1073-05-147   **Stefan Felsner** and **William T Trotter*** (`trotter@math.gatech.edu`), William T. Trotter,
School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332, and **Veit Wiechert**.
Planarity for Comparability Graphs and Cover Graphs.

It is well known that for every positive integer t, there exists a planar poset P_t so that the dimension of P_t is t. Streib
and Trotter have shown that for every $h \geq 2$, there exists a contant c_h so that if P is a poset with a planar cover graph
and the height of P is at most h, then the dimension of P is at most c_h. Here we show that if P is poset with a planar
comparability graph, then the dimension of P is at most 4. We also show that if P has an outerplanar cover graph, then
the dimension of P is at most 4. Finally, if P has an outerplanar cover graph and the height of P is 2, then the dimension
of P is at most three. These three inequalities are all best possible. (Received July 31, 2011)