

**Antonio M. Perez**  
**Chairman and CEO, Eastman Kodak Company**  
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**ARE DIGITAL CAMERAS DINOSAURS?**

Are digital cameras dinosaurs? Are they evolving rapidly and sufficiently, to take advantage of the digital ecosystem where they belong? Or are they lagging behind?

Just like the first cars were called “horseless carriages” because they were basically like horse-drawn carriages with the addition of a motor instead of a horse, I will make the argument that what we have today in our industry are not real, full-blown, digital cameras but, to a large extent, only “film-less cameras,” and we are all responsible for it.

In the past we had one lens, one shutter, and something to capture the focused light. Today, we still have basically the same configuration as optical cameras, but with a silicon sensor replacing film.

Is silicon replacing silver the BIG contribution of digital imaging technology?

Obviously not, but if we, as an industry, do not change the analog paradigm, the analog architecture and workflow, our customers will never benefit from the advantages of digital.

And really, there is no reason not to be further along! We have the internet, universal broadband, low-cost, high-quality CMOS image sensors, web-based repositories, computational power that exceeds our expectations; so what’s the problem?

In fact, digital imaging today should allow consumers to capture the world as they see it. Camera features, settings, and modes of operation, should exist only to enable creativity, not to deal with the limitations of the past.

Digital products and services should not require our customers to be engineers, but rather, inspire them to be artists and publishers as they capture the moments of their lives.

Point and shoot film cameras made the industry, and defined standards for the consumers decades ago. But they were limited, because of optical physics and that is a legacy of limitations that current digital cameras, amazingly enough, continue to have.

A good example:

There should be no need for a consumer to carry several snap-on auxiliary lenses, for wide angle, or long telephoto, to capture what his eyes are able to see. Why can't we have more than one imaging pathway, with multi-sensors in the same camera?

But none of us, none of the current providers of digital cameras, are moving fast enough away from the analog architecture and workflow.

So much for the camera companies. But what about the rest of the business verticals that are part of digital imaging?

Take, for example, the computer companies.

They deliver PC's, where our data, our pictures, our lives are held captive. We're required to be glued to the PC to do the things we want.

This is not convenient nor consumer friendly when it comes to dealing with large imaging files. Spending hours manually organizing or cleaning up those files is another admission of failure.

Digital technology can do a lot more than that to help consumers.

How about the software providers?

They are leashing us to their proprietary systems and they keep selling us software packages to solve problems by post-processing the data.

Problems that, in fact, should not have been created in the first place, such as Red Eye, Low Light, wrong composition, and so on.

The printing companies?

Their image pipeline and workflow have one and only one purpose in mind. It's about feeds and speeds for printing your file. Of course, hard copy is very important, but it is only one part of the overall multimedia experience.

And the communication companies are not helping much either, by maintaining proprietary pipelines and making it very difficult, if not impossible, for the consumer to exchange files easily across them.

We all need to work together to make this industry truly interconnected and, by doing that, expand the business opportunity while satisfying consumers.

Because, at the end of the day, it will be the consumers who will define the new Digital Imaging space.

The consumers will set the rules and the industry segments will abide or they won't be participating.

So, what are these new consumer rules in this digital world? And, what have we done at Kodak to abide by these rules and fulfill the consumer's vision?

We at Kodak, believe that these are the new TOP 5 Consumer Rules in Digital Imaging:

Consumer Rule #1 and first industry challenge: Full Ownership belongs to the Consumer.

The first and most important rule, above all, is that consumers must own their pictures, their multimedia memories, and their life data.

It is theirs to capture, manipulate, share, and print or display; at their own will, without any limitation caused by technology, format, device or location.

All of us, working in partnership as an industry, will have to facilitate that.

Consumer Rule #2 and second industry challenge: Easy Quality

We're an instant gratification society. We will choose what makes our life better and easier. The well known expression "You press the button, we do the rest" established by George Eastman 125 years ago, made photography for the masses one of the most enjoyable, and I would argue, the most enduring of hobbies ever invented.

