

Transitioning Video From Flash to HTML5

Why Hasn't Flash Gone Away?

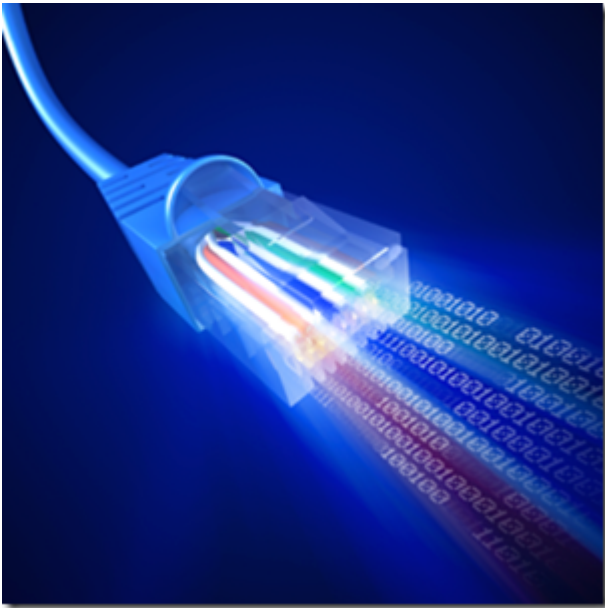
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About Me

- Tech Lead @ LongTail Video
- JW Player - HTML5/Flash Video Player
 - Since 2005, 2M+ sites using the player
 - 1 billion video streams / month on JW6



A Brief History of Video on the Web



1995-2000: Availability of Broadband Internet

- Consumer internet speed breaks 100kbps mark
- It becomes possible to transmit video over the Internet

A Brief History of Video on the Web

1999-2002: Player Wars

- Multiple video and player formats proliferated
- Browser plugins brought video to websites
- Multiple formats, spotty user adoption



A Brief History of Video on the Web



2002: Video Comes to Flash

- Large install base
- Streams video over HTTP
- High quality video codec (VP6) released in 2005



2005: YouTube Launches

- Uses Flash-based player (JW Player!)
- Adobe buys Macromedia

A Brief History of Video on the Web



2007-Present: Mobile Web & HTML5

- iPhone released without support for Flash
 - Battery consumption
 - Competes with App Store
- 2008: HTML5 Public Working Draft
 - `<video>` and `<audio>` tags
 - Browser vendors implement video playback

Making a Case for HTML5 Video



- Better resource management
- Nothing for the user to install
- Native JavaScript interaction

On The Other Hand...

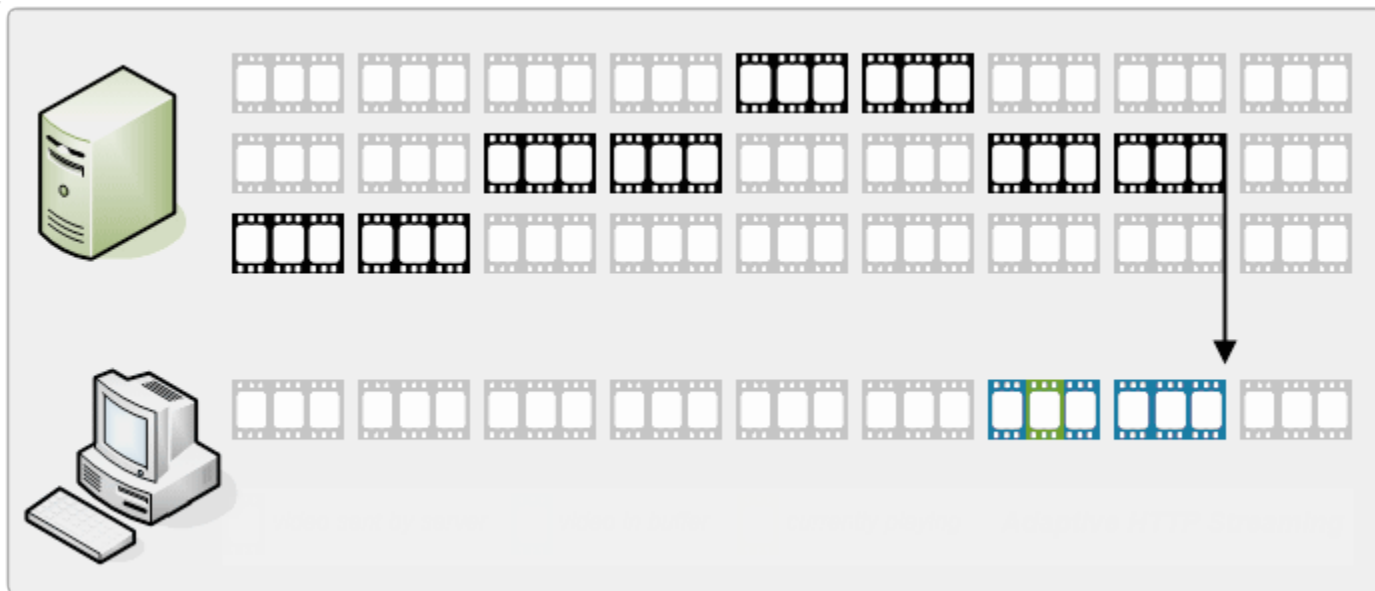
- Browser adoption still an issue (IE8!)
- API implementations can be inconsistent
- Media support not universal
 - MP4 (H.264) vs. WebM (VP8)
- Players must handle usual cross-browser behavior issues (styling, etc)

When Can Flash Die?



