



Trends in Technology kevin dunal

I've had a number of jobs with Adobe Systems in the last little while. I was the acting Vice President for the U.S. and Latin American operation and in between that they stuck me in this little stint to reorganize the entire worldwide sales organization. So I get to go and live in California for part of the winter and come back and for the next foreseeable future, which is in about 3 months, I'm back managing the Canadian operation.

My background educationally is I'm an industrial designer. So I'm pretty passionate about graphic design and it's great to put that together and work for a company like Adobe. That being said, I'm also a manager and I don't get near the products as much as you people do. And it's always interesting working for Adobe and coming up in front of a bunch of graphic designers to tell you about your trade. I really want to make something clear from the start. At Adobe, we've come up with an awful lot of enabling technologies. I think we've revolutionized. The desktop revolution started with PageMaker on the Mac a number of years ago, and we brought tools into place that allowed people to do incredible things.

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Everybody's seen the ransom note and you know, jumping onto Collin Cole's comment about learning design first, I want to make sure...we make tools. That's what Adobe does. Designers use them and do incredible things. Design is probably the most important thing to us. It's just incredible how far we've come. Look I have 37 fonts in my system. I got them all into this document. And it just keeps going. It's like wow, I took this document and now I have it on the web. Well I used Adobe PDF and all of these fonts represent perfectly on any operating system now. Little scary. The tools and how you work with them are really important.

We hear, oh, this is going to take away work from designers. It's putting desktop publishing in the hands of everybody. And I think what's happening is the exact opposite. Sure it's taken away some of the barriers of how to produce things. It's made it easier. I think my first Mac was about \$8,000. It ran on two floppies. Computers are a lot cheaper now. So starting out is a lot easier. But there are so many media. There's so much out there. So many tools, different formats. Designers can be the ones who will win this one.

I'm going to talk about this from a toolmaker's point of view. Adobe is a toolmaker. We're very passionate about the craft. We have been leading in a lot of different areas. I heard a great stat...PhotoShop, 96% of the images on the web have been touched by PhotoShop. We're pretty

happy about that. But, at the same time, it's an everchanging workplace. And we've got to make sure that we respond to where the market's going. I'm going to talk about the future; what it will bring. I'll talk about the growth opportunities in two areas; the traditional markets...I'm not going to spend a lot of time on that because we know the internet's growing. I'm going to talk a little bit about epaper. I'm going to talk about emerging markets. What's next? What's coming down the road? I'll finish off talking about community.

What will the future bring? And we'll talk about growth in present markets. This is how we Adobe, look at it when we're building tools. The traditional print market. It's growing at 7%. It's pretty saturated, but there's still growth. The web is causing more printing to happen. Everybody's talking about what the explosive growth and epaper of the Internet. I'll try not to be too salesy, but I've got to ask some of these questions. How many people are using Acrobat files today? This part of our business is growing at over 40% a year. There are over a million downloads of the free reader every week and we're of 200 million users right now. There are incredible design opportunities around making documents digital. It's a free reader, but start looking at what's going out there in the marketplace. In the U.S. there's an Act of Congress, called the Paper Elimination Act, going in place that, by 2003, you will have a digital equivalent for every paper document. I don't know the last time you were in a government office, but there's an awful lot of paper there. Billions and billions of documents have to be transformed and moved to that format. In Canada, all publicly traded companies have to submit in Adobe PDF. We're pretty happy about that. The move to digital documents is amazing. As a designer, it opens up the field to you. Smart forms. Just forms and what can happen with that. Moving information around.

The next area that I'm going to talk about is ebooks. There's been a lot of press lately on what's going on in the ebooks world. Stephen King's *Riding the Bullet* came out and there's some

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interesting stuff there. Has anybody here downloaded a book? Ok. It's starting to get out there a little bit more. Adobe bought a company called Glass Books. We'll show you what it looks like. But then I started thinking about the implications and we're going to do our little CityTV thing here. If we could switch the camera over to the video in the back. Shall we trade sides here.

