The New Print Production Mantra: Unified Offset/Digital Workflow

With digital printing in its various forms having been in the marketplace for more than 15 years, most industry pundits agree it has reached a level of maturity. Buyers of printed product, who once may have had objections to the quality or price of digital printing—or both—now no longer voice those objections for most projects. And as they have come to understand the advantages of digital printing—the ability to economically produce high quality short runs of full color materials on demand and its unique capability to deliver one-to-one communications—the face of printing has changed forever. No one is suggesting that offset printing is going away; far from it. But there is no question that as buyers have become more educated about their options, and enamored with their ability to produce shorter runs of more targeted materials, even offset run lengths and turnaround time expectations have taken a sharp downward turn. Some 80 percent of all print runs today are in quantities of less than 5,000. And the luxury of quoting weeks to produce a printed project has long gone the way of the dinosaurs.

Meanwhile, manufacturers of offset presses have not stood still. Today's presses are more efficient than ever before, with significant automation built in that drives makeready times and waste down. And direct imaging (DI) offset presses, where plates are imaged on the press rather than in a separate platemaking process, are gaining popularity as well because of the accelerated production times and reduced makeready they enable.

Parallel Workflows, Productivity Pressures

To meet this range of customer demands, many printers have both offset and digital production operations. Until fairly recently, these operations were considered as separate businesses, often even located in different buildings with different business names. Jobs were prepared either for offset or digital based on conditions at the time the job was received or scheduled, and if for some reason, a job needed to be moved from digital to offset or vice versa, it often had to be prepared all over again, to meet a different set of equipment specifications and requirements. While buyers were enjoying the benefits of a blended offset/digital setting, printers were facing ever increasing challenges presented by the confluence of shorter runs, faster turn times, and disparate, parallel...
As NPES Chairman for the past 9 months I have had the pleasure of writing this column. Choosing a topic that is relevant, timely, and interesting is not always easy. In this edition I have decided to move away from a specific business topic and spend some time more generally discussing business culture and change. I will do this in view of the ongoing and inevitable globalization of business.

It is Saturday morning and I am on a plane from Brussels to New York. I have recently made a discovery in business accessory chic. As I check in at the Brussels airport, I am informed that no carry-on luggage would be allowed...that’s right, nothing, not even a computer case. All that will be allowed on board is one computer, one mobile phone, some papers and a writing tool. But how will I carry these articles? Well, the new chic is “a plastic bag.” My very helpful airline counter person proceeds to hand me a see-through plastic bag, the vessel that would carry my heretofore taken for granted business tools. For a moment I am in a state of panic. Without this “bag of personal and business tools,” how would I make the eight-hour plane ride productive? I take a step back and decide that indeed I could survive with just my laptop, my Blackberry, a pen, and a limited number of business documents.

Why is it important for you to hear this story? The point is that we all get comfortable in our routines and become quite uncomfortable when change is thrust upon us. Some of us resist change, first passively and then when the change continues to come, we resist openly. Business globalization is here to stay and will require all successful participants to alter how they do business. Over the past week I have conducted business in Mexico, the USA, and Europe. As I went through my daily meetings, I observed the behavior and norms of my business partners in each part of the world with this column in mind. My conclusion is that while there are many nuances in each culture, the underlying principles and driving forces of self interest, shareholder value, fear of failure, and the desire for acceptance are universal. So the changes in approach I experienced in each part of the world, while real, do not represent universally different end-states. As we conduct business across borders or even here at home, across cultures, we can all be certain that these fundamentals are at work. Managing change then becomes more of a “how to do” process rather than a “what to do” process.

One classic example is negotiating with a foreign business partner for the first time. You know what you want and so does she. In typical American style, you want to jump into the discussion and get to a decision. Without paying attention to the “how to do,” your desire to conclude the negotiation could alienate this potentially valuable partner.

