BLOGS.ADOBE.COM

ABOUT

ARCHIVES

CATEGORIES

RSS / **ATOM**

LEGAL

The views expressed in this blog are my own and do not necessarily reflect the views of Adobe Systems Incorporated.

Terms of Use

SEARCH

[Search Adobe Blogs]

APRIL 02, 2007

JPEG 2000 - Do you use it?

As you may or--as seems overwhelmingly likely--may *not* know, Photoshop ships with a plug-in for reading and writing JPEG 2000-format files. Compared with the regular JPEG format (technically known as JFIF), JPEG 2000 offers advantages such as support for higher bit depths, more advanced compression, and a lossless compression option. Adobe developed the plug-in in anticipation of cameras entering the market with native JPEG 2000 support on board.

The thing is, that hasn't happened, nor have we seen other widespread adoption of the format in places we know Photoshop is being used. Therefore with Photoshop CS2 we made the call to stop installing the plug-in by default, but to continue making it available via the product CD. What's probably not obvious is that existing features keep consuming resources to maintain & test, even if no features are added to them. As we plan for the future, we need to retire features that no longer make sense & focus instead on capabilities that matter.

So, do you use JPEG 2000? If so, please give a shout and let us know how & why you use it.

PS--Note that support for JPEG 2000 as a <u>file format by itself</u> & support for the <u>compression options</u> it offers are two separate things. PDF supports JPEG 2000-compressed images, so we wouldn't remove that support. I'm just trying to gauge the value of supporting standalone JPEG 2000 reading and writing.

Posted by John Nack at 04:33 PM on April 02, 2007

« Ctrl-Z your wrinkles away   Home   Becoming a pencil; more »

Comments

I don't use it because it's locked up. This format should go down in history as a classic sad case of stalled innovation. It IS a better file format than JPEG, supporting alpha and better compression, higher color depth. My favorite little utility on windows, irfanview prevents creating JPEG2000 files above a certain size, unless you pay for the plugin I guess. Annoying and stupid.

I suppose in some ways it's a good thing. It probably helped push along the adoption of PNG files, including pushing web browsers to read it. the PNG philosophy makes it the winner there. PNG isn't better, the philosophy is.

Every camera manufacturer out there could be using the JPEG2000 format out there, and we'd all benefit from it. No one would, why? Possibly because of a $10 royalty, but more likely because not everything can read it. they were smart not to use that format because people would complain they can't open it in their email program.

The group responsible for locking up this file only to those who pay royalties, made a terrible decision. I would like to smack their face. Where is the file format now? Just think John, you could be asking a different question right now, if they let the format go.

I propose you guys take the format out completely just to spite them. Spend the left over royalty cash on The CS4 Extended versions ability to open the .blend blender 3D file format. Spend it on innovation that allows the flash player to read the entire SVG spec. Donate it to the PNG guy.

Well

I really find no use for it.

I just use .jpg or .psd :)

I haven't found the JPEG2000 plugin to be installed by default in Photoshop yet, and have had to (a) know of its existence and (b) find an available plugin to install it.

However, Bridge and InDesign don't support the format. If they did I would have re-saved the currently .tif format client 'hero shots' etc on our central photography server to JPEG2000.

Also, if MSIE and Firefox supported the format, I would immediately use it in our web sites for the smaller graphics sizes that would in turn increase the download speed of pages.

I too have wondered why it hadn't taken off yet. I think the answer is that we at least need to have suite-wide support for designers to be able to realise its benefits .... and their creative output (web sites, flash production etc) can then cause JPEG2000s utilisation to begin from that point onwards.

Maybe this can be the biggest benefit from the Adobe / Macromedia merger ... the ability to implement positive change?

Never used it,

I have moved to PNG for most things, I would have thought that cameras

might support this in the future.

BWJones — 07:49 PM on April 02, 2007

I don't think so.... I have no need or desire for JPEG2000, especially because it is a host of formats that currently appears to be loosely supported or not at all by a number of different platforms. If I am going to want to be able to access my image data 10, 20, or 50 years from now, it will need to be in a common, open format.

