

A Discussion of the CGE06 Workshop Report: A Computer Graphics Curriculum that Addresses the Bologna Requirements

Moderator: Steve Cunningham

Anticipated panelists: Jean-Jacques Bourdin, University of Paris 8, France

Cecilia Sik Lanyi, University of Pannonia, Veszprém, Hungary

Marta Fairen, Polytechnic University of Catalunya, Barcelona, Spain

Werner Hansmann, University of Hamburg, Germany

Abstract

The CGE06 workshop, held after the EG06 conference in Vienna, recommended a structure for first cycle and second cycle education in computer graphics. The workshop report is online at <http://education.siggraph.org/conferences/eurographics/2006/cge2006>.

This discussion will present an overview of the recommended structure by four European workshop participants. They will present their views on the workshop recommendations and will discuss any steps that have been taken to implement them in their own or in other universities.

There has been some concern in the European computer graphics community about meeting the Bologna requirements for university education in a field as dynamic and diverse as computer graphics, seen in a computer science context. The Eurographics Education Board invited a group to organize a workshop to study this question at the Eurographics 2006 conference. The workshop was held in Vienna after EG 2006, with 23 participants and modest ACM SIGGRAPH and US NSF support.

The workshop considered a number of issues, including the difference in interpretation of “Phase I” and “Phase II” studies, difference in university schedules, and differences in the content of pre-research computer graphics content in different universities. Within these differences, we found a general agreement on a set of concepts that are presented in the report.

The workshop broke Phase I and Phase II studies into two groups: *basic* courses, which would be taken in the student’s first three years of studies, and *advanced* courses, which would be taken in the student’s last two years of work. The workshop also considered the role of the introductory computer graphics course. The overall goal was to develop a graphics programme whose content is easy to read and easy to compare to other programmes, thus facilitating the easy exchange of students and faculty among programmes.

In very brief summary, the workshop developed recommendations about the content of the beginning course, the content of the basic courses, the content of the advanced courses, and further work to develop a Bologna-aware curriculum.

The *beginning course* is seen as an API-based course that gives students a high-level introduction to the field and emphasizes the use of graphics to communicate.

Basic courses were suggested in rendering, modeling, animation, visualization, GPU programming, and interaction. Details of these courses are covered in the CGE 06 report.

Advanced courses were suggested in rendering, modeling, animation, visualization, and real-time graphics. These are expected to build on the content of basic courses, and again the details are covered in the CGE 06 report.

We recognize that a single workshop can only begin the process of understanding a unified European computer graphics curriculum. Further work will be needed to realize the curriculum, including getting a consensus on the courses and course content, and developing textbooks for the courses. We hope to see a follow-up workshop that will address these issues, perhaps in 2008.

References:

- 1999 Coimbra workshop:
<http://education.siggraph.org/conferences/eurographics/gve-99/reports/papers/gve-fullreport.pdf>
- 2002 Bristol workshop:
<http://education.siggraph.org/conferences/eurographics/cge-02/report>
- 2004 Hangzhou workshop:
<http://education.siggraph.org/conferences/eurographics/cge-04/Rep2004CGEworkshop.pdf>
- 2006 Vienna workshop:
<http://education.siggraph.org/conferences/eurographics/2006/cge-06-report-pdf/view>
- Assefa, Mariam and Robert Sedgwick, “The Bologna Bachelors’ Degree: An Overview,”
<http://www.wes.org/ewenr/04jan/Feature.htm>
- Fuller, Ursula et al., “A computing perspective on the Bologna process,” ACM SIGCSE Bulletin (38, 4), December 2006, pp. 115 - 131