Let me close this column by assuring you that despite the big change I experienced in not being able to carry on my loaded briefcase, all is well with the world. I had a productive flight. I wrote the first draft of this column, caught up on some e-mail, accomplished some other business needs, and even found some time for relaxing. The fact is, on my next trip, I will consider limiting the amount of “stuff” I pack into my briefcase.
21st Century Economics:

INDUSTRY PERSPECTIVES, EXECUTIVE INSIGHTS TAKE CENTER STAGE
AT NPES ANNUAL CONFERENCE

A dynamic and content-rich program has been set for NPES’s Annual Conference, slated for early November in Ponte Vedra Beach, Florida. The agenda will address issues of pivotal concern to NPES members – industry consolidation, surging international markets, converging cross-media technologies, a changing labor pool, and the path toward heightened efficiency in manufacturing and business operations. Our speakers and panelists will address these and other factors affecting your business roadmap and bottom line. Here’s a quick preview of program highlights:

The keynote presentation on Sunday, November 5th will be 21st Century Economics, delivered by Dr. Lowell Catlett, an internationally known futurist whose vast knowledge of technologies and their implications on the way we will live and work has galvanized audiences from corporate and association communities around the globe.

David Torok, CEO of Texas-based Padgett Printing, will describe the trajectory of a 100-year old printing company mapping out its path of growth for the 21st century. Torok has guided Padgett through an extraordinary and profitable evolution from traditional print provider to a cross-media powerhouse.

Jeff Howard, a Principal Consultant of The George Group, will show how world class manufacturers achieve maximum efficiency and hone their competitive edge with Lean Business techniques. Howard is an accomplished expert with 17 years of experience promoting Lean Six Sigma and related strategies for Fortune 1000 companies across many industries.

Ravi Bhaskaran, a partner at Fog City Capital and expert on cross border investments between Asia and the U.S., will share pivotal insights on The Rise of India and China: Implications for the Printing Industry Value Chain.

Philip Kuehl, senior staff consultant at Westat, will elaborate on Pathways to Greatness,

his popular exposition on “Four Essential Factors for Organizational Success in a Changing Economy” that has inspired leaders in our industry and many others.

The Conference will take on added depth with a star-studded interactive printer panel discussion. For years, attendees have been reporting back to us that these printer panels are an extremely engaging, informative, and enjoyable component of the Annual Conference program. This year’s session will be moderated by NAPL president Joe Truncale, with featured panelists Bill Woods of The EPI Companies; Joan Davidson of The Sheridan Press; and Keith Kemp of Xerographic Digital Printing.

Members will also enjoy in-depth tutorials from key industry CEOs, and a world-class level of networking, exchange, and leisure activities that members have come to expect from NPES.

The NPES Annual Conference will be held November 4-6 at the Ponte Vedra Inn and Club, a lovely beachfront resort within easy reach of Jacksonville International Airport. A full conference agenda and registration information is posted at www.npes.org. Contact Irene LaBranche at (703) 264-7234 or e-mail ilabranche@npes.org.

Dr. Lowell Catlett
David Torok
Ravi Bhaskaran
having to make a choice the minute a job hits the shop as to where it is going to be printed. They should be able to prepare it in one place without having to repurpose files using different prepress processes and different databases for different output devices.”

**Enter JDF**

Addressing this production dichotomy was one of the promises of CIP4 JDF, an initiative in 2001 that many NPES members are familiar with, as the Association played an active role in helping it get launched. Now, five years later, JDF-enabled products are making their way into the marketplace in growing numbers and much work has been done within the vendor community to ensure that products can work together effectively to deliver more automation and more efficient workflows. An outgrowth of this is the ability to unify onco-parallel offset and digital workflows.

**Unified Workflow: Tangible Benefits**

At a time when print as a communications medium is facing stiff competition from alternative media, the industry can ill-afford the inefficiencies inherent in disparate offset/digital workflows. And not only from a production perspective—with ever-shrinking margins, printers also want and need a unified view of their entire business operation, whether offset, digital or a blend of both. They need to eliminate the Tower of Babel created by different vendors speaking different languages, and the discrete production silos that have difficulty communicating with each other, let alone the business systems that are critical to profitability in today’s fast-paced world. Luckily, because of increased adoption of JDF and other industry standards, combined with increasing collaboration among suppliers to the industry, not only are offset and digital workflows becoming more efficient as they proceed along their parallel paths, but those parallel paths are now beginning to converge.

