

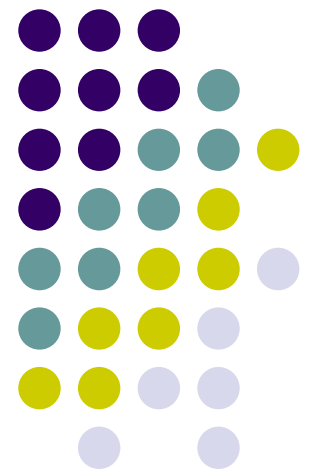
# Flash Video ...

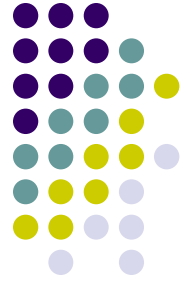
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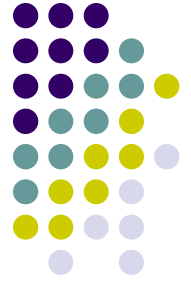


## Please also see...

- “Video for the Web ...in 20 Minutes”

[http://web.utah.edu/uwebresources/  
forums/summer07\\_seminars/  
video-for-the-web-in-20-minutes.pdf](http://web.utah.edu/uwebresources/forums/summer07_seminars/video-for-the-web-in-20-minutes.pdf)

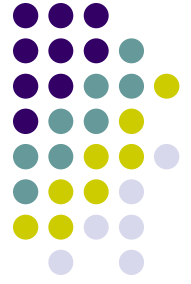
- Lots of good information I cover here
- Step-by-step instructions for Flash Pro 8 and Flash Pro CS3



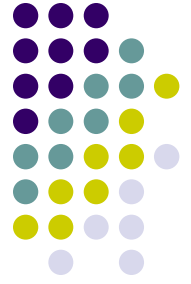
# Content

- Tech Tour
- Reaching Your Audience
- Campus Resources & Services
- The best DIY solution for most situations
  - Aka, “The practical stuff you can do NOW”
- Copyright Concerns
- Accessibility Concerns

# Flash Video

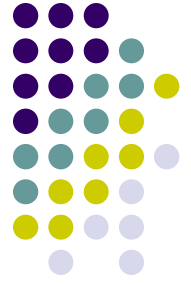


- The benefit is its ubiquity



# Flash Video

- Still relatively new architecture
- Fewer features than competing technologies
- Huge cost and learning overhead for true-streaming delivery
  - (outsourcing is currently the easiest option)



# Flash Video

H.264, On2 VP6, Sorenson Spark

- spark – Flash 6 & 7 +
  - Almost Ubiquitous (~97% install base \*)
  - Generally poor quality
  - Numerous free tools for video encoding
- VP6 – Flash 8 +
  - Fairly popular (~95% install base \*)
  - Much better quality
  - Fewer tools, but one you may already have

\* [www.adobe.com/products/player\\_census/flashplayer/version\\_penetration.html](http://www.adobe.com/products/player_census/flashplayer/version_penetration.html)  
( take these statistics with a grain or two of salt !! )

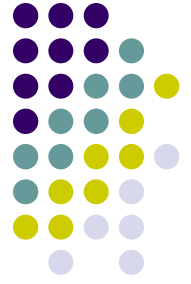
# Flash Video

H.264, On2 VP6, Sorenson Spark



- H.264 - Flash 9
  - Less popular (~93% install base \*)
  - H.264 / HE-AAC MPEG-4 support will eventually eclipse the VP6-based industry, but we're not there yet
  - Though the codec is standards-based, the implementation has some vendor-lock-in, especially in true-streaming delivery
  - Since MPEG-4 has been around for a while, there are tools already available for creating compliant or near-compliant videos

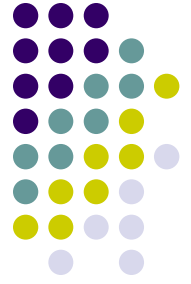
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# Parameters to consider

- Frame Size
  - The width and height dimensions
- Frame Rate / Frames per second
  - Higher frame rates look smoother
- Bit rate / data rate
  - Total amount of available data to dedicate to
  - Targeted at specific internet connection speeds
  - Shared by frame size, frame rate and audio track

# Flash Delivery / Network Protocols



- Progressive download
  - HTTP, same as HTML pages, pictures
  - Video file is easily stored on viewer's computer
  - Not suitable for very long clips or copyrighted clips
  - Easiest to deploy and use since video files are stored on web server along side HTML pages
  - No specialized serving software required

# Flash Delivery / Network Protocols

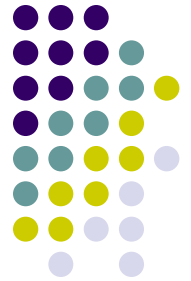


Streaming, real-time / true-stream, broadcast

- RTMP, RTP, RTMPS, RTMPT
- Playback begins after small amount is downloaded
- Not easily copied or stored on computer
- Requires specialized serving software
  - Flash Media Server / Flash Streaming Server, Wowza Media Server, Red5

# Reaching Your Audience

## Connection Speed / Data rate

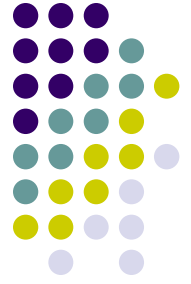


- Among “young, active internet users”
  - Nearly 50% have broadband at home
  - ... but that’s only 50%
    - And that’s only up 5% from last year
- Of all home internet use in America
  - Overall: 70% broadband, 23% dial-up
  - Rural Areas: Only 31% broadband

