1116-16-2535 **Ethan J Gegner*** (ethan.gegner@gmail.com). *Zero Divisor Graphs of* 2×2 *Upper Triangular Matrix Rings over* $\mathbb{Z}_n$.

We explore the directed zero-divisor graphs of the rings of 2×2 upper triangular matrices modulo n, denoted by $\Gamma(T_2(n))$. For prime p, we give a complete characterization of the graph $\Gamma(T_2(p))$ by partitioning $T_2(p)$, and present several key corollaries of this approach. We establish additional properties of $\Gamma(T_2(n))$ for arbitrary n. We prove that $\Gamma(T_2(n))$ is Hamiltonian if and only if n is prime, and we give explicit formulas for the edge connectivity and clique number of $\Gamma(T_2(n))$ in terms of the prime factorization of n. (Received September 22, 2015)