

## Why some pictures seem big when viewed on your monitor

You have probably received an email with an attached picture that does not fit within your computer monitor and you have to scroll around aimlessly to see the entire picture. If you have wondered what is going on, the answer is rather simple — the image you have been sent is larger than the screen resolution of your monitor. If you have been sent a 6 MP image that measures 3,000 by 2,000 pixels, and your monitor resolution is set to 1024 by 768, then the image is many times larger than what your monitor can display. The email program is simply showing you what has been sent. By contrast if you open the picture in a photo-editing program you will see the entire image as the program is set up to suppress enough pixels to make the entire image viewable.

Well, prepare to scroll even more with the next new crop of cameras coming this fall setting hurdles of 15 to 20 megapixels. It seemed just a few years ago that 8 megapixels were held as the point where digital resolution would match 35mm film. As that size is now only found on new entry level cameras, it would appear that the camera companies are keeping their promise of delivering higher MP cameras if the public is still buying.

If each year brings larger and larger capture rates, you might begin to wonder how much resolution do you really need? It depends on what you plan to do with the image and how much detail you want to see.

In my digital imaging classes I often hold up posters and have my student's guess the megapixels of the camera used. Often the guesses will be way off and when I reveal the image has been taken with a 10-year-old 1.5 megapixel camera they are usually stunned. One poster I show is of a simple subject and the reason it looks OK as a poster is because large images usually aren't meant for close viewing, but from a distance. Upon close examination, the image does not appear to show much detail at all. If I showed a poster of a complex subject like a group of people, the result would not be very satisfactory, as the viewer would concentrate on small parts of the image instead of looking at the whole.

So how can this be? We are often told that you need a certain megapixel requirement to make a certain size image. Nonsense! You can make any



WAYNE PALMER

## Bits & BYTES

size picture you want from any other sized picture or file. The key is whether you will like the results.

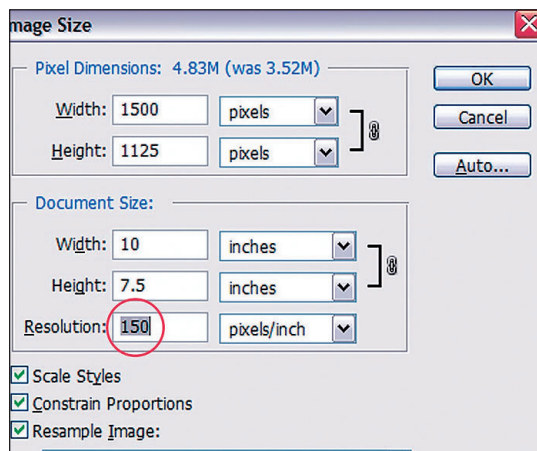
A reader recently wrote and asked me how can you take a small file and make a large print. His results were not very sharp and you could see the jagged edges of the pixels in the image.

The key to upsizing a picture is through a process called interpolation. In its simplest form, interpolation duplicates the existing pixels in the image, but when the resized image is not a multiple of the original, the computer uses some fuzzy logic, or advanced mathematics, in determining what should be replicated and what is not. You will probably find this option in a photo-editing program where you can change the original image size to the size you want. Remember, you don't gain any new detail, but the generation of additional pixels and forcing them to be printed in tighter pattern on the paper makes the individual pixels indistinguishable creating a smoother, non-pixelated picture.

Most editing programs have an option to resize a picture. In that dialog, simply enter the dimensions you want. You will want to keep the aspect ratio the same, so you should only have to change one dimension. The program will fill in the other dimension automatically. The other number you will want to change is the resolution or how many pixels per inch comprise the image. Make sure this number is at least 150. A smaller number might show the jagged edges of pixels. When this step is completed, you can run a sharpening filter on the result, which will increase the contrast of edges and give the appearance of a sharper looking image.

