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Planar Graphs as Contact or Intersection Graphs of Homothetic Triangles

De Fraysseix, Ossona de Mendez and Rosenstiehl proved that every planar graph admits a contact representation by right triangles with an horizontal side. We cannot strengthen this by requiring the triangles to be homothetic. However we will show that such strengthening is possible for a large class of planar graphs, the subgraphs of 4-connected triangulations. We will also show that this implies that every planar graph is the intersection graph of homothetic triangles.