Meeting: 999, Nashville, Tennessee, SS 14A, Special Session on Graph Theory and Matroid Theory

999-05-195 **Anant Godbole**, **Debra Knisley*** (knisleyd@etsu.edu) and **Rick Norwood**. *On Some Properties of Alphabet Overlap Graphs.*

We consider a graph $G = G(k, a, t)$ with the vertex set $V = \{v : v = (v_1, \ldots, v_k); v_i \in \{1, 2, \ldots, a\}(1 \leq i \leq k)\}$, the set of all k-letter words over an alphabet of size a. Also, there is an edge between vertices $v \neq w$ iff the last t letters of v are the same as the first t letters of w or the first t letters of v are the same as the last t letters of w. In this paper, we obtain exact values for the chromatic number if G when $t < k/2$ and bounds on its chromatic number when $t \geq k/2$. (Received August 23, 2004)