

# Computer Science E-1

## Understanding Computers & The Internet

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Lecture 5: Multimedia  
March 21, 2011

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Photo by Dan Armendariz, 2007

Images

Bitmaps



Photo by Dan Armendariz, 2007

# Images

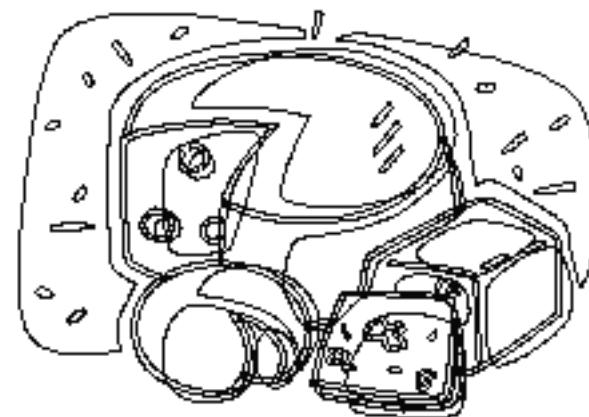
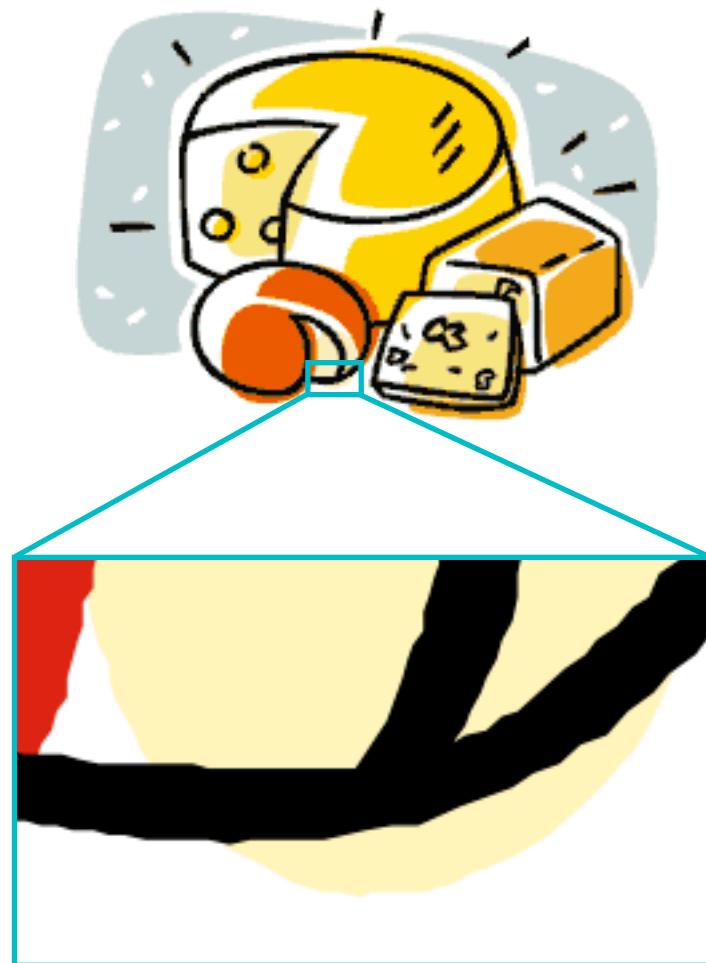
Bitmaps & Raster graphics



Image from <http://www.dpreview.com/reviews/canoneos40d/page2.asp>, copyright © DPReview

Images

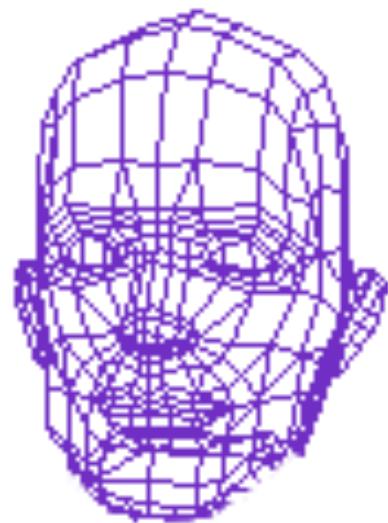
Digital Cameras



Top vector images from [http://www.prepressure.com/library/file-formats\(bitmap-versus-vector/2](http://www.prepressure.com/library/file-formats(bitmap-versus-vector/2), copyright © L. Leurs.

