

# TECHNOLOGY IN ACTION

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Managing a Digital Lifestyle:  
Media and Ethics

# *The Impact of Digital Information*

- Digital Basics
- Digital Publishing
- Digital Music
- Digital Media

# Digital Basics

## Objectives

- 8.1 Describe how digital convergence has evolved.
- 8.2 Explain the differences between digital and analog signals.

# Digital Publishing

## Objectives

8.3 Describe the different types of e-readers.

8.4 Explain how to purchase, borrow, and publish e-texts.

# Digital Music

## Objectives

- 8.5 Describe how digital music is created and stored.
- 8.6 Summarize how to listen to and publish digital music.

# Digital Media

## Objectives

- 8.7 Explain how best to create, print, and share digital photos.
- 8.8 Describe how to create, edit, and distribute digital video.

# Digital Basics

## Digital Convergence (Objective 8.1)

- Single unifying device to meet our digital needs
  - Media, Internet, entertainment, and telephone needs
- Electronics systems in cars
- Internet of Things (IoT)
- Digital Living Network Alliance (DLNA)



# Digital Basics

## Digital vs. Analog (Objective 8.2)

- Any kind of information can be digitized

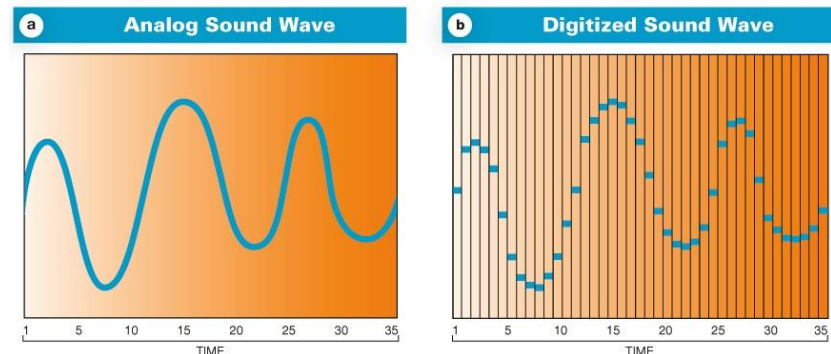
- Digital

- Long strings of numbers

- Analog

- Continuous waves

- Analog-to-digital conversion

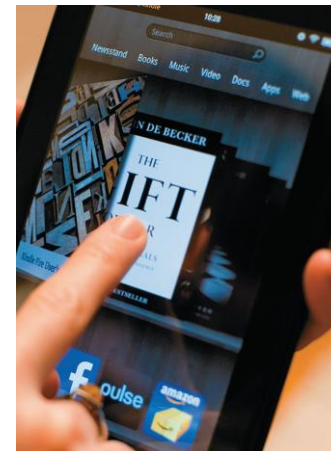




# Digital Publishing

## E-Readers (Objective 8.3)

- Electronic Text
  - Textual information captured digitally
- E-readers
  - Devices that display e-text and have supporting tools
- Allure of digital publishing
  - Distribution
- Electronic Ink (E ink)
  - Sharp grayscale representation of text.



# Digital Publishing

## Using e-Texts (Objective 8.4)

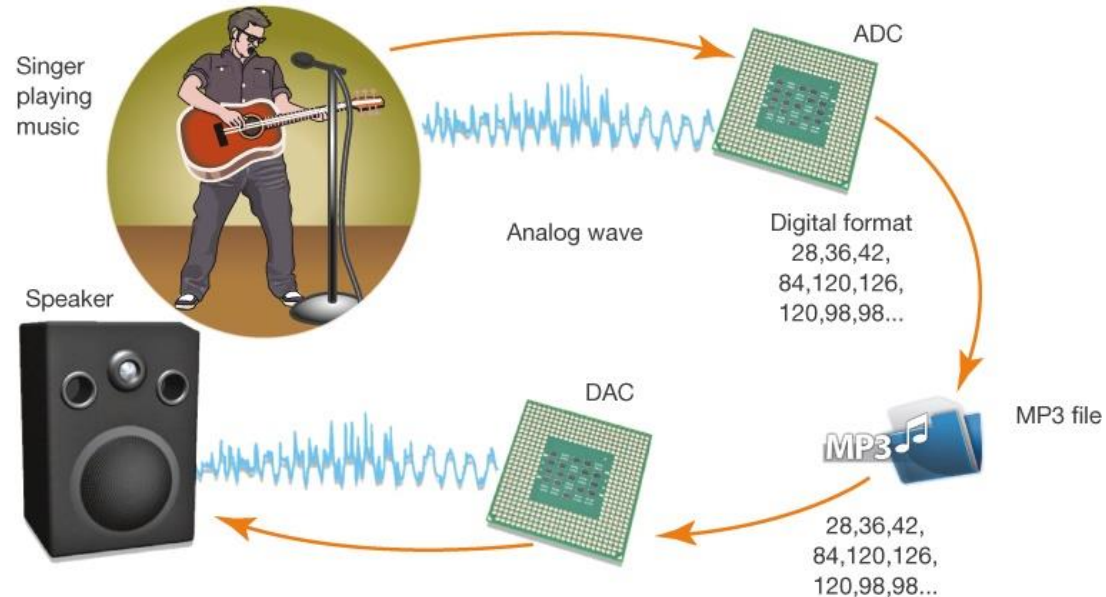
- Using e-Texts
  - Amazon
  - Barnes and Noble
  - Library
  - Project Gutenberg
  - Self-publish



