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Taylor M Short* (shorttm@vcu.edu), 4156 Grace E. Harris Hall, 1015 Floyd Avenue, Richmond, VA 23220. Vertices Belonging to All Maximum Independent Sets. Preliminary report. For a graph $G$, let $\xi(G)$ be the number of vertices belonging to all maximum independent sets. Boros, Golumbic and Levit showed that in connected graphs where the independence number $\alpha(G)$ is greater than the matching number $\mu(G)$, $\xi(G) \geq 1+\alpha(G)-\mu(G)$. We will show there is a distinguished subgraph $X$ such that, under weaker assumptions, $\xi(G) \geq 1+\alpha(X)-\mu(X)$. Furthermore $1+\alpha(X)-\mu(X) \geq 1+\alpha(G)-\mu(G)$ and the difference between these bounds can be arbitrarily large. (Received September 21, 2010)

