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Adam S. Jobson and **Andre E. Kezdy*** (kezdy@louisville.edu), Department of Mathematics, University of Louisville, Louisville, KY 40292, and **Jeno Lehel** and **Susan C. White**. *Detour Trees*.

A detour of a graph is a path of maximum length. A vertex that is common to all detours of a graph is called a Gallai vertex. We introduce the notion of a detour tree, a spanning tree of a graph in which the vertex set of any detour (of the graph) induces a subtree. We use detour trees to prove that any connected dually chordal graph has a Gallai vertex. Consequently connected graphs from subfamilies of dually chordal graphs have a Gallai vertex, including the well-studied doubly chordal, strongly chordal and interval graphs. Separately we prove that connected cographs (which are not necessarily dually chordal) have a Gallai vertex. Analogous results for cycles of maximum length follow for 2-connected graphs from these families. We also characterize graphs that have a detour tree. Several open problems will be mentioned. (Received December 19, 2015)