
Computer Graphics(L01)

EG678EX

Introduction And History of Computer Graphics

Course Overview

- ❑ Introduction, History
- ❑ Application in different fields like CAD, schematic capture, medicine, art etc.
- ❑ Hardware concepts
- ❑ 2-D and 3-D algorithms
 - Line drawing, viewing transformations, other transforms (scaling, rotation, translation)
- ❑ Graphical Languages
 - Brief intro of different languages, Language in project
- ❑ Project
 - Project guideline, Project group, Topic Proposal, Project Presentation
- ❑ Text Book
 - Computer Graphics C Version – Hearn & Baker

Computer Graphics

- ❑ A sub-field of computer science which studies method for digitally synthesizing and manipulating visual content.
- ❑ Are texts and sounds graphics ???
 - No (*wikipedia*); but text→??
- ❑ Generally refers to (*Ref: Wikipedia*):
 - Representation and manipulation of pictorial data by computer
 - Various technologies used to create and manipulate such pictorial data
 - The image so produced

History of Computer Graphics

- Late 1950's – Whirlwind computer (MIT) and SAGE (Semi Automatic Ground Environment); an automated control system to bombard enemy
 - Used CRT and light pen for user interactive environment
- 1959 – TX-2 (MIT's Lincoln Laboratory); first interactive interface computer system using light pen and bank switches
- 1960 – William Fetter
 - Introduced phrase "Computer Graphics"
 - Boeing man (Fetter called it First Man) for human figure simulation to describe different user environment
- Mid 1960's – MIT activities in computer graphics field promoted early computer graphics industries like TRW, General Electric, IBM
- End 1960's – organization, conferences, graphics standards and publications
 - 1969 – ACM initiated Special Interest Group In Graphics (SIGGRAPH)

History of Computer Graphics

- ❑ 1970's – powerful PCs to draw basic and complex shapes
- ❑ 1980's – artists and graphics designers preferred to use Macintosh and PCs
- ❑ Late 1980's – 3-D computer graphics with SGI (Silicon Graphics) computers
- ❑ 1990's onwards – 3D graphics in gaming, multi media and animation, GUI