But, on a daily basis, we were still not getting good images. Quality is too much of a lottery and too often, a great moment to remember will get lost because of low light, high contrast, back lit shadows, flash in the face, lack of dynamic range, and other conditions.

But thanks to digital, we have fortunately an infinite number of options to solve those problems, and with those choices, comes a powerful ability to unleash creativity and obtain flawless pictures.

Consumer Rule #3 and third industry challenge: Easy Sharing

We are social animals and we need to share thoughts, feelings and knowledge. Images are an integral part of our lives. We must enable people to share faster, seamlessly and much simpler than it is possible today.

Without true partnerships across our industry this will not happen, we will disappoint consumers and we will miss one of the greatest business opportunities of our time.

One of our top priorities at Kodak is to build strong partnerships with other industry leaders to make this happen.

Because, from the consumer's point of view, the industry is in a chaotic state of technology and standards, which is leading to consumer confusion, for example:

We have Wi-Fi and Wi-Max; Bluetooth and infrared; IRDA, USB, SD/MMC, MPEG, JPEG, HD, 802.11, CDMA, GSM, you name it!

Consumers are confused!

The real challenge, is managing those variables in a way that is useful to the consumer for easier and better sharing.

Consumer Rule and industry challenge #4: Easy and Permanent Archiving

Hunting through shoeboxes, photo albums, shelves of unlabelled videotapes, DVD's and hard drives, is not a very exciting experience, as we all know. But this is where the industry is today.

Recorded images, sound and videos must be always available and intuitively capable of organizing and presenting themselves in a form meaningful to the author and the audience.

There is not much value in having lots of wonderful digital files that we cannot find or have access to when we need them.

And that brings me to the last of the TOP 5.

Consumer Rule #5 and fifth industry challenge: Portability

The consumer need is Anytime, Anywhere. We live in a very dynamic, mobile society; families and friends are spread around the country, around the world.

Consumers carry interconnected devices under the basic promise that we will have easy access to our most important information.

Today, we carry pda's; phones; cameras; phonecams; pagers; you name it. Likely still a wallet with some pictures!

And what all of those things contain are small pieces of what is becoming an extraordinarily complex puzzle. All we did was replace a paper filled wallet with multiple silicon-based devices all filled with disconnected data bits!

Why is that? Because all we are doing, again, is duplicating the digital product as a variation of the analog, not as a paradigm change.

To answer these five challenges, our industry must create a new interconnected architecture; combining the best of the thin client/server relationship and mesh network architectures.

High-quality, high-resolution images and life's critical data bits require economical, reliable and simple to use storage that is always available.

We must create a system where every device is an intelligent node, on a self-perpetuating, and continuously growing network.

At Kodak, we live by those 5 rules that we have developed by listening to consumers for decades. So what is Kodak doing to enable these consumer rules?

In September 2003, we presented to the world a new Digital Vision for Kodak – a vision that we believe will delight consumers by following the new rules.

Last year, 2005, for the first time ever in Kodak's 125-year history, Kodak digital revenue was larger than its analog revenue – with the largest part of that digital revenue coming from our consumer digital products and services.

Kodak has been one of the leading investors in digital imaging technologies for the last 15 years. We have created one of the strongest intellectual property portfolios of fundamental digital imaging patents and know-how that we are now commercializing at rapid speed.

And don't forget the power of the Kodak brand when it comes to imaging. In the past 18 months, several independent studies have reported the power of the Kodak brand.

In August 2004, for example, Harris cited Kodak as the #2 tech brand in the U.S.;

Forrester Research, in a separate study, cited Kodak as the #2 most trusted manufacturing brand among technology companies; and,

Synovate studies show Kodak to be the #3 brand in all of Asia among all brands, not just imaging brands.

Just like in the industrial economy when capital and know-how were the barriers of entry, in the digital economy those key assets are IP and Brand, and thanks to them, we have become in the last few years:

#1 in the US in digital cameras, #3 worldwide, closing in on number 2  
#1 WW in snapshot printers, competing against the “specialized printer companies”  
#1 WW, by far, in kiosks  
#1 in online printing

And, as important as those market share numbers, is the fact that we have delivered very important Worldwide firsts and received significant industry awards, such as:

Best of Innovations awards for The Easy Share One, the first consumer Wi-Fi digital camera and for the Easy Share Photo Printer 500.

