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Maximally Non-Matching Covered Graphs.

Let G be a graph. G is said to be matching covered if for every edge e in G , there exists a perfect matching containing e . Infinite families of matching covered graphs are presented and proven. We define a graph to be *maximally non-matching covered* if it contains a unique edge that does not occur in any perfect matching. Conditions for which graphs are maximally non-matching covered are investigated and preliminary results are presented. (Received September 04, 2008)