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ABSTRACT

Multimedia presentations are defined as the integration, control, and manipulation of text, art and graphics, photography, animation, audio, and video for presentations. This paper provides an overview of multimedia presentations, and examines how multimedia is being implemented through the Multimedia Design Center (MDC) at California State Polytechnic University at Pomona (Cal Poly). The overview of multimedia presentations looks at the advantages of media for learning effectiveness, retention rate, interest and motivation, speaker image and confidence level, information, and preparation; the various levels of multimedia presentations such as static, animated, and interactive; hardware and software requirements; and the explosive growth of the multimedia marketplace and profiles of primary types of media and its users. The examination of the MDC provides a discussion on the return to centralization for sharing expensive equipment; the development of the MDC and its sister labs, the Multimedia Learning Lab and the Syntonic Lab; financing and staffing issues; and multimedia courses offered at Cal Poly. Nine illustrations emphasize the text. (DGM)

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# Visual Literacy and Multimedia Presentations

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The "M" word of today is multimedia—a word meaning many different things to different people. *Webster's Ninth New Collegiate Dictionary* shows the word multimedia to be an adjective meaning using, involving, or encompassing several media. This paper is using multimedia as an adjective with the noun presentations.

Multi refers to more than one, and media is a means of expressing or communicating. Thus, multimedia presentations can be defined as *the integration, control, and manipulation of text, art and graphics, photography, animation, audio, and video for presentations.*

"Multimedia is the integration, control, and manipulation of text, art and graphics, photography, animation, audio, and video for presentations."

The first section includes an overview of multimedia presentations. The second section takes a look at how multimedia is being implemented through the Multimedia Design Center at California State Polytechnic University, Pomona.

## Multimedia Presentations Overview

This overview of multimedia presentations contains a look at the need for media, the various levels of multimedia presentations, the hardware/software requirements, and the growth of multimedia presentations.



### Objectives

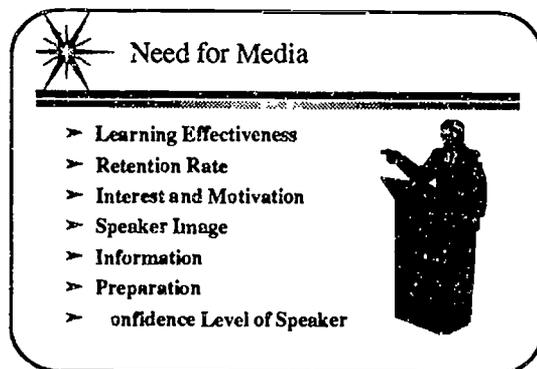
- Define Multimedia
- Look at the Need
- Determine the Various Levels
- Consider the Hardware/Software
- Explore the Growth

## Need for Media

Great orators, comedians, and entertainers are able to hold the interest of an audience without the use of media. However, most individuals making a presentation to a group find that the use of media is essential for truly successful meetings, conferences, seminars, conventions, training sessions, or classroom lectures.

Both the audience and the presenter benefit from the use of presentation media. Advantages of using media include:

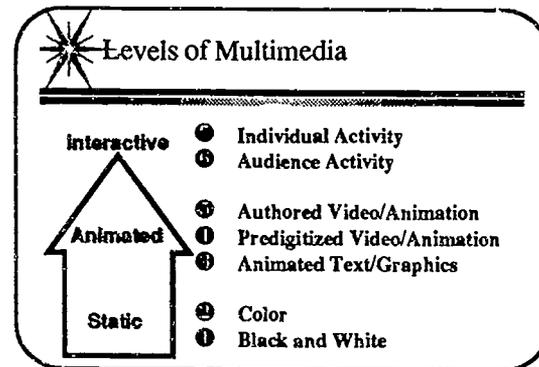
- Learning effectiveness is improved.
- A higher retention rate occurs.
- More interest and motivation are created.
- The image of the speaker is enhanced.
- More information can be effectively covered.
- Better preparation results from the advanced effort required.
- The confidence level of the speaker is increased by reducing the nervousness of having to memorize the presentation.



## Levels

### of Multimedia Presentations

The distinction between presentations and multimedia sometimes becomes a bit blurred. Presentations can be categorized as static, animated, and interactive.



**Static.** Visuals used in static presentations may be either in color or black and white. They may include graphics as well as text. But as the word static indicates, these visuals contain no motion or movement of any kind. A desktop presentation software program makes the preparation task much easier.

**Animated.** By adding animated text and/or graphics to static visuals, the visuals become more stimulating and exciting. Text builds and transitional effects between visuals are possible through the use of special features available in most desktop presentation packages. The addition of predigitized video and animation is an even more sophisticated technique for bringing motion into the presentation. Personally designed video and animation can also be used.

