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Manizheh Nafari* (manizheh@uta.edu), Department of Mathematics, University of Texas at Arlington, P.O.Box 19408, Arlington, TX 76019. *Regular Graded Skew Clifford Algebras of Low Global Dimension.*

M. Artin, W. Schelter, J. Tate, and M. Van den Bergh introduced the notion of non-commutative regular algebras, and classified regular algebras of global dimension 3 on degree-one generators by using geometry (i.e., point schemes) in the late 1980s. Recently, T. Cassidy and M. Vancliff generalized the notion of a graded Clifford algebra and called it a graded skew Clifford algebra.

In this talk, we prove that all classes of quadratic regular algebras of global dimension 3 contain graded skew Clifford algebras or Ore extensions of graded skew Clifford algebras of global dimension 2.

We also prove that some known regular algebras of global dimension 4 can be obtained from Ore extensions of regular graded skew Clifford algebras of global dimension 3.

We also show that a certain subalgebra R of a regular graded skew Clifford algebra A is a twist of the polynomial ring if A is a twist of a regular graded Clifford algebra B . We have an example that demonstrates that this can fail when A is not a twist of B . (Received September 22, 2011)