**New PRIMIR Study Spotlights Inkjet Market Potential**

Many companies, small and large, are investing in inkjet technology R&D to develop systems for graphic arts, packaging, and other markets. To gauge the upside potential of this technology, PRIMIR commissioned I.T. Strategies of Hanover, MA, to produce a study focusing on *Trends in Inkjet Technologies 2006-2011*.

The study, which has been released exclusively to the members of PRIMIR, targeted five key markets including **Display Signage**, **Graphic Arts**, **Packaging**, **Decorative/Textiles**, and **Manufacturing/Deposition**.

According to I.T. Strategies, there is no doubt that inkjet technology will play a major role in these markets, driven by the process advantages it will offer, and its ability to meet user performance requirements. Less certain is when the impact of inkjet technology will be felt.

**Why inkjet?** Inkjet is the only digital printing technology potentially able to match analog print throughput and quality, while providing all the process advantages of digital printing. In addition, inkjet provides a combination of linear speed and print widths far exceeding the capabilities of electrophotography. Inkjet prints on a wide range of substrates, making it the future technology choice for the markets covered in the PRIMIR report.

There are three primary types of inkjet technology: Thermal, Piezoelectric (piezo), and Continuous. While PRIMIR expects all three to play a role in future commercial and industrial markets, piezo inkjet technology may hold the most growth potential and ability to address new markets, due to its ability to jet a much broader range of ink chemistry than either thermal or continuous inkjet. Piezo inkjet technology generates minimal heat, consumes less power and has a longer life – of special importance for high-volume industrial-type applications.

- **Inkjet head manufacturers** build the print engine, which can be complete, stand-alone and self-contained, or it may be a semi-manufactured non-standalone module or part for integration into a large system. There are two types of inkjet head manufacturers: primary market head manufacturers, such as HP, Canon, Epson, and Lexmark that sell heads in large quantities primarily into home/consumer applications; and secondary market head manufacturers,

  *continued on page 5*
Making a Difference...One Member at a Time

NPES started the year with an aggressive plan of hosting a series of regional meetings in four of our large, member-based areas. Those that read NPES News regularly were aware of the four Regional Roadshows which were held in January in Chicago, New Jersey, Connecticut and Ohio. The concept was simple. Bring the association’s programs to members, rather than expecting our members to come to us, with the objective of touching more members, both those who have been inactive, and reaching deeper and broader into those active member companies.

After the four sessions, NPES is proud to have reached 104 members representing 68 companies in the industry. Both of our objectives were met, engaging new companies and reaching deeper into our active members. We were fortunate to have a unique panel of local printers share their insights at each location. They shed light on some of the basic tenets of good business, that is, you can’t know too much about your customers. And even if you have heard these messages before, the frequency of the message confirms and solidifies where you may (or may not) be taking your business.

Let me share with you some of the key take-home points I had from the printer panels of those four sessions:

“We are not a solutions provider or graphics communications company because it doesn’t distinguish us from the competition.”

“We are not a printing company. We are an election company.”

“Our average order size (in dollars) has increased by three to four times during the last three years.”

“My customers ask me how can you help me grow my business; my best vendors ask me the same thing.”

“I like vendors who talk to me when I am not in a buying mode. They are interested in my company’s success, all the time!”

“We are trying to embrace CIP-4 and JDF, and looking at equipment to help us streamline the workflow.”

“We sell unique processes. The ink, toner and paper are just part of that process.”

“Whatever is sizzle today, is a commodity tomorrow.”

“Our vision is to wrap JDF into our organization.”

“We think of ourselves not as a 130-year-old company, but people who eat change for breakfast.”

“EIGHTY percent of my time will be spent in marketing in 2007.”

“Partnership with the customer is the holy grail.”

“Act as cost consultants to me by providing information on the application of the latest technology.”

As NPES continues to reach out to members with programs like our Regional Roadshows, we recognize that not all members can participate in all of our programs. One member even suggested that the effort “to get to all of our members” was not possible and potentially a poor use of resources. Fortunately, NPES does have great resources to back up our great programs. What we don’t have, though, is as great a participation as we should. And the challenge of touching as many members as possible reminded me of a story about an old man and a young man on a South Carolina beach.

There was a man who lived by the ocean and each morning it was his habit to rise early and enjoy the cool morning air. One morning he noticed a lone figure some distance down the beach. The figure was picking up objects and throwing them, one by one, into the pounding surf.

The man was curious and wondered what that person was doing out there all alone? The next morning the man looked out toward the beach, and sure enough, the lone figure was back.

