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Terry A. McKee* (terry.mckee@wright.edu), Dept of Mathematics and Statistics, Wright State University, Dayton, OH 45435. *Parity and Disparity Subgraphs.*

A *parity subgraph* of a graph is a spanning subgraph such that the degrees of each vertex have the same parity in both the subgraph and the supergraph. Among known results are that every spanning tree contains a parity subgraph and that every graph has an odd number of minimal parity subgraphs. Define a *disparity subgraph* to be a spanning subgraph such that each vertex has degrees of opposite parities in the subgraph and the supergraph. Every spanning tree contains both a unique parity subgraph and a unique disparity subgraph; call such subgraphs *paired*. Main result: Every minimal disparity subgraph is paired with an odd number of minimal parity subgraphs, and every minimal parity subgraph is paired with either one or an even number of minimal disparity subgraphs. (Received July 10, 2007)