

## Homework 03—Due: 4 May 2009

### Problem 1—Layout Algorithms (5 pts)

The drawings for this problem may either be created by hand, in which case they should be submitted to Christian Motika or Hauke Fuhrman in person, or using a drawing tool such as Inkscape or Xfig. Please export your drawings to PDF or PNG/JPEG format.

- (a) Apply the five phases of hierarchical layout to the directed graph shown in Figure 1. Give a separate drawing for the result of each phase.
- (b) Draw a maximal planar subgraph for the graph shown in Figure 2, i.e. a planar subgraph for which the addition of any edge of the original graph would make the subgraph non-planar (without proof).
- (c) Draw the dual graph for the planar subgraph created in (b) using a different color.