Images

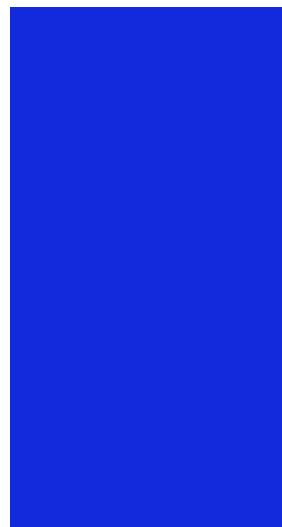
Vector Graphics



Images from <http://library.thinkquest.org/10015/data/info/reference/techniques/computer.animation.html>, copyright © ThinkQuest

Images

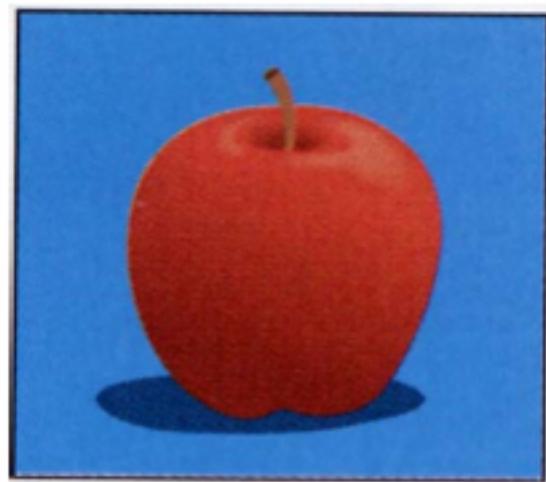
Wireframes



Flag images from <http://www.worldatlas.com/>, copyright © Graphic Maps.

Images

Compression



Images from Dennis P. Curtin, et al., Information Technology: The Breaking Wave, copyright ©The McGraw-Hill Companies, Inc.

