1089-16-10 **Sergio L/'opez-Permouth**, **Jeremy Moore** and **Steve Szabo*** (steve.szabo@eku.edu), Eatsrn Kentucky University, Department of Mathematics and Statistics, 521 Lancaster Avenue, Richmond, OH 40475. *Algebras Having Bases Consisting Entirely of Units.*

We introduce a hierarchy of notions about algebras having a basis $\mathcal{B}$ consisting entirely of units. Such a basis is called an invertible basis and algebras that have invertible bases are said to be invertible algebras. The other conditions considered in the said hierarchy include the requirement that for an invertible basis $\mathcal{B}$, the set of inverses $\mathcal{B}^{-1}$ be itself a basis, the notion that $\mathcal{B}$ be closed under inverses and the idea that $\mathcal{B}$ be closed under products. It is shown that the last property is unique of group rings. Many examples are considered and it is determined that the hierarchy is for the most part strict. For any field $F \neq F_2$, all semisimple F-algebras are invertible. Semisimple invertible F_2-algebras are fully characterized. Connections between invertible algebras and S-rings (rings generated by units) are also explored. (Received February 14, 2013)