**Interactive.** Interactive presentations are possible with a non-linear

approach. The viewers (either as a group or on an individual basis) respond by using a mouse or a touch screen. This response determines which sequence is addressed next.

## Hardware/Software

The specific hardware and software needs grow as the level of sophistication increases. The basic needs for developing multimedia presentations are as follows.

**Hardware.** In developing multimedia presentations, a user will

 **Hardware Requirements**

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- Central Processing Unit
- Monitor
- Keyboard and Mouse
- Hard Drive
- Audio and Video Digitizing Cards
- Input and Output Devices

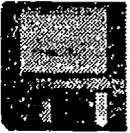


need a central processing unit, a monitor, a keyboard and mouse, a high capacity hard drive, audio and video digitizing cards, and input and output devices.

 **Software Requirements**

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- Presentation
- Page Layout
- Draw and Paint
- Photo Retouching
- Animation
- Desktop Video Editing



**Software.** In addition to presentation software, multimedia developers will

also need additional types of programs such as page layout, draw and paint, photo retouching, animation, and desktop video editing.

## Growth of Multimedia Presentations

Multimedia presentations are growing at a rapid pace as illustrated by the following facts.

- A recent study completed by Market Intelligence cited in the *T.H.E. Journal* (1993, p. 4) states that the worldwide multimedia marketplace is on the brink of a seven-year explosion and is expected to peak at \$24 billion in 1998. They credit education and training as accounting for over 50 percent of the total \$24 billion market, with education overtaking training by the end of the decade.

 **Growth-Explosion** 

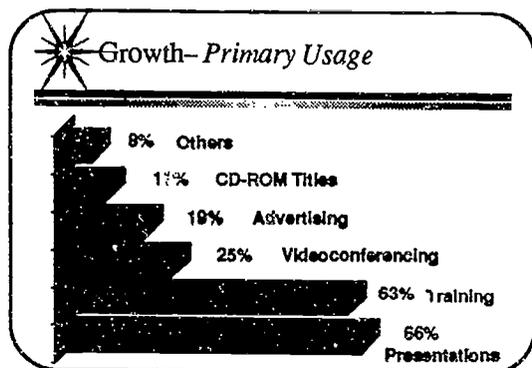
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- \$24 Billion Market by 1998
- Training and Education = 50%
- More Education by Year 2000

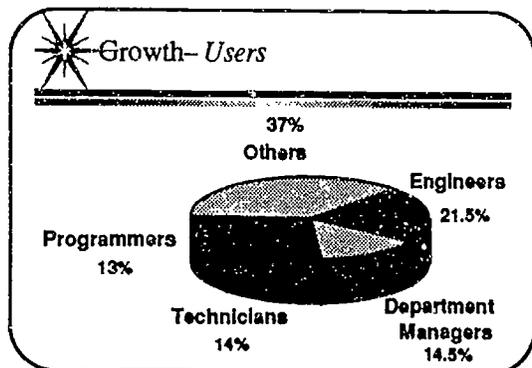
— Market Intelligence  
Cited in the *T.H.E. Journal*, 1993

- *New Media* (1994, p. 55) reports a study by Dataquest of 200 large corporations concluding that the primary uses of multimedia are presentations and training. The responses of the primary use of multimedia are 66 percent responding presentations, 63 percent saying training, 25 percent listing videoconferencing, 19 percent

showing advertising, and 11 percent identifying CD-ROM titles, and 8 percent stating other uses.

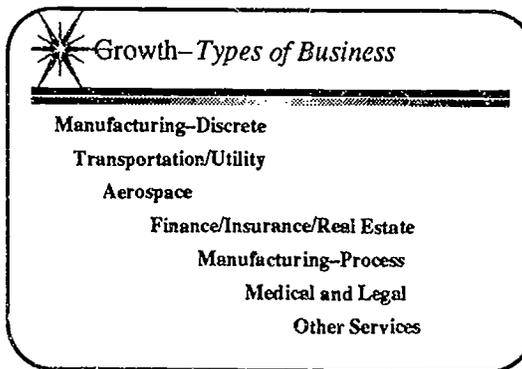


- Dataquest's survey (*New Media*, 1994, p. 53) of corporate multimedia users also showed that engineers were more likely to use multimedia than other types of professionals. The responses were engineers (21.5%), department managers (14.5%), technicians (14%), programmers (13%), project managers and designers/producers (each 7.5%), MIS managers, (5.5%), managers (5%), specialists (4%), consultants (3%), scientists, (2.5%), educators and owners (each 1%).



