1078-03-308 **Matt Insall*** (insall@mst.edu), 400 W. 12th street, room 315, Rolla Building, c/o Department of Mathematics and Statistics, Rolla, MO 65402-0020. *Ends of Representation Spaces.* Preliminary report.

Given a class $\mathcal{C}$ of topological spaces, with no two members homeomorphic, let $\mathcal{M}$ be a class of continuous surjections that is closed under composition. Topologize $\mathcal{C}$, in terms of a closure operator: Given a subclass $\mathcal{P}$ of $\mathcal{C}$, write $(X,\tau) \in \mathrm{Cl}_{\mathcal{M}}(\mathcal{P})$ iff for each open cover $\mathfrak{C}$ of X, there is $(Y,\sigma) \in \mathcal{P}$ such that (Y,σ) is a $\mathfrak{C}$-image of (X,τ) via some element of $\mathcal{M}$. The resulting topological space is a **representation space**. The representation spaces of continua, constructed using ε-images, are especially interesting.

Ends of spaces fill "holes" in the space: they are formally defined using equivalence classes of nested nets of open sets with compact boundary whose closures have empty intersection. Attaching ends results in compactifications. Another approach is to define ends, using nonstandard methods, as equivalence classes of remote points: remote points x and y are identified iff there is an internally connected set A containing no nearstandard points, with $x, y \in A$. We detail the setting, motivation, and early results in the study of ends of representation spaces. (Received December 12, 2011)