The next morning the man’s curiosity got the better of him and he left his balcony and walked down to the beach. As he approached the mysterious figure, he saw that it was a young man. As he had the previous morning, he was...
picking objects up off the beach and throwing them into the ocean waves.

By now the man had almost reached the stranger and to his surprise saw that the objects of his attention were starfish. Starfish that had been carried onto the beach by the action of the waves, and, as the tide went out, had become stranded. How unusual, thought the man. I must ask him why he is doing that.

“Good morning,” he said. “Good morning” came the reply. “I hope you don’t mind, but I’ve been watching you all week and I just had to come down and ask you what you’re doing.” “These starfish are stranded and I’m throwing them back so that they don’t dry out and die,” the younger man answered. “But there are dozens of starfish out here,” the man protested. “And this beach is miles long – you can’t possibly make a difference to them.”

The younger man said nothing but simply stooped and picked up a large starfish that was lying right next to the older man’s feet. He then ran toward the hissing waves, and, with all his might, threw the stranded starfish back into the sea.

Returning to the spot where the older man stood, he looked into his eyes and said: “Well, I just made a difference to THAT starfish, didn’t I?” Then he smiled and ran off to where another starfish lay waiting in the early morning sun!

So, yes, if NPES is making a difference one member at a time, we are making progress in helping members succeed. I can assure you that the staff at NPES is patient, persistent and committed to making a difference in your business.

By popular demand of our members, NPES is launching the 2007 INDUSTRY SUMMIT, a three and a half-day mega-event combining PRINT OUTLOOK ‘07 with three other key sessions: the PRIMIR Spring Meeting, the NPES Market Data Committee Meeting, and the NPES Board of Directors Meeting. This consolidation of events enables members to enhance their industry knowledge while minimizing time away from the office.

PRINT OUTLOOK, slated for March 27-28, is ideally suited for industry executives and managers with a stake in marketing, sales, finance, research, manufacturing, and operations. Attendees will benefit from this conference by getting answers on the state of the economy, pivotal trends in the marketplace, and business prospects for the future.

Themed Print’s Role in the Modern Media Mix, PRINT OUTLOOK ‘07 will present a host of timely new content including a special Demand Specifier Panel moderated by Bill Esler, Editor of Graphic Arts Monthly. Tuesday’s session will be keynoted by the popular industry consultant and commentator, Joe Webb, with Wednesday’s agenda keynoted by MJ Anderson, Vice President of Creative Services at Chicago-based Trekk Cross Media.

Members can further hone their competitive edge by staying to participate in the PRIMIR Spring Meeting immediately after PRINT OUTLOOK concludes. Each year, PRIMIR conducts several of the industry’s most comprehensive research studies on topics of critical strategy concern to manufacturers, suppliers, and printers. Join us at the Spring Meeting to get an insider’s view of three new PRIMIR studies:

- World-Wide Market for Print (final phase)
- Effect of Postal Reform on the Demand for Print
- Life Cycle of Analog and Digital Lithographic Printing Plates (update)

Special conference rates are available to NPES, PIA/GATF, NAPL, and FTA members. Visit www.npes.org for conference agendas and registration details.
Gift Cards: A Booming Niche in the Marketplace

When it comes to gift purchases these days, more and more people are paying with plastic – and not just the credit card variety. The National Retail Federation reports that consumers bought some $25 billion worth of gift cards over the recent holiday season. Printers have been taking notice of this growing opportunity in the marketplace. At OnTime Mailings in Chelsea, MA, a specialist in card embossing, President Richard Connolly says, “In the year 2000, we did fewer than 10 million cards, but for 2006 we’ll do approximately 100 million.”

By any measure, gift cards are a booming business, one that could attract printers’ attention as a potential diversification path. “I don’t think it’s a huge stretch for many printers,” says Jeff Peters, Vice President and Managing Director at Datacard Ga-Vehren, an NPES member. He notes that a newcomer to the specialty would have to invest in high speed equipment to print and emboss the cards and encode data onto the magnetic strips. “For half a million dollars, you can be in this business,” he says. “These are not scary numbers for people accustomed to buying big presses.”

Consumers bought $25 billion worth of gift cards last holiday season.”

“Even commercial printers not interested in producing and personalizing the cards can find major sales opportunities in printing the hanging holders on which most gift cards are displayed, along with other point-of-purchase displays and card packaging,” Peters adds.

