

Graph Drawing Contest '05
September 12 - September 14, 2005
Limerick, Ireland

Introduction

The 12th Annual Graph Drawing Contest shall be held in conjunction with the 13th International Symposium on Graph Drawing (GD 2005). This year's contest shall be split into three parts, a graph drawing challenge competition, an evolving-graph drawing competition and a free-style drawing competition. The challenge competition will take place during the conference while submissions to the drawing contests are due by September 8th, 2005. The anticipated funding for the contest is US\$1,000.

Graph Drawing Challenge

As with last year's contest, we shall hold the Graph Drawing Challenge in a format similar to a typical programming contest. At the start of the challenge, teams of contestants will receive the collection of challenge-graphs. After one hour the teams will submit their final drawings and the team with the highest cumulative score wins.

Teams will be allowed to use any combination of software and human interaction systems to produce the best drawings. To accommodate both teams wishing to prepare for the challenge and teams wishing simply to participate, with no preparation, we will be providing, in advance, a small set of graph visualization tools. These tools are not necessarily meant to solve the problems at hand but are there to help the teams interactively draw and manipulate the graphs. To further the development of new tools and to help promote tools already in existence, teams are also welcome and highly encouraged to create and bring their own software packages.

To keep the momentum from last year, the challenge this year remains the same: *straight-line crossing minimization*. That is, the graphs produced should be straight-line drawings with the fewest number of crossings. While such drawings are not necessarily the best, crossing minimization is an important aesthetic criterion, that is well-known and difficult to compute. Moreover, this particular challenge offers an objective way to qualitatively evaluate a given drawing. Here is an overview of the rules for the challenge:

- The challenge will take place for one hour during the Graph Drawing Symposium.
- Teams may consist of one to three participants each. Each team may bring their own computers and/or software tools to the challenge.
- Computers and software tools will be provided for each team with time available prior to the challenge to set-up and practice with the system.
- At the start of the challenge, contestants will receive a collection of five to ten graphs. The graphs will be undirected simple graphs with twenty to two hundred vertices.
- For each graph, the team submitting the drawing with the fewest crossings will receive the highest score. Scores for other submissions of the same graph shall be weighed with respect to this value. The team with the highest total score over all graphs wins.

Evolving-Graph Drawing Competition

The challenge of drawing large evolving graphs can be addressed in various ways. We welcome any submissions of visualizations based on the contest data, including animations, static images, subgraphs and derivations of the contest graph. Moreover, in addition to the visualizations, we encourage contestants to submit supplemental material, such as background relevance of the graph, case studies, concepts, algorithms, experiments, structural results, that address the problem of visualizing this type of data in a meaningful way. The data set for this challenge is available on the GD2005 contest webpage (<http://www.ul.ie/gd2005/contest.htm>) and represents a real-world bipartite graph based on the Internet Movie Database, where nodes are either actors or movies and edges represent relations between movies and actors.

Free-Style Drawing Competition

The free-style competition is an opportunity for participants to present their best graph visualizations. All types of graph drawings can be submitted to this contest, and judging will be based on artistic merit and relevance to the graph drawing community.

Contest: Submissions

Submissions for both the evolving graph drawing competition and for the free-style competition must be received by midnight September 8th and should include the following information:

- Names and email addresses of the contributors,
- A picture illustrating the graph (graphs),
- A brief description of the graph, how it was generated, and its relevance to the graph drawing community.

If your drawing requires special printing because of size, resolution, or color constraints, you are encouraged to submit via hard-copy. Besides hard-copy submissions, acceptable electronic formats include PDF and PostScript for static images. For dynamic graphs or animations use mpg or avi files. Movies should be made with standard codecs and be accompanied by a pdf/ps description and a location where the movie can be downloaded from. All contest submissions should be sent to

Stephen Kobourov
Department of Computer Science
University of Arizona
1040 E 4th Street
Tucson, AZ 85721-0077
kobourov@cs.arizona.edu

Graph Drawing Contest Committee

Christian A. Duncan, University of Miami
Stephen G. Kobourov (Chair), University of Arizona
Dorothea Wagner, University of Karlsruhe

Questions or comments should be sent to Stephen G. Kobourov, kobourov@cs.arizona.edu.