**JDF is not a panacea, not an end in itself. Rather, it is a useful tool to address a business need. There has been a lot of hype, but now the hype is over and we are getting tangible benefits.”**

for Heidelberg, puts it this way: “Because digital presses were so different from offset, and because of the lack of sophisticated workflow systems for these devices when they first hit the market, we had a dual evolution. Traditional prepress products were driving filmsetters or CTP based on one architecture from an established set of vendors, and different players were bringing digital presses to market with their own workflow systems based on their applications needs five to six years ago and earlier. Now that digital presses have gotten faster and deliver better quality, it makes no sense to have two parallel workflows that will never intersect.”

**Deborah Cantabene**, Vice President of Workflow Marketing at Xerox, echoes these sentiments. “Printers should be able to bring jobs into the offset print management system and manage them through without...
will be continually expanding the numbers of components of the workflow as well as the robustness of those connections, with more data flowing among more components. With this type of infrastructure, printers can make better decisions and increase their profitability.”

In another example of vendor collaboration, Heidelberg is actively working with several of the digital print engine manufacturers, including Xerox, to allow offset printers to leverage their mature offset workflows all the way up to the point of print. “Now, as the print shop owner or the CFO or production manager, you will be able to see shop status from a single interface,” says Schaer. You can tell what your finishing, conventional printing and CTP devices are doing, what’s going on in preflighting, and the status of your digital printing devices at the same time. And you get the same robust level of data about the digital press as you get from your offset press, as well as a seamless flow of data to and from your print MIS for both your offset and digital production operations. This is the advantage that JDF brings.”

**Key Elements**

Kodak’s Bracken points out that there are four areas that must be addressed in an effective unified offset/digital workflow: production, data, business and color. He adds, “Color matching between offset and digital is a huge challenge. Increasingly, printed products are a blend of offset and digital in one deliverable, and the customer expectations for color matching are high. With respect to data, customers are telling us that as they move into digital printing, they want to utilize that unified workflow interface for data cleansing, data mining, and ensuring that the information used to generate variable data printing is correct.”

Xerox’s Larry Zusman, Worldwide Manager of Workflow Marketing Solutions and Services adds, “As we move forward, the alignment between digital and offset capabilities will be even greater in the offset workflow. People are already looking at how to set up variable data from within the offset workflow, and that is the next horizon. We are working hard with our offset partners throughout the world to integrate better and make this a reality.”

**Unified Workflows: Still Not Perfect**

Zusman offers a caution, though, saying, “There is a perception in the marketplace that this is a plug-and-play environment—that with JDF, A plugs into B like a TinkerToy set. Because the JDF specification has not kept up with the development of the hardware and software, this is not the case today. When you are sending a JDF ticket from an offset environment to a digital press, all you get is the basic functionality of that press; you can’t access all of the special features.” That, he points out, is why close collaboration between offset and digital manufacturers is important to deliver finely tuned solutions, based on JDF but which also extend the integration to take full advantage of both environments.”
As President and Chief Operating Officer of the Flint Group, Michael Gannon has a global outlook on factors that drive the world of ink manufacturing and consumption – and he hasn’t cultivated that view sitting in his U.S. office. When we started the process of lining him up for an interview, he was prospecting new business in South America. By the time we caught up with him by phone, he was in a different time zone, visiting a customer site in Australia. We sounded him out on the state of the ink business through Flint Group’s perspective.

Of the forces in the industry affecting the day-to-day and long term outlook for ink manufacturers, what comes to mind first for you?

Basically, I’d flag the issue of over-capacity in the industry. You’re seeing it being addressed through consolidations, such as the one Flint recently underwent with XSYS Print Solutions. Such consolidation is going to continue a while longer, although I’d say a good bit of it is done. It’s safe to say this is taking place in a number of industries; ours is far from unique.

