

Meeting: 998, Houston, Texas, SS 1A, Special Session on Graph Theory and Combinatorics

998-90-271 **Ilyya V. Hicks*** (ivhicks@tamu.edu), Industrial Engineering- MS3131, Texas A&M University,
College Station, TX 77843-3131. *New facets for the Planar Subgraph Polytope.*

Nine new facets for the planar subgraph polytope are given. Two of the nine are new members of a class of extended subdivision facets introduced by Jünger and Mutzel while five of the facets are members of a new class of facets called 3-star subdivisions. In addition, the other two facets are in neither class. Preliminary computational results illustrating the effectiveness of the facets in a branch-and-cut scheme for the maximum planar subgraph problem are also presented. (Received March 01, 2004)