

GRAPHIC EXCHANGE

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JOHN WARNOCK

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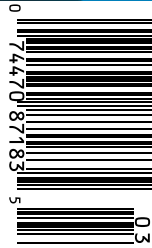
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This is how ARGDO describes its discipline: "*Graphic Design is an interdisciplinary, problem-solving activity which combines visual sensitivity with skill and knowledge in areas of communication, technology and business. Graphic design practitioners specialize in the structuring*

and organizing of visual information to aid communication and orientation." Despite the mention of "technology" in ARGDO's description, I found it curious that not a word in its literature or on its website (www.argdon.org) is devoted to the subject of proficiency in digital skills.

ARGDO's pamphlet for buyers of graphic design services suggests they discuss projects with prospective designers in terms of time frame, fee structures and budget considerations. Yet if I was a knowledgeable client searching for a



JOHN WARNOCK, CO-FOUNDER (WITH CHUCK GESCHKE) OF ADOBE SYSTEMS AND THE INVENTOR OF POSTSCRIPT, MAY BE REGARDED AS ONE OF THE TRUE ICONS OF THE DESKTOP PUBLISHING REVOLUTION. ONE OF THE FEW CEOs OF A TECHNOLOGY COMPANY WHO WELCOMES TECHNICAL DISCUSSIONS, WARNOCK IS AN ENGAGING, ARTICULATE SPOKESMAN FOR BOTH ADOBE AND TECHNOLOGY ISSUES IN GENERAL. GRAPHIC EXCHANGE PUBLISHER DAN BRILL HAD THE OPPORTUNITY TO SIT DOWN WITH WARNOCK FOR A ONE-ON-ONE DISCUSSION THE DAY AFTER ADOBE STOCK HIT A NEW HIGH, WHICH FOLLOWED THE ANNOUNCEMENT OF ADOBE'S QUARTERLY EARNINGS. THE CONVERSATION COVERED A BROAD RANGE OF TOPICS.

DAN: First, let's talk about the Macintosh market. What kind of proportion and focus will there be on [Adobe's] product development for the Mac?

JOHN: We've consistently said that the Mac business is coming back, that it's been strong. We expect that the mix will probably stabilize

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around 60/40 between Windows and Mac. The worst quarter we had, in terms of Mac mix was 65/35—I think it was the third quarter of last year. Now, since the iMac was announced, and since the G3s were announced, that mix has stabilized around 60/40.

DAN: You've bought GoLive, and you've been acquiring other companies. Internal development appears to have not been as significant as what you have gone out and bought, aside from InDesign, which is the obvious exception. What is the future plan for product development? Essentially, are you looking to buy or build?

JOHN: We do both, and it's part of our plan to do both. Our run rate for R & D expenditures has always been around 20% [as a percentage of revenue]—forever—from the first days that Adobe brought out its PostScript devices to recently. It will sometimes ratchet up a percent or down a percent, but we try to keep R & D expenditures at about 20% and that's what we said yesterday at the press confer-

ence. In terms of acquisitions, we do look for technology acquisitions, where someone has built a great product like GoLive, and we feel that with our marketing distribution and our ability to bring the product into harmony with the user interfaces of the other products, we can gain advantage by doing that. So, we do both acquisitions and internal development.

DAN: Depending on...?

JOHN: Depending on the levels of expertise. InDesign clearly we did internally, because we had all the talent in-house to do page layout, so we did InDesign over the past five years as a ground-up development. Sometimes we can buy plug-ins for Photoshop to add value, or we can do them in-house—it depends on which is most economical.

DAN: Given that it took five years to bring InDesign to market, and given that Adobe appears to be taking over the entire printing and publishing market, can we count on you being able to turn around quickly enough when the market needs a

product, given the billion dollar size of the company now?