All of this is not to say that entering into this business is a simple matter. In fact, its complexities and “zero” margin for error may be more daunting entry barriers than capital investment. “There’s a lot more to gift cards than just printing,” says Jake Jacobs, Vice President at Arthur Blank Company in Boston, a leading supplier of card production and encoding systems and one of America’s largest producers of gift cards.

The printing aspect of gift card production starts with rendering the images on the front of the card, typically on a high speed sheetfed press. Arthur Blank Company operates Komori six- and four-color presses, and the cards are printed on white PVC, normally 72-up, Jacobs explains. The smooth and stiff substrate presents some specific challenges.

“For people accustomed to printing on paper, printing on plastic is another world,” says Terry Hardy, Vice President at Plastilam in Salem, MA. “Inks do not dry quickly on a smooth surface. If you print with a metallic color, you have to sometimes rack them for a day or two, because the metallic is taking that long just to dry.”

Hardy reports that digital presses are producing a growing volume of highly personalized gift cards — but metallic inks won’t work with digital presses because of the potential for the powdered metal they contain to cause electrical problems in the press.

The printed gift cards are then laminated and die cut. All of these processes must result in a card whose dimensions comply with ISO standards, so that they will work reliably in any ATM or point-of-sale device. “The hardest part has to do with encoding the cards,” Hardy says. The card producer must work closely with the ultimate customer’s POS system provider and its MIS department to be sure each card is encoded so that it will be readable by the customer’s cash registers. Every card must work, every time, and no two cards can be duplicates. “There’s zero tolerance for mistakes,” says Jacobs.

Magnetic stripes have a quality called coercivity, which reflects their ability to maintain their data integrity despite frequent or rough use. For the average gift card, which Jacobs says is swiped 2.5 times, low coercivity is fine. But for a card expected to go through a large number of transactions — or a critical application like security ID cards — “high co” is called for.

Security is another issue. Peters notes that retailers have become concerned about gift card fraud. Perpetrators were copying numbers off gift cards on display racks, then trying to use those numbers online by simply calling every day until a legitimate shopper activated that card. The answer has been to add a PIN number to each card, hidden by a layer of scratch-off foil.

Jacobs comments that automation in the gift card industry still has room for improvement. “There’s a fairly high level of handling of this material,” he says. “We are constantly doing one task, then the sheets will wait before going to the next station. The operation is labor intensive.”

Jacobs says vendors are responding. The new generation of Datacard systems combine card personalization and affixing to the carrier all in line, on one machine. This eliminates a step, reduces floor space and labor requirements.

For the foreseeable future, these execs expect the gift card business to continue to boom, and its tools to continue to gain sophistication. Given the constant technical innovations in the industry, however, the long-term outlook is less clear. “Gift cards will eventually be replaced with something else,” says Hardy.
such as Fujifilm Spectra/Dimatix, Konica Minolta, Panasonic Communications Company and Toshiba TEC, that do not have large base markets and in almost every case sell their products into custom applications and to new customers.

- **Integrators** are companies such as Dainippon Screen and Sun/Inca that have developed but not yet commercially sold fixed array systems. Integrators are also required to integrate the parts such as the heads, chassis, media handling systems and software into a working system.

- **Chemistry manufacturers (either captive or independent)** work with head manufacturers to develop inks for new systems. Ideally an inkjet ink manufacturer will develop an ink hand-in-hand with the head manufacturer. This is a requirement for systems hoping to successfully address large-scale markets.

- **Media handling suppliers** may be called upon to develop pre- and post-processing handling equipment. They may work with the head developer or an integrator.

- **Market Access Companies:** A Market Access Company (MAC) is usually a company such as Heidelberg that is already supplying products into the target user industry and is known and trusted. In this case they would also integrate or distribute inkjet systems.

  - **Customer:** In some cases, especially as inkjet attempts to enter new, unknown markets, a special user must be sought out to become an early, active party to the project with involvement in its development.

  Currently there are large investments—nearly $2 billion in 2005 alone—in inkjet technology around the world. Many of the consumer inkjet manufacturers see markets such as graphic arts, packaging and manufacturing/deposition as the next opportunities for growth. This belief is clearly supported by the forecast shown in the chart below.

  NPES members should note that the inkjet integration path and its proper match to a particular application are lengthy. It is a longer time-to-money model than most expect. Inkjet is a very flexible technology and in the long-term (beyond five years) is the most likely digital technology to meet digital user needs in terms of form factor, throughput speeds, and print quality. Outside of the display signage market, there will be little immediate impact on current traditional print markets. However, the momentum is strong and PRIMIR expects that inkjet will change traditional print markets, one drop at a time.