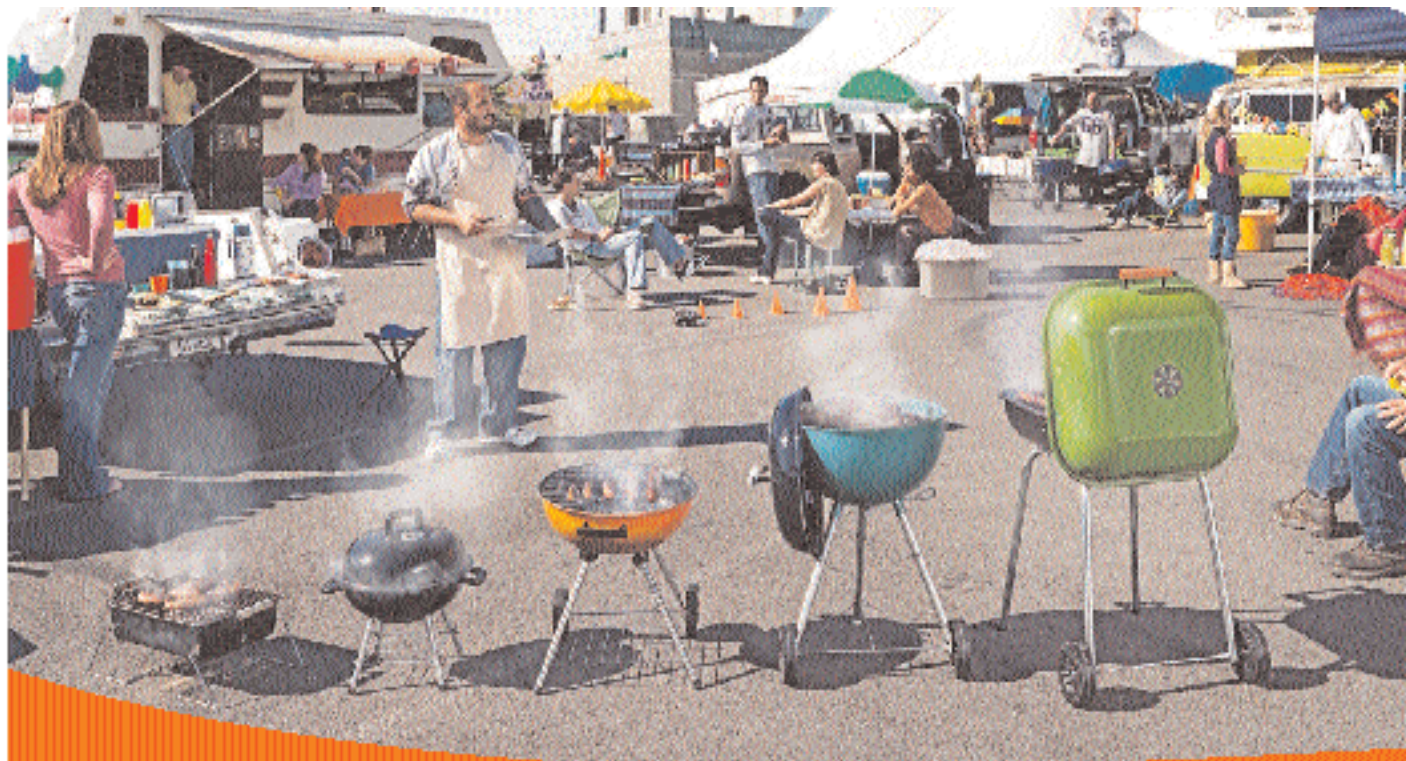
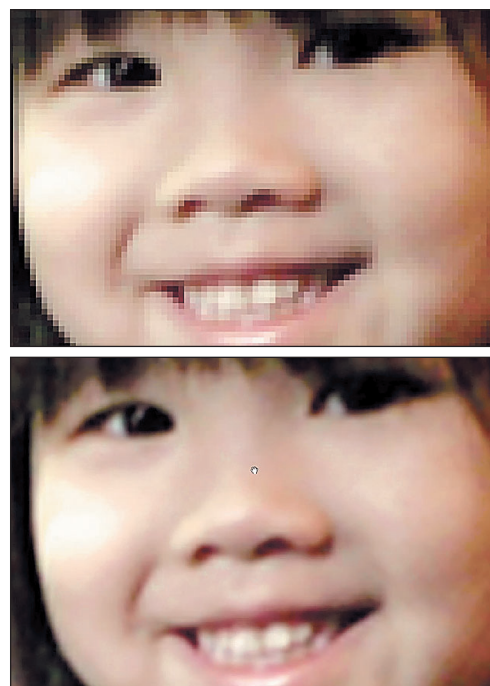
By the way if you have seen one of those TV forensic programs a blurry pixelated image is magically transformed into a sharp and detailed picture by running an algorithm, it's science fiction. Upsizing a picture can only work with the data provided, it will not create new details.

Again if you have ideas for future articles, please drop me a line at [pmi@palmermultimedia.com](mailto:pmi@palmermultimedia.com).



PHOTOS PROVIDED

Be sure to set your resolution to at least 150, shown above, to ensure pixels, shown top right, won't be visible in the image. When changing the resolution to a higher number, more pixels are generated and will not be noticeable in the print, shown lower right.



## Switch to the network with the best coverage.



**BUY ONE FOR \$4999**  
**GET ONE FREE**

after \$50 mail-in rebate debit card with feature package purchase and 2-year wireless service agreement per phone  
**LG SHINE™**  
 AT&T Mobile Music™ includes an MP3 player, MuziCD, and more  
 Get your personal email with AOL, Yahoo!, MSN\*

**\$7999**

after \$50 mail-in rebate debit card with feature package purchase and 2-year wireless service agreement  
**PANTECH MATRIX™**  
 Dual-sliding full keyboard device  
 Available in red, navy blue, or black with green

**\$7999**

after \$100 mail-in rebate debit card with unlimited messaging package purchase, minimum \$399 voice plan and 2-year wireless service agreement  
**BLACKBERRY™ Curve™ 8330**  
 Integrated GPS with AT&T Navigator  
 Get access to personal and corporate email

Best Coverage claim based on global coverage.