Besides some of the experimentation I did with JPEG2000 images revealed poor image quality in data with high texture detail. If I want to store data losslessly, I'll go with tiff. If I want to compress it, regular old JPEG works nicely.

Eric — 08:34 PM on April 02, 2007

Nope, see no reason to store my photos as jpegs of any sort. Being a pro photographer it doesn't make sense to save serious photos as anything but RAW, TIF or PSD.

And forget Microsoft's new "open" format. Nobody really believes them that they're doing it for the good of photographers, do they?

Alex — 08:35 PM on April 02, 2007

Yes John, I use it frequently, since the Library of Congress uses JPEG 2000, and MrSID for all it's archive docs and photos and maps. They are the only ones however that use it as far as I have run across.

Eric Peacock — 09:13 PM on April 02, 2007

In summary:

I wanted to use it.

But I do not.

Jennifer Apple — 09:33 PM on April 02, 2007

My compressed answer is no.

[Yes, but is that lossless or lossy? ;-) --J.]

Lalo Greiner — 11:24 PM on April 02, 2007

QUOTE:
"As we plan for the future, we need to retire features that no longer make sense & focus instead on capabilities that matter."

Kill me if you will, but you made me curious: which are the features that, making no sense anymore, need retirement???

Chris R. — 12:13 AM on April 03, 2007

I used to use it ... mostly because of it's better support for alpha transparency.

But the lack of support and little extra's it has over PNG makes i recently stopped using it.

I made a post on it a while ago though, then i was still in love with JPEG2000 ... times have changed.
http://www.skyrocket.be/2005/12/10/jpeg2000-stock-imagery/

Sergejs Bizans — 12:27 AM on April 03, 2007

Have never used it and I think I will never ever use it in future. Exception was one cd from ad agency in Lithuania - they sent me an image-pack all in

jpeg2000 format, but the first thing I did - convert photos and burn them to new CD so I could be sure I will open it on any computer.

Alexandre Jenny — 12:38 AM on April 03, 2007

For our needs (big pictures with high depth), we decided to jump over jpeg2000 which still has good compression ratio and the ability to extract a subpart, and use hdphoto directly. The support of hdr format, the ability to extract a subpart / subscale of the picture easily, the support of hdr format is a real bonus over jpeg2000. It's not more compressed (a big russian study shows that), it just supports more depth.

Taco van der Werf — 12:51 AM on April 03, 2007

Yes John, I do use Jpeg2000 regularly. Apart from archiving my Raw/Dng files and my edited 16 bit Tiff files, I also save my flattened 16 bit Tiffs as Jpeg2000 files with a (lossy) 70% compression. With specific settings in the plug-in I can get really small file sizes: a 50 Mb file becomes somewhere between 1 and 4 Mb! My ProPhoto color profile is retained, as are the 16 bit bit level and alpha channels, Exif data, etc.
Once opened again and compared with the original 16 bit Tiff through a difference layer, only a very(!) small difference is visible. And only if you flattened the result and play with Levels in an extreme setting. Compared next to each other on screen, I am not able to distinguish the Tiff from the Jpeg2000 version.

The beautiful purpose of this all is that I can have several thousands of files on 1 DVD as a safety backup. This makes a very compact and inexpensive archive I can easily take with me, or store at a friend's house. Should a hard disk failure of fire distroy my real archive, I still have my work.

I was glad to find the Mac-Intel version of the plug-in through this blog a few weeks ago and it is so much faster when I use it with PS CS3 on my Mac Pro. Needless to say that I would really regret it if Adobe would retire the plug-in in the future!

For anyone who would like to try it out for themselves:
the Mac-Intel and Windows version of the plug-in is available on this link:
http://blogs.adobe.com/jnack/files/JPEG2K.zip

Here are the settings I use:

File Size: leave open
Lossless: deselect
Fast Mode: select
Quality: 70
Include Metadata: select
Include Color Settings: select
Include Transparency: deselect
JP2 Compatible: select

(Advanced Options:)
Compliance: General Device
Wavelet Filter: Float
Tile Size: 1024x1024
Jpeg 200 XML: deselect
XMP: select
Exif: select
ICC Profile: select
Restricted ICC Profile: select