In terms of demand for ink, what is happening in the publication industry, for example, that has contributed to this?

Within the mature economies of North America and Europe, you can see pockets or segments of growth in publications, but for the most part it’s not a growth industry. Circulation is obviously the number one challenge for all of the papers and magazines in these economies. They are competing with other flows of information; the internet and fragmentation of news on TV are prime examples.

Yet newspapers domestically and abroad are busily adapting their business models. I’m thinking of the new free publications handed out in metro stations, for instance.

Yes, the metro format is making a run at it, and they’ll enjoy a niche. In general, news publishers are doing everything they can to creatively adjust. I think the real growth will be in the nationals and the very local papers. In Europe now, just about everyone has moved to tabloid format. In some regions of the world, the outlook is positive. In Australia, they’re doing well. I was at News Corporation yesterday and they are in the midst of putting in a lot of new presses. Certain countries are much more newspaper-oriented than others; Australia is one of them. In those cases, there is a good market and they’re not going to go away for a long time. And of course, when you look at China and India, it’s a very dynamic environment with a lot of publication activity, and we are experiencing significant growth in those regions.

It’s been amply reported that Flint has announced price increases along with other major suppliers. What were the key drivers of those increases?

For years, we have worked assiduously at taking costs out of the equation. One result of the integration of Flint and XSYS was that we had to make some tough decisions about plant closings. We closed plants in Europe, downsized others, and unfortunately that involved a number of terminations. After taking costs out of all the entities over the last three or four years, we’ve reached the point where there is just not much more we can do in that regard; we’ve had to adjust pricing, and it’s been a long time since we did that.

It sounds like a decision you didn’t arrive at lightly.

Yes, and in a few cases, it can mean walking away from businesses. Obviously, you need to make a reasonable margin in order to serve your customers, and to invest in research and new product development that supports them. You can’t do it for free.

Is it primarily your supply chain that’s affecting this?

We’re all captive to the hydrocarbon chain. News ink is suffering right now because of the fact that the oils have gone up quite a bit. Petrochemical suppliers are under pressure; carbon black has been going up. When you’ve done what you can in terms of rationalizing costs, it comes to the point where you simply have to address pricing.

Tell me a little about Flint’s approach in working with customers.

A few years ago, we initiated a program around customer focus. It’s based on the premise of staying very close to the customer and finding out what their real needs are. Certain accounts would like you to do a number of things, such as take care of all of their pressroom-related purchases.
for example. Some customers will allow us into their planning processes, and when that happens we can be very helpful to them.

Who are you chiefly interfacing with in this approach?

It’s not only about purchasing, it’s about everyone who is running the company up and down the line. That depth of contact is vital. There is a sophisticated process to go through, tracking things in detail so that we can thoroughly understand what the customer is all about. It helps enormously in winning and keeping the business, making it a good account for them and a profitable one for us.

How do you collaborate with press manufacturers?

There are many scenarios with manufacturing partners and OEMs. With press manufacturers, a chief goal in collaboration is to help them offer their customers an optimized package, ensuring that the installation on the floor will fly right away. For instance, if a customer is migrating to faster new presses, it’s a totally different ballgame from older equipment. Your inks have to be different in order to adjust to the new speeds and other things they may have added to the press. We do an exhaustive process evaluation with the manufacturer and get everything sorted out well before the customer receives their equipment. When done correctly, the collaboration leads to a faster time to acceptance, which works in everyone’s favor. The result is a huge amount of time and cost savings for the customer.

How active is Flint on the environmental side?

We are the industry leader in soy-based ink technology. It’s a challenging area for many, but we’ve been able to become really quite expert at this through our own R & D.

So how is the business case looking for soy-based inks these days?

I’ll tell you, if the price of oil stays high, you could be seeing a lot more activity in that direction. Up to now the price point has been such that for high-volume blacks and so forth, a lot of newspapers haven’t seen incentive to pay extra for the soy. But with the differential between petroleum and soy changing, soy is becoming a viable and very competitive alternative – which could make for an interesting shift in volumes of soy ink being used as we go forward.