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**GOVERNMENT AFFAIRS UPDATE**

**Health Savings Accounts Improved**

As one of its final acts, the 109th Congress passed the Health Opportunity Patient Empowerment Act of 2006, as a part of the Tax Relief and Health Care Act of 2006 that President Bush signed into law on December 20, 2006. This bill makes it easier for participants in health savings accounts (HSAs) to put money aside for their personal health care.

**HSAs at a glance:** Individuals with a high-deductible health plan (and no other health plan other than a plan that provides certain coverage) may establish an HSA. In general, HSAs are tax-exempt trusts or custodial accounts created exclusively to save on a tax-favored basis and pay for current and future qualified medical expenses of the account holder and his or her spouse and dependents. Within limits, contributions to an HSA made by or on behalf of an individual are deductible by the individual, while contributions made by the employer are excludable from income and employment taxes. Earnings on amounts in HSAs are not taxable, nor are distributions from HSAs that are used to pay for qualified medical expenses. However, distributions from HSAs that are not used for qualified medical expenses are included in gross income and are subject to an additional 10% tax. The additional tax does not apply if the distribution is made after death, disability, or the individual attains the age of Medicare eligibility.

Under the new legislation, improvements to HSAs include:

- **Increase in Annual HSA Contribution Limits** – Previously, the maximum HSA contribution was the lesser of the deductible of the individual’s HSA-eligible plan or the statutory maximum. The new rules allow up to the statutory maximum, regardless of the deductible. In 2007 this provides for $2,850 for individuals, and $5,650 for families, indexed for inflation. Special rules apply to individuals who attain the age of 55 by the end of a taxable year.

- **Allow Greater Employer Contributions for Lower-paid Employees** – Previously, employer contributions had to be the same for all employees with the same category of coverage. Now, the new rules permit employers to contribute more to the HSAs of non-highly compensated employees, as defined for purposes of qualified retirement plans.

- **Allow Rollovers from Health FSAs and HRAs into HSAs** through 2011 – Employers can transfer funds from Flexible Spending Arrangement (FSAs) or Health Reimbursement Accounts (HRAs) to an HSA for employees switching coverage to an HSA-compatible plan. Rollover amounts are in addition to annual contribution limits, but have some limits of their own. Individuals must remain qualified for HSA coverage for 12 months following the rollover or it will be included in income and subject to a 10% additional tax.

- **One-time Transfer from IRAs to HSAs** – The new rules also allow a one-time contribution to an HSA from an individual’s Individual Retirement Arrangement (IRA), limited to the maximum annual HSA contribution. The IRA transfer will not be included in income or subject to the early withdrawal additional tax unless the individual fails to remain eligible for 12 months following the contribution.

For more information contact NPES Government Affairs Director Mark J. Nuzzaco at 703-264-7235, Fax: 703-620-0994, or mnuzzaco@npes.org.
Problem Solved… (at a Distance)
Remote Diagnostic Service Is a Boon for Printers

For printers, it’s a basic law of life, right up there with death and taxes: Idle equipment earns no money. Any time a system goes down, it’s bad news, and it gets worse the longer the disruption continues. That’s why printers in the past have been glad and relieved to see an equipment vendor’s service technician walk in their front door. Despite the waiting and expense involved, a tech’s arrival usually meant that a problem was about to be solved.

These days, though, more and more printers are getting their problems fixed, questions answered and upgrades implemented by experts they never meet. Thanks to a growing array of remotely-delivered maintenance and related services, they’re able to avoid downtime, save money and improve productivity.

For the customer, this means less downtime – a welcome trend. “Unexpected unavailability of equipment is the printer’s nightmare,” says Jon Guy, President of Gallus, Inc.

Richard Mack, Director of systemservice™ Business Development at Heidelberg, agrees. “The pressure on customers to deliver on time and on demand has increased so much that uptime is everything,” he says. “Downtime is a killer for customers.”

Vendors are convinced that remote service is good business for them, too, for several reasons. First, even large vendors have limited technical service staffs. Second, it costs a bundle to fix a customer problem in the customer’s shop. Third, certain problems crop up repeatedly.

A service technician with key press data and controls at his or her fingertips can often diagnose and fix a problem over the telephone in a few minutes, rather than devoting hours or days to a field call. At KBA North America, remote service has meant that up to 80 percent of all problems can be diagnosed and solved without a technician site visit, reports Florian Spiekermann, Director of Electrical Service.