# Digital Music

## Creating and Storing Digital Music (Objective 8.5)

- Analog-to-digital converter (ADC)
- Sampling rate
- File types
- Ripping
- Storage options
  - USB devices
  - Cloud services



# Digital Music

## Distributing Digital Music (Objective 8.6)

- Options for Listening to Digital Music

- Port or dock on an audio receiver
- Networked audio/video receivers
- New cars are equipped with an auxiliary input
- Systems like Sonos can mate wirelessly with a mobile device



- Digital Rights Management (DRM)

- System of access that allows only limited use of material that's been legally purchased

# Digital Media

## Digital Photography (1 of 2) (Objective 8.7)

- Digital cameras
  - Capture images and video
  - Convert to digital data
- Factors that determine image quality
  - Quality of lenses
  - Image sensor size
  - File format and compression used
  - Color management software
  - Camera's resolution



# Digital Media

## Digital Photography (2 of 2) (Objective 8.7)

- Resolution
  - Number of data points captured for each image
- Pixel
  - Picture element is a single dot in a digital image
- File Formats
  - RAW files records all the original image information
  - JPEG files can be compressed to varying degrees

# Digital Media

## Digital Video (1 of 2) (Objective 8.8)

- Sources of digital video content include:
  - Television
  - Internet (Vimeo, Ustream)
  - Pay services (iTunes, Netflix, Hulu, and Amazon)
- Digital camcorders or webcams allow recording of digital video
- Video-editing software allows editing of digital video

# Digital Media

## Digital Video (2 of 2) (Objective 8.8)

- Codecs are rules for compressing audio and video
- High Definition is a standard that guarantees a specific resolution and aspect ratio

**Figure 8.13** Typical File Formats for Digital Video

Format	File Extension	Notes
QuickTime	.qt .mov	You can download the QuickTime player without charge from <b>apple.com/quicktime</b> . The Pro version allows you to build your own QuickTime files.
Moving Picture Experts Group (MPEG)	.mpg .mpeg .mp4	The MPEG-4 video standard was adopted internationally in 2000; it's recognized by most video player software.
Windows Media Video	.wmv	This is a Microsoft file format recognized by Windows Media Player (included with the Windows OS).
Microsoft Video for Windows	.avi	This is a Microsoft file format recognized by Windows Media Player (included with the Windows OS).



# *Ethical Issues of Living in the Digital Age*

- Protection of Digital Property
- Living Ethically in the Digital Era

# Protection of Digital Property

## Objectives

- 8.9 Describe the various types of intellectual property.
- 8.10 Explain how copyright is obtained and the rights granted to the owners.
- 8.11 Explain copyright infringement, summarize the potential consequences, and describe situations in which you can legally use copyrighted material.

# Living Ethically in the Digital Era

## Objectives

- 8.12 Explain plagiarism and strategies for avoiding it.
- 8.13 Describe hoaxes and digital manipulation.
- 8.14 Describe what comprises your online reputation and how to protect it.

# Protection of Digital Property

## Intellectual Property (Objective 8.9)

- Intellectual property (IP) is a product of a person's mind
- Categories of intellectual property
  - Copyright
  - Patents
  - Trademarks
  - Service marks
  - Trade dress

# Protection of Digital Property

## Copyright Basics (Objective 8.10)

- Begins when a work is created and fixed into a digital or physical form
- Rights of a copyright holder
- Public Domain (works without copyright protection)
- Copyleft (enable copyright holders to grant certain rights to the work)

**Figure 8.17** Exercising Your Rights with a Video of Your Band.



### Public Performance

- Post the video on YouTube



### Reproduction

- Burn DVDs



### Distribution to the Public

- Sell DVDs at your concerts



### Derivative Work

- Capture audio tracks from the video soundtrack



### Public Display

- Place a still image from the video on a poster

# Protection of Digital Property

## Copyright Infringement (Objective 8.11)

- Copyright infringement (when violations of the holder's rights occur)
- Music and video violations cause a significant loss of revenue
- Software piracy is illegally using copyrighted software
- Photos should be considered copyrighted
- Fair use provides a way for people to use portions of a copyrighted work

# Living Ethically in the Digital Era

## Plagiarism (Objective 8.12)

- Copying text or ideas from someone else and claiming them as your own
- Usually considered an academic offense and isn't punishable under civil law
- Cite the source if there is any doubt

# Living Ethically in the Digital Era

## Hoaxes and Digital Manipulation (Objective 8.13)

- A hoax is anything designed to deceive another person
- Urban legends are incorporated into society as true events even though they are false
- Can check out Urban legends at Snopes or Hoax-Slayer
- Digital manipulation involves altering media from the way they were originally seen



# Living Ethically in the Digital Era

## Protecting Your Online Reputation (Objective 8.14)

- Online reputation (the information available about you in cyberspace)
- Persistence of information (facts about you might never disappear)
- Protecting your online reputation:
  - Improve and update your personal profiles
  - Create content on relevant sites
  - Post frequently
  - Be vigilant



# Questions

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# Copyright

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