UCL Department of Computer Science
CS M038/GZ06: Mobile and Cloud Computing
Spring 2016
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One-pager: CLDP (Kim et al., 2005)   **Due: Start of lecture, 22nd January 2016**

Instructions: **in your own words,** *answer the following question as* **succinctly** *as possible (in 200–500 words, but shorter answers within that range are encouraged). Quoting figures or text from the assigned reading or from any other source is specifically prohibited.*

At the end of Section 3 of the CLDP paper, the authors describe an enhancement to the GG and RNG graph planarization methods called *mutual witness* (MW).

Suppose you have a non-unit network graph *G* that represents the nodes and links in a wireless network. When you apply the GG or RNG *without* mutual witness to *G*, the resulting output graph may contain one or both of two pathologies: the graph may be partitioned, and it may remain non-planar (*i.e.*, it may still contain crossing edges). Which of these two pathologies *cannot* occur when the GG or RNG with the mutual witness extension is applied to the same input graph *G*? Referring to the appropriate details of the mutual witness extension's definition as needed, why can this pathology not occur when the mutual witness extension is used?