

CPSC 414: Computer Graphics Fall 2003-2004

Instructor:
Tamara Munzner

Week 1, Wed Sep 3

Course organization

grading

- 40% projects (3)
- 25% final (1)
- 20% midterm (1)
- 15% homework (2)

projects

- OpenGL graphics library
- GLUT user interface toolkit
- C++
- Linux is supported, must demo on it
- may use Windows for development

Course content

definitely will cover

- geometric transformations, projections
- hidden surface removal, scan conversion
- lighting, shading
- texture mapping, sampling
- curves and surfaces
- input and output hardware, human perception

as time allows

- current hardware
- ray tracing, global illumination
- shadows, procedural models
- visualization, animation

schedule (web page)

Course outline

<http://www.ugrad.cs.ubc.ca/~cs414>

- pages updated often, remember to refresh
- slides will be posted morning of lecture

policies on web page

newsgroup

- ubc.courses.cpsc.414
- (WebCT will not be used)

Collaboration

individual solutions unless stated otherwise

can have two-person teams for Project 3

plagiarism policy details (web page)

Course disclaimer

topics not covered

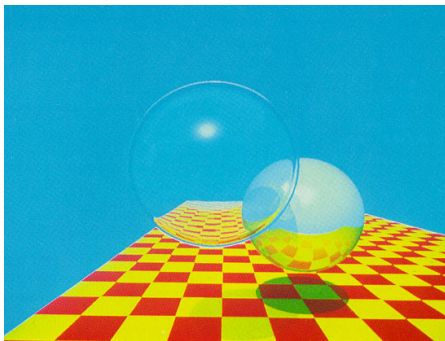
- art and design issues
- use of commercial software packages

other graphics courses this year

- 424: Geometric Modeling
- 514: Image-Based Methods
- 533A: Digital Geometry Processing
- 533B: Animation Physics
- 533C: Information Visualization

Graphics past

1980: ray traced spheres (Turner Whitted)



[www.accad.ohio-state.edu/~waynec/history/tree/images/turner.eps]

Graphics past

1983 Road to Point Reyes (Lucasfilm)



[www.accad.ohio-state.edu/~waynec/history/tree/images/pt-reyes.JPG]

Graphics past

1984 Distributed Ray Tracing (Lucasfilm)



[Cook, Porter and Carpenter. Distributed Raytracing. SIGGRAPH 84
www.accad.ohio-state.edu/~waynec/history/tree/images/pool-balls2.JPG]

Graphics past

1989 Rendering Fur (Kajiya and Kay)



Graphics past

1995 Toy Story (Pixar)



[www.pixar.com/featurefilms/ts/]

Graphics past

2001 Monsters, Inc. (Pixar)



[www.pixar.com/featurefilms/inc/]

Graphics now

synthetic image or photograph?

<http://www.alias.com/eng/etc/fakeorfoto/>