Terry A. McKee* (terry.mckee@wright.edu). When All Minimal $k$-Vertex Separators Induce Complete or Edgeless Subgraphs.

Define $\mathcal{D}_k$ to be the class of graphs such that, for every independent set $\{v_1, \ldots, v_i\}$ of vertices with $2 \leq i \leq k$, if $S$ is an inclusion-minimal set of vertices whose deletion would leave $v_1, \ldots, v_i$ in $i$ separate connected components, then $S$ induces a complete subgraph; also, let $\mathcal{D} = \bigcap_{k \geq 2} \mathcal{D}_k$.

For instance, $\mathcal{D}_2$ is the class of chordal graphs. Others of these classes—along with some of the modified classes when “complete” is replaced by “edgeless” or by “complete or edgeless”—have been characterized recently.

I shall give unified characterizations of all of these classes. (Received January 02, 2014)