\* [http://www.pewinternet.org/report\\_display.asp?r=217](http://www.pewinternet.org/report_display.asp?r=217)

# Reaching Your Audience

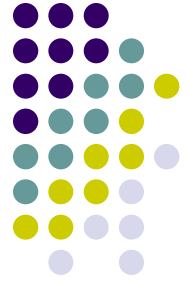
## Connection Speed / Data rate



- Connection speeds are STILL relevant !
- Consider your target audience
  
- Best practice: make a “small” size too
- Encode with these parameters:
  - At most, 40 kilobits per second
    - 34kbps video
    - 16kbps audio (in mono, not stereo)
  - 6 frames per second
  - 240 wide X 180 height frame size

# Reaching Your Audience

## Summary



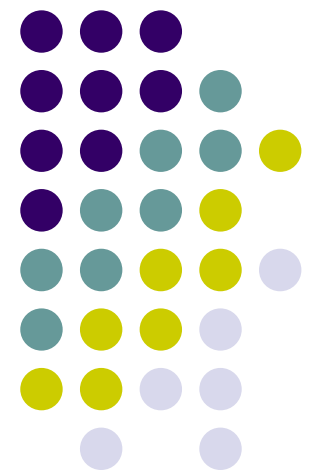
- The “Right” solution
  - Accommodates all connection speeds
  - Accommodates computer’s typical default configurations and the players they include

But ultimately, the nature of the content and your target audience dictate choices.

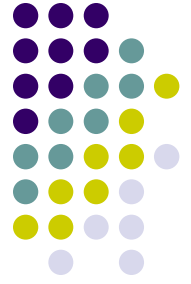
Be Practical

# Doing it Yourself

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# Alternative Embedding



- JW FLV Media Player
  - [www.jeroenwijering.com/?item=JW\\_FLV\\_Media\\_Player](http://www.jeroenwijering.com/?item=JW_FLV_Media_Player)
  - More features, media file type support
  - Playlists are not simple
- Flowplayer
  - [flowplayer.org](http://flowplayer.org)
  - Easy playlists, fewer features, embedded logo
- Both have free / open / flexible licensing

# Questions?

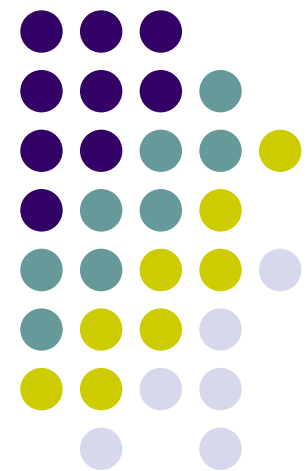
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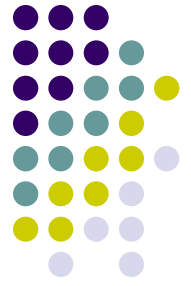
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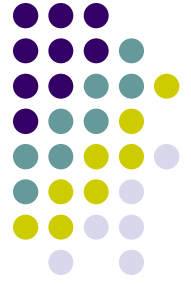
Please feel free to contact me!





# Encode – Alternative Tools

- On2 FlixPro Version 8 +
  - <http://on2.com/products/flix/flix-pro>
- Sorenson Squeeze for Flash 4.5 +
  - <http://www.sorensonmedia.com/products/?pageID=1#pc2>
- Avoid:
- On2 Flix Exporter
  - (a QuickTime-based plugin for 3<sup>rd</sup>-party encoding tools)
- Encoding Flash with spark codec



# References

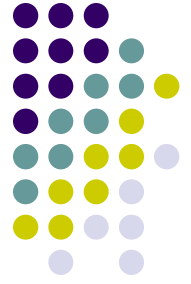
- Player Statistics

- [http://www.adobe.com/products/player\\_census/npd/](http://www.adobe.com/products/player_census/npd/)

- Broadband Statistics

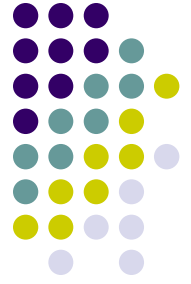
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# Accessibility Concerns

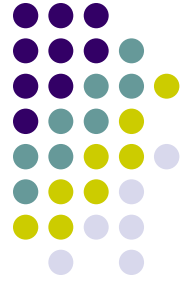


- Providing a text-equivalent is best way to make your content accessible to all
- [http://library.med.utah.edu/wiki/MODwiki/index.php/Accessibility\\_%26\\_Captioning](http://library.med.utah.edu/wiki/MODwiki/index.php/Accessibility_%26_Captioning)

# Copyright Concerns



- [http://library.med.utah.edu/wiki/MODwiki/index.php/Intellectual\\_Property\\_Rights%2C\\_Digital\\_Rights\\_Managements\\_%26\\_Copyright](http://library.med.utah.edu/wiki/MODwiki/index.php/Intellectual_Property_Rights%2C_Digital_Rights_Managements_%26_Copyright)



# Resources

- Test your browser:
  - <http://services.tacc.utah.edu/mphc/>
- Media Solutions Digital Video site
  - <http://stream.uen.org/medsol/digvid/>
- Media On Demand Wiki
  - <http://library.med.utah.edu/wiki/MODwiki/>
- Others
  - <http://www.apple.com/quicktime/>
  - <http://www.realnetworks.com/>
  - <http://www.adobe.com/devnet/flash/video.html>
  - <http://www.microsoft.com/windows/windowsmedia/>