What's going on?

by

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From the image above we can't really garner what these men are looking at, we can only speculate. As soon as we see a group of people looking into a specific direction we usually turn our heads and join them, in an attempt to find out what is going on. Our curiosity is not simply an idle effort for the sake of some banal piece of information –obviously there is some of that too- but in essence it's related to our survival. We want to know if we are in danger. A deep-seated animal instinct meant to protect us. The fact that we see here a puppy quite content and with his ears placidly at ease, provides us with the feeling that nothing serious is about to happen.

As we move ahead in this digital world of ever changing technological realities, speeding along at an ever-faster pace, we are confronted with events that somehow mirror this picture. Not only can we find the equivalents of a content puppy, but also those that are looking towards what for us are unknowns. We can't really appreciate if the vantage point is of importance let alone know what are they looking at? In the end, what is the significance of what is going on for our continued existence?

If we take the metaphor of this image – and apply it in our case to photography– we can surely make a case for scouting around to see if we are in need to "protect" our professional future. Dealing with issues of technology is not something solely for those so inclined. Their impact (the technologies) is also about major conceptual and formal transformations that affect the world of photography in equally significant ways.

At Photokina, the German trade show for photography, Kodak, just announced the Professional DCS Pro Back 16 megapixel sensor (4080 x 4080)—two-and-a-half times larger than any other pro digital camera sensor on the market

today—generating a 48 MB file. That, by some measures, is about twice the resolution of 35-millimeter film. You can't do better than that to obtain the highest resolution possible and superior image quality. It's designed for use with a medium-format camera, such as the MAMIYA RZ67 Pro II and HASSALBLAD 555ELD Cameras, so your workflow can easily include digital.

You can shoot approximately 1 image every 2 seconds with a burst depth of 8 frames. With an ISO of 100 you can take great images in daylight and capture movement with confidence.

Also announced by Kodak, were the new 'super fast' Kodak Professional HR500 film scanner, (capable of scanning up to 500 images per hour); a large format solution for every application, indoor and outdoor; new pigment inks; a new 4720 portable thermal printer.

We are now told by John Markoff, that a company founded by one of Silicon Valley's pioneer chip designers, will announce an image-sensing chip capable of the same resolution as the Kodak chip, but made using a technique that could be much less expensive.

Executives of the company, **Foveon**, said they had given a prototype camera based on their chip to a photographer in Los Angeles, Greg Gorman, who has used it to make a portrait of a cowboy. In that image, no pixels, or dots, were visible to the eye, even with the photograph blown up to a size of 8 feet by 4 feet.

Already, digital cameras being sold on the consumer market for less than $1,000 are rivaling 35-millimeter film cameras. Digital images of the clarity achieved with Foveon chip could begin to challenge even the much more expensive cameras made by companies like Hasselblad that are used by professional photographers for portraiture, advertising and fashion.

"We're headed to flat-out replace the film camera," said Carver Mead, the founder of Foveon, which is based in Santa Clara, Calif. Mr. Mead, a pioneer of the chip industry, became a Silicon Valley legend in the 1970's by helping develop techniques that for the first time enabled chip engineers to create circuits containing tens of thousands of transistors.

Industry analysts say that the new technologies could affect much more than still cameras. High-resolution images, if produced in quantities that made the new generation of image-sensing chips cost only several dollars apiece, could become a staple of cellular telephones and other hand- held devices and might bring the cost of a consumer video camera below $100. And the contest is not only between film and digital sensors, but also between two kinds of chip-making techniques. Foveon's planned announcement, coming on the heels of Kodak's, suggests a sharpening battle between the two competing manufacturing technologies at the heart of a billion- dollar market for digital photographic sensors.

Coming on the heels of all these announcements, we are being informed about the LuraWave image format. (.LWF) LuraWave is a proprietary format that offers higher quality and smaller file sizes than the current JPEG standard, making image files more suitable for fast data transfer across the Internet. LuraWave is a lossless to lossy, scalable, multi-resolution image format that offers a number of additional features and flexibility over current standards. The ability to perform lossless (no loss of data from original image) and lossy (discards data from original image) compression within the same mode is a key difference from the existing JPEG standard, which is lossy and therefore unsuitable for archiving of images. Moreover, LuraWave's multi-resolution format allows a new ability to progressively download sharper versions of an image. Initially, a low-resolution version of the entire image appears and then more resolution and details are filed in as the data stream arrives. Images can also be scaled to different sizes without having to create separate files. [LuraWave files may be viewed on the Internet by downloading LuraTech's free browser plug-in or with LuraTech's Java applet, which requires no plug-in. Both may be downloaded from LuraTech's website at: www.luratech.com.]