Order: Growing Thumbnail
Region of Interest: None
Enhance: 50%

Richard Earney — 02:02 AM on April 03, 2007

Seemed like a good idea at the time, but another format that has wandered into the siding!

labracherie — 04:09 AM on April 03, 2007

Hello, i'm french so sorry for my poor english. I'm a photographer, so i would like use JPEG 2000 but no camera manufacturer use it !! So it quite difficult to use JPEG 2000. What is the adobe position with the new microsoft format Photo HD which is quite similar to JPEG 2000 but open and free ? i think HD photo will be more successful. Thanks for your blog

Jp Cooper — 06:18 AM on April 03, 2007

John -

When it first showed up on the scene years ago I made the leap that it was a replacement for/or the predecessor to the JPEG format_

Unfotunately as with the MP3 audio format consumer product manufacturers and by extension the general public seem to adopt bastard technologies and hold onto them way too long_

I was looking forward to having something to replace the shortcomings of the JPEG format [which I have never liked from day - one being a print designer] - but aside from consumer products attaching to the JPEG format like leaches - other things like no native web browser support [as I build websites too] - just never gave me a stage in which to take advantage of the JPG2000 format_

Whereas in contrast - in regards to web browser support - the PNG format has somewhat been taking a similar course - but it's more due to Microsoft's lack of getting off their arse and updating their software [it's about time]_ With the release of IE7 - there is now native PNG support and I can finally migrate my projects to PNG as oppsoed to JPG images_

The little pocket cam I have uses JPG to produce images [I have found a hack to activate a RAW function - but have yet to try it] - so now at this point that is the only reason left why I use JPG files for anything_

I am sorry to see that JPG2000 never had a fair shake to strech it's wings - but that is the case when some corporation demand a buck every time someone saves a file_

Macromedia did the right thing from the start by allowing free use of the SWF format when they implemented Flash technology across the board_ And it had no where to go BUT to explode allover the scene like a really big zit that popped_

I guess if one were to look at all the technologies out there as split them into licensed/paid and GPL/open source or some such distinction - it wouldn't be hard to track which technologies will make it and which won't_

Ultimately both the JPEG and MP3 formats will be forced to go the way of the dinosaurs as they are and have been becoming dated - unless the "expert groups" that created them get back together and pump new life back into them_ But the momentum is already building for newer stuff to take over and by the time these "groups" get back together and do anything about it - it'll be too late_

I think that the JPG2000 format was unfairly passed by - but if at some point someone take the advantages of it and applies them to future technologies and expands upon it then in some way it did it's job after all_

I'd say keep it for now [maybe one more revision]

Pedro Estarque — 07:11 AM on April 03, 2007

I think JPEG2000 is like AAC, a little better than MP3 but no worth the trouble. Except AAC has Apple to back it up and JPEG2000 has no one. It's a shame really, but I think that for JPEG2000 to catch on it should have been backward compatible, which would probably be impossible for an image format targeting small size footprint. It's a whole lot easier for HTML, for example, you could have both HTML4 and future HTML5 in the same file without adding too much overhead.

There are millions of people still running Win98 and JPGs are omnipresent. I think JPEG2000 got lost in between JPG and lossless, not that much better than the established and widely compatible JPG and still worst than lossless.

Still, it would have been nice to shoot in JPG2000 and have a 16 bit file. Of course I could never send that file to anyone, it would be a camera Photoshop thing. And maybe the overlapping compression of such different algorithms (JPEG2000 and regular JPEG) could really degrade the image quality.

Ted — 08:17 AM on April 03, 2007

I use its lossless compression for "working" files. That means things like the unedited output of my film scanner, or a cropped and cleaned scan after noise reduction and capture sharpening but before any color or density adjustments. Keeping these files around is often helpful in case I later have second thoughts about some aspect of the final "master" version (which I archive in uncompressed TIFF files).

I use JPEG 2000 because it's the only available losslessly-compressed format that can store 48-bit images with alpha channels, metadata, and ICC profiles. PNG comes close, but it can't store metadata or profiles. I find the RLL compression in PSD files useless, and the LZW compression option for TIFF actually *increases* the size of 48-bit files. I want the compression because I archive the "working" files to DVD, and the compression does make quite a significant difference with 128-megabyte 4000dpi film scans.