And just this week:

the 2006 PC World Innovation Award for the Easy Share V570 camera, the world's, first-ever, dual lens camera

Plus, very important Customer Satisfaction Awards from JD Power & Associates:

- #1 in digital camera picture quality in the segments in which we compete and
- #1 in customer satisfaction in 2 price points for the second year running, of which we're very proud.

This is the consumer digital business at Kodak today, and this is what we are working on:  
Innovating to make the complex simple.

We will continue to follow the consumer rules that I mentioned before.

In order to do that, we are working on what we call 3 Game Changers ... three new technology platforms that will exploit the digital ecosystem, and allow us to give consumers what they need by shattering the analogue paradigm.

The #1 Game Changer is “Flawless Imaging” and the Kodak Technology Platform that will make it possible for consumers is called “Kodak Perfect Touch.”

As I said before, digital cameras have basically the same architecture of that “box brownie” we created 125 years ago; one lens, one shutter and something to capture the focused light.

With Kodak Perfect Touch, whose first technology elements have started to appear in Kodak’s products already, yesterday’s common photographic flaws will be fixed, well before viewing.

This new Kodak technology will continue to evolve to redesign other “sacred cows of the old architecture” such as:

The Flash: will be used as a tool and not a crutch!

The Lens: Digital pathways allow new lens design and camera architecture, such as multiple lenses.

The Viewfinder: The best way for a consumer to compose an image is actually when you can easily see all of it!

The pixel wars: They exist because we’ve not given the consumer anything else to equate quality to. Making better use of those wasted pixels is a game changer.

The shape: Camera phones proved that cameras don’t need to be rectangular, the shape of the original box brownie. And who says you need to hold a camera?

Imagine if every picture looked like the “MAGIC MOMENT” that you remember seeing, but never quite got.

Kodak's Perfect Touch will be using technologies such as face detection for auto-composition, eye tracking, auto-scene detection to automate the scene mode on the camera (sports, portrait, fireworks) and better manage the light conditions, and many more.

It will be Picture Perfect, any time, all the time.

#2 Game Changer is Intelligent Content and the Kodak technology platform is called "Kodak's e-finder."

Think about the shoebox: the ultimate picture tragedy.

Because pictures go in there and never come out; never get organized or tagged. Hardly ever repurposed, hardly ever enjoyed again.

And today, we've merely replaced the shoebox with a PC.

We're doing the same thing again, except that this time those pictures could disappear eventually.... because of hard drive malfunction, corrupted files, lost computers, lost files, old formats, you name it!!

Kodak's e-finder technology will allow us to create "intelligent content." Instead of consumers hunting through shoeboxes, photo albums and hard drives, to share their experiences, their recorded images will be always available and capable of organizing themselves.

Imagine a world where all digital content automatically has an identity. A world where you have access to all that content as you wish. Connected in a way that whatever device you are interfacing with, automatically knows how to connect you to your data.

This is the essence of a thin client/server network relationship that I talked about earlier; a relationship that not only provides connectivity and image enhancements, but redundancy and protection as well.

But what if more types of data were to be captured automatically?

We all talk about metadata. Today, beyond the information that pertains to how the image was captured, we do very little with it, and, more often than not, we throw it away! Big mistake!

Image-capture systems and the content that they generate, must be interconnected and self-aware, in order to liberate the user from tedious tasks that interfere with the creativity process.

For example, by using:

- Face detection and face recognition through the years, identifying someone as they grow.
- Recognition technology that detects your subjects and stores and classifies them by their name and face.
- GPS linked with street information (more than just coordinates) not only to add to the pictures, but also to interactively let you work with your images and data in a relevant manner.
- Cross link between date and time with personal calendar to identify events, (whether they are birthdays, holidays, or vacations)
- Automatic scene classification and orientation
- Automatic zoom and crop

Kodak's e-finder technology will take metadata to a new level.