- The Dataquest study (*New Media*, p. 50) showed that of the 200 companies who reported using multimedia, manufacturing-oriented businesses were the largest segment.

The complete results were manufacturing—discrete (25%), transportation/utility (12%), aerospace (11.5%), finance/insurance/real estate (11%), manufacturing—process (9%), medical and legal (8%), other services (7.5%), research and development (7%), architecture/engineering (5%), and consulting (4%).



## Implementation of Multimedia at Cal Poly

California State Polytechnic University at Pomona recognized the need for multimedia presentations and began moving in this direction in 1989. This section provides a discussion on centralization versus decentralization, the development of three labs, financing and staffing issues, and a look at the curriculum.

### Centralization

The costly impact of multimedia technology can be abated through the centralization of computer workstations and peripherals—such as specialized software, clip art, CD-ROMs and drives, large high-resolution monitors, color

scanners, color printers, film recorders, etc.

Centralization was popular when data processing and eventually word processing first arrived. However, decentralization of word processing began to take place as popularity of the equipment increased, promoting convenience and greater productivity. A return to centralization for high-end multimedia production has many advantages including the sharing of expensive and specialized hardware and peripherals. In addition, skilled and knowledgeable assistance is more feasible.

### ***Development***

In 1990, Cal Poly started a Presentation Design Center (later renamed Multimedia Design Center) with a \$12,000 California Lottery Grant and \$46,000 worth of equipment donated by Apple Computer. This facility has expanded and relocated three times in the last four years and is now housed in the new CLA (Classroom/Laboratory/Administration) building on campus.

**Multimedia Design Center (MDC).** The MDC is a 20-station facility providing high-end workstations dedicated to enhancing the development of presentations for students, faculty, and staff from throughout the university community. The center is open between 50 and 60 hours a week with skilled consultants and assistants available to assist users in designing their oral, written, or multimedia presentations. The consultants are paid student workers; the assistants receive units of credit for working in the MDC.

**Multimedia Learning Lab (MLL).** The MLL consists of 25 high-end multimedia workstations arranged in traditional classroom style. More than 30 different three-hour hands-on workshops and seminars are held each quarter.

Fee charges are as follows: \$25 for Cal Poly staff/students, \$30 for educators, and \$50 for people from business/industry. Personalized workshops can also be scheduled to fit the special needs of a group. In addition, faculty can schedule to use the lab when hands-on instruction is needed for their classes.

**Syntonic Lab.** The Syntonic (*a word meaning awareness and sensitivity to the environment*) Lab is a third lab presently under development. This lab will have a flexible design so that it can be used either as a Design Center or a Learning Lab for preproduction activities such as group brainstorming and production planning.

### ***Financing and Staffing Issues***

The financing of the original Presentation Design Center came from donations from business with a modest supplement from the College of Business Administration. Expansion and growth funds resulted from a special grant from the University President's Cabinet for \$125,000. Another \$686,000 resulted from being in the right place at the right time. Because the CLA Building was new, proposals were requested for 16 (out of a total of 25) computer labs.

Funds for support staff have been the hardest to obtain. Economic hard times and cutbacks make the hiring of new full-time permanent employees

impossible. Therefore, funds for student help are currently obtained from the special grant from the University President but are also solicited from the various colleges. The fees charged for the workshops and a small profit gained from selling supplies are channeled into a fund to pay graduate and student assistants. Donations from former users who are now alumni will be sought in the future.

## Curriculum

Presently, two new courses at Cal Poly directly address the subject of presentations. The first class is a graduate class titled *Professional Presentations Using Technology*. Another course titled *Design and Presentation of Information* is offered on the undergraduate level. Even though the classes are electives at the present time, the enrollment is strong because students realize the usefulness as well as the necessity of such courses.

A suggested topic outline for a course on presentations is taken from the book *How to Create High Impact Business Presentations* (Kupsh, 1993) includes:

- Creating Effective Presentations
- Planning the Strategy
- Selecting the Media
- Developing the Message
- Using Diagrams and Graphs
- Designing Visuals
- Working with Color
- Considering the Environment
- Being a First-Rate Presenter
- Conducting Meetings
- Delivering and Evaluating
- Moving into Multimedia

## Opportunities

Many other computer labs are available on the Cal Poly campus, provided by the university and the various colleges. However, the MDC and the MLL have become popular spots on campus for the following reasons. The MDC and the MLL have:

- Advanced the quality of presentations throughout the university.
- Shared resources making more sophisticated multimedia equipment available than might have otherwise been possible.
- Provided a large number of open hours enabling maximum use of resources—hardware/software as well as support help.
- Provided training assistance to reduce the frustration level of beginning and even experienced users.
- Improved the images of students, faculty, and the university when they are making presentations.

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