Computer Graphics I

Introduction

Introduction

❖ **Only for seminars**

❖ **Max** – 50 points of your final evaluation

❖ **Min** – 30 points of your final evaluation

❖ **Attendance** – optional but recommended

❖ **Additional activity**

   ❖ Max 10 points of your final evaluation

Introduction

❖ What do you need

    ❖ Basic understanding of mathematics
(matrices, vectors, addition, division, subtraction etc)

    ❖ Basic programing skills
(classes, data types, recursion, cycles etc)

    ❖ Basic interest in computer graphics

❖ We are not trying to teach you how to code or how to do math

Introduction

❖ On every seminar we will implement selected problems/algorithms from lessons. Prearranged template will be downloadable from with site.

❖ C#, Sharp Develop, Visual C# 2010 Express or Mono Develop (Linux / Mac OSX)

Introduction

❖ **Assignment** – max 100%

❖ By email (cg1.2013.hw@gmail.com)

❖ Every week until next Deadline 06:00 (morning)

❖ Title of email – 'ExNN' where NN is the number of exercise (Ex05)

❖ Zipped source code of your homework, well formatted and commented etc.

Introduction

- ❖ **Don't cheat – create instead**
- ❖ **Cheating is punished** by withholding 15 points of your final evaluation for all involved students.

- ❖ Brainstorming is allowed and encouraged
  - ❖ What the brainstorming is?
  - ❖ What the brainstorming is not?

Assignments

❖ Examples
  - ❖ 2D Half-edge
  - ❖ 3D mesh
  - ❖ Rasterization
  - ❖ Knitting and Floods

❖ Template Example
  - ❖ Bezier curve

Light Intro to C#

❖ **From Java and C++**

❖ It is **simple**

    ❖ No pointers

    ❖ No '::' and '->'

    ❖ Automatic memory management

    ❖ Garbage collection

Light Intro to C#

- ❖ **Modern**
  - ❖ Namespaces, assemblies, keywords and variables, data types
- ❖ **Object oriented**
  - ❖ int i=1;
  - ❖ string a=i.Tostring();
- ❖ **Safe**
  - ❖ No converting double to a Boolean.

Visual Studio C#

- ❖ To read
  - ❖ [Microsoft Visual C# 2010 Step by Step](#) (code included)
  - ❖ [C# in a nutshell](#) (cca. 2 chapters)
  - ❖ A lot of tutorials on web

- ❖ For better or for worse
  - ❖ [Visual Studio shortcuts and hints](#)
  - ❖ [Sharp Develop shortcuts](#)

Summary

- ❖ What do we want
    - ❖ Answer to selected problems
    - ❖ Min 30 points for your work
    - ❖ No cheating, hacking, scamming, luring no tricksters, impostors, cons or bluffs

- ❖ What do you get
    - ❖ Assignment info (to know what's up)
    - ❖ Template (to begin with something)
    - ❖ Sample (to be inspired by something)
    - ❖ Consultations (personal, by mail, additional)

Inspiration

- Extracting Editable Objects from a Single Photo
    - Combination of 2D CV and 3D CG
    - SIGGRAPH 2013
    - http://www.youtube.com/watch?v=Oie1ZXWceqM