# 3 Game Changer is Semantic Understanding. The Kodak technology platform is called "Kodak's e-moment."

The last and final game changer sounds far out, but it is not as far out as you might think.

Semantic understanding is like a rule-based system that learns with every interaction. Semantic data relates to you and the world around you. It's the next level of automatic understanding. It adds levels of automation until now never dreamed of, and again, driving simplicity for the consumer.

Semantic understanding through Kodak's e-moments will remove the obstacles and provide the tools that have stood between consumers and their goal of telling their personal stories with the maximum impact. Think of it this way: The pictures themselves become learning organisms.

With this technology, the pictures begin to recognize each other – so, without human instruction, a picture will use its metadata to find another picture with related metadata, so that, all the pictures keep assembling in new groups, depending on how they relate to each other.

In fact, we all know, there is no right way to organize pictures. Appropriate organization is dependent upon each situation, where there is a need to find a particular image or collection of images. The collection must be easily manipulated to the most relevant view at that exact moment.

Semantic understanding will allow us to look at the relationship between a range of image-based media – such as photos and videos – and other documents such as marriage licenses and report cards. As the technology recognizes the relationships, it will actively respond to and assist the consumer to tell her story with a new level of visual impact and creativity.

In short, we have found a way to use technology, so it provides a solution to its own complexity. Very much what Kodak has done again and again over the years. It's like “you press the button, we do the rest” in the digital space.

We will create an architecture that allows third parties to write plug-ins to augment our own technology.

In an early embodiment of this technology, pictures will self organize in a post processing scenario. Later on, that will be done in real time, automatically.

The elegance to semantic understanding is that it will be very easy for a consumer to do tasks that are very valuable but basically impossible today.

For instance, I will be able to request to see all the pictures I have ever taken of my daughter at Christmas.

This is intelligent, intuitive data analysis that learns how I share my images, and how they relate to me and others in my circle. It's a self-learning system. The more it learns the more it infers, which means it learns more, which means it infers more.... needing less and less correction with time.

Imagine a selected group of friends and all the phone cam pictures they took of a Superbowl or a wedding, self-organizing in a collection. One impressive, real time Conga line or photo blog!

How are we going to make this vision a reality?

First of all, let me tell you that this is not fantasy.

Many of the key elements of these technologies exist today. They certainly need more work, and better integration, and that is what we are working on.

But most important, we need to be working with other industry leaders to package the technology effectively.

That is why, at Kodak, we have been busy announcing partnerships with industry leaders that not only have complementary skills and a similar vision, but they are as determined as we are to make it a reality soon.

Examples are the announced Kodak partnerships with Texas Instruments, Microsoft, and IBM.

Another great example – announced here at CES:

Kodak and Skype have partnered to create Kodak Photo Voice software – a new voice to storytelling. So now, on the Kodak Easy Share Gallery, you can share your photos with friends and family, and talk with them at the same time; a wonderful experience!

And another fantastic partnership announced last night ... (January 5)

Let me introduce Ed Zander, Motorola's Chairman and CEO and Kodak's newest partner.

Last night, Kodak and Motorola announced our new partnership that will change the face of mobile imaging.

ZANDER: I thought it might be a good time to tell you and everyone here how excited we are at Motorola to be Kodak's newest partner!" "By partnering with Kodak, the number one digital imaging company in the world, Motorola -- the global leader in mobile design – will forever change the way the world captures and shares their mobile images.

PEREZ: "Kodak's very excited too, Ed. I said earlier we must change the way we work together if we are to win.

Together with the Motorola team, we will simplify and enhance the quality of virtually every aspect of the mobile imaging experience to truly change the consumer experience."

(Perez resumes)

Think about what will come from partnerships like this one with Motorola, focused on the consumer, and on innovation that will change this industry forever.

We, together, as an industry, have to work on these challenges.

It's no longer just about pictures or voice, data or text. It's a future, where information and imaging become one, to enhance the customer experience.

We at Kodak, are committed to innovation and partnerships to make that future a reality.

Because the needs of our customers are like the pencil line you saw in the first video.

That pencil, doesn't stop. And nor will we.

Kodak's new brand logo ends presentation

Thank you.