JOHN: The core tools and the machinery in the cross-platform stuff in the basic core graphics code, the basic text handling code—that's in a thing called core technologies. To bring out a new product is essentially doing something that depends on the core technology. That's a very well-developed piece of code that's been debugged for years and is very stable. InDesign for instance, gets all of its image import filters from PhotoShop. It gets all of its graphic import imaging from the vector graphics side from Illustrator. That's core code. It gets its basic text handling from CoolType, which we call our text engine. So the architecture for InDesign was built so that it could build in the various capabilities from other products to make the products work together in a seamless way.

DAN: What's Microsoft doing that has you concerned?

JOHN: We worry about Microsoft in that, if they get a very strong prod-



graphic designer, I would be asking questions like “What format will we use to exchange files?” or better still, “What referrals can you give me from a printer or prepress house?”

What’s the point here? Simple. Digital production workflows have changed the role of the graphic designer dramatically. Where once a designer could hand off to a graphic artist who would take care of mechanical production for the printer, now these two jobs have been merged. The designer is now also the graphic artist. And the designer must be

capable of not only designing well but also producing print-ready jobs with proficiency.

What this means is that computer skills form the backbone of a designer’s role. Knowledge of file construction and preparation is fundamental to being a good graphic designer. Familiarity with the various tools and techniques that standard graphics applications offer is both a prerequisite for success and a competitive advantage.

Conversely, a lack of competence with digital tools limits

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uct at the low-end, they have a tendency to start at the mass market and then ratchet up to squeeze out the professional products. They have tried to squeeze on us on a lot of different fronts. Initially in 1989, they tried to attack the PostScript market with Truelmage—remember that? Truelmage was their version of PostScript and they shipped one commercial product, which was a failure. So they were not terribly successful, even though they tried to give away the code, to take over the PostScript market. Then they came out with PictureEditor, which is the competitive product to PhotoDeluxe. On a consumer level, PhotoDeluxe essentially got all the OEM business...in the picture business, we have substantially more market share than Microsoft. If Microsoft does come out with a successful product, then it is dangerous.

DAN: Is there one [product] in particular?

JOHN: There is one called PhotoDraw, that in my opinion is badly positioned...a reasonable product, but it’s not gaining the market share. We still have the brand, we still have the position. We are always aware of the competitive threats coming up.

DAN: When you look back at your days with Xerox at Palo Alto, how closely did the future from that perspective parallel what has actually

gone on? How closely has Adobe grown in developing from the original vision that you had?

JOHN: The vision was there, but what was never there was our expectation of the success that we’ve had. We thought that PostScript was absolutely a very cool technology. We thought that it had the potential to revolutionize the printing and publishing business, but we never dreamed that it actually would revolutionize printing and publishing, because it’s a huge, huge, huge industry! It was very hard in those days to project it becoming a standard across an entire industry, because all the companies I had worked for prior to that couldn’t even get niches, let alone standards. So getting a standard was a very, very big deal.

DAN: In terms of going forward from here—you are in your late fifties, and Mr. Geschke is of a similar vintage...

JOHN: (chuckling) Oh, no, he’s older!

Dan: Essentially you two guys have in your hands the future of the whole printing and publishing industry. What’s your plan, both on a personal and a corporate basis, for the legacy that you’re going to leave and the road map that you’re going to have to build? Adobe stock just hit \$76. You’re not suffering for money. I’m sure you’ve got a lot of things that will continue to inspire

you, but it’s not going to be that long before you’re going to be thinking about smelling the roses. John: I think when we got the hostile takeover attack from Quark last summer, the stock was down at \$24. Chuck and I looked at each other and said, “It is not going to end like this, that is simply not going to happen. We are not going to let that happen, we won’t allow it.” So, I think that in the past six months, we have become much more engaged in the business, both in an operational point of view and in a direction-setting point of view. I am very happy with the current management that’s under me. We have a very good co-ordinated executive team that works very well together. I am bound and determined that when I do retire, it is going to be an extremely strong company, with a very strong technical foundation and at least three years of very strong progression.

DAN: How much notice will you give?

JOHN: (chuckling) When I say three years of very strong technical progression, it’s at an upper trajectory!