Images

Compression

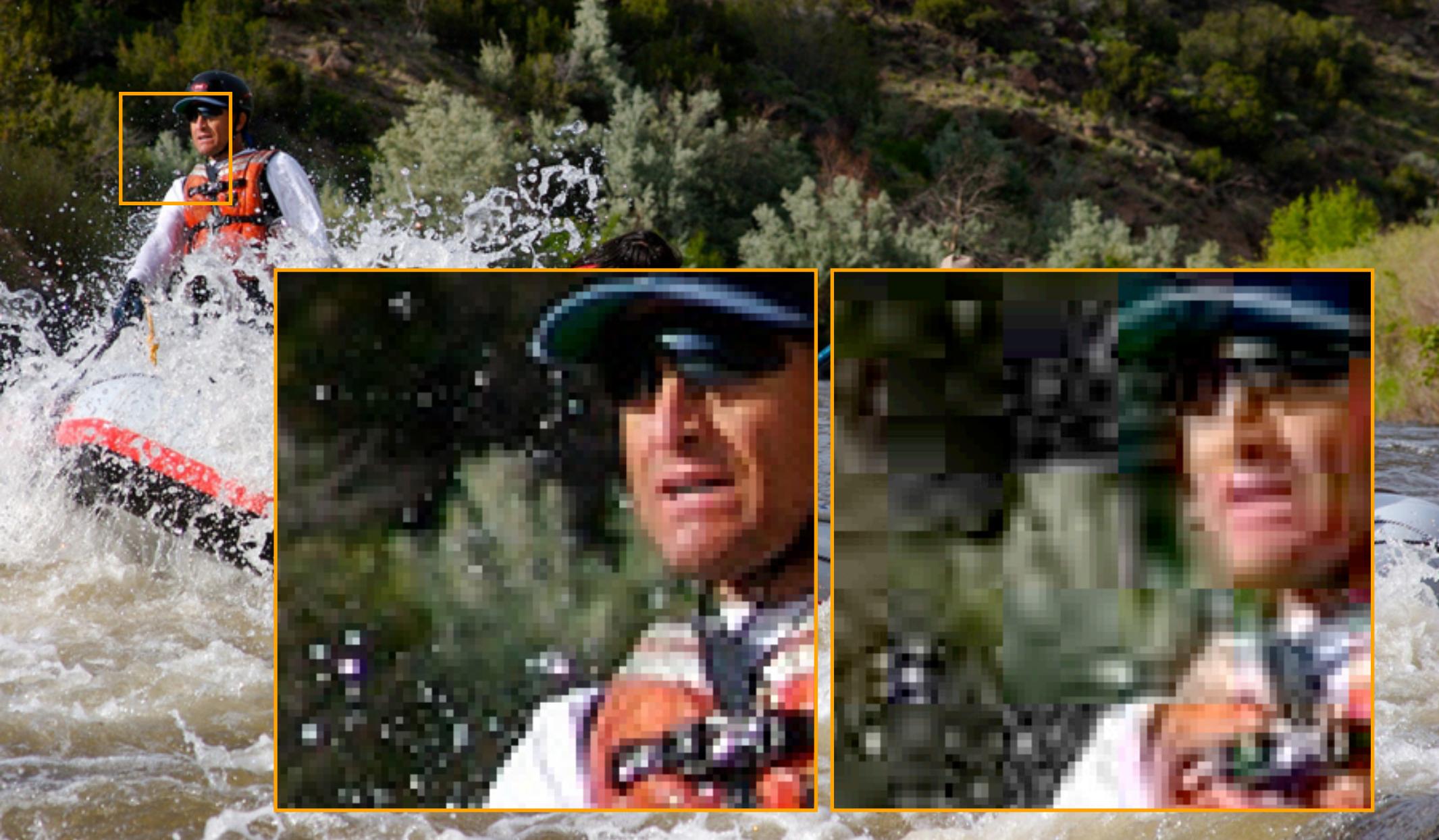


Photo by Dan Armendariz, 2007

# Images

Lossless vs Lossy Compression

Name	Type	Compression	Color	Alpha
<b>JPG</b>	Raster	Lossy	24-bit	No
<b>GIF</b>	Raster	Lossless	8-bit	Yes
<b>PNG</b>	Raster	Lossless	24-bit	Yes*
<b>EPS</b>	Vector	-	24-bit	Yes