Some vendors today are going beyond remote problem resolution and implementing systems to handle routine maintenance and press monitoring from afar, even to the point of developing benchmark data with which a print company exec can evaluate the overall performance and productivity of his systems.

Guy reports that on a recent trip to explain and promote Gallus’s offerings, “every customer we spoke to was not just interested but excited.” Even if customers weren’t so enthusiastic, though, Gallus would still pursue its remote support strategy. “We are simply able to service the equipment better,” Guy says.

Remote service enables a vendor to achieve significant results from limited resources. Experienced technicians are always in short supply, and sending them to customer sites to fix problems almost always entails travel costs, often including overnight accommodations. Responding to emergencies can also mean a traveling technician pays top dollar for airfares. Expenses mount up quickly. While remote service based on a dial-up connection has long been the norm on many systems, vendors are rolling out new systems based on Internet Protocol, which does away with busy signals, lost connections, and other nuisances associated with analog telephone lines. With IP, Mack says, “from my laptop I can connect to every press worldwide that has this capability. Reporting and other functions are very automated.” Customers can use the Internet connection to access an “e-Self Help” feature and search Heidelberg’s documentation for information on specific problems.

Over the Internet, a vendor’s technical expert can view the same control screens the customer’s technicians see, and run all the same diagnostic procedures he or she would perform in person. As an added bonus, the Internet can put expert service at the customer’s command 24/7, which can be especially important to companies running overnight shifts. Even if a press problem crops up at three a.m., somewhere in the world, there’s an expert able and ready to help.

Delivering 24/7 technical service in person, all over the world, is simply not economically feasible, vendors say. Remote systems, though, can make this promise a reality.

KBA also offers an option that allows customer technicians to capture digital images with a hand-held or headset-mounted camera, and send these images to the remote expert. Gallus is also using video to guide customers through both repairs and standard maintenance. “We can show video clips on the control console, and show them what to do. We try to stay away from long explanations and put it in pictures,” he says.

When a part must be replaced, it can be ordered automatically and shipped to the customer. Then, a remote technician can guide customer personnel in installing the new part. Guy points out that some parts must be programmed after installation, and this programming can also be done remotely.

All of these remote capabilities are also enabling vendors to offer powerful new options for printers to anticipate and control their maintenance costs over long periods. For example, some options roll the cost of several years’ maintenance, problem resolution, repairs and parts into the purchase price of a press. “We couldn’t afford to give this to our customers without remote diagnostics to lower our exposure in costs,” Mack says.

The goal, for both maintenance and repair services, is maximum productivity from every machine, every day. Today’s technologies are making it easier than ever to realize that goal.
Good news for NPES members: The latest edition of MarketScan, a bi-annual economic publication packed with detailed industry forecasting and analysis, has just been issued free to all Association member companies. MarketScan consists of a 16-page booklet combining economic analysis by NPES consulting economist Michael Evans with segment-by-segment industry analysis by consulting analyst Neil Richards, plus eight valuable inserts covering key printing market segments.

Executives of companies participating in the NPES Market Data Program are granted access to special inserts containing even more detailed analysis and forecasts, collected through the NPES Market Data Program, which gathers and sifts through shipment data for nearly 200 product categories including: Imaging/Prepress, Systems and Software, Pressroom Equipment, Bindery/Finishing and Graphic Arts Supplies.

The Macroeconomic Outlook by Michael Evans depicts an "economy losing steam," in which real GDP will rise at an average of 1.5 percent per year through 2007 and increase over 2 percent in 2008. Yet even with the sluggish growth of the economy, Evans foresees no recession in 2007. Normally, while changes in economic growth have an impact on the printing industry, Evans predicts that the industry will continue to moderately grow over the next two years despite the economy slowing down.

Neil Richards concurs that print is expected to stay vital, with growths ranging between 2-3 percent through 2010. He notes that GRAPH EXPO® 2006, with its crowded aisles and overflowing booths, epitomized the optimism and excitement in the printing industry last year. The big story affecting the industry, however, has been the powerful and ever-evolving presence of digital culture. "We are now shifting from an environment with an older culture where 'literate' literacy was and is the norm, to a younger culture where 'visual' literacy is not only much more intuitive, but also more important," says Richards. Termined digital natives, these individuals have spent a far greater proportion of their lives immersed in electronic media rather than absorbing information through print. This widening cultural divide leads to the question of how long lithographic printing will remain central to the way people communicate. In recent years there has been a revitalized technical focus on sheetfed lithography, and printers continue to view lithographic printing as the key to profitability while keeping their outlook open toward digital printing. For now, lithography drives profitability, but to attract the customers of tomorrow, printers will soon be compelled to re-position their capabilities to reach far beyond the boundaries of print.