DAN: You spent some time in Canada, back in the 70’s...you were in Vancouver for a while and you got a little taste of living here [in Toronto]. What are your memories of Toronto?

JOHN: Incredibly pleasant. My wife and I love Toronto...it’s one of our

favorite places to live. We love the people, we think it’s a great city. It has all of the good parts of New York and not the bad parts.

DAN: What is your personal perspective on the Canadian market and its importance in the whole world market?

JOHN: Well, in some sense I don’t even think about it in those terms. I know that essentially, Toronto is the publishing capital of Canada and it is the creative capital of Canada in terms of all the film and television work that is done here. So, my perspective in terms of the Canadian market is that Adobe’s customers are the creative types and the creative types are here. How big it is, is not as important as the quality.

DAN: What is the contribution of the Canadian market—and Canadians—to Adobe’s success?

JOHN: Well, we’ve looked at Canadians as being some of the aggressive early adopters of technologies. A lot of people are stuffy—Canadians aren’t! (laughing)

DAN: Do you recognize that Canada is a different country?

John: Oh, absolutely! I’ve lived here!

DAN: As you know, we’ve had a bit of a skirmish lately in the publishing sector over split-run advertising...

JOHN: No, I’m not aware of this.

DAN: Essentially what it boils down

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to is a philosophical difference. Americans say, 'Magazines are a form of entertainment product' and Canadians say, 'It's part of our culture, it's cultural expression.' How do you see it?

JOHN: I think it's a funny balance between free enterprise and protecting the cultural heritage of the country. We have certain laws about mix of music, we have certain laws about mix of entertainment, and I think those laws are in place to help protect the culture. What the U.S. will do, is what the U.S. does! I haven't been able to control that!

DAN: Adobe has a major say in this industry, and may have an indirect say on how that one unfolds.

JOHN: Well, I actually spend a fair amount of time in Washington lobbying a couple of times a year, trying to keep global issues global, trying to keep freedom on the Internet, trying to keep encryption policies sane and rational...so there are a lot of issues.

DAN: Let's talk about print production—high end print production—InDesign being the focal point. First of all, is InDesign behind schedule?

JOHN: It will be shipped in the third quarter. We are not going to ship an unstable product and we are not going to ship a product that doesn't win across the board in all aspects.

DAN: Makes perfect sense, but you've been working on it for five years.

JOHN: We have been working on

it for five years, and when you get your hands on it, you'll understand why.

DAN: [InDesign has] some glaring

omissions which are pretty fundamental to printing—[application-based] trapping and imposition. I don't see signs of anyone developing a trapping plug-in, which certainly seems to be pushing us into in-RIP trapping—but that means [using] PostScript 3 RIPs...

JOHN: There are a number of plug-ins that do PDF imposition.

DAN: I'm talking about InDesign as a standalone product—and about the down-and-dirty world of print production, where a press is waiting...and we need a page right now.

JOHN: InDesign is already fairly large. You certainly could, over time, put imposition into InDesign. We have an entire group working on the PDF workflow...the imposition, trapping and separations stuff is being directed at the PDF workflow...that's where we've chosen to put the energy...if you were the architect, you may have chosen to put it in InDesign.

DAN: Why would it be one or the other? Why not both?

JOHN: We may some day, if the customer requirement is there. What I'm telling you is that we have a finite number of resources and I'm telling you where we are putting those resources. That doesn't mean that if we had an infinite number of resources, we wouldn't solve problems in all kinds of different ways.

DAN: So you don't see trapping as being an essential part of a page layout program?

JOHN: I think it could be in both places. I think it could be in the PDF workflow or in the page layout. We've chosen to attack it in the PDF workflow.

DAN: But, Quark has trapping...

JOHN: (laughing) I don't care.

DAN: So you don't think that that's going to be an impediment to getting acceptance in the print industry?