Streaming

HTML5 browsers still can't do video streaming



Streaming: Applications

- Live streaming (events, presentations, etc)
 - Time shifting
- Adaptive streaming
 - Handle changes in bandwidth smoothly
 - Save on streaming costs
- Ad injection

Streaming: HTML5

Possible solutions for HTML5 streaming

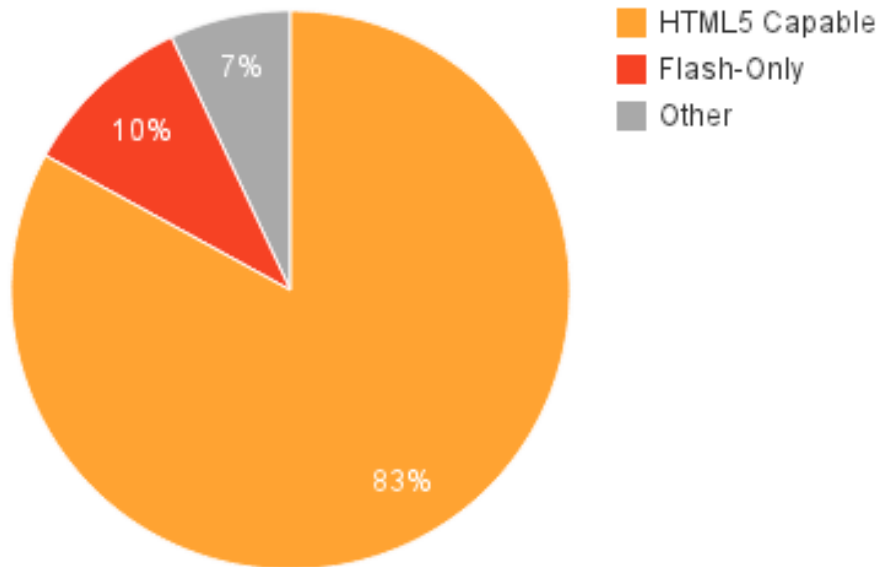
- Browser vendors agree on streaming format
 - Apple HTTP Live Streaming (HLS)
 - Microsoft Smooth Streaming
 - MPEG DASH
 - ???
- Browsers provide hooks for developers
 - Media Source Extensions API
 - Currently available in Chrome
 - Will be available in IE11, future Firefox

So What Now?

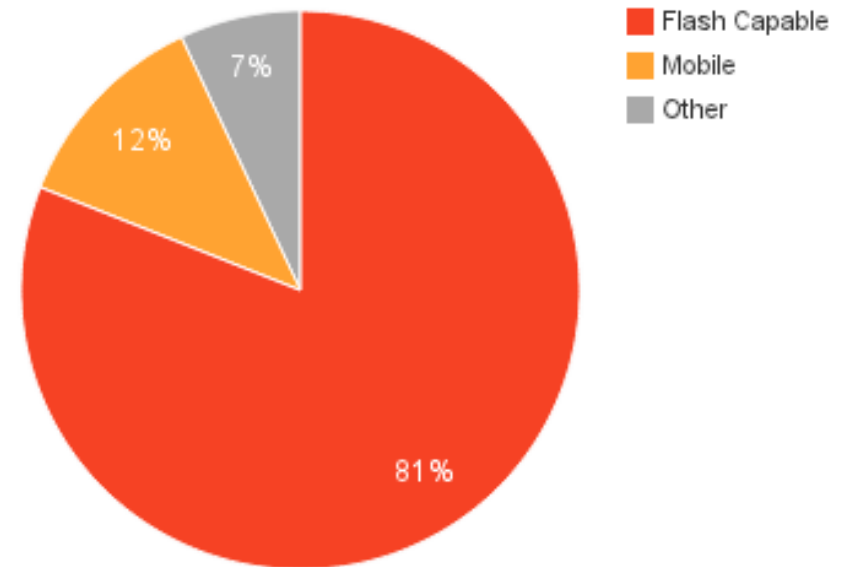


Today's Browser Landscape

HTML5 Browsers: Combined Desktop & Mobile



Flash Browsers



A Hybrid Approach

- Use HTML5 when appropriate, Flash otherwise
- Latest and greatest on modern browsers
- Flash provides fail over for older browsers
- 100% coverage
- Two players to implement
 - 3rd party integrations need to be done twice

Thanks!

<http://longtailvideo.com/html5>