What does it take to keep a very cohesive company culture when your people and operations are spread out around the world?

We work hard at being a good employer, putting in people who really know the varied business environments we’re dealing in, and again, staying very close to the needs of customers wherever they are. It comes down to sharing a common vision and values, but implementing those effectively on a local basis. “Think globally, act locally” is the operating response.

QUARTERLY ECONOMIC HIGHLIGHTS:
MID-SUMMER UPDATE AND OUTLOOK

The following is extracted with permission from a report released in August 2006 by Ronnie H. Davis, Ph.D., Vice President & Chief Economist, PIA/GATF.

2006 Is Right on Track

Last fall, PIA/GATF projected the economy to grow about 3 – 3.5% or so this year and for printing shipments to grow around 3%. So far this year both the economy and print markets are tracking with this projection. At present it looks like 2006 will end up a relatively healthy year for both the economy and print markets. The economy started off strong in the first quarter (4.8% annualized growth) but will probably increase by a somewhat slower pace with the Federal Reserve continuing to restrain inflation. PIA/GATF projections are for the economy to grow around 3.0 – 3.5% and printing shipments to increase by around 2.5 – 3% over the course of the year.

2006 Forecast Snapshot

<table>
<thead>
<tr>
<th>Total shipment volume</th>
<th>$171.1 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total shipment growth</td>
<td>3.0%</td>
</tr>
<tr>
<td>Ink-on-paper print growth</td>
<td>2.0%</td>
</tr>
<tr>
<td>Digital printing growth</td>
<td>4.0%</td>
</tr>
<tr>
<td>Printers’ ancillary services</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Postage Rates in 2007

In addition to the print market drivers of overall economic growth and advertising/promotion spending, another dynamic could have a significant impact: postage rates. A postage rate increase of 8.4% is scheduled to go into effect around the middle of 2007. Based on analysis of the cross-elasticity between postage rates and postage-related printing, we estimate this could result in a 3.4% decline in volume of printed materials in the mail stream over the course of a year. Since the rate increase will not go into effect until about mid-year, the negative impact will be around 1.7%.

If the economy stays on track, 2007 will be the sixth straight year of growth with the mature recovery very good for print. However, printers and industry suppliers need to prepare for three possible scenarios: continued growth, economic slowdown and recession. What will print markets look like in 2007 under each case?

Economic Scenario 2007 Print Market Snapshot

<table>
<thead>
<tr>
<th>Total printing shipments</th>
<th>Scenario 1: Continued Growth</th>
<th>Scenario 2: Economic Slowdown</th>
<th>Scenario 3: Recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total on-paper print</td>
<td>1.5–2.0% Growth</td>
<td>No Growth</td>
<td>2–3% Decline</td>
</tr>
<tr>
<td>Digital print volume</td>
<td>3.5–4% Growth</td>
<td>2–3% Growth</td>
<td>Holds steady</td>
</tr>
<tr>
<td>Printers’ ancillary services</td>
<td>3% Growth</td>
<td>1.5–2% Growth</td>
<td>Holds steady</td>
</tr>
<tr>
<td>Total shipments</td>
<td>$4.2 Billion Growth</td>
<td>$1.7 Billion growth</td>
<td>$3 Billion Decline</td>
</tr>
<tr>
<td>Sales impact on an average printing plant</td>
<td>$100,000 Growth*</td>
<td>$40,000 Growth*</td>
<td>$80,000 Decline*</td>
</tr>
</tbody>
</table>

*These impacts are for a typical printing plant producing about $4 million per year.

At this time printers should “expect the best but prepare for the worst.” Their performance will vary greatly depending on which scenario plays out. Continued growth will keep the recovery going with the average printer’s before-tax profit as a percentage of sales rising to around 3% next year and profit leaders above 10%. The slowdown scenario will cause average profits to decline to around 2% and profit leaders to dip to about 8–9%. The recession scenario will cause profits to drop to around 1% for an average printer and to less than 8% for a profit leader.
AMENDMENT OF EUROPEAN MACHINERY DIRECTIVE
PUBLISHED


Familiarity with the Machinery Directive is necessary for manufacturers who export machinery to be placed in the European Union market, since they must provide specific technical documentation to obtain the mandatory CE mark for their equipment. This documentation includes evidence that they comply with the country’s standards and laws, one of which is the Machinery Directive.

