” For proper geodesic spaces, I show how to use the language of nonstandard analysis to make the aforementioned heuristic precise. When this description is applied to the case of a Cayley graph of a finitely generated group, one may find it easier to perform calculations and prove theorems, as will be illustrated through a few examples. I will end the talk with some ideas for future applications. (Received December 13, 2009)