I can't say I'm really happy with the Photoshop plug-in, though. It's excruciatingly slow for both reading and writing. When writing, it makes interminable passes through the file unless the "fast mode" box is ticked. But that box has an annoying tendency to become un-ticked, which means a lengthy wait while it makes those passes through the file the next time I use it. But even before I read this post I suspected that development of this plug-in was not a high priority for Adobe.

I wish there were a better option for a need that is probably unusual. But there doesn't seem to be. I read the announcement about Microsoft's HD Photo with some interest, but I quickly decided that I would not want anything to do with a Microsoft-proprietary format regardless of its advantages (which it doesn't seem to have).

So to answer your question, I would indeed miss the JPEG 2000 plug-in if you dropped it. Unless you have something that meets my needs better. I guess I'll just be sure to keep my copy of the CS2 plug-in in a safe place so I'll be able to read my archives "working" files.

Alex — 08:25 AM on April 03, 2007

OK, I am going to let out a secret. Since the Library of Congress is using our money(taxpayers) any program they use they have to offer free to the public. MrSID, which is the best actually, and jpeg2000 are offered free through the Library of Congress, plugins- the whole thing. You just have to hunt for them, by using it to view their images. Do I get a cigar? howabout a copy of CS3 extended?

Tiago Celestino — 09:07 AM on April 03, 2007

Eu não utilizo. Acho que não vem muita diferença.

keith — 09:24 AM on April 03, 2007

Think your survey is the biggest event to have happened with this file format.

James Darknell — 09:33 AM on April 03, 2007

I used it when it first came out and was pleased with it, but unfortunately its not supported by any of my other applications (3D special effects) It's a shame as it would've been really nice to use. My files have a tendency to fill up hard drives quick.

Dwight Kelly — 09:33 AM on April 03, 2007

We have developed several programs that read & write JPEG2000 - both standalone and in PDF. We even released a free JPEG2000 Workbench program 4+ years ago so people could experiment with the format. Until IE and Firebox browsers support JPEG2000, it won't be used widely.

Dude-X — 10:11 AM on April 03, 2007

I've always thought that JPEG2000 looked pretty bad for highly compressed files with lots of detail. It's no loss that not many people and industries have not adopted it.

I see Microsoft's HD Photo taking off though, due to Microsofts large install base, and it being unencumbered by royalties.

Jerome Dahdah — 01:16 PM on April 03, 2007

I've never used it. It's an entirely obscure format, I doubt most people have ever even heard of it. I remember having a look at it two or three years ago. The site wanted me to install a browser plugin, and it left the overall impression of a commercial proprietary product on me, like some format that had nothing to do with jpeg and was just called that way for marketing. I don't remember what site that was, but it left a bad impression on me. Now reading about the royalties I can tell I wasn't entirely wrong.

What I would like to see is an entirely open sourced (GPL?) format with all the goodies such as 24bit transparency, embedded paths, SVG interoperability, perhaps even hooks for DOM accessibility, etc, and with better compression rates than PNG. Perhaps a PNG 2.0 or something. That's quite a wish list but I know Adobe and a few others would have the resources to back this, sort of like Google and IBM support open source software projects.

John Eakin — 01:25 PM on April 03, 2007

I would have liked to used but it never gained enough support. Since I can't send that format to anyone I won't miss it when it disappears except in terms of wishful thinking.

illovich — 03:16 PM on April 03, 2007

I've looked at using it, but given that other formats seem to have already filled all the needs it was meant to fill (I don't need lossless JPGs when I have lzw-compressed TIFFs, the savings don't seem that impressive over TIFF), and that support for JPEG2000 is so spotty, it just never seemed worth going through the pains of transitioning.

Frank Spangenberg — 03:36 PM on April 03, 2007

I wanted to use lossless JPEG because of better compression than TIFF

with LZW. But no Adobe CS2 application supports lossless JPEG (JPEG-LS) natively (Photoshop no, Illustrator no, InDesign no, Bridge no, Acrobat 8 no). The HP Photoshop extension doesn't support color profiles. Many people think that the JPEG export of Photoshop is lossless if "Quality" is set to 12, but is isn't.