If you now add to these new compression technologies the fact that IBM as well as Delkin Devices from San Diego, California, have come out with new memory cards of up to I gigabyte MicroDrives for cameras, you start to realize what is happening to the storage potential of photographs within the camera. Just consider the following. With a lossless compression ratio of 100:1, applied to 48 megabyte files such as produced by the new Kodak Professional DCS Pro Back, you would end up with a 480 K. file. Of which you then could save two thousand such images per one gigabyte MicroDrive. Mind you these images are the largest that can be produced today. This would be the equivalent of 170 rolls of 120 film. When was the last time you took that many rolls of film in one day?

One last step that we need to consider is how all of these images are going to stored so that we can retrieve them in the future.

Improvement in storage technology has been nothing short of legendary: the capacity of hard-disk drives grew about 25 to 30 percent each year through the 1980s and accelerated to an average of 60 percent in the 1990s. By the end of last year the annual increase had reached 130 percent. Today disk capacities are doubling every nine months, fast outpacing advances in computer chips, which obey Moore's Law (doubling every 18 months). At the same time, the cost of hard-disk drives has plummeted. Disk/Trend, a Mountain View, Calif. based market research firm that tracks the industry, reports that the average price per megabyte for hard-disk drives plunged from $11.54 in 1988 to $0.04 in 1998, and the estimate for last year is $0.02. James N. Porter, president of Disk/Trend, predicts that by 2002 the price will have fallen to $0.003 per megabyte.

Thomas Peppard, director of Chase Manhattan Bank's new 50 million Image Archive Project, has to process 11 million checks a day. Consider each check the equivalent of a low-resolution photographic image. That represents 600 gigabytes per day. After seven years, they are looking at 970 terabytes that people will need to access quickly over the Internet. Right now Peppard is storing those 600 gigabytes per day, on magnetic tape. The tape replaces the bank's manual microfilm-based archive because it is faster and less expensive to use. On microfilm, the cost is 34 cents per 1,000 checks and retrieval time is one to three days. StorageTek's 50-gigabyte tapes cost 10 cents per 1,000 checks and deliver an average retrieval time of 90 seconds, says Peppard. Even faster access can be achieved with the company's TimberLine tape, which delivers data in about 20 seconds.

As we look back at all these numbers, it is quite evident that the future of photography is based upon digital technology with the days for analog images gradually declining in importance. However there is a strong case to be made for film based photography and it's continuity if one considers the millions of cameras that today are already in existence around the world. It is hard to imagine that these will all suddenly become obsolete and no one offering film to such a market. What probably will happen is a gradual decline,

with film becoming more and more expensive as the volume of sales decrease. Photographers, both professional as well as amateurs, will have a strong incentive to use digital technologies as the cost of zero for consumables (film) becomes more evident.

If you consider that you as a photographer have it tough in deciding what to do next, think about the photographic industry that have to live a schizophrenic life. On the one hand they need to develop and improve upon the film-based tradition for their on going business to survive, while at the same time investing heavily in research and development of all the digital alternatives that are going to destroy their analog base offerings which are their bread and butter of today. For them the problem is that if they don't do it, some one else will. For you as a photographer the same logic is probably also on your horizon.

For sure there are photographers sitting around content like the puppy in our picture, not worrying too much about what is going on, but then there are others who are perched up as high as possible in order to see what the future has in store for them, and acting accordingly. The choices of what to do next are as much about the technologies themselves as about the life styles of the individuals concerned.

An era of transitions, such as this one, is fraught with crisis all the way from the industry titans down to the youngest kid deciding to study photography. There are no simple answers or solutions of what is the "right" thing to do. And we haven't even begun to discuss issues of content and form. That will have to wait for a future editorial.

Please, share with us your thoughts on any of these topics.

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