JOHN: From the feedback we got—we've done fairly extensive market surveys on this, and we've talked to lots and lots of customers and said, gee, why don't you check what is important and what isn't important...and the feedback we got is that where we've put it is fine. We may have been wrong, we may have miscalculated, but I don't think so. I think when you get your hands on the product, you're really going to like it.

DAN: What about Quark and InDesign? We can open up Quark documents in InDesign—well, first of all, can we open up all Quark documents in InDesign? John: Actually, our testing is going pretty well.

DAN: Is it a 90% success rate? Is it a 100% success rate?

JOHN: Well, we would like to think that it's a 100% success rate, but I don't know in reality whether it will open them or not. That's a very hard standard to live up to. From what I understand, the testing has gone very well. We're having great luck and the filter is very good.

DAN: That seems to be the cornerstone of every presentation on InDesign. But there has never been any mention made of the fact that it is not perfect—nor should we expect it to be. But you're putting a lot of emphasis on it in your marketing.

JOHN: Well, I think that we're putting the emphasis on where it's solving issues. It's a deep concern to customers that they have a transition strategy, and that this transition strategy is credible. Opening up Quark documents is a big part of that.

DAN: What if you want to go

back the other way?

JOHN: Why would you want to?

DAN: Until InDesign proves itself, Quark is going to be the basis of certain workflows. People are going to want to get InDesign documents to go back to Quark.

JOHN: Well, Quark should write the filter... We wrote the filter going the other way.

DAN: Is this in discussion?

John: With Quark? Well, Quark doesn't talk to us on a regular basis these days (laughing). It's not what I would call a friendly, congenial atmosphere.

DAN: Back to InDesign again. What about screen refresh speed?

JOHN: Actually, the testing that I have done... I built a document where I brought in one of every image type—a TIFF image, an EPS image, a PhotoShop image—all into InDesign, and rapidly moved them around... did drag and drops as much as I could, and I didn't find performance problems there. I wasn't annoyed.

DAN: What about PDF/x? What is its relationship to PDF 1.3? Will InDesign have a plug-in for creating a PDF/x document?

JOHN: Well, we have, in the PDF 1.3 spec, really tried to address some of the extensibility issues in PDF documents. To what extent InDesign produces tagged documents that can be round-tripped—that won't be perfect the first time around. What we will be able to do is reliably produce good PDF documents. There are some issues there; what we are trying to do is have really good PDF documents—and to round-trip most of the information.

DAN: What about producing a PDF/x-1 document? Are you involved in that at all?

John: I don't know about the current release plan, and I haven't tested that product. I can't remember the dialogue box where it

asks you. I know that it asks you a whole bunch of questions when you produce a PDF file. I don't know about the compatibilities, backward and forward. I just can't remember. I would fire up the application if I had my PC here with me.

DAN: Another topic is portable job tickets. Adobe has the specs for PJTF...but I don't think anybody has made a portable job ticket yet.

JOHN: There are implementations in the printer group that have been doing that, doing the job ticket, but you are getting into a realm of technical level where I don't know the specifics.

DAN: When are we going to see a [Acrobat] Distiller error log that means something? Right now when I distill, I have no clue where I went down, and I have no clue why I went down. Kevin [Nathanson, Adobe Acrobat product manager] said, it's just an exit routine thing.

JOHN: That's right. All Distiller is a PostScript interpreter. There is an error handler that you can download into the printer. This will actually image as much of the page as you've actually got, and then give you the stat, the PostScript stat, of where the error is, and give you a tag of what was undefined and what wasn't undefined. Right now it just says, "No PDF file produced". What there should be is an error handler that produces the PDF file and shows you where you failed.

DAN: Wouldn't ya think?

JOHN: Wouldn't you think! That's sounds fairly reasonable.

DAN: So, how about Stilton? When are we going to see it?

JOHN: Actually, the progress being made is going well. We are trying to figure out exactly what the categories of the products are. The demo that I have seen in recent weeks is really a Web-based asset management sys-

tem—very cool—and we're targeting two different groups: the super high end Time Inc. types and the smaller work groups.

