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## AFTER EFFECTS + FLASH = BROADCAST & BEYOND

Why should a Flash designer or developer be interested in After Effects? I mean, isn't that part of the Production bundle, and not the Web bundle? Because in an ever more convergent world, After Effects can help you solve a few problems that are becoming more and more common. Like when you learn that not only does your client need your award-winning animation to play on the web in HD, but also on TV in HD, and maybe even on The BIG screen, in 4K, or, or even the WAY BIG screen, IMAX.! How does AE CS3 allow you to convert Web Standards to Broadcast or Theatrical Standards? And how might its new version, AE CS4 help you even more?

For Flashers who don't use After Effects daily, you'll be relieved to learn that AE projects and Flash CS3 projects follow a similar workflow, made even more similar in recently released CS4.

AE CS3 similarities to Fla CS3		AE CS3 Differences from Fla CS3
1) Create Project	project files similar	only one project file at a time
2) Import Media	files used to compose	files NOT embedded within project
3) Set Keyframes	interpolation like tweening	AE interpolates both space AND time
4) Apply Effects	enhances items on stage	Hundreds of effects in infinite combination
5) Render Project	similar to publishing in Flash	More output options, larger files

### And now with FLASH CS4 and AFTER EFFECTS CS4

Setting Keyframes: Flash CS4 adopts a timeline more AE-like, interpolating both space, and time and [more](#)

### Flash to After Effects For Broadcast

The trick to converting Flash to After Effects for broadcast video depends on how quickly you can negotiate six technical issues that After Effects LIVES to sort out:

- 1) **frame aspect ratio** (is it Academy standard, 1:33:1- that's SD 4:3, or Academy Flat, 1.78:1- that's HD 16:9, **2) pixel aspect ratio** (are we dealing with square or non-square pixels), **3) frame rate** (29.97, 25.24, or 59.23), **4) interlaced or progressive video**, **5) title-safe and action-safe** and **6) color issues** (NTSC vs PAL).

The immediate advantage to using After Effects in your broadcast workflow are two-fold :

1) Lots of templates and presets for broadcast.

2) Made by the same company as Flash. It's easier to go between programs.

## **6 Important Choices: Know Where You're Going Before You Get There**

**Frame Aspect Ratio and Pixel Aspect Ratio: So what dimensions should I set my Flash stage to?** Hmm.. Before you can answer that, you need to know the pixel aspect ratio of the video format: NTSC Video uses a non-square pixel tall than wide; PAL video is just the opposite (its pixels are wider than they are tall). Since Flash only works in square pixels, how do you adjust for broadcast? **A commonly adopted Flash stage size for NTSC Video is 720x540** (which is slightly taller than its actual video size of 720x486 (DI)). **For PAL, a common Flash stage size is 768x576**, (which is slightly wider than its video size of 720x576).

**Frame Rate: And what's the best frame rate for my broadcast- bound Flash?** NOT the default frame rate setting of Flash CS3, 12fps, nor the new default frame rate setting of 24, in CS4. **If your headed for TV, use a frame rate of 30 fps, or some lesser multiple, say 15.** 24 or 12fps ARE good choices for Flash projects headed for the BIG screen-film.

**Interlacing: Hmm, so what's Interlacing?** It's soon to be history, but it's still the way much of broadcast expects its delivery product. Your artwork can be severely distorted by the alternating scan lines used in interlaced video. **Avoid using thin lines (2 point or thicker) or small text (at LEAST 18 points, in size AND in bold san serif font, if possible.** In broadcast, flicker is not your friend. And especially with razor sharp, all-vector art, sometimes a little last minute blur goes a long way. Oddly enough also, in the HD realm, progressive (the way computer screens use video) is more prevalent and seems destined to win out over interlacing.

**You can easily modify your 720x540 Flash file to accommodate a wider HDTV aspect ratio.** Because HD has an aspect ratio of 1.78:1, we multiply the height (540) by 1.78 and the result is 961 pixels, or 540x941. If you want to keep a 4:3 stage size, but have a widescreen image, you need to set up a new layer that masks, or letterboxes, the HD aspect ratio. Increase the resolution of your QT upon export, and AE will resize or crop your published Flash movie to the proper HD dimensions: say 1280x960.

**And what's the difference between Title Safe and Action Safe anyway?** Because television screens are overscanned, and don't show the whole video picture frame, it's up to you, with big help from After Effects, to protect the heart of your scene: that is, its graphics and main action.

**And what about those color issues you mentioned?** Video uses a YUV color space. Flash uses the computer RGB color space -which is a few decimal space larger color space than YUV. So, because RGB is a WAY-bigger color space, Flashers are more apt to pick colors schemes that go beyond the ability of most TVs. Worse yet, NTSC video uses the YIQ color space, which is a subset of the dinkier YUV color space, which means its capable of displaying even less range of color choice. **So how do you know if your Flash colors will work on TV?** After Effects has a filter called "the Broadcast Colors effect" that can be laid on top of a clip or an entire project that will 'clamp' the colors into an acceptable range for NTSC or PAL broadcast. You can also replace the color default palette in Flash by importing an NTSC color palette that you can download at [www.animonger.com](http://www.animonger.com).

In this converging world, [the roads between Flash and AE](#) are bound to soon grow far more familiar:

- 1) Exporting Quicktime video from Flash
- 2) Exporting FLV from After Effects
- 3) Importing and publishing video in Flash
- 4) Differentially compositing graphics, animation and video
- 5) Exporting After Effects content into Flash

AND

- 6) Importing Flash SWF files into After Effects.

But why wait? It's worth it to the average Flasher to check out its broadcast-friendly cousin, AE be it CS3 or CS4. For lots more information on how to become more familiar with AE from a Flash perspective, check out Chris Jackson's book [Flash + After Effects](#).