

# Quality Scans

by Kim Pettit

**Y**ou desire to scan a photo, a drawing, or some other item to get a digital image. How can you get the best quality? What do you need to know?

Consider how a scanner works. It measures the light that passes through or reflects off the item to be scanned, and transforms this information into digital data. That determines the image size and resolution of the scan, and thus its quality and usefulness for your publications.

There are two kinds of scanners: flatbed and drum. Flatbed scanners use a fluorescent tube as their light source. Drum scanners, in contrast, use a tungsten or laser, so they usually give better quality. Whatever equipment you use, however, there are several ways to ensure better scans.

### *Quality of the image*

1. *The images or items to be scanned should be as free of any dirt, lint, or debris as possible.* Even correction fluid may be evident on the completed scan.

2. *If you are scanning several items as part of a montage, assemble and scan them all at once.* If you scan the items separately, then assemble them in an image-editing program, your file size will increase and the shadows and highlights will not look realistic.

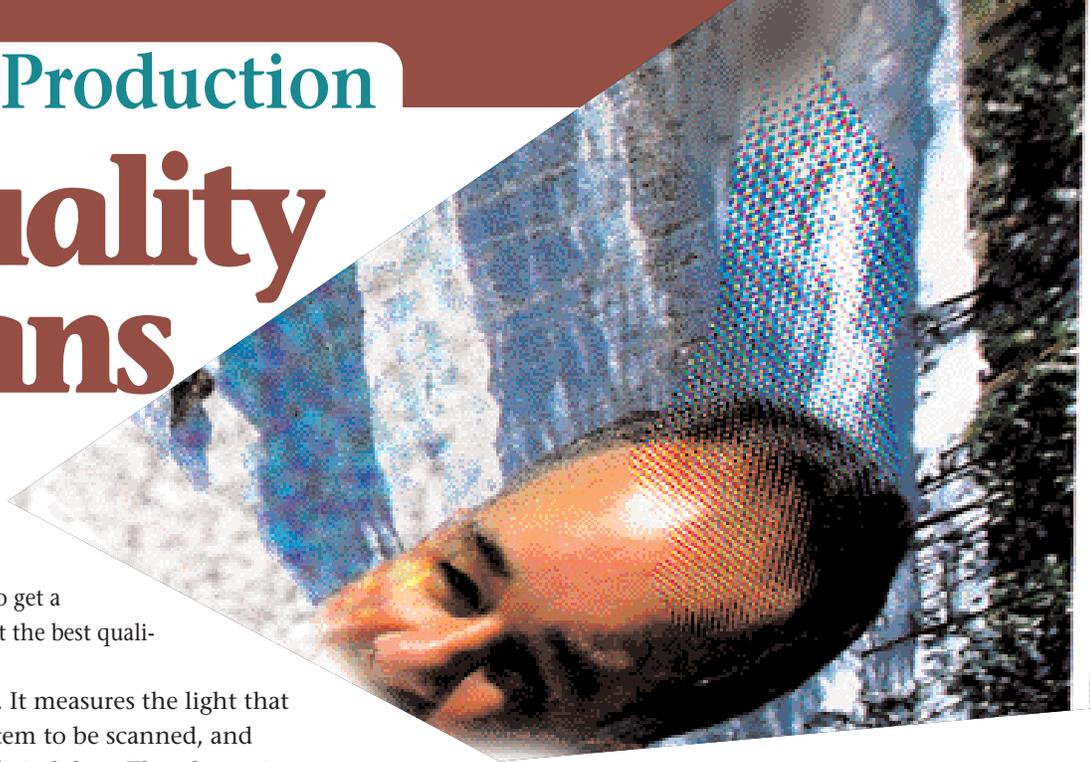
3. *Avoid scanning photos printed in magazines or newspapers.* If you must do so, be aware that you will need to fix the image with your image-editing software. Printed images have already been screened, and the screen pattern, together with the pixel pattern the scanner creates, is likely to produce an undesirable moiré effect (the surface will look wavy or rippled).

4. *Be careful when you choose items to scan.* Fabric, linoleum, wrapping papers, and other patterns and textures may be copyrighted. If you are scanning art or a photograph, first make sure you have permission to use it. Scan from the original art whenever possible.

### *Scanning equipment tips*

1. *Make sure the scanner bed is clean.* Use an anti-static screen cleaner sprayed on a lint-free cloth to wipe away smudges and fingerprints.

2. *Align the item correctly on the scanner bed.* With a sheetfed scanner, align the image by trimming the top edge of the



sheet so it is parallel to the horizontals in the drawing. Tape it to a larger sheet of paper after aligning it with a T-square to prevent it from twisting as it is fed into the scanner. If you scan the image and it is crooked, you will have to rotate it in an image-editing or page layout program to get it straight.

3. *Use the different functions in your scanning software.* See how your scans differ when you open up the shadows, hold tone in highlights, or increase or decrease contrast. Learn through experience.

4. *Use the selection tool to crop off excess white areas.* Cropping on the scanner (instead of in an image-editing program) reduces the amount of time it takes to scan, and may reduce the file size.

5. *Your equipment may allow you to enlarge the image directly on the scanner instead of scaling it in an image-editing program.* The end result will be cleaner and sharper. The size of the scan of the original art or transparency should be as close as possible to the final reproduction size. While it is possible to enlarge or reduce the original scan, to maintain optimum quality you should not change the size more (or less) than 20 percent. Otherwise, you could distort the image or alter the color and tone values.

6. *The resolution of the image is critical for quality reproduction.* On drum scanners, resolution is measured in pixels per millimeter. On most desktop or flatbed scanners, it is measured in dots per inch, or dpi. If the line screen for printing is 150 lines per inch, then the scanning resolution should be 300 dpi, or twice the lines per inch, to provide sufficient quality.

**I**mages need to be clear and meaningful, aiding readers to grasp the message. Get the best quality scans you can. Add force and vitality to your print communications. ❖