The new Machinery Directive entered into force June 29, 2006, 20 days following its official publication. However, the Member States of the European Union will have a transition period until June 29, 2008, to amend their national legislation. Beginning December 29, 2009, the transition period will end and the provisions of the Directive must be applied.

One issue that complicates the determination of what has changed from the 1998 Directive is that the Articles and Essential Health and Safety Requirements in the new Directive are numbered differently than those in the old. The European Council has anticipated difficulties and Annex XII has been included to compare the old and the new Directives clause by clause.


NPES INTERNATIONAL TRADE SEMINAR YIELDS INSIDER’S VIEW ON THE WORLD PRINTING MARKET

Print industry executives seeking to launch profitable operations in today’s burgeoning global marketplaces gathered in Chicago on July 21 for the NPES annual International Trade Seminar, “Profiting from the Big Emerging Markets of China, India, Brazil, and Russia – Setting Up a Strategic Plan and Making It Work.”

An impressive roster of top print industry leaders from around the world assembled for this one-day seminar. Doug E. Weber, Corporate Director of Manufacturing, and Steve Tholen, Corporate Pre-Press Manager, from RR Donnelley Company gave the keynote presentation discussing the perspective of a global printer.

Other featured speakers from a diverse group of companies – from capital equipment suppliers to spare part manufacturers – shared their critical insights on strategic international business development to an appreciative crowd of professionals.

The seminar also featured Evgeny Boutman, President of ECS Corporate Group Moscow, the largest distributor of printing equipment and supplies in Russia, who elaborated on how U.S. companies could benefit from distribution channels in his country.

NPES international market representatives were on-hand to deliver market data and personalized assistance to attendees about how to successfully enter emerging world markets.

One invaluable benefit, however, was not on the program – NETWORKING. Seminar attendees exchanged throughout the day with NPES member companies who are thriving overseas, learned first-hand how to avoid costly mistakes in the ever-popular Q&A Session, and left with a wealth of data on today’s emerging print markets.

Attendees like Mike Russell from Mark Andy, got an insider’s view on the complexities of navigating the world printing market. “It was good to see that other people are experiencing the same issues as I am,” commented Russell.

“You can always find something of value, and I came away with a few ideas to chew on from several of the panelists’ experiences,” said Craig Thomson, Marketing Manager/Regional Manager, Martin Automatic, Inc.

“I found the presentations and discussions highly informative and enjoyed the networking,” added Jerry Stolt, Executive Vice President, Sales and Marketing, Pantone, Inc., who also served as a speaker.

Next year’s seminar will return to Chicago in mid-July 2007. Proposed topics include Turkey, Latin American opportunities outside of Brazil and Mexico, how to compete effectively against European competitors, and free trade agreements.

If you missed the seminar and want to learn how your company can benefit from going global, contact Mike Hurley, Director of International Trade, at mhurley@npes.org.

GEGENHEIMER AWARD NOMINATIONS DUE

Nominations for the annual Harold W. Gegenheimer corporate and individual awards for industry service are due by September 29. The awards are presented annually to a member company and an individual employed by a member, recognizing their leadership and commitment to building a strong future for our industry and its suppliers.

The awards are named in honor of the Chairman Emeritus of Baldwin Technology Company and a former President and active leader of NPES in recognition of his lifelong commitment to technical innovation, sound management, and support for education and research. NPES has established two scholarships with the Printing and Graphics Scholarship Foundation, to which $2,000 is given in the name of each recipient each year.

The Gegenheimer awards will be presented November 6 during the Annual Conference in Ponte Vedra Beach, Florida. For more information about the awards and nomination forms, contact Irene LaBranche at (703) 264-7200 or e-mail ilabranche@npes.org.