The ebooks reader. It's based on PDF. I can log on the Internet and I download books. Right now I've got a few on my desktop. A couple of favourites, *Alice in Wonderland*. I like that one because it's very similar to the industry that I work in. I've got the Jules Verne *Journey to the Centre of the Earth*. I'll click on this and open it up so you know it's actually a book. One of the things I like about this is I can change the format. I'll read it like it is, a book. And I can sit back and page through it. You know it's basically just like a normal book. A couple things to come to

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mind while I’m ready, so I can sit back and jump to chapters. I showed this to my father in law. He can’t see that well. I can sharpen the text. This is a good one. I’m going to page through a couple of things. I’m going to go to...one of the things that when I’m reading is I always want to look up words. I can double click on it and it’ll bring up my dictionary that’s in the background. I want to just take that though a little bit farther. Jules Verne book, and my son who’s 8 was looking at it and playing with it and he asked, oh “And I said well it’s a really cool book. It was one of my favourite books as a kid. Let me read it to you. And I sat down on the couch and I flicked the orientation around and we started reading the book. And within issues I realized I was reading a really great book to him that he was quite interested in. I wasn’t thinking about a digital book. I was thinking about the content. And it was really amazing how quickly I fell into that. And then I looked beside my desk and there’s this incredible stack of books and an immense amount of business material. I do the classics. You go to the cottage or wherever you go for recreation and I used to carry over my big bag of stuff that I was going to read, in my spare time and I invariably carried it back. Or when I really wanted to read a document it wasn’t there. And also now that I’ve loaded all this stuff down to my notebook and I think, this thing can talk to me. So I’ve got a book on it and I’m driving in the car and it’s reading the book to me. And you want to find out the information that’s going on from those market places and you want it quickly and you want it from a lot of different sources. So you know the ability to pull that all into one place is quite something. And it might be difficult to show it on a stage, but it’s actually very easy to use. And I think we’re going to see an incredible shift into that in the marketplace.

Then there’s always the dialogue. Books are not going to go away. There are some beautifully published books. One of the cool things this does is bring some interesting books back. If you’re surfing the web, take a look at a site called octavo.com. Octavo was started up by Adobe’s founder, Dr. John Warnhoff. He’s a rare book collector and he’s gone out and got access to libraries all over the world and is digitizing rare books and making them available to people at a very low cost. This is one of them. This is *Microafrica* which was published in 1664. It’s an incredible book. The illustrations are incredible. All these pen and ink pieces. These books are captured digitally with a camera that is higher resolution than film. So when you’re looking at it, you can go right in and see fiber in the paper. The works that are available are incredible. Benjamin Franklin’s book on the discovery of electricity. And all his notes leading up to it. My son likes to invent stuff so I downloaded it and I started talking to him about the guy who invented electricity, what he was thinking at the time and reading his notes. It’s really amazing all the information that’s available to people.

Let’s talk about how we’re going to view all this new content. So new markets. Today we’re all pretty excited about the way we can log on the Internet and I think that’s going to change to any place, any time, any device. Everybody’s wired up. How many people are using lap technology or getting information on their cell phones right now? How many people have tried it? How many people have tried it and decided it doesn’t work? How many people are using PDA’s? How many people have the original Newton? It’s interesting watching the transition of these devices.

If you try a new technology and think that's not going to happen, think again. We've got to look back at history. Anybody remember what the first laptop looked like? It was this box that bathed you so much radiation you didn't need chemo. It had a little tiny screen. It weighed 1,000 pounds. It was unbelievable. And now, laptops are inexpensive. You can get them in tangerine and blueberry. You can edit video on them. We don't think twice about what a laptop can do.

That cycle is happening so much quicker. So right now, some of the wireless technologies need a bit of work. Someone is going to figure them out really quickly and we'll start to see a convergence of how all these different technologies work together. I read a lot of business press. If you're ever in an airport, Bloomberg puts out these daily market reports and if you look at them they're printed off a Tektronics ledger colour printer. They're ledger size and they e-mail those to the different locations or distribution areas. They print it out and send it to the airports and the United Cigar stores and places like that. It's interesting; it's fast; they're really expensive. It's like five dollars for this little two page thing. So you start putting some of these technologies

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together. They're talking about GPS. I'm standing in an airport and I want to find out what's going on with the Adobe stock and the news headlines of the day from the Post can read it in a certain format on my phone, which obviously is limited. But what if I can e-mail this info via my phone to a kiosk that I know is there because I'm GPS-enabled and the kiosk spits it out and I pick it up and it has all this beautiful rich content, colour photos and everything else. And it's billed to my credit card. All of a sudden, that's a pretty interesting piece of technology. We're going to get used to this fairly quickly. Whether it be my phone, or my Pilot, we're going to start moving lots of data around. And it's going to come a lot sooner than you think.

What's that going to mean from a designer's point of view. I'll show you. What sales-oriented guy would be perfect without some graphs. Here's how Adobe looks at the world, at what's going to grow. You see numbers like wireless Internet subscribers, broadband media into households and digital cameras. Obviously that's a big one for us. More people are using digital video cameras now than analog.

