



# **INTRODUCTION TO MULTIMEDIA**

## **Chapter 9**

### **Future Direction of Multimedia Technology**

# Introduction

- ◆ There are many future directions for Multimedia, indeed the multimedia explosion has probably only just began.
- ◆ For example:
  - developments in multimedia system's hardware
  - developments in multimedia system's networking and distributed environments
  - developments in multimedia system's design
  - developments in Hypermedia Models which we mentioned in the last chapter briefly with RMM for example.
  - developments multimedia standards, formats and compression.

# Digital Library

- ◆ A digital library is a collection of documents in organized electronic form, available on the Internet or on CD-ROM (compact-disk read-only memory) disks.
- ◆ Depending on the specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos.
- ◆ The use of a digital library is enhanced by a broadband connection such as cable modem or DSL.



# Features of Digital Library

## Search

- ◆ Search the database by keyword, document number, standard number, author or a combination of criteria.

## Browse

- ◆ Browse the database by any combination of your full-text subscriptions, or the 15 different content types. These may be selected individually or combined for further targeted results.

## Filter

- ◆ Powerful search facets expand or refine results by content type, date, author and topic.

# Features of Digital Library

## Select

- ◆ Conveniently email or print a selected group of documents directly from the search results page.

## Details

- ◆ Single-page access to download, print and email documents; review full citations, abstracts and references; and continue research through comprehensive taxonomy terms.

## Download

- ◆ One-click document downloads available directly on the search results page and within Document Details.

# Features of Digital Library

## Print

- ◆ Print search results, document details and PDFs all within the Digital Library interface.

## Export

- ◆ Export multiple search results in plain text or Excel spreadsheet formats.

## Share

- ◆ Social sharing features create a fully integrated workflow system.

# Features of Digital Library

## Linking

- ◆ HTML linking technology provides bookmark access to critical documents.

## Contact

- ◆ Customer sales and technical support are available via email, phone or through the online "Contact Us" form.

# Digital Library - Advantages

## **No physical boundary**

- ◆ The user of a digital library need not to go to the library physically, people from all over the world could gain access to the same information, as long as an Internet connection is available.

## **Round the clock availability**

- ◆ Digital libraries can be accessed at any time, 24 hours a day and 365 days of the year

# Digital Library - Advantages

## Multiple accesses

- ◆ The same resources can be used at the same time by a number of users.

## Information retrieval

- ◆ The user is able to use any search term bellowing to the word or phrase of the entire collection. Digital library will provide very user friendly interfaces, giving click able access to its resources.

# Digital Library - Advantages

## Space

- ◆ Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information, simply because digital.

## Cost

- ◆ The cost of maintaining a digital library is much lower than that of a traditional library. A traditional library must spend large sums of money paying for staff, book maintains, rent, and additional books. Digital libraries do away with these fees.

# Digital Library - Disadvantages

## Copyright

- ◆ Digitization violates the copy right law as the thought content of one author can be freely transfer by other without his acknowledgement.

## Speed of access

- ◆ As more and more computer are connected to the Internet its speed of access reasonably decreasing. If new technology will not evolve to solve the problem then in near future Internet will be full of error messages.

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# Digital Library - Disadvantages

## Efficiency

- ◆ With the much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult.

## Environment

- ◆ Digital libraries cannot reproduce the environment of a traditional library. Many people also find reading printed material to be easier than reading material on a computer screen.

# Digital Library Requirement

- ◆ **Audio visual:** Color T.V., V.C.R., D.V.D., Sound box, Telephone etc.
- ◆ **Computer:** Server, P.C. with multimedia, U.P.S. Etc
- ◆ **Network:** LAN, MAN, WAN, Internet etc.
- ◆ **Printer:** Laser printer, Dot matrix, Barcode printer, Digital graphic printer etc
- ◆ **Scanner:** H.P. Scan jet, flatbed, Sheet feeder, Drum scanner, Slide scanner, Microfilming scanner, Digital camera, Barcode scanner etc
- ◆ **Storage devices:** Optical storage device, CD-ROM, Jukebox etc.
- ◆ **Software:** Any suitable software, which is interconnected and suitable for LAN and WAN connection.

# Interactive Television

- ◆ **Interactive television** (also known as **ITV** or **iTV**) is a form of media convergence, adding data services to traditional television technology.
- ◆ Throughout its history, these have included on-demand delivery of content, as well as new uses such as online shopping, banking, and so forth.



# Interactive Television Features

## **Distance Learning**

- ◆ You can follow a course sitting in your chair with the TV as your teacher. I think that this is going to be an important application of Interactive Television. An indepth explanation is given below.

