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Lance Edward Miller*, 301 SCEN, University of Arkansas, Fayetteville, AR 72701, and
Benjamin Steinhurst. *A concrete interpretation of a non-noetherian generalization of Witt
vectors.*

Witt vectors are ubiquitous in commutative algebra and enjoy a number of generalizations. Most of these can fit into a systematic framework where one produces from each profinite group G a functor \mathbf{W}_G on the category of commutative rings. Using the group $G = \mathbf{Z}_p$ of additive p -adic numbers one recovers the original Witt vector construction, which is well known to be a DVR when applied to any perfect field of characteristic $p > 0$. We give a concrete interpretation of the images of $\mathbf{W}_{\mathbf{Z}_p}(k)$ where k is any field of characteristic $p > 0$. This ring in particular is not noetherian. As an application of our interpretation we calculate the dimension of this ring. (Received February 07, 2014)