DAN: When?

JOHN: Good question. Hopefully this year—but I'm not promising.

DAN: OpenType—the original announcement was, I think, May 6, 1996. It's been three years.

What's the status on OpenType for the high end print market?

JOHN: We are supporting OpenType in InDesign...that's correct, I believe. We are converting more and more of the typeface library to the OpenType format; we are committed to the OpenType format. As a matter of fact, most of the products are getting moved over, but that's a slow process. It's complicated both by Microsoft and by Apple.

DAN: On the one hand you have to work with Microsoft on something like this, on the other hand, you have to deal with it as a competitor.

JOHN: Yes, we have to deal with Apple as well. Their version of TrueType is different than Microsoft's version of TrueType and we have to live in both of these worlds.

DAN: Font issues are not going to go away, even after all these years.

JOHN: (throwing his hands up and laughing) Well, I've been trying to get the world entirely graphical, so that we can just forget all the font issues...

DAN: Can you speak a little bit more on what your strategy is?

JOHN: We are really trying to stabilize on OpenType, but there is mixed co-operation from Apple—and Netscape published this crazy open standard for the Internet, and other people are attaching different kinds of type. But Adobe is pretty committed to OpenType. We handle more type problems than anyone. Everyone has their own little corner. Mi-

crosoft will go off into this little corner; Apple will deal in this corner; and the Japanese will have their manufacturers in their corner; and we have to deal with all of it. These are very, very complex issues.

DAN: How long do you think it's going to take?

JOHN: I don't know if it'll ever sort itself out. I would love to believe that we could talk everyone into a single standard. That would make a lot of sense. That would save us a lot of grief.

DAN: Quark couldn't buy you...would you ever consider buying Quark?

JOHN: No!

DAN: There is a perception within the printing industry, that Adobe really doesn't care about the printing industry, because it's so wrapped up in the corporate market, with its Web development, etc. That would seem to be supported by the news that you are cutting back jobs and planning to put more into your Web products.

JOHN: The right way to think of that is that in terms of printing, we are pulling back from the black and white laser printer market. What we are putting our energy into is the high-end color market, the high-end prepress market, the demand printing market, and everything having to do with professional production printing...Fighting with Hewlett-Packard over the scraps of the laser printer market is not our cup of tea.

DAN: You bought GoLive...you paid something like \$39 million dollars for it. The actual tangible assets were only worth less than \$12 million. How did you justify what seems like a large amount of good will?

JOHN: I thought it was a bargain.

DAN: What percentage of your revenue two years from now might be from Web-based products?

JOHN: Actually, we are trying to measure that even today. For example, when we sell a copy of Photoshop, we don't know whether it's being used for print production, or whether it's being used for Web production. That's true also for Illustrator; so what we are trying to do is figure out what our market segmentation is today, and then we will have a better handle on things. We certainly know how much GoLive we are selling, how much PageMill we're selling, how much ImageReady and ImageStyler, but we are trying to get a good handle on the growth rates of those markets.

DAN: Why isn't ImageReady just a plug-in for PhotoShop?

JOHN: (laughing) Watch this space!

DAN: SVG [Scalable Vector Graphics]—could you talk about what it is and what Adobe's role is in its development? What makes it different from what Flash was supposed to be?

JOHN: What we're trying to do is upgrade graphics on the Web, and we're trying to build a real live Illustrator-like imaging model for the Internet, so that you can do zooming and reasonable printing from the Web. So, a Web page that has lots of graphics on it, like maps, won't print well. It'll bitmap, like it came from the early 70's.

DAN: Is this development happening inside Adobe?

JOHN: Well, we are working with a group called the W3C consortium. We put forward a spec, and they took that spec and with some minor modifications turned that into SVG. We, to our belief, have the only real implementation of SVG. We will target our applications to produce SVG and we will provide plug-ins to the primary user to render SVG. So, we want to upgrade the graphic experience on the Web, and make it not as brain dead as it is today. *