The new **at&t**  
 Your world. Delivered.

**FREE SHIPPING | 1.866.MOBILITY - ATT.COM/WIRELESS - VISIT A STORE**



AT&T is the exclusive wireless provider of Penn State sports. Text UONS to 72645 for PSU sports news, offers, content, and more. [www.att.com](http://www.att.com)

**AT&T STORES**

Williamsport: 245 E. Third St., 717.244.1111  
 Williamsport: 245 E. Third St., 717.244.1111

**AUTHORIZED RETAILERS**

Local: One-Stop Communications, 120 E. 1st St., 717.244.1111

Williamsport: 245 E. Third St., 717.244.1111

\*AT&T also imposes monthly a Regulatory Cost-Recovery Charge of up to \$1.25 to help defray costs incurred in complying with State and Federal telecom regulatory, State and Federal Universal Service charges, and surcharges for customer-based and revenue-based state and local assessments on AT&T. These are not taxes or government-required charges.

Early Termination Fee: None if cancelled in the first 30 days thereafter up to \$175. Some agents impose add'l fees. Offer available on select phones. Limited-time offer. Other conditions & restrictions apply. See contract & rate plan brochure for details. Subscriber must live & have a mailing addr. within AT&T's owned wireless network coverage area. Up to \$36 add'l fee applies. Equipment price & mail may vary by retailer & may not be available from independent retailers. Rebate Debit Cards: BlackBerry® Curve™ 8330 price before unlimited messaging package purchase, mail-in rebate debit card, and 2-year wireless service agreement is \$179.99. LG Shine™ price before mail-in rebate debit card, feature package purchase on first phone, and with 2-year wireless service agreement per phone are \$119.99 and \$49.99, respectively. PANTECH MATRIX price before mail-in rebate debit card, feature package purchase, and with 2-year wireless service agreement is \$149.99. Allow 60 days for fulfillment. Card may be used only in the U.S. and is valid for 120 days after issuance date but is not redeemable for cash and cannot be used for cash withdrawal at ATEs or automated gasoline pumps. Card request must be postmarked by 12/31/2008; you must be a customer for 30 consecutive days to receive card. Sales tax calculated based on price of unactivated equipment. Offer Usage: If your mins of use (including unlit arcs) on other carriers' networks (offnet usage) during any two consecutive months exceed your offnet usage allowance, AT&T may at its option terminate your svc, deny your card use on other carriers' networks, or change your plan to one imposing usage charges for offnet usage. Your offnet usage allowance is equal to the lesser of 750 mins or 4% of the anytime mins incl'd with your plan (plus offnet usage allowance is the lesser of 6 hrs or 20% of the hrs incl'd with your plan). Unlimited voice services: Unlimited voice svcs are provided solely for live dialog between two individuals. No additional discounts are available with unlimited plan. Service provided by AT&T Mobility. ©2008 AT&T Intellectual Property. All rights reserved. AT&T, the AT&T logo, and all other marks contained herein are trademarks of AT&T Intellectual Property and/or AT&T affiliated companies. All other marks contained herein are the property of their respective owners.

### Free Health Programs!

**HUMPHREYS PUBLIC LIBRARY**  
 November 20th - 1:00pm  
**"Why Should I Care About Diabetes?"**  
 Presented by Susquehanna Health

**JERSEY SHORE PUBLIC LIBRARY**  
 October 28th - 2:00pm  
**"Understanding Cholesterol"**  
 Presented by Department of Health

**NOVEMBER 12th - 10:00am**  
**"Chiropractic - It's Essential & Trustable"**  
 Presented by Department of Health

**MUNCY PUBLIC LIBRARY**  
 November 13th - 1:00pm  
**"Prevent Cancer - Just the Facts"**  
 Presented by Susquehanna Health, Family Center for Reproductive Health

**TAKE CARE LYCOMING - Neighbor to Neighbor**

Free Health Programs will be given at the following locations:  
 November 18 Highsville (8:30-10:00 am); Muncy (12:30-2:00 pm) and  
 Montgomery (2:30-5:00 pm) Fire Co.'s  
 November 20 Highsville (8-10 am); Jersey Shore (Philadelphia Ct. 11:30-1:00 pm); and Highville  
 Township, Mt. Fire Co. (8-9 pm)  
 November 21 The Campbell Street Center (9am-12 Noon)

For more information on any of these programs, please call 822-3000.

**LYCOMING COUNTY HEALTH SERVICES CENTER, INC.**  
 IMPROVING BETTER LIVES

The Williamsport Sun-Gazette is printed on newsprint which contains recycled material