So I wanted to use JPEG2000. No native support in Photoshop CS2/CS3 Beta, but wait, on one of the CS2 CD's is a little extension that I have to install manually to have J2k support. Great, but InDesign doesn't know JPEG2000, lossless gets useless. :-(But wait, Illustrator CS2 and Bridge reads and Acrobat reads/creates JPEG2000, very crazy!? Ok, next try, using lossy JPEG2000 compression in web optimized PDF's. Works, but at the same or greater file size the quality is worse than with "normal" lossy JPEG... bug or feature?

Additionally there is no official PDF/X standard allowing JPEG2000 yet, the upcoming PDF/X-4 will support it.

For web I use lossy JPEG only, but not with Photoshop or ImageReady because the file size is too big, same for GIF and PNG. The Fireworks compression for these file formats is better, better quality and smaller file size!
The browser support for JPEG2000 is too low, but Adobe has the power and $$$ to change this. ;-)

To **use** JPEG2000 all Adobe applications have to support it in reading and writing! And if there is a preview like in the Photoshop extension, please add a check box to enable/disable it, JPEG2000 compression is really slow and for lossless output I don't need a preview. ;-)

But why do you ask this question after the launch of CS3 and not before? This would have been a great feature while using PDF/X-4 - a whole JPEG2000 workflow.

David Harradine — 05:50 PM on April 03, 2007

Never touched it, only use jpg's for the web and heard there were browser compatibility issues, end of story. But that was 2001 come to think of it.

What can jpg 2000 offer my web graphics that jpeg 1984 (or whatever) can't? Maybe if you re-named it pro sexy web (.psw) format people would take notice.

I think most people, certinaly photographers, associate jpg with compromise and if one wants maximum quality from their digital cameras they shoot raw without question.

It would be a sad day if cameras capture jpeg 2000 natively before they do DNG.

Barry Pearson — 01:12 AM on April 04, 2007

I suspect that the new HD Photo format from Microsoft will take over from where JPEG2000 failed to go.

My tests suggest that JPEG2000 offers slightly better lossless compression of both 8-bit and 16-bit images than HD Photo. But with Microsoft pushing HD Photo, and talking to companies about using it in-camera, (probably for lossy rather than lossless use), JPEG2000 may get sidelined.

Both of them face strong competition from other common formats such as JPEG and DNG, and TIFF itself of course. Those 3 formats in the previous sentence are the ones that currently matter to me as an amateur photographer.

Rich Gibson — 09:14 AM on April 04, 2007

I did for awhile because of the lossless compression, but given it simply

didn't gather much adoption in the marketplace (e.g., digital cameras would have been the logical spot), I haven't in quite some time... Now, I shoot in RAW, convert & store DNGs, and use JPG to upload to the labs (this is where I could still use it... the conversion and upload for the lab who is going to process the image, better format than JPG).

Alas, the market does NOT always get it right and I think that is what we have here. A superior format that for whatever reason the marketplace has shunned.

So in summary, if you find yourself ASKING whether or not it should be supported, it is probably time to put the format out of its misery...

Rich Gibson
photographer

[Nigel Moore](#) — 02:30 AM on April 05, 2007

I tried to use it, but browser support, or rather lack thereof, put me off taking it any further.

Some of the concerns raised above, regarding quality/compression, might be addressed if Adobe rolled better PNG compression (such as an optimiser like PNGCRUSH) into its export options. It would be great to have that option right in the Save For Web dialogue, for example.

Oh, and export as ICO format for favicons, that would great to have in the application. Currently I use the Telegraphics plug-in, which does an admirable job.

Post a comment

(If you haven't left a comment here before, you may need to be approved by the site owner before your comment will appear. Until then, it won't appear on the entry. Thanks for waiting.)

Name:

Email Address:

URL:

Remember Me?

○ Yes ◉ No

Comments: (you may use HTML tags for style)

To confirm that you are a human & not a Spam-bot, please enter "photoshop" (without quotes) in the following textbox. **(required)**:

[Preview] [Post]