Obviously web publishing is growing. I don't think there's any question on that. The wireless market is going to grow at the same pace. That's pretty compelling news about the amount of content that's going to be produced. This is a U.S. based presentation. I love the term ROW. What a great term, "Rest Of World." It's interesting being a Canadian working in a US company. A lot of our business in Canada is driven from the US. We are the largest supplier of information and materials to the US and the US realizes that the rest of the world market is growing and will exceed the US domestic market. That's a really good story for Canadian designers. All of a sud-

den, they're paying attention to us. They couldn't handle what was going on in the US originally. Now they realize that everything else is exploding. So there's some really great opportunities there.

As a designer, you should start thinking about your work in terms of structure and content. We've all been through the process of getting a beautifully printed element onto the web. There were a lot of problems and invariably you had two different streams of workflow to do it. Through the help of some toolmakers like Adobe, you're now able to produce content that you can flow to either print or Internet fairly quickly. That's going to change again and there's no way designers can keep up if they treat each medium as a separate workflow. What does that content look like when it's on the web? What does that content look like when it's printed? What does that content look like when it comes across the phone? What does it look like on a handheld device? There is going to be an awful lot of work in structure, in thinking that way. And then when you consider the dynamic capabilities of web publishing that adds a whole other element to it. If you know that I am a fortysomething viewer and these are my likes and dislikes, you're going to spit out different content to me than you would for a twentysomething viewer. The amount of content is going to explode.

Personalization is going to be really important. We're already seeing that today. Looking at some of the technologies that are out there, I can tell that some are clearly the wave of the future. Visit Nokia's site. There is a little thing that you can download and test out what your format looks like and the upload is free off of their site. Start playing with that because although it might not be there today, it's going to be there really quickly and it would be great if you were the first ones to the table.

You're going to hear a lot about network publishing. We've been through traditional desktop publishing. We're now in the middle of web publishing and we see network publishing as the next step, as being a far greater and larger element. Think about dynamic content, structure and...sorry, the dynamic part and the content part and then structure.

Community. Interesting term. What does it mean from a toolmaker's point of view? Working with you people, we used to sell the box and some of you would buy the box. Some of you would copy the box from your friends. But you'd talk about it and work with it. We realize that we have to take care of our communities. We're investing in the communities that we do business with. That means sponsoring things like this. We're looking at what we can do to tie the community together. We can do that through our tools. We're going to be designing for our different communities so that you can personalize the tools. That's going to be a huge new feature. The web has brought together many different communities. We've only just begun to see the tools that can help that. We see community in the form of standards. For example, Dr. John Warnaco, Adobe's founder, is openly publishing standards. Gone are the days of closed systems. If they're going to work, you've got to make it available for everybody. We did that with Postscript. We're doing that with PDF. How many people have run through the problem of trying to do things in HTML? You know it's pixels. It has its own structure. There's only so much flexibility. And

if we're going to move to markets that open up these opportunities we've got to start looking at new standards.

How many people have heard about SVG? Anybody doing anything with it yet? It stands for Scalable Vector Graphics. Think of it as a smart standard. It has incredibly dynamic capabilities. Imagine we're on a web site that shows this auditorium. As I move across the different seats, we are seeing where they are and what the prices are. And imagine this being updated live so that as the seats get sold, they start disappearing. Very easy to offer. Actually Illustrator has some plugins right now that offer it. Its capabilities are amazing. One of the greatest things about scalable vector graphics, if I print this out, it will work on whatever device you're working with. It is able to move across devices. This will be a real incredible enabler for structure. Start looking at it. It's an open standard with the W3C, the Web Consortium. Everybody's involved with it and it's going to be really something.

So where does this go from technology trends. Publishing eco-systems. This goes back to where Collin left off—you're going to think it up and we're going to be the tool providers of how you work with it. Before it used to be really, really difficult. Our commitment is to make tools that are really easy to use and cover off all of these areas. John Warnaco describes it is our vision perfectly, a publishing eco-system that works at the speed of thought. So if I'm working in web, I'm working in dynamic media, motion media, video, DVD. I want to work with all of those formats and I want to be able to publish them on any device anywhere. What we have to do, and what our commitment is, is make those tools really easy. The tools are going to change. Our commitment will be to make sure it is easy to migrate through to the new ones. What you want to focus on is what the message is and how the technologies together and hopefully we'll make the backend easy.

The best way to predict the future is to invent it. Adobe has a pretty interesting strategy to move forward. You've seen from some of the stats where the market place is going. There are some unbelievable opportunities for a designer. Structure, content. It's amazing. This is a huge time for opportunity. For designers, the ship is coming in; row out to meet it.

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