



PROGRAM SUPPORT NOTES

Multimedia Systems

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For Teachers

Introduction

This video looks at the development of multimedia as a means of communication and entertainment. All stages of multimedia development are examined, and examples are provided from the latest areas of interactive development such as iPhone and iPad multimedia applications.

Interactive multimedia is pervasive in our society and its application in the gaming industry, the work environment and our social interactions is investigated with explanations from experts in multimedia development.

The development team from Tin Man Games detail the creative processes in the development of their 3D interactive story books showing how powerful software is used to create the text links, 3D images, animations, music and sound effects used in their software. Tin Man Games programmer Ben Britten explains the use of Apple's XCODE software to make iPhone applications software and the importance of media file formats. The social implications such as issues of copyright ownership, data security, piracy and the accuracy of information found on the internet are discussed.

Timeline

00:00:00	What is Multimedia?
00:04:06	Multimedia technologies
00:06:50	Multimedia elements
00:11:20	Bringing it all together
00:15:43	Issues related to multimedia systems
00:19:25	Credits
00:19:58	End program

Related Titles

ICT Project Management
Data: Ethical Use and Storage
Designing on Screen
Animation in Multimedia

Recommended Resources

<https://market.android.com/>
<http://www.apple.com/iphone/apps-for-iphone/>
<http://www.apple.com/ipad/from-the-app-store/>
<http://en.wikipedia.org/wiki/Codec>
<http://popwatch.ew.com/2010/11/05/andy-grammer-video/>
<http://www.callingallgeeks.org/apple-ipad-ipad2-enables-multi-touch-gesture/>
<http://www.answers.com/topic/analog-to-digital-converter>

Student Worksheet

Initiate Prior Learning

1. What do you think is meant by the term "multimedia"?

2. Give one example of how you can use multimedia to navigate in the real world?

3. Does it make sense to print books when multimedia "Books" are so much richer an experience?
Explain your response.

Active Viewing Guide

1. What is multimedia?

2. Who creates multimedia?

3. How have Swinburne University been able to help autistic children?

4. How is technology driving the development of software?

5. How have "choose your own adventure" books been improved with multimedia?

6. What does the mercury mouse software enable the developers to do?

Multimedia Systems

7. What is digitising?

8. What does XCODE do?

9. What is a file format?

10. What do codecs do?

11. What file format does Whizkids use to distribute their games on the Internet?

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12. What does the word "viral", used in the video, mean?

13. Apart from the lost profit from stolen sales, what other bad effect does piracy have on the original owners and developers of the software?

14. What does "validation" refer to?

Extension Activities

1. Visit an applications store such as the iTunes app store or the android app store on the web. Compare the stores. Which has the best programs? Which has the easiest interface to use? What hardware platforms do the programs run on?
2. Research the use of "choose your own adventure" style multimedia being used for music videos. See this link. <http://popwatch.ew.com/2010/11/05/andy-grammer-video/> How could this make music videos more interesting?
3. What is the complete set of gestures available on the ipad? Try the links below and search Google videos with your own search criteria.

<http://www.youtube.com/watch?v=cOajdkHe8f8>

<http://www.youtube.com/watch?v=oN5BpvrCxvo>

4. What use could a game make of the iPad gestures?
5. How can we know if Internet information is correct? Research this problem. This link below is a great place to start

<http://www.internetfamilyfun.com/knowabout/accuratewebsite.htm>

Suggested Student Responses

Initiate Prior Learning

1. What do you think is meant by the term "multimedia"?
Answers will vary but may include: text, graphics video, animation, music and sound effects all combined and enabled by a single display technology such as a computer iPod or phone.
2. Give one example of how you can use multimedia to navigate in the real world?
GPS software on devices used in cars. For example NAVMAN or phone versions of Google maps or Google earth.
3. Does it still make sense to print books when multimedia "Books" are so much richer an experience? Explain your response.
Most people think that books will be around for some time to come as they have their own advantages, but e-readers like the kindle and iPad are becoming very popular and may displace books for many media users.

Active Viewing Guide

1. What is multimedia?
The experience produced by interacting with artificial intelligence capable of producing a combined source of video, sound, graphics and touch experiences.
2. Who creates multimedia?
Creative people such as musicians, writers and graphic artists, together with programmers, audio technicians, and project managers.
3. How have Swinburne University been able to help autistic children?
Under the name of whizkid games the university has developed special software for autistic children
4. How is technology driving the development of software?
New hardware platforms such as the ipad need software that can respond to touch and gestures such as multi finger swipes.
5. How have "choose your own adventure" books been improved with multimedia?
Tin Man software has added hypertext, interactive 3d menus and rolling dice with sound effects and music.
6. What does the mercury mouse software enable the developers to do?
Mercury mouse makes it easier to link the text to logical tags. The user can click on the text and this will trigger various multimedia events such as a jump to a different part of the story or displays a video or animation.
7. What is digitising?
Digitizing is the process of converting analogue signals such as music or sounds into digital signals that can be stored in a computer.
8. What does XCODE do?
XCODE is apple computers software development platform. It is a suite of programs for developing software for the Macintosh computer, the ipad and the iphone. The programming language is called "Objective C" and is a superset of the "C" language.
9. What is a file format?
File formats are agreed (standard) rules (or protocols) for the representation of media MPEG for example is an agreed standard binary file format for music.
10. What do codecs do?
CODECs (compression and decompression) are software tools for compressing or decompressing binary files into compact storage forms so that they take less time to be distributed on networks and less space to be stored on hard drives or other storage technology.

11. What file format does Whizkids use to distribute their games on the Internet?
Whizkids use Adobe flash to create their games and the files are sent through the net as shockwave (SWF) files. The game code is interpreted by the flash player engine/ plug-in in the web page.
12. What does the word "viral", used in the video, mean?
Virality refers to the way software can be copied and distributed very quickly through the Internet in an exponential way.
13. Apart from the lost profit from stolen sales, what other bad effect does piracy have on the original owners and developers of the software?
If a sale is not recorded when software is stolen the developer loses their ranking in the App store. These ranking increases with sales and helps consumers find the software in the store.
14. What does "validation" refer to?
Validation is the process of checking that information on the web is accurate and reliable.