\* Some browsers do not properly display transparency in PNG files

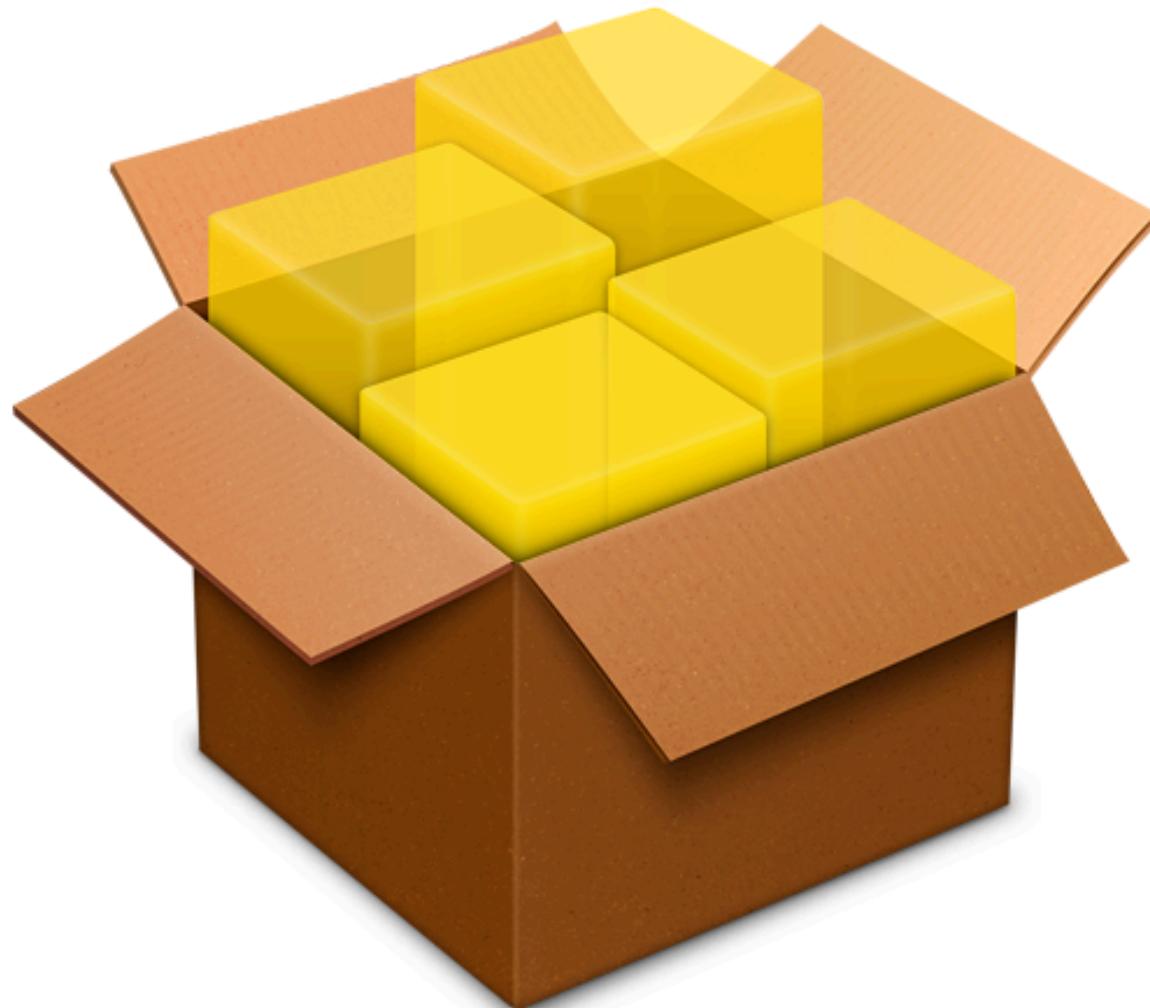
Images

File Types



Audio

| File Types



Video

Containers & Codecs



Progressive  
(deinterlaced)



Interlaced

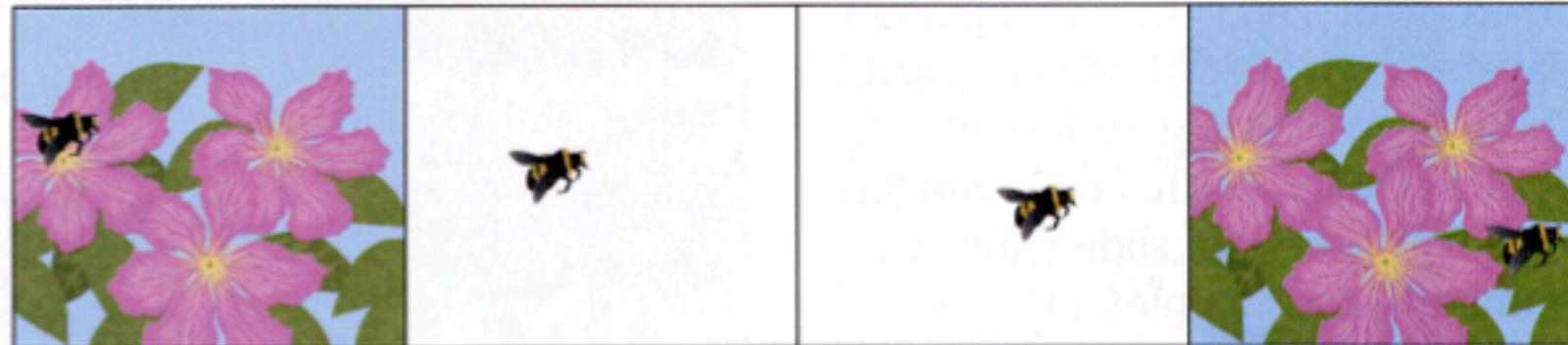
Images from <http://www.100fps.com/>

Video

Interlace



Uncompressed video



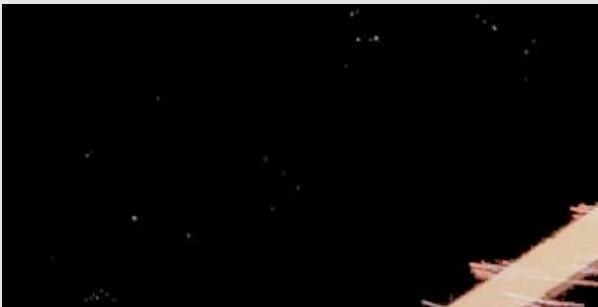
Compressed video

Images from Dennis P. Curtin, et al., Information Technology: The Breaking Wave, copyright ©The McGraw-Hill Companies, Inc.

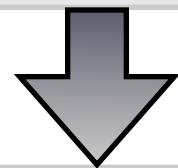
Video

Compression

File



Decompress



Displayed

Images adapted from <http://www.animenmusicvideos.org/guides/avtech/video3.htm>

Video

Compression



Media

DRM

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