Multimedia computing incorporates the rich array of possible computer input and moves beyond text and command-line limitations. Multimedia computing recognizes that input media...

- can be **TRANSFORMED**: a scanned page may become text, which is then rendered as audio output for the visually impaired.

- can result from the **FUSION** of many types of input; a game level may be composed of text, images, sounds, video clips, and other data.

**Input**

- Text files
- Command line
- Audio
- 2D/3D data constructs
- Devices
- Images
- Video
- Analog and digital signals

**Programming**

**Advanced IDE**: IDEs (Integrated development environments) programs facilitate creation of programs through use of graphical tools.

**Visual Programming Language (VPL)** - VPLs let users create programs by manipulating program components (objects, functions, variables) graphically rather than by specifying them with text. Many VPLs are targeted towards beginner programmers who have only a basic understanding of concepts like variables and logic. However, VPLs are not limited to novices. VPLs may appeal to more advanced programmers for rapid prototyping or code development. VPLs are also often well suited to programming within a variety of concurrent or distributed processing scenarios. VPLs thus appeal to a wide audience of users from students to professionals.

**Computer**

As both research and art project students and scientists have been exploring alternatives to the traditional silicon computer:

- Analog Computers (RICE)
- Water Computers (MIT)
- Mechanical Computers (Digi-Comp) (Marble Adder)

**Output**

Multimedia computing allows for output in forms that...

- facilitate **CLARITY** (Presentations)
- improve **COMPREHENSION** (Visualizations)
- help manage **COMPLEXITY** (Simulations)
- directly **CONTROL** objects in the environment

**Multimedia Computing Courses**

- **CISC 1600 Intro to Multimedia Computing** (web design, interface design, animation, game design, data visualization, simulations.)
- **CISC 3610 Intro to Multimedia Programming** (in-depth multimedia programming and authoring using Flash and Actionscript.)
- **CISC 3630 Multimedia Computing** (multimedia hardware and software platforms, media types and formats, compression techniques.)
- **CISC 4610 Multimedia Databases** (storage and organization of multimedia data.)

**Introductory Programming Sequence**

(CISC 1110 + CISC 3110)

Introductory programming courses tend to limit input and output to text files and command line data. This is intentional as it allows students and instructors to focus on the fundamentals of computer programming.