## **Game Shows**

- ◆ You could play games where you are a participant and not a watcher. The TV host could ask you a question and you could answer using the keyboard that is connected to your Interactive Television system.

# Interactive Television Features

## Home Shopping

- ◆ You could order an article and have it in your hands the following day, ordering it by pushing a single button on your remote control, while sitting in your chair watching TV.

## Voting

- ◆ Participate in local, regional or even national polls simply by pressing a button on the remote control. The results are quickly tabulated and shown on the screen. This could be extended so that voting can be done from home.

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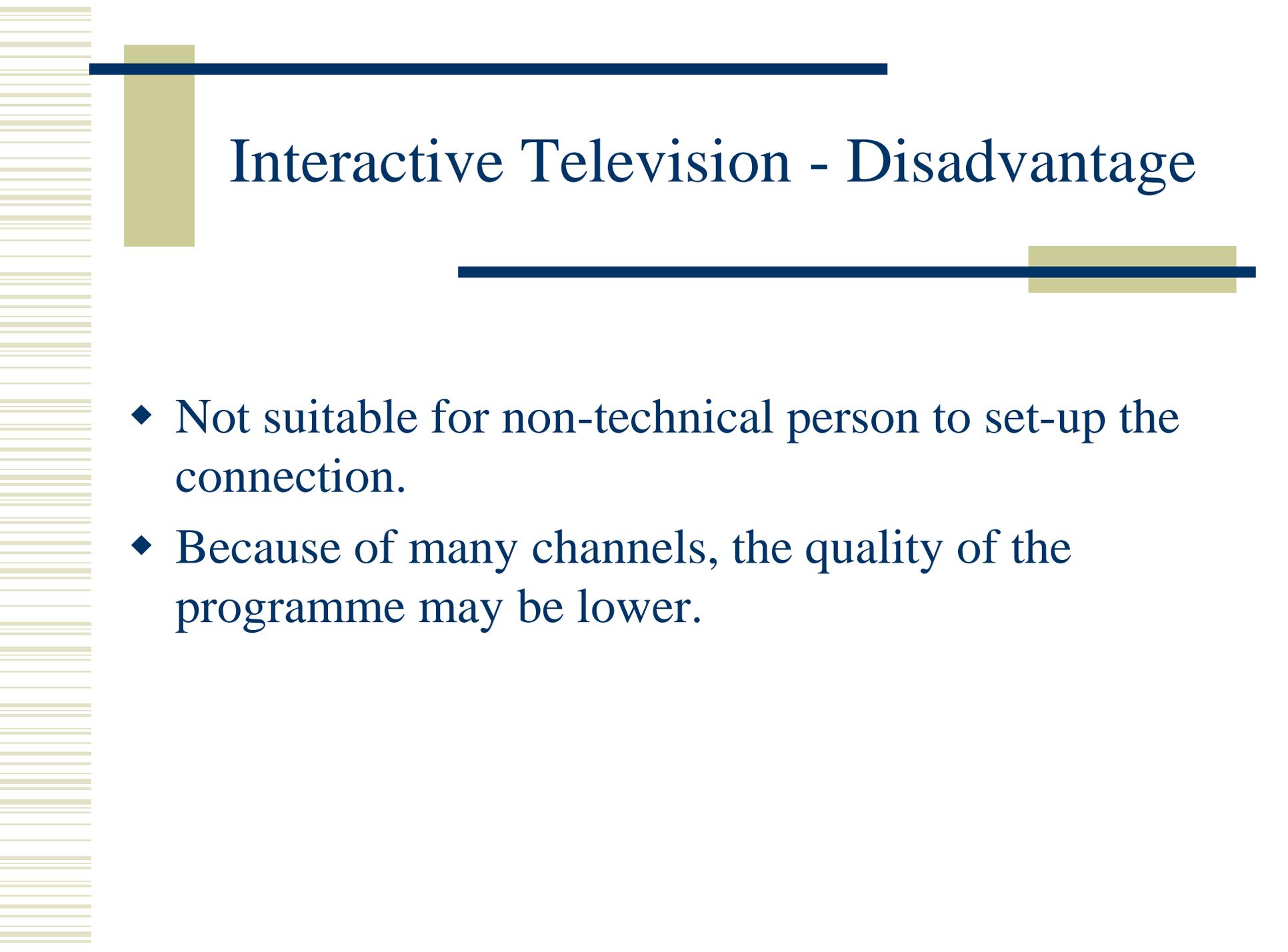
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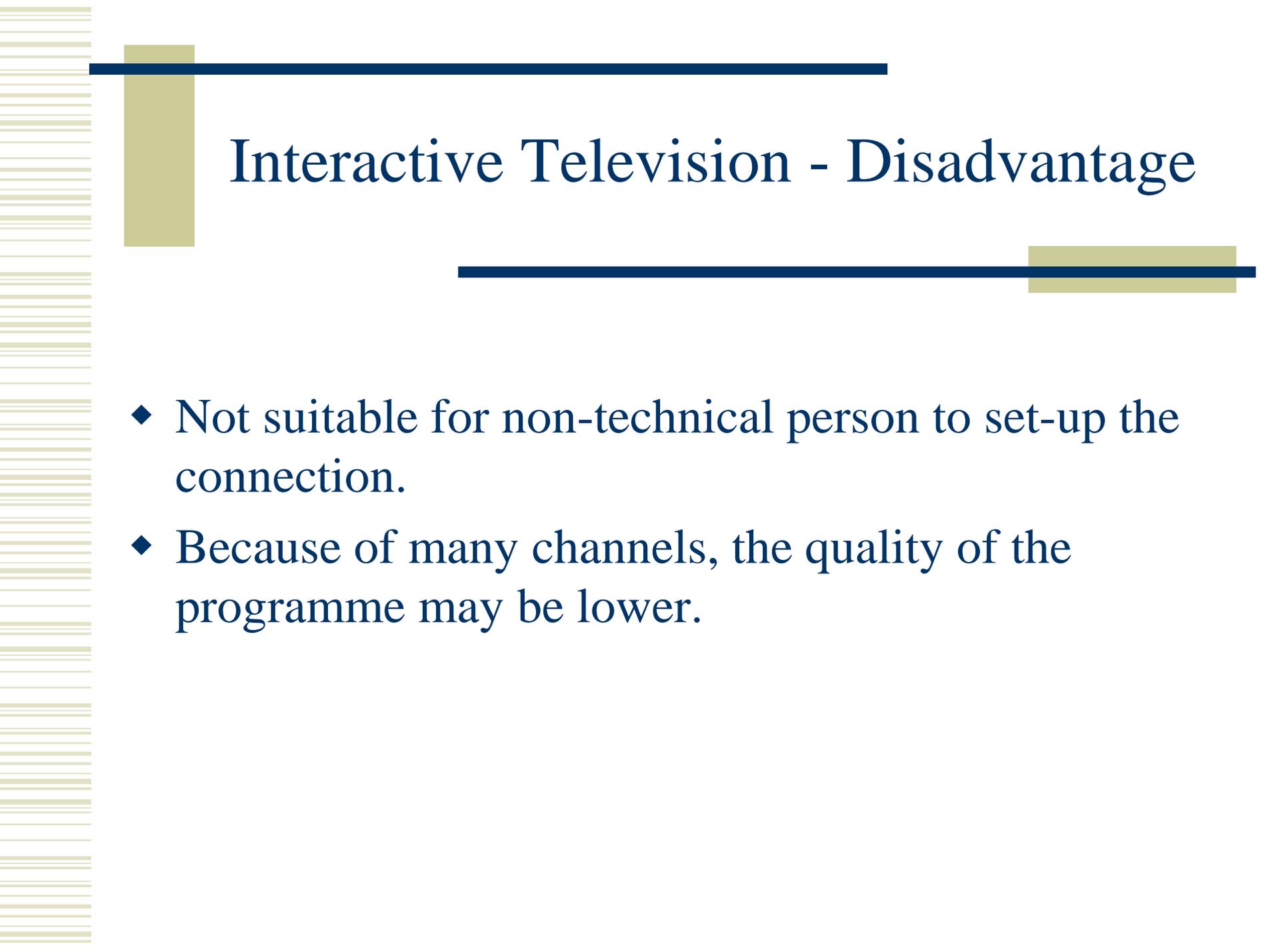
# Interactive Television - Advantage

- ◆ Offers many more channels.
- ◆ Higher quality images.
- ◆ Higher quality sound.
- ◆ Many interactive services available.



# Interactive Television - Disadvantage

- ◆ Not suitable for non-technical person to set-up the connection.
- ◆ Because of many channels, the quality of the programme may be lower.



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# Multicast Backbone

- ◆ **Multicast Backbone** or MBone is an extension to the Internet to support IP multicasting -- two-way transmission of data between multiple sites.
- ◆ The MBone is an experiment to upgrade the Internet to handle live multimedia messages.
- ◆ The purpose of MBone is to minimize the amount of data required for multipoint audio/video-conferencing.

# Spherical Digital Display

- ◆ The next trend in digital signage and special effect displays is to create eye-catching, memorable images by projecting onto a round surface such as a large video globe or touch sphere by using a single projector or lens system.
- ◆ To create an attention-grabbing effect, designers are developing displays on curvy and wavy surfaces, rather than standard flat surfaces.

