1056-Z1-451   **Jay Stine*** (`jstine@misericordia.edu`), Department of Mathematics, 301 Lake Street, Dallas, PA 18612. *A New Characterization of Dimension Zero.* Preliminary report.

We consider notions from general topology which can be expressed solely in terms of induced or coinduced topologies, including (in)discrete topologies, product topologies, and quotient topologies, among others. In this paper we discuss some advantages of these notions over others, and then show that the classical notion of dimension zero has such a characterization. By way of application, we employ this new characterization to give a novel interpretation of an equivalence relation on a set. (Received September 08, 2009)