Weakly Ordered Multiplicative Basis of An Algebra Related to Quiver Theory

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Abstract. In this paper, for an algebra, a multiplicative basis with a weakly admissible order is introduced as an invariant under ¡§almost¡šMorita equivalence. It is shown that an algebra with a weakly ordered multiplicative basis is a quotient of its corresponding generalized path algebra, which is a generalization of the classical Gabriel structure theorem. Finally, it is proven that the skew group algebra of a cyclic group over an algebra with an ordered multiplicative basis has a weakly ordered multiplicative basis.