Evans and Richards provide assessments of data from the NPES Market Data Program on printing equipment and graphic arts supplies categories. Aggregate revenues of printing equipment and supplies are estimated to be around $3.9 billion for 2006 and around $4 billion in 2007, with equipment accounting for two-thirds of the total revenue. However, aggregate revenues are expected to decline in the 4-6 percent range by the end of the decade.

**Equipment and Supplies Highlights:**

Products in the equipment category (prepress, press and post press) will see modest growth in 2007, followed by...
stagnation and declines by the end of the decade.

- **Prepress** – Platesetters will remain the only viable type of equipment among these products in the future. Although it is expected that this market will become more saturated, platesetters continue to facilitate printer shifts into digital workflow streams.

- **Press** – Although presses will experience declines by the end of the decade, sheetfed presses have strong industry staying power and will continue to be an important aspect of printing equipment revenues.

- **Postpress** – Even with weakening revenues over the next several years, this market is offering printers opportunities to extend their value-added services beyond the pressroom (i.e. non-print services, computerized bindery and finishing systems).

By the end of the decade, sales of **consumables** are estimated to be half of what they were when they reached their maximum impact in the late 1990s.

- **Graphic arts film**, formerly a primary driver of supplies revenue and an essential link to quality print production, has now become incidental and irrelevant. Shifts to CTP solutions have caused the dramatic declines in film.

- Declines in sales of **off-press color proofing** are a result of the utilization of digitally based proofing systems for all mainstream production purposes. The unit volume of these digital systems are expected to increase; however, revenues will decline between 2-4 percent.

- **Plates** have become the main driver of supplies consumption, especially direct-to metal plates, which continue to show strong growth.

For more details on the above product categories, as well the overall industry, please refer to the December 2006 issue of MarketScan which was distributed to all member companies toward the end of January. You can also find a copy of this issue, as well as past issues, on the NPES website in the Members Only section at www.npes.org. For questions or inquiries, please contact **Rekha Ratnam**, Assistant Director Market Data and Research at (703) 264-7200 or e-mail ratnam@npes.org.

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**HURLEY’S TRADE-WISE DO TELL INTEL**

Vietnam officially became the 150th Member of the *World Trade Organization* on January 11th, opening the door to a new era of trade and investment in one of Asia’s *fastest growing* economies. U.S. - Vietnam bilateral trade has increased over five fold, from $1.5 billion in 2001 to $7.8 billion at the end of 2005.

Global Economic Prospects 2007 predicts that **global trade** in goods and services could rise more than threefold to **$27 trillion in 2030**, and trade as a share of the global economy will rise from one-quarter today to more than one-third. Roughly half the increase is likely to come from developing countries.

**Developing countries** two decades ago provided 14% of manufactured imports of rich countries, today supply 40%, and by 2030 are likely to supply over 65%. At the same time, **import demand from developing countries** is emerging as a locomotive of the global economy.

Three prominent features in the **next wave of globalization** are: (1) the growing weight of developing countries in the international economy, (2) the potential for **increased productivity** that is offered by global production chains, and (3) the **accelerated diffusion of technology**.

**Global Supply Chain—2007 Risks and Rewards**: tariff code changes, reverse logistics and global **environmental regulations** loom; but trade agreements, on-shoring and RFID offer bright spots.

Sources: World Bank, New York Times, JP Morgan Chase Vastera

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**NEW STANDARD APPROVED**

The American National Standards Institute (ANSI) has recently approved B65/NAPIM 177.1, *Safety standard – Three-roll printing ink mills*. This is a revision and expansion of a 1997 standard, and provides safety requirements for the design and use of three-roll printing ink mills used for printing inks. The revision was conducted by a subcommittee under the ANSI B65 Committee, which develops safety standards for the printing, publishing and converting industries, with the cooperation of the National Association of Printing Ink Manufacturers (NAPIM). The B65 Committee is accredited by ANSI and is administered by NPES The Association of Suppliers of Printing, Publishing and Converting Technologies. The new standard can be purchased from NPES by contacting Darcy Harris at (703) 264-7215 or by downloading an order form from http://www.npes.org/standards/orderform.html.

For more information, contact **Mary Abbott**, NPES Director, Standards Program, Tel: 703-264-7229; e-mail: mabbot@npes.org.