



Computer Graphics

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Definition:

Computer Graphics involves display, manipulation and storage of pictures and experimental data for proper visualization using a Computer.

Graphics System Comprises of a host computer with support of fast processor, large memory, frame buffer and

- . Display devices (color monitors)
- . Input Devices (mouse, keyboard, joystick, touch screen, trackball)
- . Output Devices (LCD Panels, laser printers, colour printers, plotters etc.)

"Computer graphics are pictures and films created using computers. Usually, the term refers to computer-generated image data created with help from specialized graphical hardware and software. It is a vast and recent area in computer science. The phrase was coined in 1960, by computer graphics researchers Verne Hudson and William Fetter of Boeing. It is often abbreviated as CG, though sometimes erroneously referred to as computer-generated imagery (CGI)."

Computer graphics is an art of drawing pictures on computer screens with the help of programming. It involves computations, creation, and manipulation of data. In other words, we can say that computer graphics is a rendering tool for the generation and manipulation of images.

Applications of Computer graphics

1. GUI (Graphical user Interface)
 - a. Menu
 - b. Icons
 - c. Cursors
 - d. Dialog box
 - e. Scroll bars
 - f. Buttons
 - g. Valuator
 - h. Grids
 - i. Sketching
 - j. 3-D Interfaces
2. Office automation
3. Plotting in Business
4. DTP
5. Plotting in Science and Technology
6. Web/Business/ Commercial publishing and advertisement
7. CAD/CAM design (VLSI, construction, Circuits)
8. Scientific visualization
9. Entertainment (Movies, TV Advt., Games)
10. Simulation studies
11. Cartography
12. Virtual Reality
13. Simulator
14. Multi Media
15. Digital Image Processing
16. Education and Training

What is Computer Graphics?

- Different things in different contexts:
 - pictures, scenes that are generated by a computer.
 - tools used to make such pictures, software and hardware, input/output devices.
 - the whole field of study that involves these tools and the pictures they produce.
- Use of computer to define, store, manipulate, interrogate and present pictorial output.

Source: Computer graphics nptelhrd